

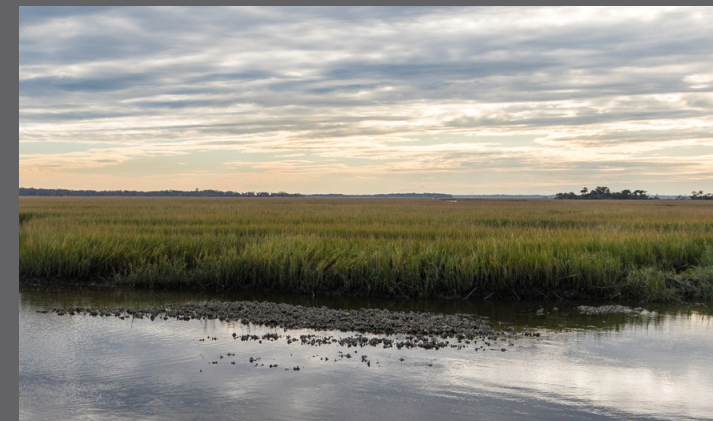
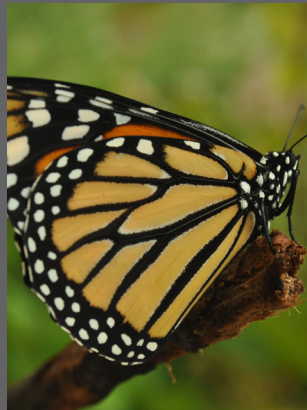
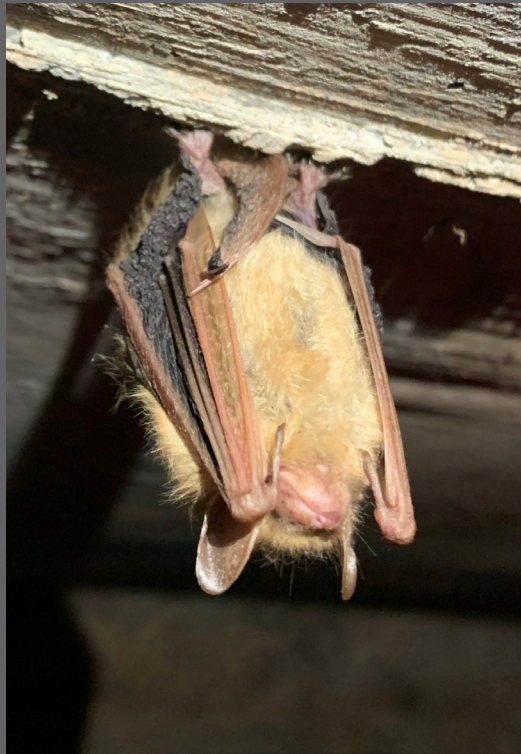
IDIQ CONTRACTS FOR ENVIRONMENTAL PERMITTING AND BIOLOGICAL SERVICES.

STATEWIDE, LA

Contract Nos.
4400027474 AND 4400027480
Advertisement Date: July 31, 2023
Submittal Date: August 22, 2023



In partnership with:



Thursday, August 22, 2023

Louisiana Department of Transportation and Development
1201 Capitol Access Road, Room 405-E
Baton Rouge, LA 70802-4438

10352 Plaza Americana Drive
Baton Rouge, Louisiana 70816
Phone: 225 292 1004
Fax: 225 218 9677
www.arcadis.com

Subject: **Contract Nos. 4400027474 and 4400027480**
IDIQ Contracts for Environmental Permitting and Biological Services
Statewide

Dear Project Evaluation Team,

Arcadis and its teaming partners are pleased to share our experience to deliver on the above referenced advertisement. The Arcadis Team has provided dedicated and dependable environmental support to the Louisiana Department of Transportation and Development (LADOTD) through the preparation of comprehensive **wetland studies and biological surveys for more than 20 years**. To this proven delivery record, our team adds a depth of environmental permitting experience including U.S. Army Corps of Engineers Section 404 Clean Water Act and Section 10 Rivers and Harbors Act (RHA) Permits, U.S. Coast Guard Section 9 Bridge Permits, Louisiana Department of Wildlife and Fisheries Scenic Rivers Permits, Louisiana Department of Environmental Quality Water Quality Certifications, and Local/Regional Levee Board Permits. Collectively, our permitting team has **over 240 years combined experience** preparing and submitting permit applications and coordinating with the permitting agencies for projects throughout Louisiana and the Southeast.

We have assembled a team of biologists across multiple firms that can serve LADOTD needs for threatened and endangered species surveys, Biological Assessment, with established relationships with the U.S. Fish and Wildlife Service and Louisiana Department of Wildlife and Fisheries (LDWF). ICF is an industry leader in environmental permitting and biological services for State DOTs throughout the U.S. and brings expertise in threatened and endangered species survey to this contract. Arcadis has partnered with ICF on similar IDIQ contracts to provide innovative programmatic solutions to streamline agency consultations for threatened and endangered species, reducing costly project delivery schedule delays. Morris P. Hebert, Inc. (MPH) brings local expertise and knowledge to our biological service offerings with certified professionals skilled and experienced in completing oyster assessments, wading bird surveys, and Scenic Rivers permitting per LDWF requirements.

Our Project Management team, led by Jason Morrell, PWS specializes in environmental analysis and ecology for transportation projects. Mr. Morrell has worked almost exclusively on environmental permitting and biological services for State DOTs for over 12 years and is supported by Task Leads and subconsultants with 20+ years' experience. Our team understands the unique challenges LADOTD faces to obtain on-time environmental clearance for projects and keeps project delivery our first priority.

Perhaps most importantly, the Arcadis Team lives, works, and travels through the communities that will be served by this contract. We are committed to **improving quality of life** for Louisiana through sustainable solutions that improve transportation infrastructure while conserving natural resources for future generations. We look forward to the opportunity to continue partnering with LADOTD to provide responsible environmental permitting and biological services. Thank you for your time and consideration.

Sincerely,
Arcadis



Akhil Chauhan PE, PTOE, PTP, PMP
Senior Vice President, Transportation Services



Jason Morrell PWS
Project Manager, Principal Planner

Sections

1-11

The Arcadis team has a depth of certified Professional Wetland Scientists with a combined 80+ years experience completing wetland delineations and associated permitting throughout Louisiana and Southeast.



DOTD FORM: 24-102

PROPOSAL TO PROVIDE CONSULTANT SERVICES

(Revised January 1, 2023)

Prime consultant shall complete the DOTD Form 24-102 without altering the Form's text; however, the instruction and/or guidance for Sections 12 through 23 can be removed but do not remove Section title and number.

ANY CONSULTANT FAILING TO SUBMIT ANY OF THE INFORMATION REQUIRED ON THE DOTD FORM 24-102, OR PROVIDING INACCURATE INFORMATION ON THE DOTD FORM 24-102, MAY BE CONSIDERED NON-RESPONSIVE.

1. Contract Name as shown in the advertisement	IDIQ CONTRACTS FOR ENVIRONMENTAL PERMITTING AND BIOLOGICAL SERVICES STATEWIDE
2. Contract Number(s) as shown in the advertisement	CONTRACT NOs. 4400027474 AND 4400027480
3. State Project Number(s), if shown in the advertisement	
4. Prime consultant name (name must match as registered with the Louisiana Secretary of State where such registration is required by law)	 ARCADIS U.S., INC.
5. Prime consultant license number (as registered with the Louisiana Professional Engineering and Land Surveying Board (LAPELS) if registration is required under Louisiana law)	EF.0002808 DUNS 057690414
6. Prime consultant mailing address	10352 Plaza Americana Drive Baton Rouge, LA 70816
7. Prime consultant physical address (existing or to be established, if location is used as an evaluation criteria)	10352 Plaza Americana Drive Baton Rouge, LA 70816
8. Name, title, phone number, and email address of prime consultant's contract point of contact	Jason Morrell, PWS Project Manager P. 504 648 3617 E. jason.morrell@arcadis.com
9. Name, title, phone number, and email address of the official with signing authority for this proposal	Akhil Chauhan, PE, PTOE, PTP, PMP Senior Vice President P. 225 368 6563 E. akhil.chauhan@arcadis.com

Prime consultant should enter the firm name in the footer at the bottom of this page. (It will carry over to subsequent pages.)

10. This is to certify that all information contained herein is accurate and true, and that the team presently has sufficient staff to perform these services within the designated time frame. By submitting this proposal, proposer certifies that it is not engaged in a boycott of Israel and it will, for the duration of its contract obligations, refrain from a boycott of Israel. Proposer also certifies and agrees that the following information is correct: In preparing its response, the proposer has considered all proposals submitted from qualified, potential subcontractors and suppliers, and has not, in the solicitation, selection, or commercial treatment of any subcontractor or supplier, refused to transact or terminated business activities, or taken other actions intended to limit commercial relations, with a person or entity that is engaging in commercial transactions in Israel or Israeli-controlled territories, with the specific intent to accomplish a boycott or divestment of Israel. The proposer also has not retaliated against any person or other entity for reporting such refusal, termination, or commercially limiting actions. DOTD reserves the right to reject the response of the bidder or proposer if this certification is subsequently determined to be false, and to terminate any contract awarded based on such a false response.



Akhil Chauhan, PE, PTOE, PTP, PMP

Date: August 22, 2023

11. If a Disadvantaged Business Enterprise (DBE) goal has been set for this advertisement, indicate which firm(s) will be used to meet the DBE goal and each firm(s)' percentage.

Firm(s):

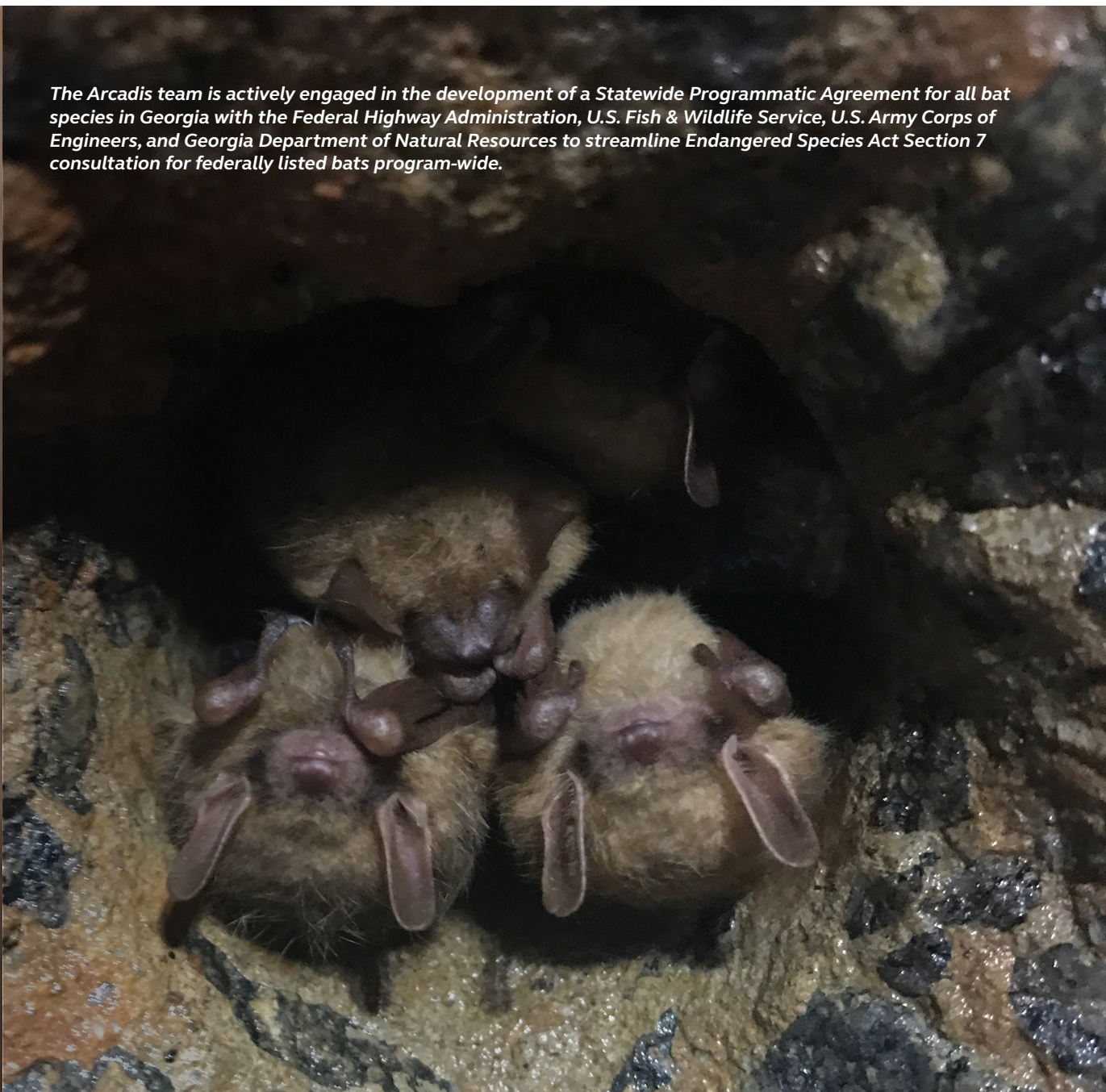
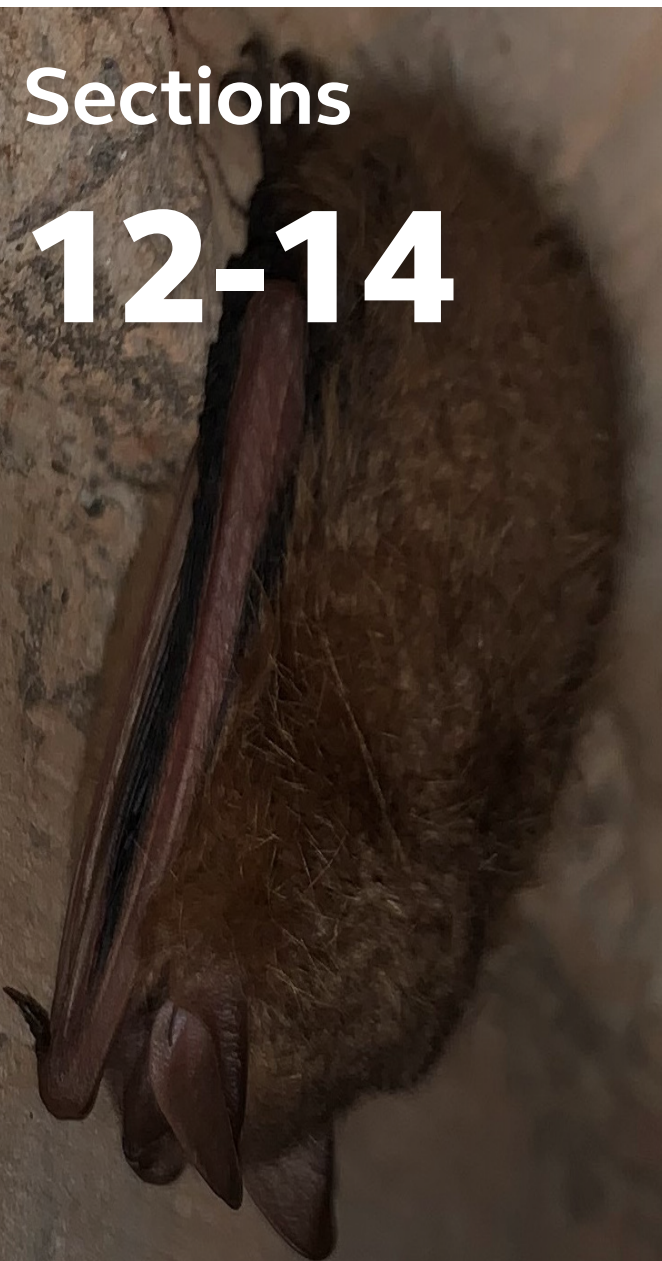
Gaea Consultants, LLC

Firm(s)' %:

10%

Sections 12-14





The Arcadis team is actively engaged in the development of a Statewide Programmatic Agreement for all bat species in Georgia with the Federal Highway Administration, U.S. Fish & Wildlife Service, U.S. Army Corps of Engineers, and Georgia Department of Natural Resources to streamline Endangered Species Act Section 7 consultation for federally listed bats program-wide.



12. Past Performance Evaluation Discipline Table:

As indicated in the advertisement, insert the completed table here. The percentages for the prime and sub-consultants must total 100% for each past performance evaluation discipline, as well as the overall total percent of the contract.

The **only** past performance evaluation disciplines to be used are: Road, Bridge, Traffic, CE&I/OV, Geotech, Survey, Environmental, Data Collection, Planning, Right-of-Way, CPM, ITS, Appraiser and Other (please specify).





Past Performance Evaluation Discipline(s)	% of Overall Contract	 ARCADIS	 ICF	 Gaea (DBE)	 mph Morris P. Hebert, Inc. client focused solutions	Each Discipline must total to 100%
Environmental	100%	60%	20%	10%	10%	100%
	Identify the percentage of work for the <u>overall contract</u> to be performed by the prime consultant and each subconsultant.					
Percent of Contract	100%	60%	20%	10%	10%	100%

13. Firm Size:

For all firms that are part of this team, indicate the approximate number of personnel to be committed to this contract, by DOTD Job Classification and the total number of personnel within the firm that could provide support, if needed. If a specialized job classification is required and not included on the DOTD job classification list, specify “Other (please specify)” and include the classification title inside the parentheses.

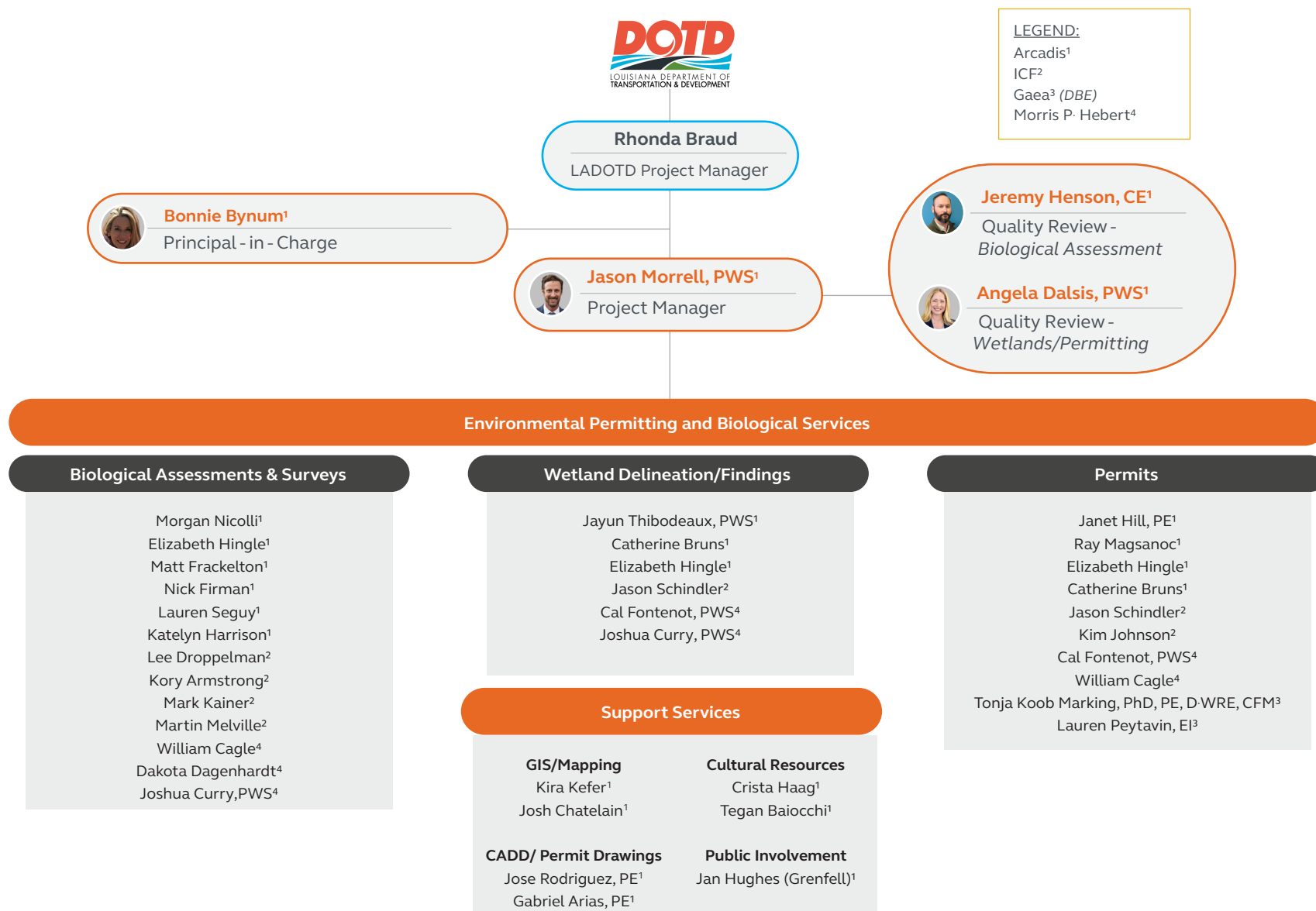
The DOTD Job Classification(s) to be used can be found at the following link:

http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/CCS/Job_Qualification/Job%20Classifications%20with%20Descriptions.pdf

Firm name	DOTD Job Classification	Number of personnel committed to this contract	Total number of personnel available in this DOTD Job Classification (if needed)
	Principal	1	3
	Supervisor – Other	1	2
	Supervisor – Engineer	1	3
	Environmental Manager	3	3
	Environmental Professional	1	4
	Biologist/Wetlands	8	11
	Archaeologist	1	4
	GIS Analyst	2	4
	Engineer	2	7
	Historian	1	3
	Biologist/ Wetlands	6	10
	Engineer	1	1
	Engineer Intern	1	2
	Environmental Manager	1	6
	Environmental Pro	2	2

(Add rows as needed)

14. Organizational Chart












Sections 15-16






Arcadis has successfully completed Wetland Studies and Permitting for the Rural Bridge Initiative Phase II in LADOTD Districts 02, 03, 07, 61, and 62. Pictured is the existing bridge on LA 422 at Richland Creek proposed for replacement (Project H.014251)

15. Minimum Personnel Requirements:


MPR No. Do not insert wording from ad	Personnel being used to meet the MPR (Individual(s) may not satisfy more than one MPR unless specifically allowed by Attachment B of the advertisement)	Firm employed by	Type of license and discipline meeting MPR/ certification & number (Ex: PE # - Civil)	State of license	License / certification expiration date
1	Bonnie Bynum <i>(26 years' experience)</i>		N/A	N/A	N/A
2	Angela Dalsis, PWS <i>(21 years' experience)</i>		Professional Wetlands Specialist (PWS)	N/A	#2299 / USA / Exp. 1/3/2028
3	Jason Morrell, PWS <i>(23 years' experience)</i>		Professional Wetlands Specialist (PWS)	N/A	#2319 / USA / Exp. 04/2028
	Jeremy Henson, CE <i>(23 years' experience)</i>		Certified Ecologist (CE)	N/A	Exp. 06/30/2025
	Jayun Thibodeaux, PWS <i>(6 years' experience)</i>		Professional Wetlands Specialist (PWS)	N/A	#3565 / USA / Exp. 09/2027
	Elizabeth Hingle <i>(9 years' experience)</i>		N/A	N/A	N/A
	Jason Schindler <i>(23 years' experience)</i>		N/A	N/A	N/A
4	Jeremy Henson, CE <i>(23 years' experience)</i>		Certified Ecologist	N/A	Exp. 06/30/2025
	Morgan Nicolli <i>(10 years' experience)</i>		N/A	N/A	N/A
	Lee Droppelman <i>(25 years' experience)</i>		N/A	N/A	N/A

4	Kory Armstrong, CWB <i>(15 years' experience)</i>		Certified Wildlife Biologist	N/A	N/A
5	Morgan Nicolli <i>(10 years' experience)</i>		N/A	N/A	N/A
	Mark Kainer <i>(32 years' experience)</i>		N/A	N/A	N/A
6	Jeremy Henson, CE <i>(23 years' experience)</i>		Certified Ecologist	N/A	Exp. 06/30/2025
	Matt Frackelton <i>(18 years' experience)</i>		N/A	N/A	N/A
	Nick Firman <i>(8 years' experience)</i>		N/A	N/A	N/A
	Martin Melville <i>(21 years' experience)</i>		N/A	N/A	N/A
7	Jason Morrell, PWS <i>(23 years' experience)</i>		Professional Wetlands Specialist (PWS)	N/A	#2319 / USA / Exp. 04/2028
	Jeremy Henson, CE <i>(23 years' experience)</i>		Certified Ecologist	N/A	Exp. 06/30/2025
	Kim Johnson <i>(32 years' experience)</i>		N/A	N/A	N/A
	Jason Schindler <i>(23 years' experience)</i>		N/A	N/A	N/A

	Tonja Marking, PhD, PE (32 years' experience)		Professional Engineer – PE	LA	#30749 / Exp. 09/30/2023
8	Jeremy Henson, CE (23 years' experience)		Certified Ecologist	N/A	Exp. 06/30/2025
	William Cagle (15 years' experience)		N/A	N/A	N/A
	Dakota Dagenhardt (13 years' experience)		Oyster Lease Damage Evaluation Board (OLDEB) certified biologist	N/A	N/A
	Joshua Curry, PWS (16 years' experience)		Oyster Lease Damage Evaluation Board (OLDEB) certified biologist	N/A	N/A
9	Kira Kefer (16 years' experience)		N/A	N/A	N/A
	Joshua Chatelain (20 years' experience)		N/A	N/A	N/A
	Jose L. Rodriguez, PE (25 years' experience)		Professional Engineer – PE	LA	#30492 / Exp. 03/31/2025


(Add rows as needed)

16. Staff Experience

Firm employed by		ARCADIS		Meets MPR No. 3 and 7
Name	Jason Morrell, PWS		Years of relevant experience with this employer	10
Title	Principal Environmental Specialist		Years of relevant experience with other employer(s)	13
Degree(s) / Years / Specialization			BS / 1999 / Agriculture / Environmental Economics & Management, University of Georgia	
Active registration number / state / expiration date			Professional Wetland Scientist (PWS) – #2319 / USA / Exp. 04/2028	
Year registered	2013	Discipline	Wetland Science	
Contract role(s) / brief description of responsibilities.			Project Manager	
Experience dates		Experience and qualifications relevant to the proposed contract		
		Mr. Morrell has over 20 years of experience in environmental planning and ecology in the southeastern U.S. Prior to joining Arcadis, he served as an Ecologist with the Georgia Department of Transportation (GDOT) completing technical studies, evaluating environmental effects, and completing permitting for transportation projects. A certified PWS since 2013, his area of expertise includes wetland delineation, biological assessment, and environmental permitting, with a focus on Clean Water Act (CWA) Section 10/401/404 permitting and Section 7 Endangered Species Act (ESA) consultation. He is experienced working with the Federal Highway Administration (FHWA), US Army Corps of Engineers (USACE), US Fish & Wildlife Service (USFWS), US Coast Guard (USCG), and state resource agencies. Since 2011, Mr. Morrell has focused on transportation projects and is an active member of the Transportation Research Board Committee on Environmental Analysis and Ecology.		
02/17 – Ongoing		I-49 South (Ricohoc to Berwick) SEIS, LADOTD, St. Mary Parish, LA. Project Manager and Ecology Lead for a Supplemental Environmental Impact Statement (EIS) for the conversion of a 10-mile segment of US 90 to I-49 from Ricohoc to Berwick in St. Mary Parish. Responsibilities include scope and labor hour negotiations, as well as managing the schedule and budget for multiple phases of project delivery including the traffic, line and grade, and environmental studies.		
04/21 – Ongoing		Rural Bridge Replacement Initiative Phase II – Districts 02, 03, 07, 61, and 62, LADOTD, Multiple Parishes, LA. Project Manager for 16 state projects involving replacement of 29 state highway bridges. The environmental scope of services for the projects consists of Solicitation of Views, Wetland Studies, Programmatic Categorical Exclusion Checklists, and permitting including USACE Nationwide Permits (NWPs) and Louisiana Department of Natural Resources Coastal Use Permits. Completed QAQC review of wetland findings reports and permit applications and agency coordination needed for permit approval.		
06/22 – Ongoing		Environmental Support Services - Ecology IDIQ Contract, GDOT, Statewide, GA. Project Manager. Responsible for contract management, staffing, and program delivery. Manage a team of staff and subconsultants providing 19 embedded (Support Services) ecologist positions with the GDOT Office of Environmental Services (OES). Also manage a team of ecologists and subconsultants delivering Ecology Initiatives including training media, guidance documents, report templates, programmatic agency agreements and consultants, and on-call services to the GDOT Ecology Section. Provide innovative digital solutions to improve GDOT program delivery including workload management, conflict of interest, and document tracking dashboards.		
04/16 – 5/23		Pete’s Highway Interchange Alternative and Environmental Assessment, LADOTD, Livingston Parish, LA. Ecology Lead for wetland delineation and protected species habitat assessment along Range Road in the vicinity of the I-12 interchange for the proposed interchange improvement project. Provided technical review of a Biological Resources and Wetland Findings Report, including required exhibits, in support of the NEPA Environmental Assessment.		
09/19 – 06/22		Environmental Support Services IDIQ Contract, GDOT, Statewide, GA. Project Manager and Ecology Lead. Responsible for management of embedded ecology and NEPA staff managing environmental studies on behalf of GDOT, including review of consultant documents. Design and develop ecology initiatives for the GDOT OES including guidebooks and toolkits to update		

	the Environmental Procedures Manual, training materials for contractor prequalification, <i>applications to streamline National Marine Fisheries Service Section 7 ESA and Essential Fish Habitat consultations</i> , and other research initiatives.
9/17 – 7/19	Aerated Stabilization Basin Embankment Repair, Georgia-Pacific Brewton, LLC, Escambia County, Alabama <i>Environmental Permitting Lead.</i> Responsible for management of environmental permitting for the repair and reinforcement of an existing aerated stabilization basin in the wastewater treatment system of the Brewton Mill located in Brewton, AL. Oversaw completion of a wetland delineation and findings report, as well as an <i>Individual Sec. 404 CWA permit application and Sec. 401 Water Quality Certification request</i> to the USACE Mobile District and Alabama Department of Environment Quality, respectively. Competed QAQC review of all deliverables, led agency coordination to obtain required permits, and assisted the client with completing compensatory mitigation for unavoidable impacts.
07/14 – 07/19	Statewide Ecological Services IDIQ Contract GDOT, Statewide, GA. <i>Deputy Project Manager and Ecology Lead.</i> Responsible for managing embedded ecologists assigned management of ecology studies, permitting, and biological assessment for GDOT projects. Negotiated a menu of services task order for on-call environmental studies providing the client the flexibility to complete tasks quickly to meet project delivery schedules. Managed preparation and provided technical review of ecology resource survey and assessment of effects report and permit applications for federally funded transportation projects. Collaborated with GDOT and regulatory agencies to develop guidance documents and report templates, including a <i>biological assessment template. Managed research evaluating the effectiveness of migratory bird mitigation measures on transportation projects</i> and provided recommendations to GDOT for best management practices.
12/15 – 11/18	Railroad Bridge Replacements, Confidential Class I Railroad Client, Louisiana and Texas. <i>Lead Ecologist.</i> Responsible for <i>wetland delineation</i> and protected species habitat assessments for replacement of two structurally deficient railroad bridges. Completed <i>Wetland Findings Report</i> , including required exhibits, and calculated impacts to streams and wetlands for bridge replacements. Coordinated with design for impact avoidance and minimization and provided technical review of a <i>NWP 14 Pre-Construction Notification (PCN)</i> , including permit sketches, submitted to the USACE Fort Worth District.
07/16 – 03/18	Bayou Sara Streambank Restoration, West Feliciana Parish Department of Public Works, West Feliciana Parish, LA. <i>Ecologist.</i> Project involved stabilizing the streambank along approximately 3,600 feet along Bayou Sara, where severe erosion is impacting the Town of St. Francisville's Wastewater Treatment Facility, pond levees, and the Parish's only access road (Ferdinand Street) to the Mississippi River. Completed a <i>wetland delineation and protected species habitat assessment</i> within the area proposed for bank stabilization, as well as adjacent staging and access areas. Provided technical review of a <i>Biological Resources and Wetland Findings Report</i> , including required exhibits, and <i>NWP 13 PCN, including permit sketches</i> for bank stabilization for which USACE authorization was successfully obtained.
11/15 – 12/16	SR 234 at Chickasawhatchee Creek Bridge Replacement, GDOT, Calhoun and Dougherty Counties, GA. <i>Lead Ecologist.</i> Responsible for ecology reporting, Section 404 permitting, and Section 7 Endangered Species Act (ESA) consultation for replacement of a load-limited, structurally deficient bridge over Chickasawhatchee Creek 8 miles north of Leary, GA. Prepared a <i>Biological Assessment for the federally listed mussel species and designated critical habitat</i> including development of special provisions to be included in contract documents for species protection. Based on this Biological Assessment, USFWS issued a Biological Opinion concurring with the recommended biological determination to support project NEPA documentation. Successfully obtained an Individual Section 404 Permit for stream and wetland impacts associated with bridge replacement and roadway improvements, including review and coordination of permit sketches.


16. Staff Experience

Firm employed by		ARCADIS		Meets MPR Nos 3, 4, 6, & 7	
Name	Jeremy Henson, CE		Years of relevant experience with this employer	8	
Title	Principal Ecologist/Line Manager		Years of relevant experience with other employer(s)	15	
Degree(s) / Years / Specialization			MS / 2011 / Ecology, Texas State University-San Marco BS / 2001 / Biology, University of Central Missouri		
Active registration number / state / expiration date			Certified Ecologist – Ecological Society of America #		
Year registered	2008	Discipline	Ecology		
Contract role(s) / brief description of responsibilities.			Biological Assessment Lead/Quality Review		
Experience dates		Experience and qualifications relevant to the proposed contract			
		<p>Mr. Henson is currently a principal ecologist and leader of the Texas ecology and permitting group with 23 years of experience conducting and managing natural resource assessments and planning/permitting projects throughout the United States. He is also a certified ecologist through the Ecological Society of America. His project experience includes National Environmental Policy Act (NEPA) documents (e.g., comprehensive conservation plans for the U.S. Fish and Wildlife Service, environmental assessments for Texas Department of Transportation, the National Park Service, and Public Utility Commission); wind energy studies; surface mining studies; wetland delineations and permitting in accordance with the U.S. Army Corps of Engineers (USACE); sensitive species habitat assessments and geographic information system (GIS) mapping; biological assessments; threatened and endangered species surveys; wildlife surveys; botanical inventories; and focused rare plant surveys.</p>			
10/22 – 07/23		<p>Collins Pipeline Spill Rapid Response Project, Chalmette, St. Bernard Parish, Louisiana. <i>Senior Technical Permitting Lead</i> for incident response and environmental permitting support for a 16-inch fuel pipeline release project near Chalmette, St. Bernard Parish, Louisiana. Arcadis supported Collins by providing rapid response planning to initiate recovery and response efforts. Arcadis prepared a wetland/biological/ecological impact assessment report to describe the observed impacts and provide impact avoidance measures to be implemented during the duration of the response. Arcadis also prepared and submitted a <i>Joint Permit Application for a Louisiana Coastal Use Permit and USACE Section 404 Permit</i>. Arcadis provided regulatory agency coordination through the permitting process, including completing a USACE 408 review, Real Estate Outgrant review, local Levee Board Review and approval, and Louisiana Department of Environmental Quality (LDEQ).</p>			
02/23 – 08/23		<p>Lake Purdy Dam Stability Improvements Project, Birmingham, Alabama. <i>Senior Technical Permitting Lead</i> for the Lake Purdy Dam Stability Improvement (LPDSI) project in Jefferson and Shelby Counties, Alabama. The proposed LPDSI project is located on BWW property surrounding Lake Purdy, approximately eight miles east/southeast of Birmingham, Alabama. The project includes dam stability improvements, architectural redesign, and road widening for construction equipment access. The project also includes the clearing of approximately eight acres of wooded area for roller-compacted concrete (RCC) staging and stockpiling in an upland area downstream of the dam. Arcadis provided initial environmental site assessment, wetland delineation, and wildlife habitat assessment services. Mr. Henson serves as the senior technical lead for all environmental services and coordination. Following project design, Arcadis prepared and submitted a U.S. Army Corps of Engineers (USACE) <i>Section 404 Nationwide Permit (NWP) Pre-Construction Notification</i> (PCN) package; prepared U.S. Environmental Protection Agency (EPA) funding support documentation; and conducted formal <i>Section 7 Consultation with the U.S. Fish and Wildlife Service</i> (USFWS) for impacts to federally listed threatened and endangered (T&E) bat species. Due to potentially adverse impacts to three federally listed T&E bat species, and one federal candidate species, Arcadis developed a <i>Biological</i></p>			

16. Staff Experience

	<i>Assessment (BA) for USFWS review and Incidental Take Permit (ITP)</i> approval. Arcadis is currently working with USFWS for ITP approval, and Arcadis will conduct follow up bat hibernacula surveys in the fall of 2023.
07/23 – 08/23	Confidential Chemical Refinery Client – New Orleans, Louisiana. <i>Senior Technical Permitting Lead</i> for a Department of Energy (DOE) grant proposal for the development of new low-carbon solutions refinery retrofits. The project is applying for federal grant funding from the DOE Office of Clean Energy Demonstrations, which is funded by the 2021 Inflation Reduction Act. The grant application includes a preliminary review of project development details, environmental justice screening, and design considerations. Arcadis will eventually prepare an Environmental Assessment (EA) for National Environmental Policy Act (NEPA) compliance, as well as provide comprehensive agency coordination and project permitting support. The project is ongoing, and Arcadis will provide a preliminary <i>delineation of potential Waters of the U.S.; threatened and endangered species evaluation</i> and resource management planning; cultural resources evaluation and management planning; and other state and local regulatory coordination.
11/18 – 01/19	Comite River Diversion – Pipeline HDD Project Confidential Oil & Gas Client Pipeline Company, East Baton Rouge Parish Baton Rouge, LA. <i>Lead Scientist</i> for the relocation of Confidential Oil & Gas Client Company's (EMPCo's) LA-90, 16-in. diameter gasoline pipeline prior to construction of the Comite River Diversion Canal located north of Baton Rouge, Louisiana. The proposed project is a 12-mi. diversion channel, which would be constructed from the Comite River to the Mississippi River. The purpose of the project is to provide flood-damage reduction for residents in the lower part of the Comite River Basin by diverting flood waters into the Mississippi River. In addition to the construction of the canal, associated infrastructure such as control structures, levees, roads, and utilities will need to be constructed, modified, or relocated to implement the project. Arcadis' performed environmental/ecological assessment and the following agency coordination and permitting: <i>USACE Section 404/10 and 408 permitting; Louisiana Department of Environmental Quality (LDEQ) 401 Water Quality Certification</i> and stormwater permitting; Louisiana Department of Wildlife and Fisheries (LDWF) rare wildlife species coordination; Louisiana Office of Cultural Development-Division of Historic Preservation (LOCD-DHP) coordination; and city/parish floodplain permitting and levee crossing coordination.
06/22 – 08/23	Brazos Diversion Channel Direct Pipe Replacement Project, Confidential Oil and Gas Client, Brazoria County, Texas. <i>Senior Technical Permitting Lead</i> as a part of the client's water crossing integrity program, which provided comprehensive permitting support for a pipeline replacement project in Brazoria County, Texas. The client operates the U.S. Department of Energy (DOE) - owned TX-226A pipeline, which is a 30-inch diameter crude oil pipeline that extends between the DOE's Strategic Petroleum Reserve at Bryan Mound and Jones Creek, Texas. The project involved the replacement of the existing pipeline segment beneath the Brazos River Diversion Channel (BRDC) via Direct Pipe® (DP) installation methods to address exposure and reduced depth of cover. Mr. Henson managed the project and served as the senior technical ecologist and permitting lead. Arcadis coordinated <i>Section 10 authorization</i> for pipeline replacement by DP methods under a Section 10 waterway (the BRDC) and verification of eligibility for coverage under <i>Nationwide Permit 12</i> for temporary impacts to emergent wetlands within the existing right-of-way and adjacent temporary workspaces. The proposed DP pipe replacement was also located beneath an adjacent earthen levee owned by the Velasco County Drainage District (and maintained by the U.S. Army Corps of Engineers). In accordance with 33 USC 408 (Section 408), Arcadis coordinated with the USACE Operations Division for <i>Section 408 review and approval</i> .


16. Staff Experience

Firm employed by		ARCADIS		Meets MPR No. 2
Name	Angela Dalsis, PWS	Years of relevant experience with this employer	5	
Title	Environmental Lead	Years of relevant experience with other employer(s)	18	
Degree(s) / Years / Specialization		BS / 2000 / Environmental Science, University of South Florida		
Active registration number / state / expiration date		Professional Wetland Scientist #2299		
Year registered	2008	Discipline	Environmental	
Contract role(s) / brief description of responsibilities.		Wetlands/Environmental Permits Lead/Quality Review		
Experience dates	Experience and qualifications relevant to the proposed contract			
	<p>Ms. Dalsis provides strategic regulatory and environmental consulting support to private and public clients and specializes in Clean Water Act Section 404 permitting and mitigation planning. She is a Professional Wetland Scientist with 23 years of experience in the field of natural resources. She has extensive experience with environmental permitting, habitat assessment, and aquatic resource delineation for roadway, rail, utility, remediation, and treatment wetland projects.</p>			
01/21 – 08/23	<p>Gulf Integrity Digs, Columbia Gulf Transmission, LLC, Various Parishes, LA. <i>Program Manager and Subject Matter Expert.</i> Provided technical expertise, management, quality review, coordination of aquatic resource delineations, and federal, state, and local permits required for 90 pipeline maintenance repair digs in Louisiana, including the coastal zone. Projects included assessment of aquatic resources; rare, threatened, and endangered species habitat; FEMA floodplain, adjacent local and federal levees, and cultural resources potentially affected by maintenance activities. <i>Louisiana permitting included coordination with parish levee districts, Louisiana Department of Natural Resources Office of Coastal Management Coastal Use Permitting, and the U.S. Army Corps of Engineers New Orleans District Section 404 and 408 groups.</i></p>			
06/23 – 08/23	<p>Highway 82 Corrective Action Plan, Arkel International <i>Task Manager and Subject Matter Expert</i> Provided permit compliance and environmental inspection of stormwater controls for corrective action involved with Section 404 and Coastal Use Permitting. Louisiana permitting included individual coastal use and Section 404 permitting.</p>			
01/15 – 12/16	<p>Toomey Siding, Union Pacific Railroad, Toomey, LA. <i>Project Manager and Subject Matter Expert.</i> Led <i>aquatic resource delineation and biological assessment for USACE Section 404 permitting</i> efforts for a proposed 2.25-mile-long siding track. The project was put on hold before permit application submittal.</p>			
05/13 – 12/15	<p>ERCO Siding, Union Pacific Railroad, Monroe, LA. <i>Project Manager and Subject Matter Expert.</i> Led aquatic resource delineation report development and preparation of an <i>Individual Section 404 permit application</i> submitted to the USACE Vicksburg District for a two-mile siding track. Prepared a wetland mitigation plan and negotiated mitigation requirements with the USACE Vicksburg District. Prepared a large-construction Stormwater Pollution Prevention Plan (SWPPP) for the Louisiana Department of Environmental Quality (LDEQ) and a UPRR All Permits Issued (API) package. The project was put on hold before a permit was issued.</p>			
05/13 – 07/18	<p>Chopin Siding, Union Pacific Railroad, Natchitoches Parish, LA. <i>Project Manager and Subject Matter Expert.</i> Led <i>aquatic resource delineation report development</i> and preparation of an Individual Section 404 permit application submitted to the USACE Vicksburg District for a proposed 1.50-mile siding track. Provided oversight of the cultural subcontractor for a Phase 1 archaeological survey of a historic civil war battlefield site. Prepared a <i>wetland and stream mitigation plan</i> and negotiated</p>			

16. Staff Experience

	mitigation requirements with the USACE Vicksburg District. Prepared a large-construction SWPPP for LDEQ, prepared a UPRR API package, and provided construction oversight for permit compliance.
05/13 – 08/15	Calcasieu Siding, Union Pacific Railroad, Calcasieu Parish, LA. <i>Project Manager and Subject Matter Expert.</i> Led aquatic resource delineation report development and preparation of an <i>Individual Section 404 permit application</i> submitted to the USACE New Orleans District for a proposed 1.7-mile siding track. Prepared a wetland mitigation plan and negotiated mitigation requirements with the USACE New Orleans District. Prepared a large-construction SWPPP for the LDEQ, prepared a UPRR API package, and provided construction oversight for permit compliance.
08/15 – 05/17	Dequincy Subdivision Bridge Replacements, Union Pacific Railroad, Allen, St. Landry, Jefferson Davis, Evangeline Parishes, LA. <i>Project Manager and Subject Matter Expert.</i> Led aquatic resource delineation report development and preparation of <i>Nationwide Permit 14 Pre-Construction Notification</i> submitted to the USACE New Orleans District for five bridge replacement projects. Permits were issued under the 2012 Nationwide Permit Program and reverified under the 2017 Nationwide Permit Program.
01/15 – 04/18	Dayton Crossover, Union Pacific Railroad, Dayton, TX. <i>Project Manager and Subject Matter Expert.</i> Led USACE Section 404 permit strategy and minimization efforts to avoid Section 404 notifying permit triggers and costly stream mitigation for proposed rail improvements. Prepared a small-construction SWPPP for the Texas Commission on Environmental Quality (TCEQ), prepared a UPRR API package, and provided construction oversight for permit compliance.

16. Staff Experience

Firm employed by		ARCADIS		Meets MPR No. 1	
Name	Bonnie Bynum		Years of relevant experience with this employer	20	
Title	Environmental Principal		Years of relevant experience with other employer(s)	6	
Degree(s) / Years / Specialization			BS, Geology University of West Georgia		
Active registration number / state / expiration date			N/A		
Year registered	N/A	Discipline	N/A		
Contract role(s) / brief description of responsibilities.			Principal in Charge		
Experience dates		Experience and qualifications relevant to the proposed contract			
		<p>Ms. Bynum is the National Environmental Policy Act (NEPA), Planning and Permitting Department Manager and a Senior Project Manager. She is responsible for the collaboration and coordination of projects among multiple environmental and engineering disciplines, including ecology and permitting; air quality; noise impacts; cultural resource identification and impact assessment; and traffic studies. She manages and prepares environmental impact documents in accordance with NEPA and leads and develops public outreach programs and meetings. Ms. Bynum has more than 26 years of experience working with various DOTs across the southeast, Federal Highway Administrations (FHWA), State Historic Preservation Offices (SHPO), Environmental Protection Divisions, the U.S. Army Corps of Engineers (USACE), and the U.S. Coast Guard (USCG) for navigable waters. Certifications/Training include FHWA-NHI NEPA/ Transportation Decision Making; NHI Environmental Justices; National Preservation Institute, Section 106 for Experienced Practitioners; Institute for Participatory Planning and Management Systematic Development of Informed Consent; Streamlining Section 106 and NEPA. Bonnie and Project Manager Jason Morrell have been completing environmental permitting projects together for 10+ years.</p>			
6/20-Ongoing		<p>Environmental Services: 30 Counties throughout GA for GDOT: <i>Contract Manager/Lead Environmental Manager</i>, responsible for delivering on \$25 M IDIQ overseeing 30+ active task orders for bridge replacements in metro Atlanta and coastal Georgia. This contract utilizes various contracting mechanisms including cost-plus-fixed fee and billable rate tables. Environmental services include delivery in ecology, <i>USACE and USCG permitting, threatened and endangered species surveys</i>, species relocations, history, archaeology, air, noise, and community impacts. All projects are federally funded and delivered in compliance with the National Environmental Policy Act.</p>			
12/16-10/17		<p>I-75 Commercial Vehicle Lanes (CVLs) Scoping Phase: Monroe/Lamar/Butts/Spalding/Henry Counties, GA for GDOT: <i>Lead Environmental Manager</i> responsible for overseeing the screening of environmental constraints for three concept alternatives for CVLs along a 40-mile corridor of I-75. As part of Arcadis' commitment to our DBE mentoring program, Bonnie guided Aulick Engineering environmental staff on what to screen for, what databases to research, how to work with engineering staff to develop an environmental constraints map and identify environmentally sensitive resources that must be avoided. Additionally, Bonnie worked with her own staff to develop a project justification statement and Need and Purpose Statement to support improved mobility within the I-75 corridor.</p>			
06/16- 03/18		<p>I-16/I-95 Interchange Widening, GDOT, Chatham County, GA. <i>NEPA Lead</i>. Overseeing preparation of Categorical Exclusion (CE) document for I-16 widening between I-95 and I-516, as well as reconstruction of the I-16/I-95 interchange. Successfully provided justification and worked with GDOT and PMC to receive FHWA concurrence to reduce environmental documentation</p>			

16. Staff Experience


	from an Environmental Assessment (EA) to a CE in a corridor that involves five historic canals, a community highly concerned with noise impacts, and <i>extensive wetlands and other Waters of the U.S.</i> The project has been let to construction.
10/17 – Ongoing	Kennesaw Mountain Pedestrian Improvement, GDOT, Cobb County, and City of Marietta, GA. <i>Environmental Quality Manager.</i> Responsible for the Environmental Assessment (EA), Finding of No Significant Impact (FONSI) and environmental re-evaluation for an approximately seven-mile multi-use trail. The project was delivered in partnership with the National Park Service (NPS), GDOT, Cobb County, and the City of Marietta. Arcadis was responsible for public involvement management and served as agency liaison. The EA was written with specific NEPA requirements of FHWA/GDOT but also included NPS requirements specific to Director's Order (DO)-77-1, which speaks to NPS requirements for <i>wetland and stream delineations</i> . Once FHWA/GDOT approved the document, Arcadis prepared a separate NPS FONSI and Impairment Statement that adopted the FHWA/GDOT EA. The project has been awarded and construction is underway.
06/16 – Ongoing	I-285/SR-400 Interchange EA, GDOT, Fulton County, GA. <i>Quality Control Manager</i> for a fast-track Environmental Assessment (approved by FHWA in 12 months) for the reconstruction of the I-285/SR-400 interchange and the construction of CD lanes along I-285 for approx. 4.5 miles. Technical expertise was used to minimize impacts within a project area that included 31 Waters of the U.S., 20 historic resources/districts, an environmental justice community, and a public park. Detailed indirect and cumulative effects analysis and an <i>Individual Section 404 Clean Water Act permit</i> required. Currently overseeing re-assessment/re-evaluation efforts associated with design changes by the Design-Build contractor.
11/18 – Ongoing	I-285 Westside Express Lanes, GDOT, Fulton and Cobb Counties, GA. Lead NEPA planner preparing an Environment Assessment for the construction of over 12 miles of managed/tolled lanes along the western segment of I-285. The project will also include the reconstruction of five interchanges. The corridor is flanked with over 60 Waters of the US, a major river crossing, two railroads, and major utilities. Environmental analysis will also include in-depth analysis of the effects of tolled lanes on environmental justice communities. Assisting in the stakeholder engagement social media and preparing for a virtual public involvement open house. The Environmental Assessment is schedule to be approved in 2026 and let to a Design-Build Contractor.



16. Staff Experience

Firm employed by		ARCADIS		Meets MPR No. 3
Name	Elizabeth Hingle	Years of relevant experience with this employer	8	
Title	Environmental Scientist	Years of relevant experience with other employer(s)	1	
Degree(s) / Years / Specialization		BS / 2012 / Natural Resources & Ecology Management / Louisiana State University		
Active registration number / state / expiration date		N/A		
Year registered	N/A	Discipline	N/A	
Contract role(s) / brief description of responsibilities.		Biological Assessments, Wetland Delineation/Findings, Environmental Permits		
Experience dates	Experience and qualifications relevant to the proposed contract			
		<p>Ms. Hingle is a biologist with a diverse background in terrestrial ecology, permitting, and compliance, with nine years of relevant experience working throughout the U.S. and abroad. She has experience in terrestrial ecology; environmental risk assessment; pre-construction clearance surveys for avian resources, threatened and endangered species, and sensitive habitats. She routinely completes delineations of wetlands and other Waters of the U.S.; Section 404 permitting through the U.S. Army Corps of Engineers (USACE), and surveys required under the Endangered Species Act, Migratory Bird Treaty Act (MBTA), Bald and Golden Eagle Protection Act. She has extensive experience with GPS data collection and processing techniques for integration into GIS geodatabase systems and is well versed in the use of ArcGIS for data analysis, geodatabase development and management, and field map and figure generation.</p>		
10/15 – 05/21	<p>Wetland Delineations & Remediation for UPRR Derailments - Union Pacific Railroad Company, Various State. <i>Biologist.</i> Respond to new derailments for environmental impact assessments. Complete <i>wetland and stream delineations</i> when needed, as well as provide BMP recommendations. Under certain circumstances, Arcadis also steps in for wetland restoration, which may involve planting native shrubs and seed. Lead in preparing <i>Nationwide Permit Pre-Construction Notifications</i>, Stormwater Pollution Prevention Plans, and other documentation as needed depending on level of disturbance.</p>			
03/18 – 05/18	<p>Seadrift 26-Acre Wetland Development Project – Confidential Client, Seadrift, TX. <i>Biologist.</i> Arcadis was contracted by a confidential client to develop an emergent wetland community in an existing 26-acre stormwater detention basin located within a former operations plant in Calhoun County, TX. The detention basin was primarily used for stormwater catchment and detention but was created as a component of a larger site remediation project. The detention basin was converted to an emergent wetland community to enhance stormwater detention function and increase vegetative diversity and microtopography. The creation of the wetland also provided an opportunity to apply for a TX Commission on Environmental Quality (TCEQ) – TX Environmental Excellence Award (TEEA) for achievements in environmental preservation and protection.</p>			
09/18 – 11/18	<p>Wetland Delineations for GTN A Line Hydrotests Project - TransCanada Corporation, Bonner's Ferry, ID. <i>Field Lead.</i> Acted as field lead to complete <i>wetland delineations</i> across seven survey areas in northern ID. Followed structured protocol on contacting landowners and client. Delivered daily reports.</p>			

16. Staff Experience


01/18 – Ongoing	Mussel Survey & Relocation for S-232 Mustang Lockport to Patoka Crude Oil Pipeline Repair Project - Confidential Client, Illinois. <i>Biologist.</i> Conducted a month long in-water <i>freshwater mussel survey and relocation</i> , as part of the Arcadis Scientific Dive team, within Forked Creek, Illinois. This involved a timed-search survey by examining the substrate visually and tactilely within 100m ² cells throughout the area of direct impact and buffers. Relocation efforts involved transporting mussels to suitable habitat and placing them in substrate correctly, for best survivability.
05/18 – 05/20	Field Reconnaissance for Invenergy Solar Projects - Invenergy Company, TX. <i>Biologist.</i> Conducted a site characterization assessment on over 40,000 acres of land. This involved a coarse-scale ground-truth of Texas Parks and Wildlife Department (TPWD) Ecological Mapping Systems. Documented areas where land cover types provided suitable habitat for species of concern. Observed features that may attract wildlife and recorded wildlife seen while on site.
05/18 – 07/18	MBTA and Weed Surveys for Pauite 2018 Expansion Project - Confidential Client, Great Falls, MT. <i>Biologist.</i> Conducted nest search <i>surveys for migratory birds</i> . Documented weeds found within survey area. Recorded sensitive species present within project area.
08/17 – Ongoing	Water Crossing Integrity Program – Confidential Client, TX. <i>Biologist.</i> Provide technical permitting expertise for a comprehensive pipeline integrity program related to stream crossings. Following a technical risk analysis by engineers and development of a proposed pipeline mitigation design, Arcadis evaluates the ecological integrity and resources associated with each pipeline stream crossing to identify applicable permits and sensitive receptors. Arcadis closely coordinates with the USACE for <i>Clean Water Act compliance</i> and with TPWD state terrestrial and aquatic resource impacts. Arcadis frequently coordinates with TPWD's Kills and Spills Team for aquatic resource relocation planning, including <i>survey and relocation of state-listed threatened mussels, oysters, and other coastal aquatic resources</i> .
07/17 – 08/17	Eastern Sand Darter Survey for WRCL 739 Pipeline Maintenance Project - Marathon Pipeline LLC, Cumberland County, Illinois. <i>Biologist.</i> Assessed project area for threatened species by conducting a presence/absence survey for eastern sand darters within the proposed project footprint in Muddy Creek, Illinois. The survey was conducted using a combination of backpack electrofishing, seining and dip-netting.
04/17 – 05/17	Bald Eagle Nest Biological Monitor for PAOW Pipeline HDD Project - Marathon Pipeline LLC, Spencer County, Indiana, IN. <i>Biologist.</i> Monitored an active bald eagle nest to minimize disturbance during tree clearance activities.
11/14 – 04/15	Burrowing Owl, Raptor, and Migratory Breeding Bird Surveys for Swisher Wind Project - Exelon Corporation, Swisher, TX. <i>Biologist.</i> Conducted two rounds of <i>breeding-season surveys</i> within the area of a proposed wind farm in north-central Texas. The surveys included transect lines of fixed-radius point counts for passerines, single-point wide-radius counts for raptors, and systematic raptor nest searches. Mapped Burrowing Owl territories during the surveys.
06/16 – 08/17	SE Idaho Remediation Project - Agrium, Port Huron, MI. <i>Biologist.</i> Conducted terrestrial surveys at old and active mine sites in southeast Idaho. This included <i>point count surveys of migratory breeding bird species</i> and visual encounter surveys (VES) for mammals, reptiles, and amphibians. Transects were setup for the VES surveys.
03/18 – 09/18	Permitting for Navigable Waters - Gulf Coast Ammonia LLC, Subsidiary (Agrifos Partners LLC), Texas City, TX. <i>Biologist.</i> Conducted <i>oyster bed and seagrass surveys</i> within Galveston Bay, TX. Assisted in piloting a boat and operating a small oyster dredge along predetermined transects of the bay. Once the dredge was retrieved after a transect, assisted in evaluating the contents, characterizing the transect, measuring the water quality using a multiparameter sonde, and mapping the area using a handheld GPS. Seagrass was evaluated by sight in water less than six feet deep.

Firm employed by		ARCADIS	
Name	Catherine Bruns	Years of relevant experience with this employer	<1
Title	Ecologist	Years of relevant experience with other employer(s)	2
Degree(s) / Years / Specialization		BS / 2021 / Coastal Environmental Science, Louisiana State University	
Active registration number / state / expiration date		Traffic Control Technician / Louisiana / Completed 07/23	
Year registered	NA	Discipline	NA
Contract role(s) / brief description of responsibilities.		Wetland Delineation/Findings	
Experience dates	Experience and qualifications relevant to the proposed contract		
		<p>Ms. Bruns is an Ecologist in the Arcadis Baton Rouge, Louisiana office. She supports transportation projects by performing wetland studies and preparing permit packages for submittal to USACE and LDNR Office of Coastal Management. Prior to joining Arcadis, she worked in the LDNR Office of Coastal Management performing technical and environmental reviews of projects submitted for Coastal Use Permits. She has experience with environmental permitting, biological assessment, and wetland studies.</p>	
05/23 – Present	<p>Rural Bridge Replacement Initiative Phase II – Districts 02, 03, 07, 61, and 62, LADOTD, Multiple Parishes, LA. <i>Ecologist</i> for 16 state projects involving replacement of 29 state highway bridges. The environmental scope of services for the projects consists of Solicitation of Views, Wetland Studies, Programmatic Categorical Exclusion Checklists, and permitting including USACE Nationwide Permits (NWP) and Louisiana Department of Natural Resources Coastal Use permits.</p>		
07/23 – Present	<p>I-20 Widening/Overlay (Vancil Rd – LA 34), LADOTD, Ouachita Parish, LA. <i>Ecologist</i> for wetland delineation along approximately five miles of I-20 near West Monroe, LA for the proposed interstate widening project. Developed a Wetland Findings Report, including required exhibits, to be used for a USACE Jurisdictional Determination and permitting.</p>		
02/23 – 05/23	<p>JDEC Hurricane Laura Repair, Replacement, and Restoration, LDNR Office of Coastal Management, Multiple Parishes, LA. <i>Permit Analyst</i> responsible for technical review of environmental impact studies and preliminary construction plans submitted by Jefferson Davis Electric Cooperative for a Louisiana Department of Natural Resources Coastal Use Permit. The project includes replacement of 147 miles of electrical system infrastructure damaged by Hurricane Laura.</p>		
01/23 – 05/23	<p>Butch Hill Pump Station, LDNR Office of Coastal Management, Lafourche Parish, LA. <i>Permit Analyst</i> responsible for technical review of environmental impact studies and preliminary construction plans submitted by Lafourche Parish Government for a Louisiana Department of Natural Resources Coastal Use Permit. The project includes construction of a 1,200 CFS pump station and subsequent removal of an existing pump station as well as relocation of existing levee berms.</p>		

Firm employed by				Meets MPR Nos. 4 and 5	
Name		Morgan Niccoli		Years of relevant experience with this employer	
Title		Project Ecologist		Years of relevant experience with other employer(s)	
Degree(s) / Years / Specialization		Dual BS / 2010 / Biology and Environmental Studies, Virginia Commonwealth University MS / 2013 / Biology, The College of William and Mary			
Active registration number / state / expiration date			N/A		
Year registered		N/A		Discipline	
				N/A	
Contract role(s) / brief description of responsibilities.				Biological Assessments	
Experience dates		Experience and qualifications relevant to the proposed contract			
		<p>Mrs. Niccoli has over 9 years of experience in transportation ecology. Prior to joining Arcadis, she served as an Ecology Team Leader with the Georgia Department of Transportation (GDOT) where she managed a team of ecologists with over 160 active transportation projects ranging in degree of complexity. She has experience providing technical reviews for Section 404 Clean Water Act (CWA) permits, Biological Assessments, and Ecology reports. She has served as project manager for the development of a statewide bat programmatic agreement as well as project manager for several GDOT-funded research projects. She has experience working with the Federal Highway Administration (FHWA), U.S. Army Corps of Engineers (USACE), U.S. Fish and Wildlife Service (USFWS), as well as state wildlife and environmental protection agencies.</p>			
03/22 – Ongoing		<p>Collaborative Programmatic Agreement, GDOT, Statewide, GA. Project Manager Responsible for assisting with the development of a programmatic agreement that includes a combined <i>Biological Assessment and Biological Opinion</i>, covering potential impacts from GDOT activities to federal and state bats in Georgia. Provided overall project management, technical reviews, and agency coordination with stakeholders, including FHWA, USACE, USFWS, and Georgia Department of Natural Resources Wildlife Resource Division.</p>			
01/22 – Ongoing		<p>Ecology Training Media, GDOT, Statewide, GA. Content Developer and QA Reviewer Responsible for assisting with the development and technical reviews of interactive training video modules for preparing State Buffer Variance and Individual Section 404 CWA permit applications. This initiative is designed to serve as consultant pre-qualification for the GDOT Office of Environmental, Ecology Section and is being completed under the Environmental Support Services – Ecology IDIQ Contract.</p>			
01/21 – Ongoing		<p>Ecology Workload Dashboard, GDOT, Statewide, GA. Content Developer, Project Manager Responsible for assisting with the development of an Ecology Workload Dashboard to improve GDOT program delivery by assisting GDOT Ecology team leaders with workload management and project assignments.</p>			
06/22 – 05/23		<p>Statewide Connected Vehicle and Broadband Installation, GDOT, Multiple Counties, GA. Ecologist Project involved the deployment of an expanded statewide Broadband and Intelligent Transportation Systems to provide the communication infrastructure necessary for connected vehicles and to provide underserved rural communities access to Broadband. Provided project team support with developing the ecology document that contained <i>assessments of effects to over 70 federal and state protected species</i>. Provided technical support in determining contractual commitments for surveying transportation structures across the state for migratory bird species and federal and state protected bats pursuant to Section 7 of the Endangered Species Act (ESA). Responsible for completing a technical review of the Ecology Resource Survey and Assessment of Effects Report as well as the Special Provision for contract documents.</p>			

09/19 – 06/22	Ecology Guidebooks and Toolkits, GDOT, Statewide, GA. <i>Ecology Team Leader</i> Assisted with the development of ecology toolkits as well as provided quality assurance reviews of Ecology guidebooks developed to update GDOT's Environmental Procedures Manual. These guidance documents outline procedures for assessing impacts to protected species and completing <i>Section 7 ESA consultations</i> , guidance on completing Section 404 CWA permits and buffer variance applications, as well as GDOT procedures for documenting compliance with federal regulations including Fish and Wildlife Coordination Act, Bald and Golden Eagle Protection Act, <i>Migratory Bird Treaty Act</i> , and Magnuson-Stevens Fishery Conservation and Management Act.
01/20 – 09/20	State Route 25 at Savannah River in Port Wentworth, GDOT, Chatham County, GA. <i>Ecology Team Leader</i> Provided support with agency coordination with the National Oceanic and Atmospheric Administration (NOAA) Fisheries and USFWS as well as provided a technical review of the Ecology Resource Survey and Assessment of Effects Report and <i>Biological Assessment</i> . The project proposed to replace the existing State Route 25 bridge over the Savannah River and had proposed effect determinations of Likely to Adversely Affect for the Atlantic and shortnose sturgeons.
01/18 – 11/18	Evaluating Migratory Bird Exclusion on Transportation Structures, GDOT, Statewide, GA. <i>Project Manager</i> Responsible for managing a GDOT-funded <i>research project on the effectiveness of migratory bird/exclusion/deterrence practices</i> used on transportation structures and recommendations to improve GDOT migratory bird protection practices as well as provided quality assurance reviews of the findings report. Ultimately a recommendation to establish an annual contract with the U.S. Department of Agriculture, Animal and Plant Health Inspection Service (APHIS) Wildlife Services to prevent migratory bird nesting on bridges and culverts was proposed to GDOT.
09/17 – 11/17	Interstate 75 over County Road 21/New Town Road – Bridge Preservation, GDOT, Gordon County, GA. <i>Ecology Team Leader</i> Project consisted of bridge preservation work on an existing bridge that had over 2000 bats observed roosting on the existing structure. Responsible for assisting with agency coordination with the USFWS and GADNR as well as provided technical support in the development of the <i>Biological Assessment of proposed effects to the northern long-eared bat, Indiana bat, and gray bat</i> . Responsible for providing technical reviews of the Ecology Memorandum and Biological Assessment.
04/14 – 01/20	Multiple transportation projects, GDOT, Statewide, GA. <i>Ecologist</i> As a consultant Ecologist, GDOT Senior Ecologist, and GDOT Ecology Team Leader, responsible for conducting general ecology field surveys that included habitat assessments, stream and wetland delineations, <i>bridge and culvert surveys for migratory birds and state and federally protected bats</i> as well as protected flora and fauna surveys. Prepared Ecology Survey and Assessment of Effects Reports, Biological Assessments, Section 404 CWA permit applications and Buffer Variance Applications as well as provided technical reviews.


16. Staff Experience

Firm employed by		ARCADIS		Meets MPR No. 6	
Name	Matt Frackelton		Years of relevant experience with this employer	18	
Title	Senior Aquatic Scientist/ Diver		Years of relevant experience with other employer(s)	0	
Degree(s) / Years / Specialization			BA / 2004 / Anthropology, Connecticut College		
Active registration number / state / expiration date					
Year registered	2004	Discipline	Ecology		
Contract role(s) / brief description of responsibilities.			Aquatic / Underwater Species Surveys		
Experience dates		Experience and qualifications relevant to the proposed contract			
		<p>Mr. Frackelton is currently a senior scientist and technical expert for fisheries and aquatic studies with over 18 years of experience conducting and managing natural resource assessments, biological monitoring and permitting projects throughout the U.S. He has experience developing and conducting projects under CERCLA and NEPA as well as supporting clients with natural resource damage assessments (NRDA), Section 7 consultations under the Endangered Species Act as well as state and federally threatened & endangered (T&E) species surveys and relocations. <i>He is a certified open water diver, member of the Arcadis Scientific Dive Team and Senior Member of the Arcadis Diving Control Board.</i> He has specialized training for conducting electrofishing, including in waters with endangered fish species and holds a variety of Scientific Collection Permits, T&E species permits and salvage and recovery permits for aquatic and terrestrial species throughout the U.S.</p>			
05/08 – 02/20		<p>Mammal, Fish, Herptile and Invertebrate Surveys, and Bivalve Bioaccumulation Study, Confidential Industrial Client, AL. <i>Lead Scientist and Dive Supervisor</i> who led field teams performing small mammal, fish, invertebrate and herptile community surveys to develop population estimates and a food web model. Collected tissue samples of aquatic and terrestrial species to assess ecological risks. Developed a study plan and implemented a project to assess the potential utility of passive samplers compared to live bivalves (Asian clams) at bioaccumulation rates in over 15 miles of river and an impoundment. <i>Led overall project and individual dive teams</i>, coordinated with agencies, and assisted the client with permitting and reporting.</p>			
12/19 – 02/20		<p>Threatened and Endangered Species Assessment and Surveys, North Carolina Department of Transportation, NC. <i>Scientist</i> assisted with the assessment and vetting of potential T&E species including <i>multiple freshwater mussels</i> prior to a road widening project. Coordinated with federal and state agencies to assess potential project impacts on sensitive species and habitats. Compiled data, reported results and assisted with permitting.</p>			
05/21-11/22		<p>Threatened and Endangered Freshwater Mussel Surveys and Relocation Confidential Oil & Gas Client, IL. <i>Dive Supervisor</i> for an <i>underwater mussel survey</i> to document the mussel species present at the site, including state and federally listed mussel species, and their general relative abundance prior to pipeline repairs. The survey included a qualitative timed-area visual search of the project areas as well as buffers areas. Scientists worked in teams to perform a visual/tactile search of each cell to remove mussels prior to construction. All mussels were speciated, measured, photographed, and relocated to a suitable release location upstream. Coordinated with Client, agencies and completed reporting and permitting.</p>			
05/20 – 08/20		<p>Threatened and Endangered Species Surveys, Dive Plan Coordination and Reporting, United States Coast Guard, GA. <i>Scientist</i> assisted with the development of T&E species surveys under a NEPA project to rebuild a Coast Guard station including documenting the potential presence of listed corals using scientific divers. Worked with the project team and military staff to identify sensitive habitats and species on-site. <i>Developed and helped review work plans, dive plans and reports and shepherded the diving component through the Arcadis Dive Control Board review.</i></p>			

16. Staff Experience

07/22 – 10/22	Kankakee River Freshwater Mussel Relocation – Confidential Oil & Gas Client, IL. <i>Dive Supervisor</i> for an underwater mussel survey to document the mussel species present at the site, including state listed species, and their general relative abundance prior to dredging a cooling water intake structure. Survey included a qualitative timed-area search of the project area and quantitative plots along transects and buffers. All mussels were speciated, measured, photographed, and relocated.
09/15 – 10/16	Freshwater Mussel Surveys, Confidential Industrial Client, MI. <i>Scientific Diver</i> who performed a mussel survey to document the mussel species present at the site and their general relative abundance prior to remediation. Arcadis also assessed the presence of potential relocation areas and coordinated permitting with state agencies. The underwater survey included a qualitative timed-area visual search of the project areas as well as excavating quadrats along transects.
11/21 – Ongoing	Freshwater Mussel Emergency Response and Agency Coordination, Confidential Rail Client, IA. <i>Technical Expert</i> responded to a derailment in known habitat of three federally listed mussel species as well as state listed species. Served as onsite biologist interfacing with federal and state agencies to identify risks and minimize impacts to freshwater mussels. Assisted with mussel recovery, identification and relocation and assessed derailment impacts on the mussel community.
03/19 – 02/20	Fisheries and Freshwater Mussel Emergency Response, Confidential Rail Client, NM. <i>Lead Scientist</i> Immediately responded to a train derailment for fisheries support for a federally listed fish species and two state listed (fish and freshwater mussel) species at the derailment site. Assisted with permitting, interfaced with client and agency representatives, and led a sampling crew to create an exclusion zone, clear fish using electrofishing and served as an onsite biological monitor for T&E fish species for the project duration.
08/18 – 06/19	Freshwater Mussel Surveys, Biological Monitoring Confidential Oil and Gas Client, IL. <i>Scientist, dive team lead</i> conducted T&E mussel surveys and relocation using scientific divers in support of a pipeline repair project. Assisted with permitting and reporting as well on acted as onsite biological monitor to protect T&E species and other aquatic resources during bridge construction and HDD drilling.
04/21- Ongoing	T&E Freshwater Mussel Relocation, Chemung County Sewer District, NY. <i>Technical Expert, Lead Scientist</i> conducted T&E mussel relocation using scientific divers in support of a wastewater treatment plant expansion project. Coordinated with multiple state agencies, contractors and client to get incidental take coverage, and developed a relocation plan including mitigation for project impacts and post relocation monitoring. Led multiple dive teams to conduct the work and moved over 800 mussels and over 100 listed mussels out of the project area.


16. Staff Experience

Firm employed by		ARCADIS		Meets MPR No. 6	
Name	Nick Firman		Years of relevant experience with this employer	8	
Title	Aquatic Scientist / Diver		Years of relevant experience with other employer(s)	0	
Degree(s) / Years / Specialization			BS / 2015 / Biology, Mount St. Mary's University		
Active registration number / state / expiration date			PADI Open Water Diver Certification and Dry Suit Certification		
Year registered	2016	Discipline	Scientific Diving		
Contract role(s) / brief description of responsibilities.			Aquatic / Underwater Species Surveys		
Experience dates		Experience and qualifications relevant to the proposed contract			
		<p>Mr. Firman is a certified open water diver and has <i>eight years of diving experience on the Arcadis Scientific Dive team conducting freshwater mussel surveys</i> and relocations (including for both state and federally listed mussel species), habitat assessments and passive sampler studies using SCUBA diving techniques. He is also a dive supervisor for the Arcadis Scientific Dive team and a member of the Arcadis U.S. Scientific Diving Control Board. Mr. Firman has held Threatened and Endangered species permits for various freshwater mussel species. Mr. Firman has successfully completed the Principles and Techniques of Electrofishing training and has hundreds of hours of experience both backpack electrofishing as well as boat electrofishing.</p>			
1/20 – Current		<p>Chemung River Green Floater Relocation and Monitoring – Chemung County Sewer District, Chemung County, New York. Applied for a received a New York State Department of Environmental Conservation issued freshwater mussel survey/relocation license to collect or possess the threatened and endangered (T&E) species, green floater (<i>Lasmigona subviridis</i>) and brook floater (<i>Alasmidonta varicose</i>). Aided in the design and implementation of the relocation event that occurred in July 2023.</p>			
05/21 – 11/22		<p>Kankakee River Freshwater Mussel Relocation – Confidential Client, Will County, Illinois. Conducted a mussel survey/relocation in the Kankakee River prior to in-water pipeline repairs. Mussels present included both federal and state listed T&E species. <i>Underwater surveys</i> included quantitative sampling and a qualitative timed-area visual search of the project areas and buffers. All mussels were speciated, measured, photographed, and were relocated to a suitable release location. PIT tagged the federal and state listed species for post relocation monitoring and assisted with the state and federal <i>Incidental Take permitting and reporting</i>.</p>			
07/22 – 10/22		<p>Kankakee River Freshwater Mussel Relocation – Confidential Oil & Gas Client, Will County, Illinois. Conducted a mussel survey to document the mussel species present at the site, including state listed species, and their general relative abundance prior to dredging a cooling water intake structure. <i>Underwater survey</i> included a qualitative timed-area search of the project area and quantitative plots along transects and buffers. All mussels were speciated, measured, photographed, and relocated to a suitable release location.</p>			
08/18 – 12/19		<p>Upper Mississippi River Freshwater Mussel Train Derailment Response – Confidential Railroad Client, Iowa. In response to a train derailment, acted as onsite client representative interfacing with federal and state agencies in regard to a freshwater mussel kill. Assisted with mussel recovery, identification, and enumeration to understand the impacts to the mussel assemblage. <i>Worked with agency biologists to collect, identify, and relocate mussels</i> including state listed species.</p>			

16. Staff Experience

05/16 – 10/19	Grasse River Freshwater Mussel and Habitat Surveys – Confidential Client, New York. Performed a <i>freshwater mussel survey</i> and habitat assessment in seven miles of the Grasse River, in northern New York, to document the freshwater mussel species and physical habitat present at the site prior to remediation. <i>Underwater surveys</i> included visual/tactile searches in low visibility conditions in one-meter quadrats and along transects.
05/16 – 10/16	Asiatic Clam Pilot Study for Bioaccumulation – Confidential Chemical Client, Alabama. Conducted a pilot study to test alternative remedy metrics for monitoring chemical concentrations in different media. The study involved collecting live Asiatic clams using divers/snorkelers and placing co-located caged bi-valves, semi-permeable membrane devices and sediment traps at locations throughout approximately 15 miles of a creek and lake system using scientific divers.
05/2018	Tioughnioga River Freshwater Mussel Surveys – Confidential Energy Client, New York. Conducted a freshwater mussel survey to document the mussel species present at the site and their general relative abundance and assess the potential presence of state-listed brook floater and green floater prior to Site remediation.



16. Staff Experience

Firm employed by		ARCADIS	
Name	Lauren Seguy	Years of relevant experience with this employer	1.5
Title	Environmental Scientist	Years of relevant experience with other employer(s)	7
Degree(s) / Years / Specialization		MS / 2019 / Natural Resource Ecology and Management, Oklahoma State University BS / 2011 / Biology, California Polytechnic State University – San Luis Obispo	
Active registration number / state / expiration date		N/A	
Year registered	N/A	Discipline	N/A
Contract role(s) / brief description of responsibilities.		Biological Assessment	
Experience dates	Experience and qualifications relevant to the proposed contract		
	<p>Mrs. Seguy serves as an environmental scientist with Arcadis, and has over 7 years of biological monitoring and reporting experience with threatened and endangered species including Western snowy plover (<i>Charadrius alexandrinus nivosus</i>), American eel (<i>Anguilla rostrata</i>), leatherback sea turtle (<i>Dermochelys coriacea</i>), olive ridley sea turtle (<i>Lepidochelys oliveacea</i>), green sea turtle (<i>Chelonia mydas</i>), loggerhead sea turtle (<i>Caretta caretta</i>) and nesting birds. Her current experience in environmental-socio permitting includes environmental compliance auditing, data management and reporting, and maintaining project compliance with state and federal permits. Her regulatory permitting support experience includes California Endangered Species Act, California Environmental Quality Act, National Environmental Policy Act, Master Streambed Alteration Agreement, Clean Water Act (CWA) Sections 401 and 404, Flood Control Act, Endangered Species Act, Migratory Bird Treaty Act, and National Pollutant Discharge Elimination System.</p>		
2/22 – Current	<p>High Speed Rail Project Construction Management Services, California High Speed Rail Authority, Selma, CA Conduct project construction management environmental oversight tasks for the California High Speed Rail, a large-scale transportation project. Responsibilities include preparing NEPA/CEQA re-examination documents; preparing Master Streambed Alteration Agreement amendments and subnotification permit documents; preparing Section 404 and 401 CWA Pre-Construction Notifications; performing environmental compliance field audits; performing sustainability audits; performing audits per Stormwater Pollution Prevention Plan requirements; review and approval of contractor reports and biologist monitoring records; drafting serial letters and non-compliance reports; managing excess lands sub-contractor; writing CA Department of Toxic Substances Control Annual and Five-Year Review reports; and Excel data management, tracking, and reporting. Monitor and track project permit compliance with Final Environmental Impact Report/Environmental Impact Statement, Mitigation Monitoring and Reporting Program, Mitigation Monitoring and Enforcement Plan, CDFW Incidental Take Permit, and USFWS Biological Opinion. Maintain positive relationships with the client and construction contractor.</p>		
07/23 - Current	<p>Building Resilient Infrastructure and Communities (BRIC) Grants, NYC Department of Environmental Protection, New York City Draft Environmental and Historic Preservation (EHP) sections of Cloudburst grant applications for the NYC Department of Environmental Protection on transportation and infrastructure projects to obtain Federal Emergency Management Agency BRIC grants. Create GIS figures for EHP section and create GIS layout templates</p>		
6/23 – 7/23	<p>Biological Assessment, Birmingham Water Works, Lake Purdy, AL Prepared a Biological Assessment at the request of the U.S. Fish and Wildlife Service for the Lake Purdy Dam Stability Improvement Project. The Biological Assessment addressed the impacts the proposed action on federally listed bat species</p>		

16. Staff Experience

	including the gray bat (<i>Myotis grisescens</i>), northern long-eared bat (<i>Myotis septentrionalis</i>), Indiana bat (<i>Myotis sodalist</i>), and tricolored bat (<i>Perimyotis subflavus</i>) and mussel species including the ovate clubshell (<i>Pleurobema perovatum</i>), Southern acornshell (<i>Epioblasma othcaloogensis</i>), Southern clubshell (<i>Pleurobema decisum</i>), Southern pigtoe (<i>Pleurobema georgianum</i>), triangular kidneyshell (<i>Ptychobranhus greenii</i>), upland combshell (<i>Epioblasma metastriata</i>), Alabama moccasinshell (<i>Medionidus acutissimus</i>), finelined pocketbook (<i>Hamiota altilis</i>), and orangenacre mucket (<i>Hamiota perovalis</i>), and their designated critical habitat. Conducted literary research on project impacts on protected species and drafted Biological Assessment sections.
06/16 – 9/16	Grasse River Freshwater Mussel and Habitat Surveys – Confidential Client, Massena, NY Performed a <i>freshwater mussel survey and habitat assessment</i> in seven miles of the Grasse River, in northern New York, to document the freshwater mussel species and physical habitat present at the site prior to remediation. Surveys included visual/tactile searches in low visibility conditions in one-meter quadrats and along transects. .


16. Staff Experience

Firm employed by			
Name	Katelyn Harrison	Years of relevant experience with this employer	2
Title	Environmental Scientist	Years of relevant experience with other employer(s)	7
Degree(s) / Years / Specialization		MS / 2021 / Biology, Ball State University BS / 2012 / Biology, California State University of Monterey Bay	
Active registration number / state / expiration date		N/A	
Year registered	N/A	Discipline	N/A
Contract role(s) / brief description of responsibilities.		Biological Assessments - Bats	
Experience dates	Experience and qualifications relevant to the proposed contract		
	<p>Ms. Harrison is currently an environmental scientist and primarily supports projects in the utility sector permitting group and ecological surveys. Her project experience includes documenting western and eastern bat species presence through hand capture and acoustic monitoring. She has participated in multiple acoustic monitoring projects in the private and public sector in California, Oregon, and multiple Midwestern locations. She has completed U.S. Fish and Wildlife Surveys (USFWS) Indiana bat surveys and performed roosting tree observations using radio telemetry. In the last year she has completed workshops lead by Vesper Bat Detection Services for identifying North American bat species by acoustic calls.</p>		
06/2022-Ongoing	<p>Air Force National Guard, Kingsley Field, Klamath Falls, Oregon. <i>Technical Ecologist.</i> Oversaw the assembly of bat acoustic recording machinery and surveyed for placement within high quality habitat. Managed data recording software and troubleshoot program errors. Lead a team in dusk emergent surveys and surveyed for guano and other biological indicators for roosting potential within buildings. Assisted with surveys for a federally endangered plant species. <i>Reviewed acoustic survey data using bat identification software</i> and manually reviewed confounding species for survey locations in Michigan, Vermont, Louisiana, and Oregon. Reviewed acoustic data for U.S. Air Force locations for both eastern and western species. Updated bat reports to include findings.</p>		
2018-2020	<p>Bat Acoustic Surveys, Brown County and Yellowwood State Parks, Bloomington, Indiana. <i>Biologist.</i> Ms. Harrison collaborated with the Indiana Department of Natural Resources to <i>acoustically document habitat use of bats</i> within an actively manage hardwood forest ecosystem. She coordinated field seasons conducting acoustic surveys at 25 ponds, trained and supervised field crews in standard acoustic survey protocols, and quantified vegetation characteristics of the surrounding forested habitat. She used R statistical software to analysed behaviour data, where it was presented at multiple conferences in the Midwest.</p>		
07/2020-11/2020	<p>West, Inc. Mortality Surveys at Multiple Sites, Emmetsburg, Iowa. <i>Biologist.</i> Ms. Harrison conducted mortality surveys for Midwestern bat and bird species at wind energy farms. Fatalities were identified to species and collected following U.S. Fish and Wildlife Service (USFWS) permit procedures.</p>		
07/2019	<p>Sparta Army National Guard Military Base, Sparta, Illinois. <i>Biologist.</i> Ms. Harrison successfully conducted a <i>USFWS Indiana bat (Myotis sodalis) presence/absence survey using mist-nets and telemetry</i>. She captured, identified, and collected morphological measurements on multiple Indiana bats, evening bats (<i>Nycticeius humeralis</i>), and big brown bats (<i>Eptesicus fuscus</i>). Radio tags were adhered to Indiana bats for tracking and roost identification.</p>		


16. Staff Experience

03/2017 – 04/2018	California Department of Fish and Wildlife, Sacramento, California. <i>Biologist</i>. Ms. Harrison participated in a <i>large-scale terrestrial species inventory</i> within the California Central Valley. She helped set up equipment for bat acoustic monitoring at 275 sites in the California Central Valley using SM3BAT wildlife acoustic, as a member of a 9-person crew. She aided in manually identifying species from echolocation calls, to be used in an occupancy study to track the effects of drought on California bat species.
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16. Staff Experience

Firm employed by		ICF	
Name	Mark Kainer	Years of relevant experience with this employer	25
Title	Biologist	Years of relevant experience with other employer(s)	7
Degree(s) / Years / Specialization		MA / 1992 / Biology (Wildlife Ecology Emphasis), Southwest Texas State University BS / 1990 / Biology (Wildlife Emphasis), Southwest Texas State University	
Active registration number / state / expiration date		N/A	
Year registered	N/A	Discipline	N/A
Contract role(s) / brief description of responsibilities.		Biological Assessment	
Experience dates	Experience and qualifications relevant to the proposed contract		
	Mr. Kainer is responsible for conducting ecological studies including wetland delineations, habitat assessments, endangered or threatened species surveys, vegetation mapping, as well as executing written and oral reports. He possesses a U.S. Fish and Wildlife Service Section 10 Scientific Collection Permit for the whooping crane (<i>Grus americana</i>), northern aplomado falcon (<i>Falco femoralis septentrionalis</i>), jaguarundi (<i>Puma yagouaroundi</i>), ocelot (<i>Leopardus pardalis</i>), piping plover (<i>Charadrius melodus</i>), Attwater's greater prairie-chicken (<i>Tympanuchus cupido attwateri</i>), lesser prairie-chicken (<i>Tympanuchus pallidicinctus</i>), interior least tern (<i>Sterna antillarum athalassos</i>), Houston toad (<i>Anaxyrus houstonensis</i>), black-capped vireo (<i>Vireo atricapilla</i>), golden-cheeked warbler (<i>Setophaga chrysoparia</i>), and red-cockaded woodpecker (<i>Picoides borealis</i>).		
01/18 – 2023	Texas Department of Transportation TxDOT, Environmental Analysis for the SH 63 Bridge over the Sabine River, Newton County, TX. Avian Biologist. Texas Department of Transportation (TxDOT), Federal Highway Administration, and Louisiana Department of Transportation and Development are proposing a new crossing of to the State Highway 63/LA 8 bridges over the Sabine River at the Texas/Louisiana border, located in Newton County, Texas and Vernon Parish, Louisiana. The proposed project would replace the existing SH 63/LA 8 bridges at the Sabine River through the construction of new approach roadways and a new bridge structure. The proposed bridge replacement alternative is approximately 2.9 miles long, with the proposed roadway sections being two-lane undivided, which matches the existing facility. <i>Supervised all biological assessment, Migratory Bird Treaty Act assessments</i> , wetland delineation/permitting needs associated with the project and contributed to all documentation required under National Environmental Policy Act.		
01/01 – Present	Confidential Client, Regional Renewable Energy Projects. Biologist. Worked on more than 250 wind energy and solar energy projects and battery energy storage projects in Texas, New Mexico, Louisiana, Oklahoma, Colorado, Nebraska, Kansas, Alabama, Georgia, South Carolina, North Carolina, Tennessee, Kentucky, Missouri, Virginia, West Virginia, Florida, Mississippi, and the Caribbean. <i>Conducted various investigations including general four-season avian surveys, protected species habitat assessments and surveys, Waters of the U.S. investigations, and acoustical monitoring for bats.</i> Documents prepared for these projects ranged from Constraints Analyses to in-depth Biological Assessments.		
01/17	Lower Colorado River Authority, Bald Eagle Monitoring Protocol, Lane City, TX. Biologist. Developed a protocol for monitoring bald eagle presence for the Lower Colorado River Authority's Lane City Reservoir, a 40,000 acre-foot off-channel reservoir located adjacent to the Colorado River in Wharton County.		
03/17 – 05/17	TxDOT Austin District Environmental, Pre-Construction Avian Nest Surveys, Austin, Texas. Lead avian biologist. Affairs Division, Texas. Lead avian biologist for the inspection of multiple proposed roadway construction projects in Bastrop, Burnet, Llano, Mason, Travis, and Williamson counties, Texas.		


16. Staff Experience

Firm employed by		ICF		Meets MPR No. 4
Name	Lee Droppelman		Years of relevant experience with this employer	3
Title	Managing Director - Ecology		Years of relevant experience with other employer(s)	22
Degree(s) / Years / Specialization			BS / 2000 / Natural Resource Conservation, University of Kentucky	
Active registration number / state / expiration date			N/A	
Year registered	N/A	Discipline	N/A	
Contract role(s) / brief description of responsibilities.			Biological Assessment	
Experience dates		Experience and qualifications relevant to the proposed contract		
		<p>Mr. Droppelman leads a diverse natural resource team offering multi-disciplinary services to a variety of client markets across the U.S. He has conducted numerous projects dealing with threatened/endangered terrestrial and aquatic species, ecosystem assessment, and stream/wetland jurisdictional determinations, Section 404/401 Clean Water Act (CWA) permitting, and restoration design. Lee holds a federal collection license for over 70 listed species from more than 20 eastern states. He is proficient in the identification of all eastern bats and is an expert in the biology of aquatic fauna (including fish, invertebrates, and mollusks). Additionally, he has professional interest in the correlation of aquatic assemblage to river geomorphology, restoration of aquatic habitats, restoration and enhancement of bottomland forested wetlands, wetland functional assessment, and ecological impact/risk determination. Mr. Droppelman specializes in leading complex projects requiring novel concepts needed for effective agency coordination, scientifically sound resource assessment, and cost-effective minimization and mitigation of adverse effects. Over his career, he has served as discipline expert, principal investigator, and/or project manager for more than 300 transportation projects across the Eastern U.S.</p>		
05/23 – Ongoing		<p>Missouri Department of Transportation, Acoustic Bat Survey and Biological Assessment for the I-70 Improvement Project, Jefferson City, MO. Principal Scientist. <i>Leading the acoustic survey for the federally endangered gray bat (<i>Myotis grisescens</i>), Indiana bat (<i>Myotis sodalis</i>), and northern long-eared bat (<i>Myotis septentrionalis</i>), and the proposed-endangered tricolored bat (<i>Perimyotis subflavus</i>)</i> along 34 miles of proposed highway improvements along I-70 west of St. Louis. In compliance with the 2023 Range-wide Indiana Bat and Northern Long eared Bat Summer Survey Guidelines, 39 individual acoustic monitoring locations were surveyed in the summer of 2023. Collected data files were processed through automatic bat ID software, resulting in 10 species identified, including all targeted federally listed bat species.</p>		
02/22 – Ongoing		<p>Georgia Department of Transportation (GDOT), Programmatic Biological Assessment for the Management of Bats and Transportation Projects, Statewide, GA. Principal Scientist. Preparing a Programmatic Biological Assessment/Biological Opinion between GDOT, U.S. Fish and Wildlife (USFWS), U.S. Army Corps of Engineers, Federal Highways Administration, and Georgia Department of Natural Resources that provides the framework for how GDOT will manage consultation requirements for all of Georgia's federal and state listed bat species statewide for a variety of transportation projects. Identified and assessed all covered activities for stressors, developed standard avoidance and minimization measures, and prepared a decision-making process for all GDOT project managers to follow.</p>		
08/18 – Ongoing		<p>Kentucky Transportation Cabinet (KYTC), Bridging Kentucky Program, Frankfort, KY. Principal Scientist. Repairing or replacing over 1,300 critical bridge structures across Kentucky over the next six years. The program will reopen closed bridges, remove weight restrictions that prevent use by school buses, emergency vehicles and businesses, and improve access and mobility for all Kentuckians. Serves as the principal investigating ecologist for all <i>threatened/endangered species surveys</i>, including bats,</p>		

16. Staff Experience

	freshwater mussels, fish, and plants. Managed and/or completed field surveys on more than 200 bridge locations across Kentucky.
05/15-11/22	Carroll County Water Authority, Indian Creek Water Supply Reservoir, Carroll County, GA. <i>Lead Biologist.</i> The Carroll County Water Authority is applying for an <i>Individual Section 404 CWA Permit</i> for the construction of a 401-acre water supply reservoir capable of meeting the unmet water supply needs of Carroll County, a total of six million gallons per day by the year 2065. Responsible for preparation of the compensatory mitigation plan which will provide compensation for impacts to 13 acres of wetlands and over 43,000 linear feet of stream. Managed the project's jurisdictional waters delineation and reporting, mitigation site identification, alternatives analysis, and Section 404 permit application support.
03/18-01/22	Kentucky Department of Fish and Wildlife Resources (KDFWR), Fee In Lieu Of (FILO) program – Rolling Fork Floodplain Pre-Design, Nelson and Larue Counties, KY. <i>Lead Biologist.</i> The KDFWR FILO Program provides a way to fulfil compensatory mitigation requirements associated with the Clean Water Act, Section 404 and 401. The 660-acre Rolling Fork Floodplain Project compensates for the permanent loss of aquatic (wetland and stream) functions within the Salt River watershed. Responsible for managing the <i>jurisdictional waters delineation and reporting, fish and macroinvertebrate sampling, bat habitat and sensitive ecological feature assessments, wetland restoration design, protected species surveys, and the biological assessment report.</i>
12/21-03/22	KYTC, Survey and Relocation of Federally Listed Fish for the Kentucky Highway 2996 Bridge Rehabilitation Project, Whitley County, KY. <i>Biologist.</i> As a condition of a Biological Assessment prepared for the rehabilitation project of Highway 2996 Bridge over Wolf Creek, all federally listed fish species under ESA present at the site were relocated within 50 meters upstream and 100 meters downstream of the bridge location. The stream is a known location for the federally listed blackside dace (<i>Chrosomus cumberlandensis</i>) and the Cumberland darter (<i>Etheostoma susanae</i>). Led a crew of biologists employing electroshocking techniques to perform a depletion collection in the required stream reach and relocation to a predetermined location approximately two kilometers upstream of the bridge. All activities were coordinated with KYTC and USFWS, and the contractor was able to complete their work without delay.


16. Staff Experience

Firm employed by		ICF		Meets MPR No. 4	
Name	Kory Armstrong		Years of relevant experience with this employer	1	
Title	Managing Director - Ecology		Years of relevant experience with other employer(s)	14	
Degree(s) / Years / Specialization			MS / 2010 / Biology, Missouri State University BS / 2008 / Biology, Drury University		
Active registration number / state / expiration date			Certified Wildlife Biologist / The Wildlife Society / Expires 11/2025		
Year registered	2020	Discipline	Wildlife Biology		
Contract role(s) / brief description of responsibilities.			Biological Assessment - Bats		
Experience dates		Experience and qualifications relevant to the proposed contract			
		<p>Mr. Armstrong is a Certified Wildlife Biologist® with over 15 years of industry experience. He earned his Master of Science degree focusing on bioacoustics and habitat mitigation for endangered species in the Midwest. Mr. Armstrong is a subject matter expert on endangered species compliance. He holds a Section 10 Scientific Collection Permit for all federally protected bat species in the eastern U.S and is a co-author for the <i>Bats of Arkansas</i>. He is recognized by the U.S. Fish and Wildlife Service (USFWS) and multiple state agencies as an acoustic expert. He has contributed to the testing and development of hardware and software used and approved by the USFWS for presence/absence surveys. He has worked in 35 states conducting endangered species compliance and permitting. He also has experience with various federal, state, and local agencies, including State DOTs and several federal agencies.</p>			
05/23 – Ongoing		<p>Missouri Department of Transportation, Acoustic Bat Survey and Biological Assessment for the I-70 Improvement Project, Jefferson City, MO. Senior Biologist. In charge of developing agency study plans and agency level of effort for the assessment of the gray bat (<i>Myotis grisescens</i>), Indiana bat (<i>Myotis sodalis</i>), and northern long-eared bat (<i>Myotis septentrionalis</i>), and the proposed-endangered tricolored bat (<i>Perimyotis subflavus</i>) along 34 miles of proposed highway improvements along I-70 west of St. Louis. Leading the development of acoustic study design and manual analysis of identified sensitive species identified files.</p>			
02/22 – Ongoing		<p>Georgia Department of Transportation (GDOT), Programmatic Biological Assessment for the Management of Bats and Transportation Structures, Atlanta, GA. Senior Biologist. Assisting with the preparation of a Programmatic Biological Assessment/Biological Opinion between GDOT, USFWS, U.S. Army Corps of Engineers (USACE), Federal Highways Administration, and Georgia Department of Natural Resources that provides the framework for how GDOT will manage consultation requirements for all of Georgia's federal and state listed bat species statewide for a variety of transportation projects. Identified and assessed all covered activities for stressors, developed standard avoidance and minimization measures, and prepared a decision-making process for all GDOT project managers to follow.</p>			
10/22 – Ongoing		<p>Loan Programs Office, Grainbelt Express 760 kV Transmission Line, Department of Energy, Kansas, MO & IL. Senior Biologist. Leading the third-party review <i>Section 7 Endangered Species Act (ESA) compliance</i> for an approximate 750 miles transmission line. Leads the government-to-government consultation efforts for ESA compliance with USFWS, Missouri Department of Conservation, and Kansas Department of Wildlife and Parks.</p>			
10/22 – Ongoing		<p>GDOT, I-285 Top End Improvement Project, Cobb and Fulton Counties, GA. Senior Biologist. In charge of Structure Inspections and <i>Biological Assessment</i> for the I-285 Top End Express Lanes Project. This 18 mile project focuses on adding two new barrier separated express lanes in both directions of I-285 and SR 400, alongside the existing general-purpose lanes. Leading a team</p>			

16. Staff Experience

	of permitted bat biologists in the inspection of 76 culverts and 97 bridges for roosting bats. During the winter of 2022/2023, 41 federally proposed endangered tricolored bats were found in 11 different culvert locations.
9/21 – 08/22	Carroll Electric Cooperative Corporation, Dry Creek to Smyrna Transmission Line, Berryville, AR. <i>Project Manager.</i> In charge of preconstruction National Environmental Policy Act compliance and consultation through the Rural Utility Service for an approximate 20 miles transmission line in Arkansas. Led consultation efforts with USFWS, USACE, and Arkansas Game and Fish Commission.
05/18-8/19	Louisiana Army National Guard (LARNG), Introduction to Acoustic Bat Surveying Methods, Redwood City, LOU. <i>Biologist.</i> Developed and led a training course for members of the LARNG focused on <i>acoustic survey methods for protected bat species</i> and an introduction into qualitative and quantitative acoustic analysis.
05/16-03/19	Arkansas Department of Transportation (ArDOT), Environmental On-call Contract for Threatened and Endangered Species, Little Rock, AR. <i>Project Manager.</i> In charge of a multiyear contract focused on endangered species compliance for highway construction projects across the state of Arkansas. <i>Coordinated Section 7 ESA compliance</i> with USFWS, Arkansas Game & Fish Commission, and ARDOT.
01/16-3/19	Oklahoma Department of Transportation, Environmental On-call Contract for Threatened and Endangered Species Compliance and Bald Eagle Compliance, Oklahoma City, OK. <i>Project Director.</i> In charge of the completion of over 200 projects for ESA compliance and bald eagle compliance across the state of Oklahoma. Directed field teams, led the development of study designs, and coordinated with agencies.



16. Staff Experience



Firm employed by		ICF		Meets MPR No. 6	
Name	Martin Melville		Years of relevant experience with this employer	1	
Title	Senior Aquatic Ecologist		Years of relevant experience with other employer(s)	20	
Degree(s) / Years / Specialization			MS / 2006 / Biology, Tennessee Technological University BS / 2003 / Wildlife and Fisheries, Tennessee Technological University		
Active registration number / state / expiration date			N/A		
Year registered	N/A		Discipline	N/A	
Contract role(s) / brief description of responsibilities.			Biological Assessment– Aquatics		
Experience dates		Experience and qualifications relevant to the proposed contract			
		<p>Martin Melville has over 21 years of experience conducting protected species surveys for plants and animals throughout the Southeast. He holds the appropriate state and federal permits for sampling in more than 10 states, and his current Section 10(a) Scientific Recovery Permit has over 100 federally listed fish and mussel species. For mussels, Mr. Melville has broad experience with Mississippi River, Gulf of Mexico, and Atlantic Slope drainages. He is a Certified Diver and is familiar with multiple survey methodologies across the Southeast. He regularly conducts aquatic biomonitoring projects and is familiar with several state and U.S. Environmental Protection Agency benthic assessment analyses. He additionally has performed bridge inspections for bats and completed multiple Biological Assessments in support of Endangered Species Act Section 7 compliance. Mr. Melville has authored hundreds of technical reports for transportation agencies while identifying potential opportunities for the implementation of conservation measures to offset potential project impacts.</p>			
10/22 – Ongoing		<p>Georgia Department of Transportation (GDOT) 2023, Aquatic Survey for CR 305/Palmer Road, Thomas County, GA. <i>Senior Aquatic Ecologist</i>. Led the <i>aquatic survey for federally protected mussels</i> within the Little Ochlocknee River and documented the findings in the Protected Aquatic Species Survey Report.</p>			
10/19-10/20		<p>GDOT, Biological Assessment for the State Route 520BU over the Flint River, Dougherty County, Georgia. <i>Aquatic Biologist</i>. Mr. Melville wrote the <i>Biological Assessment for the federally endangered shynyrayed pocketbook (Hamiota subangulata) and the federally threatened purple bankclimber (Elliptioideus sloatianus)</i> for a proposed bridge replacement project over the Flint River, in Albany Georgia. Mr. Melville also coordinated with the appropriate state and federal agencies while writing the report. He also helped in writing the mussel relocation survey plan for this project.</p>			
06/19 – 11/20		<p>GDOT, Interstate 20 over the Savannah River in Richmond County, Georgia and Aiken County South Carolina. <i>Aquatic Biologist</i>. Conducted a <i>mussel relocation</i> for the I-20 Bridge Replacement over the Savannah River for a state protected delicate spike (<i>Elliptio arctata</i>) near Augusta Georgia. Over the two-year period approximately 4,000 mussels were relocated upstream from the proposed work area. Mr. Melville led the several <i>dive surveys</i> for this project and submitted the findings to Georgia Department of Natural Resources.</p>			
10/19		<p>GDOT, CR 101 bridge replacement over the Cartecay River in Gilmer County, Georgia. <i>Senior Aquatic Ecologist & Task Manager</i> completing the <i>aquatic survey for state and federally protected fish, crayfish species survey</i>, and documenting the findings in the Protected Aquatic Species Survey Report. Federally protected goldline darters (<i>Percina aurolineata</i>) were collected during the aquatic survey.</p>			

16. Staff Experience



03/18	<p>GDOT, SR 122 over Okapilco Creek bridge replacement in Brooks County, Georgia. <i>Senior Ecologist & Task Manager.</i></p> <p>Completed the <i>protected species survey for the federally protected eastern indigo snake (<i>Drymarchon couperi</i>) and state protected gopher tortoise (<i>Gopherus polyphemus</i>)</i>. No eastern indigo snakes were observed during the survey, however over 40 active gopher tortoise burrows were observed during the survey. Mr. Melville led the survey and documented the findings in the protected species survey report.</p>
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Firm employed by				Meets MPR No. 8	
Name	William "Cass" Cagle		Years of relevant experience with this employer	14	
Title	Principal Environmental Scientist		Years of relevant experience with other employer(s)	1	
Degree(s) / Years / Specialization			Northwestern State University / BA / 2006 University of Louisiana Monroe / MA / 2008		
Active registration number / state / expiration date					
Year registered		Discipline			
Contract role(s) / brief description of responsibilities.			Biological Assessments – Oyster Surveys / Permits		
Experience dates		Experience and qualifications relevant to the proposed contract			
		<p>Mr. Cagle has over 10 years of leadership and project management experience with environmental consulting and regulatory permitting. He has managed a variety of projects throughout Louisiana and Texas from the preliminary stages to completion. Mr. Cagle displays skills in the following areas: Project Management, Clean Water Act Section 404 & Rivers and Harbors Act Section 10 Permitting, U. S. Army Corps of Engineers (USACE) Jurisdictional Determinations, Wetlands Mitigation Planning, Louisiana Department of Natural Resources (LADNR) Coastal Zone Permitting, and Stormwater Pollution Prevention Plans. Trainings include: NPDES Stormwater Inspector Certification; Identifying Grasses, Sedges, and Rushes; Stormwater Management Permitting and Regulatory Overview; NCSU Basic Processes in Hydric Soils; Plant Taxonomy; Wetlands and Waters Delineation Training. Additionally, he has 14 years of experience conducting and managing Coastal Use Permits in the Louisiana Coastal Zone and 12 years of experience conducting Oyster Assessments to LDWF Standards.</p>			
12/20-02/21		Whiskey Chitto Pipeline Replacement, TGP, Allen Parish, Louisiana. Environmental <i>Project Manager</i> . Managed <i>Louisiana Department of Wildlife and Fisheries Scenic River Permitting</i> process for Whiskey Chitto River.			
06/21-10/21		TGP P/L Maintenance Project, Kinder Morgan, Plaquemines/St. Bernard Parish, Louisiana. Environmental <i>Project Manager</i> . Obtained LADNR Office of Coastal Management (OCM) <i>Coastal Use Permit (CUP) that involved biological oyster assessment</i> for pipeline repairs			
5/22-08/22		Quarantine Bay Prospect, Badger Energy, Plaquemines Parish, Louisiana. Environmental <i>Project Manager</i> . Obtained all necessary approvals for a well prospect and associated flow lines. Project was located within the <i>Louisiana Oyster Seed Ground</i> . Managed the biological oyster assessment and determined water bottom impacts for access routes and project site.			
02/23-04/23		Manilla to Larose Dent Repair, Crescent Midstream, Jefferson Parish, Louisiana. Environmental <i>Project Manager</i> . Managed LADNR OCM CUP, biological oyster assessment for pipeline repairs in Jefferson Parish			
10/22-06/23		Pipeline Integrity Digs, Enterprise Products, Assumption Parish, Louisiana. Environmental <i>Project Manager</i> . Managed LADNR OCM CUP and <i>USACE/Coastal Protection and Restoration Authority/Levee Board no objections</i> for pipeline repairs in the Atchafalaya Basin			
04/23-08/23		Manilla Junction to Raceland Station Dent Repairs, Crescent Midstream, Jefferson Parish, Louisiana. Managed LADNR OCM CUP, <i>biological oyster assessment on leases and seed ground</i> for pipeline repairs in Jefferson Parish, included an Emergency Use Authorization due to the nature of the project			



Firm employed by				Meets MPR No 8	
Name	Dakota Dagenhardt		Years of relevant experience with this employer	4	
Title	Environmental Specialist		Years of relevant experience with other employer(s)	9	
Degree(s) / Years / Specialization			BS / Biological Science & Marine Biology / 2014		
Active registration number / state / expiration date			N/A		
Year registered	N/A	Discipline	N/A		
Contract role(s) / brief description of responsibilities.			Biological Assessments – Oyster Surveys		
Experience dates		Experience and qualifications relevant to the proposed contract			
		<p>Mr. Dagenhardt has eight years of experience conducting biological oyster assessments to LDWF standards for private industry and State Funded Organizations, eight years of experience conducting wetland delineations to the U.S. Army Corps of Engineer standards, three years conducting UAS missions as a remote pilot in command and eight years conducting hydrographic surveys. He has completed a 40-hour course Wetland Training Institute Training. Additionally, Mr. Dagenhardt is an <i>Oyster Lease Damage Evaluation Board (OLDEB) certified biologist</i>, FAA Part 107 Certified UAS Pilot and Open Water Diver Certified.</p>			
9/15-10/15		Golden Triangle Marsh Creation. Coastal Protection and Restoration Authority (CPRA). Orleans Parish, LA. <i>Lead Biologist</i> responsible for Oyster Assessment data management, sample analysis, bottom type assessment, sack count calculation, report preparation. Served as scientific diver and vessel captain, escorting state appraiser to leases.			
3/16-4/16		Biloxi Marsh Living Shoreline. CPRA. St. Bernard Parish, LA. <i>Lead Biologist</i> responsible for <i>Oyster Assessment data management</i> , sample analysis, bottom type assessment, sack count calculation, report preparation. Served as scientific diver and vessel captain, escorting state appraiser to leases.			
9/17-10/17		Rabbit Island Restoration, CPRA. Cameron Parish, LA. <i>Lead Biologist</i> responsible for Oyster Assessment data management, sample analysis, bottom type assessment, sack count calculation, report preparation. Served as scientific diver and vessel captain, escorting state appraiser to leases.			
4/19-5/19		Caminada Headlands Back Barrier Marsh Creation, CPRA. Lafourche Parish, LA. <i>Lead Biologist</i> responsible for Oyster Assessment data management, sample analysis, <i>bottom type assessment</i> , sack count calculation, report preparation. Served as scientific diver and vessel captain, escorting state appraiser to leases.			
7/20-8/20		Queen Bess Island Restoration. CPRA. Jefferson Parish, LA <i>Lead Biologist</i> responsible for Oyster Assessment data management, sample analysis, bottom type assessment, sack count calculation, report preparation. Served as scientific diver and vessel captain, escorting state appraiser to leases.			
5/20-6/20		Lake Borgne Oyster Assessment, Colonial Pipeline Company, St. Bernard Parish, LA. <i>Environmental Scientist</i> . Performed multiple oyster assessments. Performed data management, sample analysis, bottom type assessment, report preparation, and served as vessel captain and <i>biological oyster diver</i> .			
04/23-06/23		Pipeline Dent Repair, Crescent Midstream, Gray, LA. <i>Biologist</i> . Assisted with biological oyster assessment on leases in Jefferson Parish, included an Emergency Use Authorization due to the nature of the project.			

Firm employed by				Meets MPR No 8	
Name	Joshua L. Curry, PWS		Years of relevant experience with this employer	11	
Title	Professional Wetland Scientist		Years of relevant experience with other employer(s)	5	
Degree(s) / Years / Specialization			University of Louisiana at Lafayette/ BS / 2012 /Environmental Geoscience		
Active registration number / state / expiration date			Professional Wetland Scientist – # 2891 / USA / Exp. 2024		
Year registered	N/A	Discipline	N/A		
Contract role(s) / brief description of responsibilities.			Wetlands Delineation/Findings; Biological Assessment – Oyster Survey		
Experience dates	Experience and qualifications relevant to the proposed contract				
		<p>Mr. Curry has 11 years assisting with biological oyster assessments to LDWF standards for private industry and state funded organizations. He has 16 years of experience conducting wetland delineations to the U.S. Army Corps of Engineer standards as well as conducting threatened and endangered (T&E) species surveys and analysis to U.S. Fish and Wildlife Service (USFWS) standards. He holds a Professional Wetland Scientist (PWS) certification and is a certified Oyster Lease Damage Evaluation Board (OLDEB) biologist. Additionally, Mr. Curry served four years in the U.S. Navy aboard the John F. Kennedy (CV67) aircraft carrier.</p>			
8/09-10/12	Sabine Lake Field Oyster Assessment, Forza Operating, LLC, Spring, TX. <i>Environmental Scientist.</i> Performed multiple oyster assessments. Performed data management, sample analysis, bottom type assessment, report preparation, and served vessel captain and <i>biological oyster diver</i> .				
10/09-08/12	Multiple Barrier Island Projects, Coastal Protection & Restoration Authority (CPRA), Louisiana. <i>Environmental Scientist.</i> Assisted in conducting oyster assessments. Performed data management, sample analysis, bottom type assessment, report preparation, and served vessel captain and biological oyster diver.				
7/11-9/11	12" Sulphur to Longville Pipeline, Cameron LNG, Houston, TX. <i>Environmental Scientist.</i> Conducted <i>wetland delineation and threatened and endangered species survey</i> along 26-mile pipeline corridor.				
01/12-08/23	Multiple Pipeline Repair Projects, Enterprise Products, Houston, TX. <i>Lead Biologist.</i> Conducted <i>Louisiana Department of Wildlife and Fisheries wading bird pre-construction surveys</i> for pipeline repairs in multiple parishes in south Louisiana.				
6/16-9/16	Proposed 12" FERC Pipeline, American Midstream, Houston, TX. <i>Environmental Scientist.</i> Utilized ArcGIS to assist Hatch Mott McDonald in collecting and analyzing all required GIS datasets including land cover data, Natural Resources Conservation Service soil data, FEMA floodplain maps, USFWS National Wetland Inventory, U.S. Geological Survey watershed & historical imagery.				
3/17-4/17	Lake Borgne Oyster Assessment, Mississippi State Port Authority, Gulfport, MS. <i>Environmental Scientist.</i> Performed multiple oyster assessments. Performed data management, sample analysis, bottom type assessment, report preparation, and served as vessel captain and biological oyster diver.				
4/18-7/18	Proposed Ace Pipeline, Phillips 66, Houston, TX. <i>Environmental Scientist.</i> Performed alternate route analysis for 80-mile & 35-mile pipelines in southeast Louisiana. <i>Utilized ArcGIS to create temporary workspaces for multiple alternate routes.</i> Digitized wetland habitat types within alternate routes to determine the least affected route using aerial imagery from ArcGIS.				


5/20-6/20	Lake Borgne Oyster Assessment, Colonial Pipeline Company, St. Bernard Parish, LA. <i>Environmental Scientist.</i> Performed multiple oyster assessments. Performed data management, sample analysis, bottom type assessment, report preparation, and served as vessel captain and biological oyster diver.
06/21-07/21	Drilling Barge and Well Protection Structure in Quarantine Bay, Badger Energy LLC, Lafayette, LA. <i>Biologist.</i> Assisted with <i>biological oyster assessment</i> for project in Plaquemines Parish
04/23-06/23	Pipeline Dent Repair, Crescent Midstream, Gray, LA. <i>Biologist.</i> Assisted with biological oyster assessment on leases in Jefferson Parish, included an Emergency Use Authorization due to the nature of the project.
04/23-08/23	Levee Recoats, Colonial Pipeline Company, Multiple Locations, Louisiana. <i>Biologist.</i> Assisted with pipeline recoat <i>permitting located on major flood protection levees</i> , including the Mississippi River and Atchafalaya. Completed coordination with USACE for Section 408 authorization, CPRA, and local levee boards.

Firm employed by			
Name	Cal R. Fontenot, PWS	Years of relevant experience with this employer	13
Title	Professional Wetlands Scientist	Years of relevant experience with other employer(s)	3
Degree(s) / Years / Specialization		McNeese State University / BS / 2003 / Wildlife Management	
Active registration number / state / expiration date		Professional Wetland Scientist – # 2836 / USA / Exp. 2024	
Year registered	N/A	Discipline	N/A
Contract role(s) / brief description of responsibilities.		Biological Assessment; Wetland Delineation/ Findings; Permits	
Experience dates	Experience and qualifications relevant to the proposed contract		
	<p>Mr. Fontenot has 16 years assisting with biological oyster assessments to Louisiana Department of Wildlife and Fisheries (LDWF) standards for private industry and State Funded Organizations. He has 16 years of experience conducting wetland delineations to the US Army Corps of Engineer's standards as well as conducting threatened and endangered (T&E) Surveys and analysis to US Fish and Wildlife Service standards. Additionally, He has five years' experience collecting data for Total Maximum Daily Load (TMDL) studies on watersheds throughout the State of Louisiana. He holds a Professional Wetland Scientist (PWS) certification and is Open Water Dive Certified.</p>		
8/07-5/10	<p>Sabine Lake Field Oyster Assessment, Forza Operating, LLC, Spring, TX. <i>Environmental Scientist.</i> Performed multiple oyster assessments. Performed data management, sample analysis, bottom type assessment, report preparation, and served as vessel captain and biological oyster diver.</p>		
5/2020-6/2020	<p>Lake Borgne Oyster Assessment, Colonial Pipeline Company, St. Bernard Parish, LA. <i>Environmental Scientist.</i> Performed multiple oyster assessments. Performed data management, sample analysis, bottom type assessment, report preparation, and served as vessel captain and biological oyster diver.</p>		
3/2017-4/2017	<p>Lake Borgne Oyster Assessment, Mississippi State Port Authority, Gulfport, MS. <i>Environmental Scientist.</i> Performed multiple oyster assessments. Performed data management, sample analysis, bottom type assessment, report preparation, and served as vessel captain and biological oyster diver.</p>		
8/07-5/10	<p>Bay De Chene Field, Swift Energy Operating, LLC, Lafourche Parish, LA. <i>Environmental Scientist.</i> Performed multiple oyster assessments and assisted with drilling rig moves. Performed data management, sample analysis, bottom type assessment, report preparation, and served as vessel captain and biological oyster diver.</p>		
8/07-5/10	<p>Multiple Barrier Island Projects, Coastal Protection & Restoration Authority (CPRA), Louisiana. <i>Environmental Scientist.</i> Assisted in conducting oyster assessments. Performed data management, sample analysis, bottom type assessment, report preparation, and served as vessel captain and biological oyster diver.</p>		
11/20-3/21	<p>Whiskey Chitto River Pipeline Replacement, Kinder Morgan. <i>Environmental Scientist.</i> Assisted in permitting pipeline replacement project under a Louisiana Designated Scenic River as regulated by LDWF Scenic Rivers Program. Project proceeded under a U.S. Army Corps of Engineers (USACE) Section 404 Clean Water Act Nationwide Permit 3 and LDWF Scenic Rivers Permit.</p>		
02/23-05/23	<p>Multiple Pipeline Repair Projects, Enterprise Products, Assumption Parish, LA. <i>Lead Biologist.</i> Conducted LDWF wading bird preconstruction survey for pipeline repairs.</p>		

06/21-07/21	Drilling Barge and Well Protection Structure in Quarantine Bay, Badger Energy LLC, Plaquemines Parish, LA. <i>Biologist.</i> Assisted with biological oyster assessment.
10/22-08/23	Levee Permitting Oversight and Acquisition in Greater New Orleans Area, Entergy Louisiana New Orleans, LA. <i>Biologist.</i> Managed <i>Louisiana Department of Natural Resources (LDNR) Coastal Use Permit and USACE/Coastal Protection and Restoration Authority (CPRA)/Levee Board no objections</i> for Entergy Projects in four different Levee Districts
03/20-08/23	Mitigation Terrace Monitoring, Crescent Midstream, Gray, LA. <i>Biologist.</i> Designed and conducted vegetative monitoring of newly created marsh terraces for the one-year and three-year monitoring events. Produced reports and submitted to LDNR as required by permit.
04/23-06/23	Pipeline Dent Repair, Crescent Midstream, Gray, LA. <i>Biologist.</i> Assisted with <i>biological oyster assessment</i> on leases in Jefferson Parish, included an Emergency Use Authorization due to the nature of the project
04/23-08/23	Levee Recoats, Colonial Pipeline Company, Multiple Locations, LA. <i>Biologist.</i> Assisted with permitting pipeline recoats located on major flood protection levees, including the Mississippi River and Atchafalaya (USACE Section 408/CPRA/Local Levee Board)


Firm employed by				Meets MPR No. 3	
Name	Jayun Thibodeaux, PWS		Years of relevant experience with this employer	3	
Title	Wetlands Specialist		Years of relevant experience with other employer(s)	3	
Degree(s) / Years / Specialization			BS / 2017 / Environmental Management Systems, Louisiana State University		
Active registration number / state / expiration date			Professional Wetland Scientist – #3565 / USA / Exp. 9/27		
Year registered	N/A	Discipline	N/A		
Contract role(s) / brief description of responsibilities.			Wetland Studies		
Experience dates		Experience and qualifications relevant to the proposed contract			
		<p>Mr. Thibodeaux is an Ecologist in the Arcadis Baton Rouge, Louisiana office with over six years of experience completing wetland studies for LADOTD projects. He has experience conducting delineations of wetlands and other waters of the US (WOTUS) and threatened and endangered species surveys throughout Louisiana, Arkansas, Texas, Mississippi, and Alabama. Mr. Thibodeaux has served as the technical lead and project manager for projects requiring permit coordination with the US Army Corps of Engineers (USACE), Louisiana Department of Natural Resources (LADNR), Louisiana Department of Environmental Quality (LDEQ), as well as National Environmental Policy Act (NEPA) reviews for federal agencies. Relevant Training: Basic Wetland Delineation training by WTI (2018)</p>			
04/21 – Ongoing		<p>Rural Bridge Replacement Initiative – Districts 02, 03, 07, 61, and 62, LADOTD, Multiple Parishes, LA. Ecologist. Responsible for <i>leading fieldwork for wetland studies and authoring Wetland Findings Reports</i> for 16 state projects involving replacement of 29 state highway bridges. Prepared GIS figures to support Solicitation of Views and wetland studies. Additional responsibilities include preparing required permit applications on behalf of LADOTD for bridge replacement projects including USACE Section 404 Clean Water Act Nationwide Permits (NWP) and Joint Applications for NWP and LADNR Coastal Use Permits.</p>			
04/20 – Ongoing		<p>LA 82 Improvement, Sabine Pass LNG, LP, Cameron Parish, LA. Ecologist. Assisted in preparation of environmental resource reports and data analysis for submittal to the Federal Energy Regulatory Commission (FERC) for approval under the Natural Gas Act (NGA). Prepared ecology report, a <i>Section 404 permit application, Section 7 Endangered Species Act documentation</i>, and created figures utilizing GIS for the LA 82 improvements and modifications to the liquefied natural gas (LNG) facility entrance.</p>			
02/19 – 04/19		<p>Holton Harris Road Bridge, Monroe & Corie, Inc., LP, Over Lake Vernon in Vernon Parish, LA. Ecologist. Conducted a <i>delineation of wetlands and other WOTUS</i> for the replacement of an 80-foot long by 18-foot-wide timber bridge on Holton Harris Road, crossing Vernon Lake located south of the City of Anacoco, Louisiana. Responsible for preparing a preliminary environmental finding report and submitting a <i>Nationwide Permit 14 Pre-Construction Notification</i>.</p>			
05/20 – Ongoing		<p>Louisiana Coastal Use Permit Submittal – COP Stratco, Terrebonne Parish, LA. Technical Lead. Responsible for developing and preparing guidance documents, resource reports, and identifying potential impacts for a <i>Joint Permit Application with the LADNR Office of Coastal Management (OCM) and the USACE New Orleans District</i>. The project involves the removal of several structures including abandoned oil wells, flowlines, and a barge that served as a well pad located in the Louisiana Coastal Zone. Reviewed available data to identify potential impacts to oyster leases, pre-existing pipelines/crossings, and prop washing zones. Created GIS figures to illustrate project location(s), path, access, and oyster leases in accordance with LDNR and OCM's guidelines.</p>			


16. Staff Experience

Firm employed by		ICF		Meets MPR No. 3 and 7	
Name	Jason Schindler		Years of relevant experience with this employer	23	
Title	Managing Director, Biology		Years of relevant experience with other employer(s)	0	
Degree(s) / Years / Specialization			MS / 2000 / Range and Wildlife Management, Texas A&M University-Kingsville BS / 1997 / Biology and Chemistry, Texas Lutheran University		
Active registration number / state / expiration date			N/A		
Year registered	N/A		Discipline	N/A	
Contract role(s) / brief description of responsibilities.			Wetland Delineation/Findings & Permits		
Experience dates		Experience and qualifications relevant to the proposed contract			
		<p>Mr. Schindler is responsible for conducting ecological studies involving threatened and endangered species, wetlands, and other resource issues. He has experience in Section 404 of the Clean Water Act (CWA) permitting, Section 401 Water Quality Certification, Section 408 authorization, and state agency permitting, including the necessary habitat assessments, field survey coordination, wetland/waterbody delineations, listed species surveys, and NEPA compliance. Areas of expertise include coordination of survey crews, analysis of environmental survey data, assisting with agency consultations, and document preparation for a wide variety of projects.</p>			
07/06–08/23		<p>Texas Department of Transportation (TxDOT) Statewide Water Resources Documentation and Permitting Services. Multiple Contracts, Statewide, TX. Project Manager/Technical Expert. Managed/performed Section 404 CWA/Section 10 Rivers and Harbors Act permitting work on a continual basis since 2006 (17 years). Completed Section 404/10 permitting, wetland delineations/verifications, function/condition assessments, mitigation/monitoring plans, and U.S. Army Corps of Engineers (USACE) coordination for many coastal and inland transportation projects throughout Texas. Completed Section 404/10 permitting and related services for 40 projects covering all Texas regions during the past five years.</p>			
01/18–08/23		<p>TxDOT-Louisiana Department of Transportation and Development, Federal Highway Administration SH 63/LA 8 Bridge Replacement over Sabine River, Newton County Texas and Vernon Parish, LA. 404/10 Permit Manager. Managed <i>wetland/water delineations and functional assessments, prepared Section 404/10 permit application and mitigation plan</i> for relocation of Sabine River bridge and 2.9 miles of approach roadway on SH 63/LA 8.</p>			
01/16–08/23		<p>TxDOT, Highway 181 Harbor Bridge Replacement (Design-Build), Nueces County, TX. Natural/Water Resource Manager. Ongoing management of water resource and endangered species permitting and regulatory compliance during construction of a new bridge over the Corpus Christi Ship Channel and associated roadway improvements. Completed three separate Section 404/10 permit modifications: two for design changes that involved filling/relocating 1,000+ feet of tidally influenced channel and other impacts to tidal channels and estuarine wetlands, and a third that involved <i>development of a permittee-responsible mitigation site</i> and compensatory mitigation plan for wetland creation, enhancement, and preservation.</p>			
02/20–04/21		<p>TxDOT, Improvements to Interstate 10 (I-10) from FM 3247 to Sabine River, Orange County, TX. Project Manager/Technical Expert. Prepared/coordinated Section 404/10 permit application, mitigation plan, and supplemental reports for improvements to 4.8 miles of I-10 conducted under two separate construction projects (ongoing and upcoming projects). Avoiding delays to the ongoing project required rapid preparation of (1) an application addressing complexities of combining two projects, (2) a detailed <i>Approved Jurisdictional Determination request</i> using historical maps/aerial photographs to justify jurisdictional</p>			

16. Staff Experience


	opinions, and (3) a reasonable mitigation plan justifying resource quality and justifying that some resource impacts did not warrant mitigation.
07/19–04/21	TxDOT, Park Road 1 Culvert Project, Bastrop County, TX. <i>Project Manager/Technical Expert.</i> Led endangered species assessments, wetland delineations, and regulatory compliance for repair/replacement of 14 culverts and a rock retaining wall in Buescher and Bastrop State Parks. Project was in Houston toad (<i>Anaxyrus houstonensis</i>) designated Critical Habitat, and several masonry culverts were designated as contributing resources of the Bastrop State Park District, listed on the National Register of Historic Places, and designated as a National Historic Landmark. Completed <i>wetland/water delineations and habitat assessments for Houston toad, prepared a Section 404 Nationwide Permit Pre-Construction Notification and Biological Assessment</i> that was adopted by USACE and involved Houston toad effect/take assessments and development of conservation measures; and coordinated with USACE through 404 permit issuances.
04/16–09/19	USACE-TxDOT, Gulf Intracoastal Waterway Brazos River Floodgates (BRFG) and Colorado River Locks (CRL), Brazoria and Matagorda Counties, TX. <i>Project Manager of Environmental Compliance.</i> Managed development of National Environmental Policy Act, Environmental Impact Statement, other environmental studies, and agency consultations. Directed natural/cultural resource surveys; analyzed impacts of several alternatives; led public/stakeholder involvement and agency consultation; prepared EIS and multiple resource-specific reports: <i>Section 404(b)(1) analysis, wetland mitigation/adaptive management plan, Biological Assessment for endangered species</i> , Marine Mammal Protection Act Report, Essential Fish Habitat Assessment, Coastal Consistency Determination, Fish and Wildlife Coordination Act Report, Historic Resources Survey Report, archeological study, and noise/air quality assessments. Analyzed effects on sea turtles and marine mammals from driving 1,400 steel/wood piles and 2,400 linear feet of steel sheet pile. Oversaw historic significance assessments of BRFG and CRL. Completed EIS process (start to finish) within USACE's three years planning schedule and received Record of Decision and other necessary agency approvals.
09/14–12/20	Annova Liquefied Natural Gas (LNG), Facility and Marine Terminal, Cameron County, TX. <i>Project Manager for Natural/Cultural Resources.</i> Directed field surveys, documentation, and agency coordination for vegetation communities, endangered species habitat assessments, ocelot (<i>Leopardus pardalis</i>)/jaguarundi (<i>Puma yagouaroundi</i>) camera trap survey, endangered plant surveys, invasive plant surveys, <i>wetlands/waters delineations and mitigation planning</i> , and cultural resources within a study area that encompassed over 1,200 acres. Assessed effects of the proposed LNG facility, marine terminal, access road alternatives, and supply pipeline on endangered species, developed avoidance and minimization measures, identified conservation measures, and managed preparation of Applicant-prepared <i>Biological Assessment for formal Section 7 consultation with USFWS</i> . Conducted extensive coordination with USFWS and USACE regarding endangered species and wetland/water resources.

Firm employed by		ARCADIS	
Name	Janet Hill, PE	Years of relevant experience with this employer	6
Title	Permitting Service	Years of relevant experience with other employer(s)	19
Degree(s) / Years / Specialization		MS / 1997 / Civil and Environmental Engineer, University of Wyoming BS / 1995 / Civil Engineering, University of Wyoming	
Active registration number / state / expiration date		Professional Engineer – #10396/ Idaho / Exp. 12/2023	
Year registered	2001	Discipline	Civil Engineer
Contract role(s) / brief description of responsibilities.		Permits – U.S. Coast Guard	
Experience dates	Experience and qualifications relevant to the proposed contract		
	<p>Ms. Hill has more than 25 years of business management, staff management, and project/portfolio/program management experience within the environmental industry. For the past 15 years, she has focused on environmental planning and permitting for Class I railroads including regulatory areas such as Clean Water Act Sections 404, 401, and 402; associated stream and wetland mitigation; National Historic Preservation Act Section 106 compliance; Rivers and Harbors Act Sections 9, 10, and 14; Endangered Species Act Section 7 compliance; and a multitude of state and local permitting nationwide.</p>		
10/17 – 06/21	<p>Confidential Railroad Bridge Project, Sacramento, CA. <i>Consultant Lead</i> for a Class I railroad client working with the U.S. Coast Guard (USCG) on a fender modification project. Worked with the USCG and it was determined that the fender modification would not require a USCG Section 9 Bridge permit. Coordinated with the client's design engineer to produce drawings that were acceptable for USCG bridge program evaluation.</p>		
01/18 – 12/20	<p>Confidential Railroad Bridge Project, Marysville, CA. <i>Permitting Lead</i> for a Class I railroad client, provided environmental permitting for a bridge replacement project. The project included <i>Section 7 Endangered Species Act consultation (formal)</i> and mitigation through a <i>Biological Opinion with the U.S. Fish and Wildlife Service</i>. Section 408 authorization was required for the project with the U.S. Army Corps of Engineers (USACE), Sacramento District. The nonfederal sponsor, Central Valley Flood Protection Board, and <i>two levee districts required encroachment permitting</i> and approval. A <i>Section 404 Clean Water Act Nationwide Permit 14 authorization from USACE and Section 401 water quality certification</i> were also obtained for the project. The project permitting was completed on an accelerated schedule due to the urgent nature of the replacement project. The project was presented at the American Railway Engineering and Maintenance Association (AREMA) conference in 2022 and the USACE provided compliments regarding Ms. Hill's knowledge of the regulatory requirements.</p>		
01/22 – 12/22	<p>Confidential Railroad Bridge Project, near Cordelia, CA. <i>Permitting Lead</i> for a Class I railroad client, supported evaluation with the USCG to determine whether a railroad bridge could be closed to navigation. Provided senior oversight and guidance to the Arcadis team coordinating with the client and USCG. Provided guidance about property ownership for navigation to client's Real Estate department. <i>Coordinated with client and engineering design consultant regarding drawings for USCG.</i></p>		
01/14 – 12/ 16	<p>Confidential Railroad Bridge Project, near Brazoria, TX. <i>Program Manager</i> for a Class I railroad client for the environmental permitting for a bridge replacement project. Necessary environmental permits included a <i>Nationwide Permit 15 from the USACE and a USCG Section 9 bridge permit</i>. The USCG was the lead federal agency responsible for Section 106 of the National Historic Preservation Act. The project was considered an adverse effect because of the historic nature of the bridge. Was involved in the drafting of the Memorandum of Agreement and consultation with the Texas Historical Commission, USCG, and the client. Engaged with the client's engineering consultant to prepare a bridge permit application that meets the USCG requirements.</p>		

Firm employed by		ARCADIS	
Name	Ray Magsanoc	Years of relevant experience with this employer	2
Title	Senior Transportation Planner	Years of relevant experience with other employer(s)	20
Degree(s) / Years / Specialization		BS / 1995 / Geology / University of California, Los Angeles	
Active registration number / state / expiration date		N/A	
Year registered	N/A	Discipline	N/A
Contract role(s) / brief description of responsibilities.		Permits	
Experience dates	Experience and qualifications relevant to the proposed contract		
		<p>Mr. Magsanoc is a Senior Planner with over 22 years of experience with federal, state, and municipal planning and design projects. His strengths are in effective public, stakeholder, permitting agency and governing board engagements /presentations; efficient preparation of feasibility and corridor studies; and development of easily understood NEPA documents. Mr. Magsanoc has managed a wide variety of planning tasks including roadway and bridge improvements, bicycle and pedestrian coordination and planning, community impact assessments, land use and socio-economic evaluations, cultural resources evaluations, noise and vibration analyses, wetland permitting and mitigation, environmental site assessments, environmental agency coordination, and utility coordination. <i>His area of expertise includes US Coast Guard (USCG) coordination and bridge permitting, US Army Corps of Engineers (USACE) Section 408 authorization requests, USACE Section 404 and Section 10 permitting, and National Oceanic and Atmospheric Administration (NOAA) Fisheries consultation.</i> Mr. Magsanoc's diverse bridge planning, design, and permitting experiences include contributions to FDOT, GDOT, SCDOT, NCDOT, and VDOT projects.</p>	
7/2017 – 3/2020	<p>Various Bridges in Eastern North Carolina: NCDOT Structures Management Unit, Eastern NC. <i>Project Manager</i> for the project development and environmental study for the replacement of bridges over navigable waters and in Coastal Area Management (CAMA) areas. Responsibilities include scope and labor hour negotiations, project schedule and milestones, and completion public meetings and environmental documents. Led field coordination and visits with the USACE, U.S. Fish and Wildlife Service, NOAA Fisheries, and NC CAMA. Coordinated with NOAA Fisheries and CAMA regarding Atlantic sturgeon (<i>Acipenser oxyrinchus oxyrinchus</i>) and shortnose sturgeon (<i>Acipenser brevirostrum</i>) habitat and other resources. Led the preparation of Categorical Exclusions (CEs). Led the USCG coordination. Coordinated the <i>NOAA Fisheries consultation</i> and resource permitting and USACE Non-Recreation Outgrant Policy permitting for bridge alignments over land and water operated and maintained by the USACE. Assisted NCDOT with the <i>USACE Section 404 and Section 10 permitting.</i></p>		
6/2007 – 8/2015	<p>Bonner Bridge Phase II: NCDOT, Pea Island and Rodanthe, NC. <i>Assistant Project Manager</i> for the project development and environmental study for the maintenance of NC 12 and new emergency bridges over the Pea Island inlet and Rodanthe inlet. Responsibilities include the coordination and preparation of environmental and planning reports. Assisted with the project public involvement and responses to Southern Environmental Law Center engineering and environmental concerns. Coordinated the preparation of the Emergency CEs. Assisted with the <i>USCG coordination.</i></p>		
7/2009 – 9/2011	<p>Grand Lagoon Bridge: FDOT District 3, Panama City Beach, FL. <i>Assistant Project Manager</i> for the project development and design for the replacement of the Grand Lagoon Bridge. Responsibilities include coordination and preparation of</p>		



	environmental and planning reports. Led the public involvement and preparation of the CE. Coordinated and prepared the USCG Section 9 bridge permit. Coordinated the NOAA Fisheries consultation and resource permitting. Coordinated the <i>wetland delineation, Jurisdictional Determination and USACE Section 404 and Section 10 permits.</i>
4/2008 – 6/2009	John's Pass Bridge: FDOT District 7, Madeira Beach, FL. <i>Technical Manager</i> assisting with the bridge and roadway design for the replacement and widening of John's Pass Bridge. Assisted with coordination and the preparation of the USCG Section 9 bridge permit.
8/2006 – 3/2010	West Columbus Drive Bridge Replacement: Hillsborough County Public Works, Tampa, FL. <i>Assistant Project Manager</i> for the project development and design to replace the West Columbus Drive bascule bridge. Responsibilities include coordination and preparation of environmental and planning reports. Led the preparation of the CE. Coordinated and prepared the Tampa Port Authority Permit, USACE Section 408 permit for dredging in federal channel, and the <i>USCG Section 9 bridge permit.</i> Coordinated the wetland delineation/JD and the USACE Section 404 and Section 10 permits.
11/2000 – 7/2004	I-75 Peace River Bridge Replacement: FDOT District 1, Punta Gorda, FL. <i>Environmental Planner</i> assisting in the project development and environmental study for the widening of the Peace River Bridge and I-75. Prepared the Contamination Screening Evaluation Report and Noise Study Report. Assisted with the project public involvement. Assisted in the preparation of the EA. Assisted with the USCG coordination.

16. Staff Experience



Firm employed by		ICF		Meets MPR No. 7	
Name	Kim Johnson		Years of relevant experience with this employer	23	
Title	Senior Managing Director, Transportation		Years of relevant experience with other employer(s)	9	
Degree(s) / Years / Specialization			BA / 1986 / Zoology, University of Texas at Austin		
Active registration number / state / expiration date			N/A		
Year registered	N/A	Discipline	N/A		
Contract role(s) / brief description of responsibilities.			Permits		
Experience dates		Experience and qualifications relevant to the proposed contract			
		<p>Ms. Johnson is experienced in NEPA document preparation as well as constraints mapping and reporting, environmental documentation, feasibility study projects, and wetland and biological survey projects since 1991. Her understanding of current DOT and FHWA practices and procedures for NEPA compliance contributes to the timely resolution of potential project issues involving Section 4(f), Section 106, Section 404/401 Clean Water Act (CWA), Environmental Justice, the Endangered Species Act, and other regulatory matters. Ms. Johnson is involved in project management and environmental analysis for all phases of environmental compliance projects. She is responsible for conducting ecological studies involving threatened and endangered species and other resource issues. Specific duties include conducting wetland delineations, habitat assessments, endangered or threatened species surveys, and vegetation mapping as well as executing appropriate written and oral reports. Ms. Johnson's experience includes performing biological assessments, performing environmental justice and socioeconomic impact assessments, managing and directing NEPA implementation, and reviewing documents for legal sufficiency.</p>			
06/13 – 08/16		<p>Presidio-Ojinaga International Port of Entry (POE), Environmental Planning, Presidio, TX. <i>Environmental Permitting Specialist.</i> Led this new-location bridge project at the U.S./Mexico POE. The project included construction of a second bridge at the international POE. Oversaw technical reports for Biology, Waters of the U.S. (WOTUS), Community Impacts (EJ/LEP communities), Visual Impacts, Hazardous Materials, Historic Resources, Archeology, Air, 401 Certification, U.S. Army Corps of Engineers (USACE) <i>Nationwide Permit (NWP) 15 Pre-Construction Notification (PCN)</i> for, Noise Impact Analysis, ICI, and EA. Complexities included the project's tight timeline dictated by TxDOT Administration, the Administration's involvement, and bi-national/federal coordination. Addressed these issues by utilizing experienced staff to meet the project timeline, which required production of high-quality products with minimal revisions. She led an extensive public involvement effort with Spanish translations, including coordination with Mexican officials and management of TxDOT-Mexico liaison. She managed the Public Hearing, preparation of Presidential Permit, <i>preparation of U.S. Coast Guard (USCG) Section 9 Bridge Permit</i> application and coordination with USACE, Texas Commission on Environmental Quality (TCEQ), Texas Parks & Wildlife Department, International Boundary and Water Commission, United States Fish and Wildlife Service, Federal Emergency Management Agency, THC, US Customs and Border Protection, FHWA, DOS, and Mexican Agencies. According to TxDOT PM, Becky Reyes, she and her team prepared the "fastest-ever approved Presidential Permit in U.S. history."</p>			
01/18 – Ongoing		<p>Texas Department of Transportation TxDOT, Environmental Analysis for the SH 63 Bridge over the Sabine River, Newton County, TX. <i>Environmental Permitting Specialist.</i> TxDOT, Federal Highway Administration (FHWA), and Louisiana Department of Transportation and Development are proposing a new crossing of to the SH 63/ LA 8 bridge over the Sabine River at the Texas/Louisiana border, located in Newton County, Texas and Vernon Parish, Louisiana. The proposed project would replace</p>			


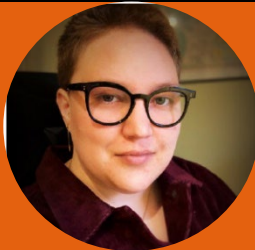
16. Staff Experience



	<p>the existing SH 63/LA 8 bridges at the Sabine River through the construction of new approach roadways and a new bridge structure. The proposed bridge replacement alternative is approximately 2.9 miles long, with the proposed roadway sections being two-lane undivided, which matches the existing facility. Serve as Lead for National Environmental Policy Act (NEPA) and environmental documentation. Documents prepared included: a Public Involvement Plan, Alternatives Analysis/Feasibility Study, Bridge Team Report, USCG Section 9 Bridge Questionnaire, EA/EIS Classification Letter, Community Impacts Technical Report, Programmatic Section 4(f) Evaluation, Historical Studies Research Design, <i>Section 404 CWA Individual Permit</i>, Section 4(f) Evaluation, Archeological Survey Report (aquatic and terrestrial), Hazardous Materials Technical Report, Air Quality and Noise Analysis Technical Reports (one for Texas and one for Louisiana), Indirect and Cumulative Impacts Assessment, and Environmental Assessment. Environmental clearance is expected by December 2023.</p>
08/16 – Ongoing	<p>US 69 Extension Project at Pine Island Bayou, Environmental Planning, Jefferson and Hardin counties, TX. <i>Environmental Permitting Specialist.</i> Led NEPA planning for this project, which extended US 69 frontage roads across Pine Island Bayou. To meet the tight project schedule, environmental constraints, and potential schedule delays due to coordination and permitting were identified early in the process. Met regularly with design engineers to identify impacts to WOTUS and vegetation, resulting in avoidance of a Section 404 CWA permit. Completed a successful <i>USCG Section 9 Bridge Exemption form</i>. The project was within the Big Thicket National Preserve and included coordination with preserve managers on their concerns. Worked with engineers to avoid impacts to the preserve which could have resulted in potentially lengthy Section 4(f) requirements and project delays. Due to public concerns, she also worked with the engineers to replace instead of removing an existing boat ramp; avoiding another potential Section 4(f) impact and public controversy. With her help, TxDOT balanced public concern with design and gained public trust.</p>
08/16 – Ongoing	<p>TxDOT, US 190 Bridge Replacement over the Trinity River and B.A. Steinhagen Reservoir, Jasper and Tyler Counties, TX. <i>Environmental Permitting Specialist.</i> US 190 links the city of Jasper and town of Woodville, the Jasper and Tyler County seats, respectively. The replacement of the NRHP-listed US 190 Bridge at Neches River constituted a “use” of a government-owned historic resource under Section 4(f) of the Department of Transportation Act and an adverse effect under Section 106 of the National Historic Preservation Act. Therefore, a Programmatic Section 4(f) evaluation was prepared to determine if there is a prudent and feasible avoidance alternative to the use of the historic bridge. In order to reduce environmental impacts and expedite the schedule, worked with the engineers to ensure that no new ROW was needed; however, 8.8 acres of temporary construction easements were required in parkland owned by the USACE, which required Section 408 authorization. Led the preparation of ECOS pages, the Feasibility Study and Historic Bridge Team Report, PCR, Research Design, HRSR, CIA, Section 4(f) for bridge and 4(f) de minimis for two parks, Archeological Background Study, Haz Mat ISA, <i>WOTUS technical reports</i> and <i>NWP 23 PCN</i> including mitigation plan for use of mitigation bank, <i>Biological Reports</i> (Alligator Snapping Turtle [<i>Macrochelys temminckii</i>] and two mussel species were proposed for listing during the project), USCG FHWA exemption forms, Bridge Marketing Form, Temporary Construction License Packet (408 property), CE, EPIC, SW3P, Section 106 Consultation MOA – Bridge Mitigation Agreement, Public Hearing and Summary (Chapter 26 and Section 4(f) requirements), Reasonable Assurance Memo, and License and Consent between TxDOT and the USACE.</p>

Firm employed by				Meets MPR No. 7	
Name	Tonja Koob Marking, PhD, PE, D.WRE, CFM		Years of relevant experience with this employer	24	
Title	Principal Environmental Engineer		Years of relevant experience with other employer(s)	3	
Degree(s) / Years / Specialization			PhD / (est'd) 2026 / History; MA / 2020 / History; MBA / 2010 / Finance PhD / 2002 / Civil and Hydraulic Engineering ME / 1996 / Environmental Engineering MSPH / 1993 / Environmental Toxicology and Risk Assessment BA / 1990 / Biology		
Active registration number / state / expiration date			PE.30749 / LA / 09/30/2023		
Year registered	2003	Discipline	Environmental Engineer		
Contract role(s) / brief description of responsibilities.			Permits		
Experience dates	Experience and qualifications relevant to the proposed contract				
	Dr. Marking has worked extensively throughout Louisiana for the last 24 years providing project management services, environmental engineering, and hazard mitigation drainage solutions to government agencies and private clients. As a Certified Floodplain Manager, she is a specialist in hazard mitigation with an emphasis on alleviating the cycle of damage-rebuild-damage due to disaster losses. Her administrative skills combined with her technical knowledge enable her to assess project needs at all levels and to direct personnel so that work is completed on time and within budget. Dr. Koob was the only local environmental engineer working for the US Army Corps of Engineers (USACE) prime contractor for debris removal post Katrina in New Orleans south of I-10. In that role she managed over 100 field personnel, designed hazardous waste removal programs, coordinated efforts between local, state, and federal entities, and maintained environmental compliance on a \$500 million project.				
01/17 – 09/17	Children's Museum Section 404 Permit, Louisiana Children's Museum, New Orleans, LA. Environmental Engineer. Permit preparation and submission. Successfully obtained a USACE Section 404 Clean Water Act/Section 10 Rivers and Harbors Act permit for construction of the Children's Museum in City Park.				
06/17 – 06/19	Non-Rock Alternative Shoreline Protection, NRCS, Lafayette, LA, ST. Environmental Engineer. Permit preparation and submission. Prepared Environmental Consideration Report; secured Coastal Use Permit (CUP) from the Louisiana Department of Natural Resources (LADNR), Office of Coastal Management.				
04/20 – 09/20	Barge Debris Removal, USACE, New Orleans, LA. Lead Environmental Engineer. Investigated channel debris for hazardous substances; coordinated with USACE and solid waste contractor for proper disposal; coordinated with LADOTD for debris manifests.				
12/20 – Ongoing	Almonaster Bridge Rehabilitation, Port of New Orleans, New Orleans, LA. Lead Environmental Engineer. Directed and wrote the NEPA Categorical Exclusion document, coordinated with state and federal agencies for USACE Section 10/404 permit, LADNR for CUP, USGS for Section 9 Rivers and Harbors Act bridge permit, and local Levee Board permits				
09/21 – Ongoing	Orpheum Levee Pave, Southeast Louisiana Flood Protection Authority, New Orleans, LA. Lead Engineer. Directed drainage study; coordinated with federal and state agencies for LADNR CUP, USACE Section 10/404 permit, and local Levee Board permits				
06/12 – 01/15	Belle Chasse Tunnel-Bridge, LADOTD, Belle Chasse, LA. Lead Environmental Engineer. Directed and wrote Phase I Environmental Site Assessment; directed Traffic Count field work for NEPA Environmental Assessment				

07/14 – 12/16	MSY Airport Environmental Assessment, Louis Armstrong New Orleans International Airport, Kenner, LA. <i>Lead Environmental Engineer.</i> Directed and wrote multiple sections of Environmental Assessment including Threatened and Endangered Species Survey, wetlands determination, and floodplain encroachment
02/14 – 09/19	Livingston and Schwartz Schools, New Orleans Recovery School District Client, New Orleans, LA. <i>Lead Environmental Engineer.</i> Designed demolition plans for RSD schools; secured permits for demolition and debris removal; managed demolition contractor
02/17 – 08/17	NDRC Grant, City of New Orleans; New Orleans, LA. <i>Lead Environmental Engineer.</i> Performed preliminary environmental review for 20 projects for grant application including historic preservation, floodplain management, <i>coastal zone management, wild and scenic rivers</i>


Firm employed by			
Name	Lauren Peytavin, EI	Years of relevant experience with this employer	6
Title	Project Designer	Years of relevant experience with other employer(s)	6
Degree(s) / Years / Specialization		Master's Certificate / 2021 / Coastal Engineering BS / 2018 / Civil Engineering BA / 2012 / Biomedical Science	
Active registration number / state / expiration date		EI.03372 / LA / 09/30/2024	
Year registered	2003	Discipline	Civil Engineer
Contract role(s) / brief description of responsibilities.		Permits	
Experience dates	Experience and qualifications relevant to the proposed contract		
	<p>During Ms. Peytavin's tenure with Gaea, she has contributed to numerous environmental, green infrastructure, and stormwater projects from inception to production of final plans. Specifically, she has prepared and submitted U.S. Army Corps of Engineers (USACE) Section 10 Rivers and Harbors Act, Section 404 Clean Water Act, and Section 408 authorizations and Louisiana Department of Natural Resources (LADNR) Coastal Use Permit (CUP) applications. She has researched and analyzed historic USACE Section 10 and 404 permits for consistency and compliance for private clients. Ms. Peytavin has also reviewed and approved state SWPPPs for city construction projects. She has performed environmental reviews and assisted in the production of environmental documents for the City of New Orleans, HANO, Port of New Orleans, LADOTD, and the Sewerage and Water Board of New Orleans.</p>		
8/22 - Ongoing	Clayton's Pond Drainage Improvement, St Charles Parish, Norco, LA. Project Designer. As part of this drainage improvement project, Ms. Peytavin will prepare and submit USACE Section 404/10 permit applications and Section 408 authorization request along with LADNR CUP, and state Water Quality Certification request for work adjacent to the Bonnet Carre Spillway Guide Levee. Once the design is complete, she will also prepare and submit the local Levee Board permit application.		
01/19 – 01/20	Permit Analyses for Privately-Owned Properties, Private, Atchafalaya Basin, LA. Permit Analyst. Researched current and historic permits from state and federal agencies in support of litigation. Reviewed LDPES, well, storage tank, LADNR CUP, and USACE Section 404/10 Water permits for consistency with current actions and advised clients of non-compliance issues.		
12/20 – Ongoing	Almonaster Bridge Rehabilitation, Port of New Orleans, New Orleans, LA. Project designer. Conducted field investigations for the NEPA Categorical Exclusion document and Phase I Environmental Site Assessment. Coordinated with state and federal agencies for USACE Section 10/404 permit, LADNR for CUP, U.S. Coast Guard for Section 9 Rivers and Harbors Act bridge permit, and local Levee Board permits		
03/21 – Ongoing	RR020 Bywater-Marigny Recovery Roads, City of New Orleans, Client, New Orleans, LA. Project designer. Coordinated with New Orleans Public Belt Railroad and Southeast Louisiana Flood Protection Authority East to obtain permits for the City of New Orleans and its contractor to perform street repairs; ensured contractor-maintained compliance with permitted activities, particularly during high water events on the Mississippi River		
09/21 – Ongoing	Orpheum Levee Pave, Southeast Louisiana Flood Protection Authority, New Orleans, LA. Project designer. Conducted drainage study; designed levee pavement; coordinated with federal and state agencies for LADNR CUP, USACE Section 10/404 permit, and local Levee Board permits.		

Firm employed by				Meets MPR No. 9	
Name	Kira Kefer		Years of relevant experience with this employer	3	
Title	Senior GIS Analyst		Years of relevant experience with other employer(s)	13	
Degree(s) / Years / Specialization			BS / 2014 / General Studies / University of North Dakota GIS Certificate / University of West Florida / 2012		
Active registration number / state / expiration date			N/A		
Year registered	N/A	Discipline	N/A		
Contract role(s) / brief description of responsibilities.			GIS/Data Mapping Support		
Experience dates		Experience and qualifications relevant to the proposed contract			
		<p>Ms. Kefer's focus is on advanced geospatial analysis for transmission and other large-scale projects and is experienced in digital data collection and management, local, state, and federal projects, and project permitting including the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). She is passionate about developing new tools to apply industry-leading GIS analysis and always looks for new efficiencies, insights, and tools to provide excellent client outcomes. Ms. Kefer excels in leading complex projects with a multi-disciplinary team to manage and provide seamless data management, spatial analysis, and project support for a large variety of projects and clients.</p>			
03/2022 – 04/2022		<p>Webmap Creation, Confidential Oil and Gas Client, Ohio. <i>GIS Analyst.</i> Served as the GIS Lead assisting with the selection of a Carbon Capture Storage facility for client. <i>Developed an interactive webmap that the client could use to share with stakeholders to help determine best location depending on various criteria, including permitting needs by state.</i></p>			
09/2020 – 03/2023		<p>Transmission Line Rating Remediation Project, Confidential Utility Client, California. <i>GIS Analyst.</i> Serves as the GIS Analyst for remedial upgrades of more than 1,100 miles of existing transmission lines in California and Nevada. <i>Utilized a comprehensive siting model for identifying opportunities, concerns and constraints for engineering, construction and permitting analysis.</i> Managed existing and proposed transmission and distribution and subtransmission engineering data, construction features, environmental and cultural data and provide detailed analysis for all project needs. Supported field work data and provided all geospatial analysis. Developed digital data collection tools for field verification of PLS-CAD models and condition assessment of assets.</p>			
06/2008 – 09/2020		<p>Transmission Group Management Multiple Clients and Locations. <i>GIS Analyst.</i> Served as GIS and Data Lead for transmission group, managing a multi-disciplinary GIS team in providing analysis and program-level support for transmission clients in all phases of siting, permitting and construction. Projects included siting for multi-transmission line, distribution and substation programs in CA, IN, KY, MA, ME, NH, OH, SC, TN, TX, VA, and WV. Managed all GIS and enterprise databases, routing analysis, field collection and validation for asset integrity, biological and cultural resources, and data sharing via web maps and web services to clients, regulatory agencies, and other consultants. <i>Provided advanced geospatial analysis and maps in support of stakeholder engagement and project permitting,</i> including impact and alternatives analysis, viewshed analysis, and siting analysis for both existing and greenfield study areas.</p>			

Firm employed by				Meets MPR No. 9
Name	Joshua Chatelain		Years of relevant experience with this employer	15
Title	Senior GIS Analyst		Years of relevant experience with other employer(s)	7
Degree(s) / Years / Specialization			BS / 2002 / Geography, University of New Orleans	
Active registration number / state / expiration date			N/A	
Year registered	N/A	Discipline	N/A	
Contract role(s) / brief description of responsibilities.			GIS/Data Mapping Support	
Experience dates	Experience and qualifications relevant to the proposed contract			
	<p>Mr. Chatelain has more than 20 years of experience using Geographic Information Systems (GIS) for planning and analysis in the environmental and transportation engineering fields. He is experienced in performing infrastructure mapping and assessment, transportation planning and analysis, data acquisition, environmental analysis, field survey oversight, and providing GIS support for ITS projects. Experience with ESRI ArcGIS application stack and data driven applications include: ArcMap, ArcCatalog, ArcGIS Pro, ArcInfo, ESRI Roads and Highways, Event Editor, ArcGIS Data Reviewer, ArcGIS Workflow Manager, ArcGIS 3D Analyst, ArcGIS Spatial Analyst, ArcGIS Geostatistical Analyst, ArcGIS Network Analyst, Production Mapping, ArcPad, ArcGIS Collector, Field Maps, ArcGIS Model Builder, ArcGIS Online/Portal, ArcGIS Enterprise, ArcGIS Web App Builder, ExperienceBuilder,, Enterprise Databases, ArcSDE, Python, Arcade, ArcGIS Server, and SQL Server Management Studio.</p>			
06/18 – 10/19	<p>I-10 Queue Warning Systems Engineering Analysis, LADOTD, Baton Rouge, Louisiana/H.013482.1. Probe Data and GIS Analyst. Developed the first of its kind ITS Systems Engineering Analysis involving the evaluation of a Queue Warning system on I-10 eastbound from LA 77 to I-110. The analysis required processing and evaluation of traffic probe data as well as LADOTD's crash data using GIS and electronic dashboarding tools to identify existing traffic conditions. Prepared maps and visualizations of geospatial and project data.</p>			
01/07 - 01/2010	<p>El Camino (LA 6) Corridor Widening - Environmental Assessment. Louisiana Department of Transportation & Development, Natchitoches Parish, Louisiana. Performed analysis, mapping, and data development as part of the Environmental Assessment (EA) for the corridor. Conducted windshield surveys and gathered GPS data in the field to identify and map important features to be analyzed in the assessment. Assisted ecologist in identifying wetland areas within the project area. <i>Developed and prepared maps and exhibits visualizing environmental data for permitting and reporting.</i></p>			
01/14 – 01/18	<p>Retainer Contract for an Enterprise LRS System Development Louisiana Department of Transportation & Development, Statewide, Louisiana. <i>GIS Analyst.</i> Responsible for the implementation of an Enterprise Linear Referencing System (LRS) using ESRI Roads & Highways. Participated in discovery meetings, development of existing conditions report, development of initial R&H database model and implementation of a Statewide Enterprise LRS. Local point of contact and associate project manager for the retainer contract.</p>			
02/13 – 07/14	<p>Enterprise LRS Business Process Review and Database Design Arizona Department of Transportation, Phoenix, Arizona. <i>GIS Analyst.</i> Worked as part of the project team to design and implement an Enterprise Linear Referencing System (LRS) using the ESRI Roads and Highways platform (RNH). Evaluated the needs of the LRS system within ADOT. Tested tool sets, geoprocessing functions, models, datasets, schemes, and other elements within RNH to identify practical methods of migration to RNH from ADOT's current system. Modified, modeled, processed, and prepared datasets for migration into RNH.</p>			

01/10 – 01/11	City-Parish Enterprise LRS System Development, City of Baton Rouge/Parish of East Baton Rouge, Baton Rouge, Louisiana. <i>GIS Analyst.</i> Responsible for the implementation of an Enterprise Linear Referencing System using Geomedia and Oracle Spatial. Conducted business requirements and needs assessment, design, build, and implementation of a parish wide LRS.
01/21 - Current	LADOA General Services Staff Augmentation Contract, Louisiana Department of Transportation & Development, Statewide, Louisiana. <i>GIS Configuration Engineer.</i> Responsible for supporting the GIS/Mapping (Section 21) in continuing development of the DOTD Enterprise GIS Program. Worked to improve business process workflows and provided training and oversight to staff members. Developed ETL (extract, transform, load) processes, scripts, and geoprocessing tools to generate transportation data products and accomplish Section 21 goals. Worked with Section 21, Highway Safety Section, and CARTS (LSU Center for Analytics & Research in Transportation Safety) focus groups to design and develop a linear referenced enterprise Intersections data model to meet the needs of various stakeholders at DOTD. Developed database schemas, datasets, tables, tools, and methodologies to support Intersections data migration and development, and demonstrated Intersection Program goals and concepts to stakeholders across the agency.


16. Staff Experience

Firm employed by		ARCADIS		Meets MPR No. 7	
Name	Jose L. Rodriguez, PE		Years of relevant experience with this employer	1	
Title	Senior Civil Engineer		Years of relevant experience with other employer(s)	24	
Degree(s) / Years / Specialization			BS / 1992 / Civil Engineering, University of New Orleans		
Active registration number / state / expiration date			PE.0030492 / LA / Exp. 03/31/2025		
Year registered	2003	Discipline	Civil Engineering		
Contract role(s) / brief description of responsibilities.			Roadway Design Lead; CADD/Permit Drawings		
Experience dates		Experience and qualifications relevant to the proposed contract			
		<p>Mr. Rodriguez has more than 25 years of experience with roles of progressive responsibility as a civil engineer performing roadway design, bridge design, project management, hydraulic analysis, utility coordination, construction supervision, estimating, and project implementation for various clients in Louisiana, Texas, Georgia, and North Carolina. Jose has worked in close relationship with the Federal Highway Administration (FHWA), U.S. Army Corps of Engineers (USACE), Louisiana Department of Transportation (LADOTD), local parish governments, and regional planning commissions. He has extensive experience with Bentley Inroads, Autodesk Civil 3d, and Leap Bridge for Concrete Bridge Design. Served on the American Concrete Institute (ACI) Louisiana Board, becoming president of the Louisiana Chapter in 2010 and remains active in the organization.</p>			
07/09 – 07/15		<p>Peters Road Expansion, Phases I-III, LADOTD, Plaquemines, LA. Project Designer. Responsible for the geometric design, plan preparation and wetland delineation of Peters Road Phases I, II and III. The projects consisted of a new roadway, elevated crossing over the Intracoastal Waterway, approach roadways in Jefferson and Plaquemines Parishes to tie Peters Road to Louisiana 23 near Barrier Road. During the environmental phase of the project, Jose actively contributed to the <i>preparation of plans and exhibits required for securing permits from the U.S. Coast Guard and the USACE</i>. These projects were executed in close collaboration with Plaquemines Parish, the LADOTD, and the USACE.</p>			
01/08 – 05/08		<p>I-12 to Bush Corridor Study Phase III (EIS), LADOTD, St. Tammany Parish, LA. Project Designer. Responsible for evaluating environmental issues and developing design alternatives in accordance with the National Environmental Policy Act (NEPA) for transportation improvements. Jose, working in coordination with the environmental team, helped produce <i>plans and exhibits for the development of GIS data sets for the project</i>.</p>			
03/19 – 05/20		<p>Eastern Federal Lands Highway Division (EFLHD), Puerto Rico. Assessment Roadway Lead: Responsible for reviewing, preparing reports, and coordinating repairs at over 70 roadway sites damaged by Hurricane Maria. Provided technical assistance to local engineering firms to ensure the project adhered to the client's guidelines and strict schedules. Jose ensured that <i>all fieldwork and plan development were aligned with Puerto Rico's horizontal and vertical datums for integration with GIS systems</i>.</p>			
04/21- 04/22		<p>Lee Drive (Highland Road to Perkins) Final Design Study Report, MOVEBR Baton Rouge, LA. Project Designer, Responsible for coordinating and developing concept drawings to evaluate the geometric feasibility of different roadway alternatives, proposed improvements, and anticipated right-of-way needs. Provided technical guidance to help identify green infrastructure opportunities along the project. Also assisted in the implementation of Complete Street regulations for the corridor. During the alternative's selection process, conducts cost estimates to evaluate and select the preferred alternative.</p>			

16. Staff Experience

01/06 – 09/09	New Orleans Submerged Roadway Program Management, LADOTD / New Orleans Regional Planning Commission, New Orleans, LA. <i>Project Designer and Quality Control Reviewer</i> for the program management team for the LADOTD and the FHWA. Jose helped develop design guidelines and processes for the standardization of engineering work for the repair of roadways damaged by Hurricane Katrina in the City of New Orleans and other parishes. Responsible for conducting quality control reviews on roadway plans prepared by other engineering firms for compliance with LADOTD and FHWA design standards.
02/10 – 06/11	I-10 from Veterans to Clearview, LADOTD, Metairie, LA. <i>Project Designer.</i> Responsible for roadway plan preparation for widening 1.2 miles of I-10 from three lanes to five lanes in each direction. The project also included bridge work to accommodate the interstate widening. Jose was also responsible for the alignment and design of concrete sound walls along the corridor. He helped implement an innovative two-sided concrete stamp process for the noise wall precast concrete panels.
05/12 – 12/15	Earhart Boulevard-Causeway Interchange, LADOTD, New Orleans, LA. <i>Project Designer.</i> Responsible for the geometric design and roadway plan preparation for the Earhart Boulevard-Causeway Interchange. The Earhart Boulevard Causeway Interchange purpose was to assist in traffic congestion relief for the east-west flow of traffic for the New Orleans Metro Area. It consisted of the development of roadway and bridge ramps for the creation of an elevated signal-controlled interchange. Responsible for development of all horizontal and vertical alignments for this project as well as roadway plan preparation, developing all roadway cross sections, drainage design, utility conflict resolution and cost estimating for the project.
06/04 – 01/11	Causeway Boulevard Interchange Improvements Phases I and II, LADOTD, Metairie, LA. <i>Project Designer.</i> This project consisted of widening Causeway Boulevard elevated structure at Veterans Boulevard and the construction of new at-grade and elevated ramps to provide better accesses, improve safety and ease congestion at this heavily traveled interchange. Responsible for evaluating existing girders, the design of new precast concrete girders and the roadway plan preparation for this project. Also, responsible for evaluating and design of new sewer and water lines for the project as well as coordinating the removal and replacement of all utilities affected by the new roadways and/or structure foundations.
01/20 – 05/20	NC Highway 73 (NC 73) Widening, North Carolina DOT, Mecklenburg County, North Carolina. <i>Project Engineer.</i> Responsible for the Temporary Traffic Control Plan preparation for the widening of NC 73. A principal arterial roadway, NC 73 was widened from a two-lane undivided roadway into a four-lane divided highway with a 30-foot wide median. The project presented many challenges due to the high traffic volumes, time restrictions for lane closures, and all NASCAR events at Charlotte Motor Speedway for the duration of the project. To mitigate traffic disruption and enhance roadway safety, assisted in preparing the Transportation Operation Plans and sequence of construction for the project. All design work was performed following NCDOT and the latest MUTCD standards.
04/18 – 09/20	Texas High-Speed Rail, Texas Central Railway, Dallas to Houston, Texas. <i>Project Designer.</i> Assisted with establishing flood elevations for the alignment of over 240 miles of rail tracts. Also responsible for the realignment of at-grade roadways impacted by the High-Speed rail.
10/17 – 03/18	Traffic Turn Lanes on Highway LA 3127, Yuhuang Chemical Inc., St. James, LA. <i>Quality Control (QC).</i> Review for the design of two turn lanes into the Yuhuang Chemical Methanol plant in St. James, Louisiana. During construction, Jose provided the owner with construction design services for the duration of the construction phase.
12/15 – 01/16	Magnolia Ridge Levee Project, City of New Orleans, St. Charles Parish, LA. <i>Quality Control (QC).</i> QC review and plan preparation for the Magnolia Ridge Levee project for St. Charles Parish.


16. Staff Experience

Firm employed by		ARCADIS		
Name	Gabriel Arias, PE		Years of relevant experience with this employer	<1
Title	Transportation Engineer		Years of relevant experience with other employer(s)	8
Degree(s) / Years / Specialization			BS / 2013 / Civil Engineering, Auburn University	
Active registration number / state / expiration date			PE. 0042599 / LA / Exp. 09/30/2023	
Year registered	2018	Discipline	Civil Engineering	
Contract role(s) / brief description of responsibilities.			CADD/ Permit Drawings Support	
Experience dates		Experience and qualifications relevant to the proposed contract		
		Mr. Arias has more than eight years' experience performing complex geometric design on roadway including horizontal and vertical (H&V) alignment, hydraulic design cross drain pipes (CDP's) and open ditches, turn lane design, striping/signage, structural design analysis and QC, traffic management plans, and roadway plan production.		
06/16 – 02/17		LA 435 to LA 40/LA 41, LADOTD, St. Tammany Parish, LA. Project Engineer. The project calls for the construction of a new four-lane highway connecting I-12 to Bush, Louisiana, in St. Tammany Parish. The new roadway is approximately 19.8 miles in length and begins at LA 434, north of the existing LA 434 interchange with I-12, and traverses in a northeasterly direction until encountering an abandoned rail corridor. It then follows the rail corridor terminating at the LA 21/LA 41 intersections near Bush, Louisiana. Assisted with roadway geometric design including H&V alignment, hydraulic design for storm drains, CDP's and open ditches, structural design analysis and QC, Traffic management plans and roadway plan production for the new 5.5 mile 4-lane RA-3 roadway from LA 435 to Bush, LA.		
07/13 – 06/16		Bayou Mercier Road/Berard Canal Bayou, LADOTD, St. Martin Parish, LA. Project Engineer. Performed topographic field surveying and assisted with bridge design, hydraulic analysis and roadway design for the replacement of the existing off-system bridge timber structure with a quad-beam concrete structure.		
07/13 – 02/17		Derrick Road Bridge, LADOTD, Iberville Parish, LA. Project Engineer. Performed topographic field surveying and assisted with bridge design, hydraulic analysis and roadway design for the replacement of the existing off-system bridge timber structure with a slab span, concrete structure.		
07/13 – 02/17		Jude & Placide Road Bridges, LADOTD, Vermilion Parish, LA. Project Engineer. Performed topographic field surveying and assisted with bridge design, hydraulic analysis and roadway design for the replacement of the existing off-system bridges timber structures with slab span, concrete structures.		
07/13 – 10/16		City of Thibodaux Overlay Projects, LADOTD, Lafourche Parish, LA. Project Engineer. Project required chip sealing, joint & crack sealing, resurfacing and complete pavement replacement for four separate locations in the city of Thibodaux, LA. The goal was to prolong the life of the existing pavements by preventing future deterioration and/or rehabilitating the existing pavements. Assisted with roadway geometric design including horizontal alignments, selection of treatment type for pavements, hydraulic design for storm drains, CDP's and open ditches and roadway plan production.		



16. Staff Experience

09/13 – 02/17	Pecan Island Road Bridge Over The Chenal, LADOTD, Pointe Coupee Parish, LA. <i>Project Engineer.</i> Performed topographic field surveying and assisted with bridge design, hydraulic analysis and roadway design for the replacement of the existing off-system bridge timber structure with a customized slab span, concrete structure.
07/13 – 02/17	Gracie Lane Bridge, LADOTD, Iberville Parish, LA. <i>Project Engineer.</i> Performed topographic field surveying and assisted with bridge design, hydraulic analysis and roadway design for the replacement of the existing off-system bridge timber structure with a slab span, concrete structure.
04/14 – 02/17	Lajaunie Rd/Lateral 1 Bayou St. LADOTD, Clair, Lafayette Parish, LA. <i>Project Engineer.</i> Performed topographic field surveying and assisted with bridge design, hydraulic analysis and roadway design for the replacement of the existing off-system bridge timber structure with a slab span, concrete structure.
11/15 – 02/17	Babin Rd./Bayou Narcisse, LADOTD, Ascension Parish, LA. <i>Project Engineer.</i> Performed topographic field surveying and assisted with bridge design, hydraulic analysis and roadway design for the replacement of the existing off-system bridge timber structure with a slab span, concrete structure.
06/18 – 10/19	Mid-Barataria Diversion Design, Plaquemines Parish, LA. <i>Project Engineer.</i> Planning, engineering and design services for the creation of the Mid-Barataria sediment diversion basin to strategically reintroduce sediment and freshwater inputs into the Barataria Basin. Assisted with detour roadway alignment creation/selection, TTC planning, and <i>plan preparation</i> .
09/13 – 02/17	West 15th Avenue/Mile Branch, City of Covington, St. Tammany Parish, LA. <i>Project Engineer.</i> Performed topographic field surveying and assisted with bridge design, hydraulic analysis, and roadway design for the replacement of the existing bridge timber structure with a customized slab span, concrete structure. Included an integral pedestrian/bicycle path and custom barrier to separate pedestrians and vehicles.
02/18 – 04/18	US 377 Cresson Relief Route, TXDOT, TX. <i>Project Engineer.</i> TXDOT will construct a three-mile relief route west of the city of Cresson. The relief route will be a new four-lane divided highway on US 377 beginning one mile south of the intersection of US 377 and SH 171 and ending one mile north of the same intersection. Assisted with plan creation including H&V alignment review, TTC plans, construction quantity estimation and <i>roadway plan production</i> for the realigned roadway.
06/17 – 10/17	Hwy 270 Widening Connecting Arkansas Program (CAP), CA0607, Garland County, AR. <i>Project Engineer.</i> Contracted by AHTD, as part of their Connecting Arkansas Program (CAP), to assist with the design of widening approximately three miles of Hwy 270 in Garland County. The proposed roadway is 4 lanes with a painted median from Hwy 270 to Black Snake Road, then 5 lanes curb & gutter from Black Snake Road to Hwy 227. Responsibilities include the <i>drainage design and plan production, wetland delineation</i> and maintenance of traffic plans. Tasks include preliminary site visits, developing hydraulic and hydrologic models for the pipes, submittal of Hydraulic Report, drainage ditch design, maintenance of traffic plan submittals and wetlands report.

16. Staff Experience

Firm employed by		ARCADIS	
Name	Crista Haag	Years of relevant experience with this employer	5
Title	Cultural Resources	Years of relevant experience with other employer(s)	20
Degree(s) / Years / Specialization		MA / 2004 / Anthropology, emphasis in Archeology, University of Kentucky BA / 1998 / Anthropology, Miami University of Ohio	
Active registration number / state / expiration date		N/A	
Year registered	N/A	Discipline	N/A
Contract role(s) / brief description of responsibilities.		Cultural Resources - Archaeology	
Experience dates	Experience and qualifications relevant to the proposed contract		
	Ms. Haag has been involved in cultural resources management and Section 106 National Historic Preservation Act (NHPA) consultation for over 20 years. She has worked with various public and private sector clients on Phase I, II, and III cultural resources investigations. Her primary responsibilities have included proposal development, project management, agency coordination, background research, fieldwork, artifact analysis, and reporting. She has served as the Principal Archaeologist on projects in Arkansas, Indiana, Illinois, Iowa, Kentucky, Michigan, Mississippi, Missouri, Ohio, Pennsylvania, Tennessee, Texas, Virginia West Virginia, and Wisconsin. Christa has implemented cultural resource management techniques for large and small projects, demonstrated budget management skills to meet client's needs, and has successfully completed numerous projects in a timeframe that meets client requirements.		
01/20 – 08/20	Westway 20-inch Potable Water Line Project, El Paso Water, El Paso, TX. <i>Principal Archeologist</i> for a project involving installation of a water line. Cultural resources investigations conducted according to Texas Antiquities Code of Texas including background research, State Historic Preservation Office (SHPO) consultation, and archaeological survey.		
03/19 – 05/19	Northeast Sanitary Sewer Line Project, Confidential Client, Brazos County, TX. <i>Principal Archeologist</i> for a project involving installation of a sewer line. Cultural resources investigations conducted according to Texas Antiquities Code of Texas including background research and SHPO consultation.		
02/19 – 09/19	Big Spring Siding Project – Toyah Sub MP 513.79 to 516.54, Railroad Client, Railroad Client, TX. <i>Principal Archeologist</i> for a project involving the construction of a siding track adjacent to the main track of the Toyah Subdivision between MP 513.79 and 516.54. Cultural resources investigations conducted according to Section 106 of NHPA. Conducted background research and developed a cultural desktop assessment, along with USACE coordination. <i>Completed background research and Section 106 NHPA consultation with the U.S. Army Corps of Engineers (USACE).</i>		
01/17 – 01/19	Railroad Bridge Replacement Projects, Railroad Client, Various Counties, TX. <i>Lead Archeologist</i> for several USACE permitted railroad bridge replacement projects. Cultural resources investigations conducted according to Section 106 of NHPA. Conducted background research and developed cultural desktop assessments, and, if necessary, coordinated field survey and Section 106 consultations with the USACE.		
12/20 – 12/20	New Braunfels Utility Surface Water Treatment Plant Expansion Project, Confidential Client, Comal County, TX. <i>Principal Archeologist</i> for a project involving the water treatment plant expansion. Cultural resources investigations conducted according to Texas Antiquities Code of Texas including background research and SHPO consultation.		


16. Staff Experience

Firm employed by			
Name	Tegan Baiocchi	Years of relevant experience with this employer	2
Title	Environmental Scientist	Years of relevant experience with other employer(s)	14
Degree(s) / Years / Specialization		MS / 2009 / Historic Preservation, Eastern Michigan University BA / 2006 / Public History, Western Michigan University	
Active registration number / state / expiration date		N/A	
Year registered		Discipline	N/A
Contract role(s) / brief description of responsibilities.		Cultural Resources - History	
Experience dates	Experience and qualifications relevant to the proposed contract		
	<p>With more than 14 years of experience in cultural resources management, Ms. Baiocchi specializes in conducting architectural and historical resource investigations for small- and large-scale Section 106 National Historic Preservation Act (NHPA) and NEPA projects. Her expertise includes conducting background research, architectural resource surveys, and effects assessments; and authoring historical contexts, building descriptions, and National Register of Historic Places (NRHP) evaluations and nominations for individual resources and historic districts. She also has experience leading public and consulting party meetings and presentations and authoring and reviewing agreement documents such as memoranda of agreement and treatment plans. She is highly skilled at genealogical research and oral history interviews as well as exhibit planning and heritage interpretation. She exceeds the Secretary of the Interior's Professional Qualification Standards for Architectural History and History.</p>		
03/12 – 04/13	<p>First Street Reconstruction, South H Street to State Road 22, City of Gas City, Gas City, IN. Investigator. Street improvements project required architectural survey. Of four resources identified within the Area of Potential Effects (APE), one was recommended eligible. Section 106 NHPA and Section 4(f) evaluations determined that the project would have no adverse effect on the resource. Received SHPO and INDOT approval on behalf of the Federal Highway Administration (FHWA). Completed Historic Sites Section 4(f) evaluation with FHWA approval. Directly involved with field work, research, and technical writing.</p>		
07/12 – 11/14	<p>First Street Reconstruction, South H Street to State Road 22, City of Gas City, Gas City, IN. Investigator. Project modifications required new permanent easement and temporary right-of-way within a NRHP-eligible property. Prepared a Section 106 Addendum and Section 4(f) evaluation, that determined No Adverse Effect and a “de minimis” finding, respectively, and received SHPO and FHWA approval. Completed Historic Sites de minimis Section 4(f) evaluation with FHWA approval. Directly involved with field work, research, and technical writing.</p>		
11/17 – 07/18	<p>Arlington Avenue at Churchman Bypass Roundabout Project, City of Beech Grove, City of Beech Grove, IN. Investigator. Project involved construction of five-leg roundabout and other improvements. Cultural resources survey identified no resources within the APE. Section 106 & Section 4(f) evaluations recommended No Historic Properties Affected. Received SHPO and INDOT/FHWA approval. Completed Historic Sites Section 4(f) evaluation with FHWA approval.</p>		
12/20 – 02/21	<p>Expo Center and Pleasant Valley BRT Projects, Capital Metro, Austin, Travis County, TX. Principal Investigator directly involved with research, field work, and technical writing. Architectural resource survey for Section 106/NEPA for two BRT lines in Austin, Texas.</p>		

16. Staff Experience

11/09 – 07/10	Appalachian Gateway Project, Appalachian Gateway Project, Greene, Washington, Allegheny, and Westmoreland Counties, PA. <i>Investigator</i>. Conducted background research, completed NRHP evaluations, and co-authored Phase I and Phase II technical report for multi-county pipeline project. Completed research and documentation of historic buildings and landscapes.
02/16 – 06/2018	Wilksburg Historic District Survey and NRHP Nomination, Confidential Client, Wilksburg, Allegheny County, PA. <i>Principal Investigator</i> oversaw comprehensive survey of properties within proposed Historic District and wrote successful NRHP nomination for Historic District, which was listed in NRHP in June 2018. Responsibilities included staff supervision, research, and technical writing..

16. Staff Experience

Firm employed by		ARCADIS	
Name	Jan Hughes (Grenfell)	Years of relevant experience with this employer	< 1
Title	Senior NEPA Planner	Years of relevant experience with other employer(s)	25
Degree(s) / Years / Specialization		BA, Anthropology, Louisiana State University, 1984	
Active registration number / state / expiration date		N/A	
Year registered	N/A	Discipline	N/A
Contract role(s) / brief description of responsibilities.		Public/Stakeholder/Officials Coordination	
Experience dates	Experience and qualifications relevant to the proposed contract		
	<p>Jan brings 25 years of experience with the LADOTD Environmental Section overseeing the National Environmental Policy Act (NEPA) process for proposed transportation projects, as well as preparing NEPA, Section 106 of the National Historic Preservation Act, and Section 4(f) of the U.S. DOT Act documentation for FHWA and U.S. Coast Guard. She has taken NHI Course No. 142055, NEPA and Transportation Decision Making. In addition to the projects listed below, throughout her career Jan has provided oversight for numerous staff and consultant prepared NEPA documents for LADOTD and local entities. She has also coordinated with federal, state, and local agencies on other environmental issues. Throughout her career, Jan participated in public involvement activities, including public meetings and hearings and Section 106 consulting parties meetings, and has conducted numerous meetings and hearings. Jan was a project team member in the development of the 2015 Louisiana Historic Bridge Inventory and Section 106 Programmatic Agreement for Treatment of Louisiana Historic Bridges.</p>		
07/15 - 02/19*	<p>I-49 South, I-10 to Lafayette Regional Airport, Route US 90/US 167, Supplemental Environmental Impact Statement (SEIS), LADOTD, Lafayette Parish, LA. LADOTD NEPA Lead for preparation of a SEIS that includes follow-up to commitments made in the 2003 Record of Decision (ROD) for the upgrade of this 5-mile portion of US 90/US 167 in Lafayette, LA to a six-lane facility with frontage roads meeting interstate standards. Responsible for oversight of the NEPA process and the consultant NEPA work, which included <i>extensive public involvement activities such as public meeting, small group meetings, and Section 106 consulting parties meetings.</i> Also carried out the SEIS initiation process and re-initiation of the Section 106 process.</p>		
11/22 – Ongoing	<p>US 11 Norfolk Southern Railroad, Route US 11, Environmental Assessment/FONSI, LADOTD, St. Tammany Parish, LA. Coordinating with LADOTD regarding the reevaluation of the FONSI.</p>		
04/23 – 04/23	<p>Airline Highway North (Florida Blvd to I-110), Route US 61, City of Baton Rouge and East Baton Rouge Parish, East Baton Rouge Parish, LA. Assisted with preparation of the Stage 0 checklist.</p>		
10/22 – 05/23	<p>LA 16 (Pete's Highway)/I-12 Interchange, Route LA 16, Environmental Assessment, LADOTD, Livingston Parish, LA. Coordinated with LADOTD to revise the draft Environmental Assessment to incorporate the rewritten construction phasing section of the document.</p>		
10/22 – 05/23	<p>Rural Bridges Initiative II, Districts 02, 03, 07, 61, and 62, LADOTD. Reviewed and provided comments on draft Programmatic Categorical Exclusion documents for multiple state projects.</p>		

16. Staff Experience

02/94 - 08/98	Airline Highway (US 61), Florida Boulevard to Just North of Jefferson Hwy., Environmental Assessment/FONSI, LADOTD, East Baton Rouge Parish, LA. <i>LADOTD NEPA Lead</i> for widening of this approximately 3.5-mile portion of Airline Highway from four lanes to six lanes. Responsible for handling the NEPA process, <i>conducted the public hearing</i> , and had primary responsibility for authoring the Environmental Assessment with Programmatic 4(f) Statement for an adjacent park for FHWA for which a FONSI was issued.
01/11 – 05/15	Bayou Teche Bridge at Oaklawn, Route LA 323, Categorical Exclusion Re-evaluation, LADOTD, St. Mary Parish, LA. <i>LADOTD NEPA Lead</i> for replacement of this historic, one lane, swing span bridge built in 1942 with a two-lane bridge on existing alignment. Responsible for handling the NEPA process and primary responsibility for authoring the NEPA document approved by FHWA. Also handled the Section 106 Consulting Parties process, preparation of the Section 106 Memorandum of Agreement and Programmatic Section 4(f) Statement for adverse impact to the bridge, and the historic bridge marketing and draft agreement for LADOTD's first ownership transfer of a historic bridge to another entity for alternate use.
03/02 - 03/05	Huey P. Long Bridge, Route US 90, Environmental Assessment, LADOTD, Jefferson Parish, LA. <i>LADOTD NEPA Lead</i> for widening of the highway portions of this historic highway/railroad bridge constructed in the 1930s from two 9-foot-wide lanes to three 11-foot-wide lanes. Responsible for oversight of the NEPA process and consultant preparation of the NEPA document for U.S. Coast Guard. <i>Conducted the public hearing.</i> Handled coordination with the New Orleans Public Belt Railroad and Louisiana State Historic Preservation Officer and preparation of the Section 106 Memorandum of Agreement for the adverse impact to the historic bridge.
01/15 - 12/01	Inner Loop Extension (LA 3132), Ellerbe Road to Flournoy Lucas Road, Environmental Assessment/FONSI, LADOTD and City of Shreveport, LA, Caddo Parish. <i>LADOTD NEPA Lead</i> for extension of the Inner Loop on new alignment as a four-lane control of access facility with interchanges and upgrade of adjacent roadways. Responsible for oversight of the NEPA process and consultant preparation of the Environmental Assessment for FHWA for which a FONSI was issued. <i>Conducted the public hearing.</i>
01/15 - 02/19*	Inner Loop Extension (LA 3132), E. Flournoy Lucas Rd (LA 523) to Future I-69 Corridor, Environmental Assessment, LADOTD and City of Shreveport, Caddo Parish, LA. <i>LADOTD NEPA Lead</i> for extension of the Inner Loop on new alignment as a four-lane control of access facility from LA 523 to Future I-69 with interchanges and upgrades to adjacent roadways. Responsible for oversight of the NEPA process and consultant preparation of the Environmental Assessment for FHWA.
04/01 - 12/06	I-49 South, Wax Lake Outlet to Berwick, Route US 90, Environmental Impact Statement/ROD, LADOTD, St. Mary Parish, LA. <i>LADOTD NEPA Lead</i> for upgrade of this 9.3-mile portion of US 90 to a four-lane facility with frontage roads meeting interstate standards. Responsible for oversight of the NEPA process and consultant preparation of the NEPA document for FHWA which was approved as a ROD.
04/01 - 10/05	I-49 South, Lafayette Regional Airport to LA 88, Route US 90, Environmental Impact Statement/ROD, LADOTD, Iberia/Lafayette/St. Martin Parishes, LA. <i>LADOTD NEPA Lead</i> for upgrade of this 10.8-mile portion of US 90 to a six-lane facility with frontage roads meeting interstate standards. Responsible for oversight of the NEPA process and consultant preparation of the NEPA document for FHWA which was approved as a ROD.

*Until retirement from LADOTD in February 2019.

Section

17

*Pictured is the Yellow Lamp Mussel (*Lampsilis cariosa*). All members of the Arcadis Scientific Dive Team dedicated to this contract hold Open Water Dive Certificates including Senior Members of the Arcadis Diving Control Board. These staff have a diverse range of experience completing underwater surveys throughout the U.S.*



Firm name			Past Performance Evaluation Discipline(s)*	Environmental
Project name	Rural Bridge Replacement Initiative Phase II, LADOTD		Firm responsibility (prime or sub?)	Sub
Project number	LADOTD Contract No. 4400019338	Owner's name	Sigma Consulting Group, Inc.	
Project location	Districts 02, 03, 07, 61, and 62		Owner's Project Manager	Greg Sepeda
Owner's address, phone, email	10305 Airline Hwy, Baton Rouge, LA 70816, 225 298 0800, gsepeda@sigmacg.com			
Services commenced by this firm (mm/yy)	01/2021	Total consultant contract cost (\$1,000's)		\$540
Services completed by this firm (mm/yy)	11/2021	Cost of consultant services provided by this firm (\$1,000's)		\$540

Describe the project including the firm's role and members involved. (Highlight members to be used in this proposal.)

Firm Members Involved: Jason Morrell, Catherine Bruns

Arcadis is responsible for completing all Environmental Services for Phase II of LADOTD's Rural Bridge Replacement Initiative in Districts 02, 03, 07, 61 and 62. This contract consists of 16 state projects involving 29 bridge replacements throughout the five Districts. Upon completion of 60% Preliminary Plans, Solicitation of Views (SOV) letters and information packets were prepared and distributed to federal, state, and local agencies, organizations, and adjacent property owners. Responses from these groups were compiled to identify potential adverse economic, social, or environmental effects from the project or other related concerns.

Field delineation of all wetlands and other Waters of the U.S. (WOTUS) within the existing and required right-of-way and servitudes of each project was completed in accordance with the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region. All delineated resources were **GPS located with sub-meter accuracy** and real-time data correction. A geodatabase of GPS collected data was then developed in ArcGIS for figure and permit drawing preparation. **Wetland Finding Reports** were prepared per LADOTD requirements detailing the results of field including LADOTD required GIS figures, photographs, and USACE delineation data forms.

Upon completion of 100% Preliminary Plans, Arcadis worked with the design engineer to develop permit exhibits documenting impacts to WOTUS and coastal resources per U.S. Army Corps of Engineer (USACE) and Louisiana Department of Natural Resources (LDNR), Office of Coastal Management (OCM) requirements. For projects inside the LA Coastal Zone, Joint Permit Applications were prepared for submittal to the LDNR OCM and the USACE New Orleans District for **Coastal Use Permits and Nationwide Permit 23**, respectively. For projects outside the Coastal Zone, Nationwide Permit 23 Pre-Construction Notifications were prepared



Relevant Services

- Wetland Delineation & Report
- Agency Coordination
- Sec. 404 Nationwide Permits
- LADNR Coastal Use Permits
- Sec. 7 ESA Consultation
- Programmatic Categorical Exclusions

for federally funded actions that qualified for a Categorical Exclusion under NEPA and submitted to the USACE. Arcadis closely coordinate with the LADOTD liaison at the USACE New Orleans District and OCM staff through the permit process to ensure all required information was provided and that all comments were adequately addressed, if needed.

"Arcadis's work thus far on the Rural Bridge Initiative, Phase 2 South, has exceeded expectations on all deliverables. Coordination with the consultant was straightforward with prompt responses to all requests."

Dylan Ohlsen - Engineer 3, LADOTD

Rural Bridge Initiative Environmental Manager

17. Firm Experience:

Firm name	ARCADIS		Past Performance Evaluation Category(ies)*		Environmental
Project name	Aerated Stabilization Basin Embankment Repair			Firm responsibility (prime or sub?)	Prime
Project number	B0066181.0004	Owner's name	Georgia-Pacific Brewton, LLC		
Project location	Brewton, Escambia County, Alabama		Owner's Project Manager	Roberto Flores	
Owner's address, phone, email	32224 Highway 31 South / Brewton, AL 36426/ 251-809-7358 / roberto.flores@gapac.com				
Services commenced by this firm (mm/yy)	09/17	Total consultant contract cost (\$1,000's)			310
Services completed by this firm (mm/yy)	07/19	Cost of consultant services provided by this firm (\$1,000's)			310
Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)					

Firm members involved: Jason Morrell

Arcadis assisted Georgia-Pacific Brewton, LLC (GP Brewton) with alternatives evaluation, design, permitting, and construction oversight for the repair and reinforcement of an existing aerated stabilization basin in the wastewater treatment system of the Brewton Mill located in Brewton, AL. Initial environmental services provided included a delineation of wetlands and other waters of the U.S. (WOTUS) located within the proposed work area for embankment repair and preparation of a wetland findings report documenting the results of the field delineation. Natural habitats within the project area were assessed for suitability to support protected species listed by the U.S. Fish & Wildlife Service (USFWS) as occurring in Escambia County, AL.



Upon repair plan development, unavoidable impacts were identified and a permitting strategy for an **Individual Section 404 Clean Water Act Permit** (Individual Permit) was developed based on the type and size of impacts to WOTUS. A pre-application meeting with the U.S.

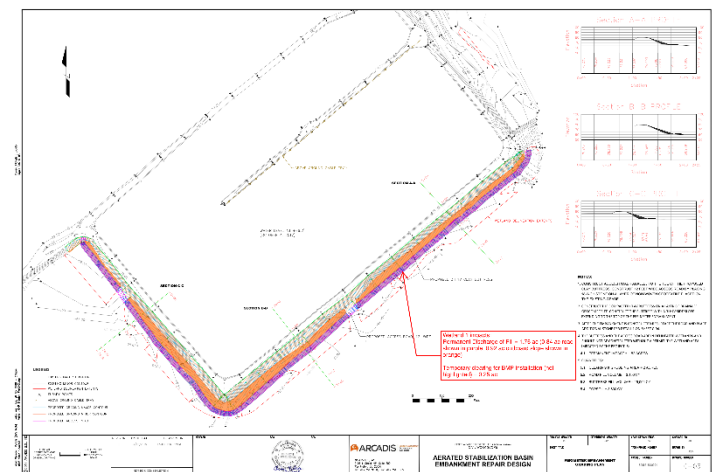
Army Corps of Engineers (USACE), Mobile District and Alabama Department of Environmental Management (ADEM) was held to identify and discuss any agency concerns with the project prior to permit application submittal. The USFWS and State Historic Preservation Office were also consulted regarding federally listed species and cultural resources, respectively.

On behalf of GP Brewton, Arcadis prepared and submitted an Individual Permit application and **Section 401 Water Quality Certification** request to the USACE and ADEM, respectively. The

Joint Permit Application included an analysis of project alternatives, including a no build alternative; permit drawings/exhibits; documentation of avoidance and minimization measures; and a compensatory mitigation plan for unavoidable wetland impacts. Post-submittal support included responses to additional information requests and agency coordination for permit approval. Arcadis also assisted the USACE Mobile District with the Environmental Assessment, **404(b)(1) Guidelines Evaluation**, Public Interest Review, and Statement of Findings for the Individual Permit Application. The Individual Permit and Water Quality Certification were issued within a timeline to allow embankment repairs to commence on schedule.

Relevant Services

- Wetland Delineation & Report
- Alternatives Analysis
- Individual Sec. 404 Permit
- Sec. 404(b)(1) Evaluation
- Sec. 401 Water Quality Certification
- Agency Coordination



17. Firm Experience:

Firm name	ARCADIS		Past Performance Evaluation Category(ies)*	Environmental	
Project name	Environmental Support Services – Ecology IDIQ Task Order 2			Firm responsibility (prime or sub?)	Prime
Project number	PI# 0012954	Owner's name	Georgia Department of Transportation		
Project location	State of Georgia		Owner's Project Manager	Chris Goodson	
Owner's address, phone, email	600 W. Peachtree St., NW Atlanta, Ga 30308, 404-631-1850 (office), cgoodson@dot.ga.gov				
Services commenced by this firm (mm/yy)	01/23	Total consultant contract cost (\$1,000's)			5,000
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm (\$1,000's)			5,000
Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)					

Firm members involved: Morgan Niccoli, Jason Morrell

Under our Environmental Support Services – Ecology IDIQ contract, Arcadis assists the Georgia Department of Transportation (GDOT) with development of Ecology Initiatives aimed at improving overall program delivery. Below is a description of completed and ongoing Initiatives delivered under Task Order 2



Individual Section 404 Clean Water Act (CWA) Permit Training:

Arcadis Ecologists and Education Technology specialists collaborated with the GDOT Ecology Section to develop interact video modules that instruct users in completing all components of complex Individual Section 404 CWA permitting. The training also covers completing associated Section 401 CWA Water Quality Certification through the State. The modules are designed to replace GDOT Consultant Prequalification requirements for completing Individual Section 404 permit applications and make them accessible to more firms.

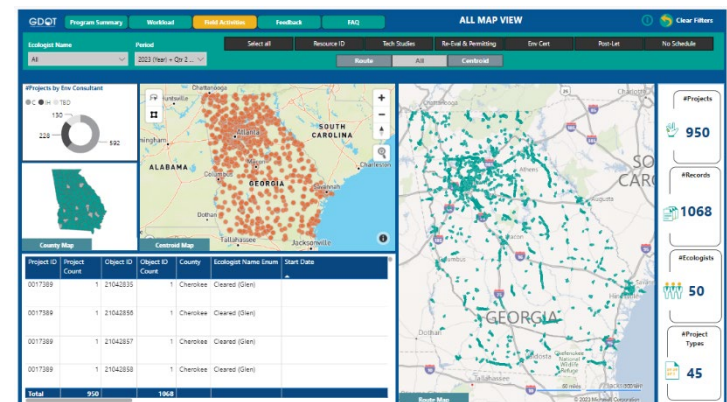
Species Survey Methodologies Manual: Arcadis collaborated with the GDOT Ecology Section and U.S. Fish and Wildlife Services to update the *State of Georgia Protected Species Habitat & Presence/Absence Survey Methodologies Manual* to include the Proposed Threatened Alligator

Snapping Turtle (*Macrochelys temminckii*) and Suwannee Alligator Snapping Turtle (*Macrochelys suwanniensis*). In addition to updated survey methodology, a habitat assessment datasheet was developed for the species to be completed with microhabitat surveys. Updates to the manual are also planned to cover revisions to survey methods for spotted turtle (*Clemmys guttata*), map turtles (*Graptemys* spp.), and protected bat species.

Ecology Workload Portal: With the goal of improving GDOT Office of Environmental Services (OES) program delivery, Arcadis developed the OES Workload Portal in collaboration with the Ecology Section. The Ecology Workload Portal is a multi-tab, PowerBI dashboard that provides customizable data visualizations and filtering options at the program, team, and staff level. Utilizing data from OES, the Ecology Workload Portal ranks projects by complexity (i.e., project type) and organizes them by schedule corresponding to the technical study phase including field investigations, ecology reporting, and permitting. An additional feature is an interactive “heat map” that provides customizable visualizations of staff assignments that allows managers to monitor staff work assignments and adjust assignments as project schedules shift over the course of delivery. The portal also provides a GIS interface showing project locations across the state with a corresponding calendar based on project schedules. This allows the Ecology Section to identify fieldwork efficiencies by identifying projects with similar geographies and delivery schedules and combine fieldwork for multiple projects in a single trip thereby reducing labor, vehicle miles traveled, and GDOT's overall carbon footprint.

Relevant Services

- Individual Sec. 404 Permitting
- Threatened & Endangered Species Survey
- Program Management Tools



17. Firm Experience:

Firm name	ARCADIS		Past Performance Evaluation Category(ies)*	Environmental
Project name	Collins Pipeline Spill Response Project			Firm responsibility (prime or sub?) Sub
Project number	30119122	Owner's name	Collins Pipeline Company/PBF Energy	
Project location	Baton Rouge, Louisiana		Owner's Project Manager	Todd Bretz
Owner's address, phone, email	500 West St. Bernard Highway, Chalmette, LA 70043/ 856-687-5555/ Todd.Bretz@pbfenergy.com			
Services commenced by this firm (mm/yy)	09/22	Total consultant contract cost (\$1,000's)		120
Services completed by this firm (mm/yy)	07/23	Cost of consultant services provided by this firm (\$1,000's)		90
Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)				

Firm members involved: Jeremy Henson

Arcadis was contracted by Collins Pipeline Company (Collins), a joint venture owned in part by PBF Energy, LLC (PBF), to conduct an environmental assessment of a 16-inch fuel products pipeline release and subsequent remediation support near Chalmette, St. Bernard Parish, Louisiana. The project area is located approximately 2.6 miles east of Paris Road (LA-47) near Chalmette, Louisiana along the Orleans Levee District-owned Mississippi River-Gulf Outlet Levee. The Collins pipeline experienced a release of approximately 7,200 barrels (bbls) of low-sulfur diesel fuel, which pooled at the release point and ran overground to two topographic depressions (borrow pits) located adjacent to the site. Upon discovery of the release, Collins/PBF mobilized incident response contractors to initiate recovery efforts. The response included the use of booms and recovery sumps excavated adjacent to the borrow pits, and the removal of approximately 500 cubic yards of soil in the vicinity of the release. In order to fully evaluate the impacts and extent of the release Arcadis collected environmental samples of shallow/surface soil which will be analyzed for constituents of concern.

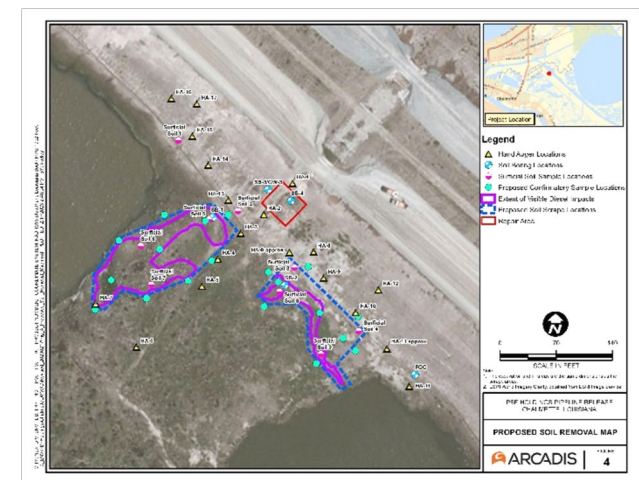
Relevant Services

- Incident Rapid Response
- Wetland Delineation/Assessment
- Louisiana Coastal Use Permit
- Section 404 NWP/10 Permit
- Section 408 Review
- Levee Board Review
- Agency Coordination



Arcadis also conducted an environmental site assessment to determine if jurisdictional Waters of the U.S. occurred within the project area prior to sampling and potential removal of impacted soils. The environmental site assessment was also conducted to identify the applicability of Coastal Use Permit (CUP) requirements, USACE Section 404/Section 10 permit applicability, and Section 408 review requirements. Arcadis provided initial environmental site assessment, wetland delineation, and wildlife habitat assessment services.

Arcadis prepared a wetland/biological/ecological impact assessment report to describe the observed impacts and provide impact avoidance measures to be implemented during the duration of the response. Arcadis also prepared and submitted a **Joint Permit Application for a Louisiana CUP and USACE Section 404 Nationwide Permit** (NWP). Arcadis provided regulatory agency coordination through the permitting process, including completing a USACE 408 review, Real Estate Outgrant review, local **Levee Board Review and approval**, and Louisiana Department of Environmental Quality (LDEQ) review and approval.



17. Firm Experience:

Firm name	ARCADIS		Past Performance Evaluation Category(ies)*	Environmental
Project name	Lake Purdy Dam Stability Improvement (LPDSI) Project			Firm responsibility (prime or sub?) Prime
Project number	30035349	Owner's name	Birmingham Water Works	
Project location	Birmingham, Alabama	Owner's Project Manager	Wanda Ervin	
Owner's address, phone, email	3600 1st Ave N, Birmingham, AL 35222 / 205-244-4220 / Wanda.Ervin@bwwb.org			
Services commenced by this firm (mm/yy)	10/22	Total consultant contract cost (\$1,000's)		150
Services completed by this firm (mm/yy)	08/23	Cost of consultant services provided by this firm (\$1,000's)		150
Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)				

Firm members involved: Jeremy Henson, Nick Firman, Lauren Sequy

Arcadis was contracted by Birmingham Water Works (BWW) to provide environmental support services for the Lake Purdy Dam Stability Improvement (LPDSI) project in Jefferson and Shelby Counties, Alabama. The proposed LPDSI project is located on BWW property surrounding Lake Purdy, approximately eight miles east/southeast of Birmingham, Alabama. The project includes dam stability improvements, architectural redesign, and road widening for construction equipment access. The project also includes the clearing of approximately eight acres of wooded area for roller-compacted concrete (RCC) staging and stockpiling in an upland area downstream of the dam. Arcadis provided initial environmental site assessment, wetland delineation, and wildlife habitat assessment services.



Following project design, Arcadis prepared and submitted a **U.S. Army Corps of Engineers (USACE) Section 404 Nationwide Permit (NWP) Pre-Construction Notification (PCN)** package; prepared U.S. Environmental Protection Agency (EPA) funding support documentation; and conducted formal **Section 7 Consultation with the U.S. Fish and Wildlife Service (USFWS)** for impacts to federally listed threatened and endangered (T&E) bat species. Unavoidable impacts to Waters of the U.S. (WOTUS) were identified and a permitting strategy for a USACE Section 404 NWP was developed based on the type and size of impacts. A pre-application meeting with the U.S. Army Corps of Engineers (USACE), Mobile District and Alabama

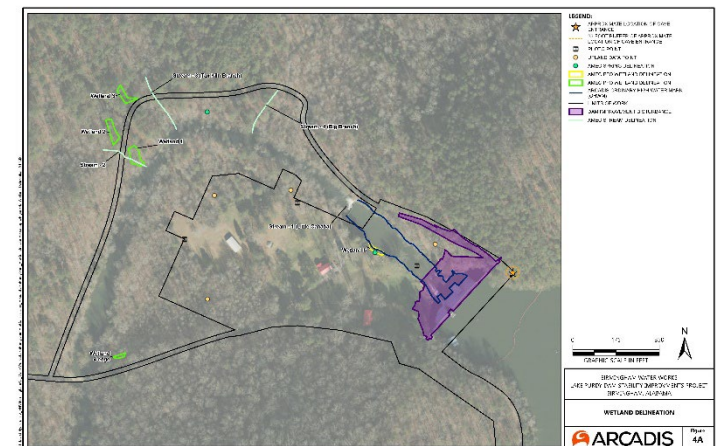
Department of Environmental Management (ADEM), U.S. Environmental Protection Agency (EPA) also was held to identify and discuss agency concerns with the project prior to

permit application submittal. The USFWS and State Historic Preservation Office were also consulted regarding federally listed species and cultural resources, respectively.


Due to potentially adverse impacts to three federally listed bat species, and one federal candidate species, Arcadis developed a **Biological Assessment for USFWS review and Incidental Take Permit (ITP)** approval. Arcadis is currently working with USFWS for ITP approval, and Arcadis will conduct follow up bat hibernacula surveys in the fall of 2023.

Relevant Services

- Wetland Delineation/Assessment
- Bat Habitat Assessment/Survey
- Freshwater Mussel Assessment
- Section 404 NWP Permit
- USFWS Section 7 Consultation
- USFWS Biological Assessment
- USFWS Incidental Take Permit
- Agency Coordination



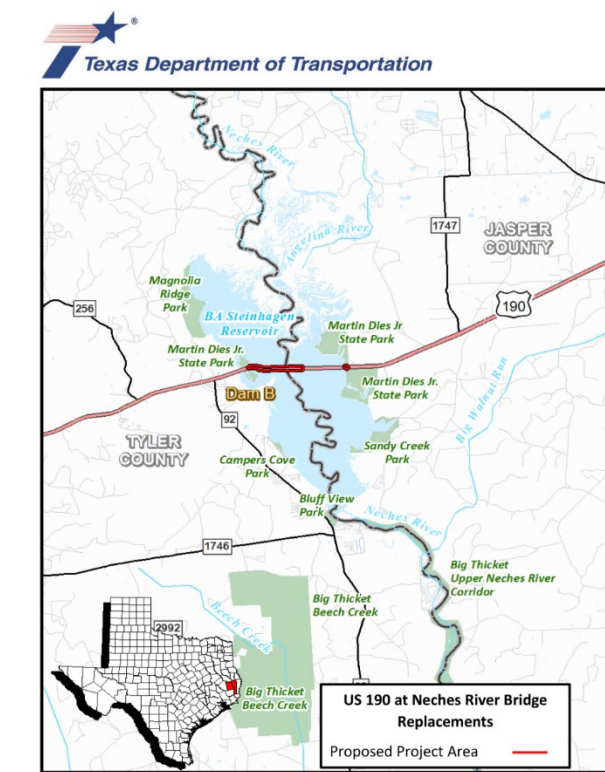
17. Firm Experience:

Firm name			Past Performance Evaluation Discipline(s)*	Environmental
Project name	US 190 Bridge Replacement over the Neches River		Firm responsibility (prime or sub?)	Sub
Project number	CSJs: 0213-07-047, 0213-08-074	Owner's name	Conсор (prime)	
Project location	Tyler and Jasper counties, TX		Owner's Project Manager	Patil Sandeep (prime)
Owner's address, phone, email	1701 Directors Blvd, Ste 510, Austin, TX 78744, 832-428-0201, spatil@consoreng.com			
Services commenced by this firm (mm/yy)	04/22	Total consultant contract cost (\$1,000's)		\$614
Services completed by this firm (mm/yy)	05/23	Cost of consultant services provided by this firm (\$1,000's)		\$614

Describe the project including the firm's role and members involved. (Highlight members to be used in this proposal.)

Firm Members Involved: Kim Johnson


The TxDOT Beaumont District proposed to remove two bridges along US 190 and will be replaced with one bridge near the Jasper/Tyler County line in Texas. The purpose of the proposed project is to provide a modern bridge-crossing the Neches River at Lake Steinhagen, with a focus on providing a bridge with adequate width and height to safely accommodate transportation needs. Additionally, the two bridges are being combined to one bridge to meet United States Army Corps of Engineers (USACE) lake requirements. The two existing bridges that will be removed include: The Neches River bridge: listed in the National Register of Historic Places (NRHP), it is a 1,595-foot-long structure built between 1941 and 1943 as a custom-designed truss bridge. The bridge consists of two through truss spans with a 24 feet wide roadway and 27 simple approach spans. The Neches River Relief bridge: It is a 455-foot-long concrete tee-beam structure built in 1940 and is located west of the historic bridge. Both bridges include two 11 feet travel lanes and two 1-foot shoulders.

**Relevant Services**

- Waters of the U.S. Report
- Nationwide Permit 23 PCN
- Biological Reports
- Mitigation Bank Plan
- USCG Coordination

ICF scientists and planners completed the required Feasibility Study/Historic Bridge Team Report, Historic Resources Survey Report, Cumulative Impacts Analysis, Archeological Background Study, Waters of the U.S. report, Nationwide Permit 23 Pre-Construction Notification (PCN) including mitigation bank plan, Biological Reports (Alligator Snapping Turtle and 2 mussels proposed for listing during project), U.S. Coast Guard (USCG) forms, Categorical Exclusion, Section 106 Mitigation MOA, and Public hearing/summary.

17. Firm Experience:

Firm name			Past Performance Evaluation Discipline(s)*	Environmental
Project name	GDOT Bat Programmatic Agreement		Firm responsibility (prime or sub?)	Sub (Arcadis)
Project number	PI 0012954	Owner's name	Georgia Department of Transportation	
Project location	Atlanta, GA		Owner's Project Manager	Doug Chamblin
Owner's address, phone, email	1212 East Hwy Dr, Room 204-S, Baton Rouge, LA 70802			
Services commenced by this firm (mm/yy)	06/22	Total consultant contract cost (\$1,000's)		\$159
Services completed by this firm (mm/yy)	ongoing	Cost of consultant services provided by this firm (\$1,000's)		\$159

Describe the project including the firm's role and members involved. (Highlight members to be used in this proposal.)

Firm Members Involved: Lee Droppelman, Morgan Niccoli (Arcadis)



Bats often use GDOT transportation structures (i.e., bridges and culverts) for roosting and hibernation, and trees within right-of-way for foraging, roosting, and hibernating. Due to discovery of white-nose syndrome in Georgia in 2013 and subsequent spread the number of federal listed bat species has increased with three currently listed including the Indiana bat (*Myotis sodalis*), gray bat (*Myotis grisescens*), and northern long-eared bat (*Myotis septentrionalis*). The tricolored bat (*Perimyotis subflavus*) was recently Proposed Endangered and is expected to be listed in the fall of 2023 which would have a detrimental impact to GDOT's program given its statewide range. Bats represent a large part of the GDOT Environmental program when considering project impacts from bridge replacement and maintenance, as well as tree clearing for routine to complex projects. and required




Section 7 Endangered Species Act consultation.

In collaboration with Arcadis and an interagency team comprised of Federal Highway Administration Georgia Division, U.S Army Corps of Engineers Savannah District, U.S Fish & Wildlife Service (USFWS) Georgia Ecological Services, Georgia Department of Transportation (GDOT), and Georgia Department of Natural Resources (GADNR), ICF is leading the preparation of a **Programmatic Biological Assessment/Biological Opinion (BO)** for all of the state's 16 bat species that will cover all GDOT's construction and maintenance program. It is a collaborative effort that will cover all federal and state funded projects across the state.

The participating agencies are jointly developing this **Statewide Programmatic ESA Section 7 Consultation** and state coordination process for common types of transportation actions. The intent of this collaborative document is to implement a statewide consultation for protected bat species to streamline the process and result in better conservation outcomes for bat species. The consultation framework presented within this PA is applicable for federally listed and proposed species requiring consultation with USFWS and additionally satisfies the GADNR technical assistance process for state protected species.

ICF serves as the technical consultant for the effort and as a bridge between technical resource biologists from each agency to ensure consistency and accurate presentation of species information and BO programmatic decision-making. **ICF is additionally developing a Decision-Making Key that will be used in the public facing USFWS Information for Planning and Conservation (IPaC) system.** Arcadis provided overall project management, led stakeholder engagement with the agencies, and provided quality assurance reviews of the BPA. This BPA will eliminate the need to consult with agencies on a project-by-project basis provided avoidance and minimization measures included in the agreement are met. Agency and GDOT time and resources saved through this BPA will allow improved focus and effort on project-specific consultation for complex projects that do not qualify for the BPA while benefiting the conservation of protected bats species.

17. Firm Experience:

Firm name			Past Performance Evaluation Discipline(s)*	Environmental
Project name	SH 63/LA 8 Bridge at the Sabine River		Firm responsibility (prime or sub?)	Sub
Project number	H.000986	Owner's name	Huitt-Zollars (prime)	
Project location	Newton County Texas and Vernon Parish, Louisiana		Owner's Project Manager	David Thompson (prime)
Owner's address, phone, email	3701 Executive Center Drive, Suite 101, Austin, TX 78731, 612-750-4381, dthompson@huitt-zollars.com			
Services commenced by this firm (mm/yy)	01/18	Total consultant contract cost (\$1,000's)		\$750,000
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm (\$1,000's)		\$750,000

Describe the project including the firm's role and members involved. (Highlight members to be used in this proposal.)

Firm Members Involved: Jason Schindler, Mark Kainer, Kim Johnson

Firm's Role: The Texas Department of Transportation (TxDOT), Federal Highway Administration (FHWA), and Louisiana Department of Transportation and Development (LADOTD) are proposing a new crossing of to the State Highway (SH) 63/LA 8 bridges over the Sabine River at the Texas/Louisiana border, located in Newton County, Texas and Vernon Parish, Louisiana. The proposed project would replace the existing SH 63/LA 8 bridges at the Sabine River through the

construction of new approach roadways and a new bridge structure. The proposed bridge replacement alternative is approximately 2.9 miles long, with the proposed roadway sections being two-lane undivided, which matches the existing facility. These lanes would be 12-foot-wide with 10-foot-wide outer shoulders and a 240-foot-wide right-of-way (ROW) footprint. The bridge would be 46-feet-wide with two 12-foot-wide travel lanes and two 10-foot-wide outside shoulders. The proposed project would require approximately 77 acres of new ROW. The project would not add capacity. Because the project crosses state lines, FHWA involvement is required, and TxDOT/FHWA National Environmental Policy Act (NEPA) delegation MOU does not apply.

Documents prepared include Public Involvement Plan, Alternatives Analysis/Feasibility Study, *U.S. Coast Guard Section (USCG) 9 Bridge Questionnaire*, EA/EIS Classification Letter, Community Impacts Technical Report, Programmatic Section 4(f) Evaluation, and a Historical Studies Research Design. Additional documents will include *Section 404 Clean Water Act Individual Permit*, USCG Section 9 Bridge Permit (if required), Historic Resources Survey Reports, Section 4(f) Evaluation, Archeological Survey Report (aquatic and terrestrial), Hazardous Materials Technical Report, Air Quality and Noise Analysis Technical Reports (one for Texas and one for Louisiana), Indirect and Cumulative Impacts Assessment, and Environmental Assessment. ICF is also managing and conducting public involvement activities, including stakeholder meetings, an alternatives workshop, public meetings, and a public hearing. All public outreach includes DOTs, FHWA, local elected officials, and agencies from both Texas and Louisiana.




Photo 3. Existing SH 63/LA 8 bridge at the Sabine River, facing northeast taken October 12, 2017



Photo 4. Existing SH 63/LA 8 bridge at the Sabine River, facing southwest taken October 12, 2017

17. Firm Experience:

Firm name	 Gaea Consultants, LLC	Past Performance Evaluation Discipline(s)*	Environmental
Project name	Almonaster Avenue Bridge Rehabilitation & New Connector Road	Firm responsibility (prime or sub?)	Sub
Project number	20-003	Owner's name	Port of New Orleans
Project location	New Orleans, LA	Owner's Project Manager	Michael Sulser
Owner's address, phone, email	1350 Port of New Orleans Place; New Orleans, LA 70130; 504.528.2551; michael.sulser@portnola.com		
Services commenced by this firm (mm/yy)	12/20	Total consultant contract cost (\$1,000's)	\$72.3
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm (\$1,000's)	\$72.3

Describe the project including the firm's role and members involved. (Highlight members to be used in this proposal.)

Firm Members Involved: Tonja Marking, Lauren Peytavin

Firm's Role: The Almonaster Avenue Bridge is a historic rail and vehicular bridge over the Inner Harbor Navigation Canal. Rehabilitation of the bridge requires a Categorical Exclusion and permitting services. Gaea is performing all environmental services required under the National Environmental Policy Act (NEPA) for a Categorical Exclusion. Permitting services include Louisiana Department of Natural Resources, Office of Coast Management Coast Use Permit, Louisiana Department of Environmental Quality Section 401 Water Quality Certification, U.S. Army Corps of Engineers Section 10/404 Permit, US Coast Guard Section 9 Bridge Permit, and Southeast Louisiana Flood Protection Authority-East levee permit.




Image courtesy neworleanscitybusiness.com

Relevant Services

- LADNR Coastal Use Permit
- Section 10 / 404 Permit
- Levee Permit
- USCG Section 9 Bridge Permit

17. Firm Experience:

Firm name	 Gaea Consultants, LLC		Past Performance Evaluation Discipline(s)*	Environmental
Project name	Hermitage Bayou Bridge Replacement		Firm responsibility (prime or sub?)	Sub
Project number	12-003	Owner's name	Plaquemines Parish	
Project location	Project location	Plaquemines Parish, LA	Owner's Project Manager	Erik Smith, PE
Owner's address, phone, email	4421 Zenith Street; Metairie, LA 70001; 504.887.7045; mss@aimsgroupinc.com			
Services commenced by this firm (mm/yy)	06/12	Total consultant contract cost (\$1,000's)		\$20
Services completed by this firm (mm/yy)	12/12	Cost of consultant services provided by this firm (\$1,000's)		\$20

Describe the project including the firm's role and members involved. (Highlight members to be used in this proposal.)

Firm Members Involved: Tonja Marking


Firm's Role: Gaea Consultants addressed NEPA documentation requirements of the U.S. Coast Guard to obtain a permit for the replacement of the Hermitage Bayou Bridge in Plaquemines Parish. Gaea coordinated with U.S. Army Corps of Engineers (USACE) and Louisiana Department of Natural Resources (LADNR) to ensure the necessary Section 404 Clean Water Act (CWA) permit and Section 401 Water Quality Certifications, respectively, were in place prior to construction. Gaea analyzed possible encroachment impacts to floodplains and investigated the potential for wetland and threatened and endangered species disturbances. Gaea investigated replacement of the bridge for compliance with the Clean Air Act, Noise Control Act, and other federal regulations. Gaea consulted with the Louisiana Office of Cultural Development to assure that the project would not affect known historic properties.



Relevant Services

- U.S. Coast Guard Section 9 Permit
- LADNR Sec. 401 Water Quality Certification
- USACE Section 404 CWA Permit
- Jurisdictional Wetland Determination
- Threatened and Endangered Species Survey

17. Firm Experience:

Firm name	 Gaea Consultants, LLC		Past Performance Evaluation Discipline(s)*	Environmental
Project name	Orpheum Levee Slope Pave		Firm responsibility (prime or sub?)	Sub
Project number	21-003	Owner's name	Southeast Louisiana Flood Protection Authority - East	
Project location	New Orleans, LA		Owner's Project Manager	Donald Jerolleman, Jr
Owner's address, phone, email	6920 Franklin Avenue, New Orleans, LA 70122; 504.286.3118; djerolleman@floodauthority.org			
Services commenced by this firm (mm/yy)	09/21	Total consultant contract cost (\$1,000's)		\$52.6
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm (\$1,000's)		\$52.6

Describe the project including the firm's role and members involved. (Highlight members to be used in this proposal.)

Firm Members Involved: Tonja Marking, Lauren Peytavin

Firm's Role: Gaea Consultants is providing conceptual and final design drawings, permitting assistance, and drainage impacts analyses. Gaea performed drainage analysis along the length of the project area to understand how the new impervious surfaces would alter drainage conditions and adjusted the pavement design to address additionally created stormwater runoff. Gaea has initiated the U.S. Army Corps of Engineers (USACE) Section 408 authorization process, coordinating with USACE and the Levee Authority. Gaea will apply through the Joint Permit Application for Louisiana Department of Natural Resources Coastal Use Permit and USACE Section 10/404 permits and process the application for a levee permit once final design has been accepted by the Levee Authority.


Relevant Services

- LADNR Coastal Use Permit
- USACE Section 10 / 404 Permit
- Levee Permit
- USACE Section 408 Authorization



Additional Levee Protection

17. Firm Experience:

Firm name			Past Performance Evaluation Discipline(s)*	Environmental
Project name	Proposed Dent Repairs - Manila Junction to Raceland Station		Firm responsibility (prime or sub?)	Prime
Project number	GU054-23-008	Owner's name	Crescent Midstream	
Project location	Jefferson Parish, LA		Owner's Project Manager	R. Guillory
Owner's address, phone, email	283 Trinity Lane, Gray, LA 70359 (985) 872-3100			
Services commenced by this firm (mm/yy)	04/23	Total consultant contract cost (\$1,000's)		\$40
Services completed by this firm (mm/yy)	12/23	Cost of consultant services provided by this firm (\$1,000's)		\$40

Describe the project including the firm's role and members involved. (Highlight members to be used in this proposal.)

Firm Members Involved: Cal Fontenot; Joshua Curry, PWS; Dakota Dagenhardt; William Cagle

Firm's Role: MPH was contracted by Crescent Midstream to provide permitting and oyster assessment and biological resource reports for the proposed dent repairs on the 16-inch Manila Junction to Raceland Station Pipeline. The proposed project is located within the Louisiana Coastal Zone, Jefferson Parish, Louisiana.

Environmental Permitting


Environmental personnel obtained the required regulatory approvals for the proposed project through approvals from Louisiana Department of Natural Resources – Office of Coastal Management (LADNR – OCM), the U.S. Army Corps of Engineers -New Orleans District (USACE – NOD) Regulatory Division, and Jefferson Parish. This task also includes preparing the necessary *permit drawings* to submit with the permit applications and submitting for an Emergency Use Authorization for the dent repairs.



Oyster Assessment & Biological Oyster Resource Report

Environmental personnel performed the *water bottom assessment survey, biological sampling, and prepared the biological oyster resource report* for the proposed project. The assessment was performed on four private oyster leases within 1,500' of the project area and required notifying the oyster leaseholders about the oyster assessment to be performed across their oyster lease.

17. Firm Experience:

Firm name			Past Performance Evaluation Discipline(s)*	Environmental
Project name	Proposed Dent Repair – Manilla to Larose (Permitting and Oyster Assessment)		Firm responsibility (prime or sub?)	Prime
Project number	GU054-23-004	Owner's name	Crescent Midstream	
Project location	Jefferson Parish, LA		Owner's Project Manager	R. Guillory
Owner's address, phone, email	283 Trinity Lane, Gray, LA 70359 (985) 872-3100			
Services commenced by this firm (mm/yy)	03/23	Total consultant contract cost (\$1,000's)		\$35
Services completed by this firm (mm/yy)	06/23	Cost of consultant services provided by this firm (\$1,000's)		\$35

Describe the project including the firm's role and members involved. (Highlight members to be used in this proposal.)

Firm Members Involved: William Cagle, Joshua Curry, Dakota Dagenhardt

Firm's Role: MPH was contracted by Crescent Midstream to prepare and submit a permit package for the dent repair/spool replacement on LA-19 12". The project is located within the Louisiana Coastal Zone, near Grand Isle, Jefferson Parish, Louisiana.

Environmental Permitting


Environmental personnel obtained the required regulatory approvals for the proposed project including Louisiana Department of Natural Resources – *Office of Coastal Management Coastal Use Permit, Section 404 Clean Water Act permit from the U.S. Army Corps of Engineers* -New Orleans District Regulatory Division, and Jefferson Parish authorization.

Oyster Assessment & Biological Oyster Resource Report

Environmental personnel performed the *water bottom assessment survey, biological sampling, and prepared the biological oyster resource report* for the project sites. The assessment was performed on nine leases within 1,500' of the project area and required notifying the oyster leaseholders about the oyster assessment to be performed across their oyster lease.



17. Firm Experience:

Firm name			Past Performance Evaluation Discipline(s)*	Environmental
Project name	Digs for 10" Promix Plant to Barge Dock (LID 33005, AID 5439)		Firm responsibility (prime or sub?)	Prime
Project number	A58693	Owner's name	Enterprise Products	
Project location	Assumption Parish, LA		Owner's Project Manager	D. Sample
Owner's address, phone, email	1100 Louisiana St., Houston, TX 77002			
Services commenced by this firm (mm/yy)	09/22	Total consultant contract cost (\$1,000's)		\$12
Services completed by this firm (mm/yy)	06/23	Cost of consultant services provided by this firm (\$1,000's)		\$12

Describe the project including the firm's role and members involved. (Highlight members to be used in this proposal.)

Firm Members Involved: William Cagle; Joshua Curry; Cal Fontenot

Firm's Role: MPH was contracted by Enterprise Products to assist in permitting dig sites in Assumption Parish, LA. The proposed project was located within the Louisiana Coastal Zone and near a flood protection levee.

Environmental Permitting

Environmental personnel obtained the required regulatory approvals for the proposed project through approvals from Louisiana Department of Natural Resources – Office of Coastal Management, Section 408 authorization from the U.S. Army Corps of Engineers -New Orleans District, Coastal Protection and Restoration Authority, and the Atchafalaya Levee District. Per a condition of the Coastal Use Permit obtained from LADNR – CMD, a *nesting bird survey* was required since the work would take place during the nesting season. MPH conducted the survey per the standards outlined by LDWF and provided documentation to Enterprise supporting moving forward with the work.



Section

18

Scientific Name	Common Name	ESA Listing Status	Group	Arcadis Team Holds Federal Collection Permit
<i>Grus americana</i>	Whooping crane	Endangered	Birds	✓
<i>Picoides borealis</i>	Red-cockaded woodpecker	Endangered	Birds	✓
<i>Charadrius melodus</i>	Piping Plover	Threatened	Birds	✓
<i>Lampsilis abrupta</i>	Pink mucket (pearlymussel)	Endangered	Clams	✓
<i>Potamilus capax</i>	Fat pocketbook	Endangered	Clams	✓
<i>Potamilus inflatus</i>	Inflated heelsplitter	Threatened	Clams	✓
<i>Quadrula cylindrica cylindrica</i>	Rabbitsfoot	Threatened	Clams	✓
<i>Myotis septentrionalis</i>	Northern Long-Eared Bat	Endangered	Mammals	✓

The Arcadis team holds U.S. Fish and Wildlife Service scientific collection permits for the above listed species and has the requisite experience to obtain agency approvals to conduct surveys for all threatened and endangered species in Louisiana. **Additionally, our team holds the requisite scientific collection permit from the LA Dept. of Wildlife and Fisheries for oyster surveys.**

18. Approach and Methodology

PROJECT MANAGEMENT



An experienced project management team is essential to delivery of a State DOT program level IDIQ contract. Each Task Order (TO) is a unique project that requires a tailored approach, which begins in the scoping phase. We take the time to analyze and understand the complexity of each project and location, the potential environmental resources that may be present, the most efficient methods for documenting resources, and the path of least resistance for obtaining the necessary permits and agency concurrences to allow the project to proceed on schedule. We then develop a scope and fee based on this analysis and our experience delivering projects of similar scope and scale. While we are committed to forwarding scope and fees that minimize unnecessary work, we acknowledge that our expectations may not always match those of our clients, and welcome the opportunity to negotiate with the LADOTD Project Manager (PMs) and Subject Matter Experts (SMEs) to reach a scope and fee that is reasonable and acceptable to all parties.

Upon TO issuance, we **develop a detailed project delivery schedule for all activities (See exhibit A)** and identify the most qualified staff based on the approved scope. Threatened and endangered species surveys can often only be completed during specific seasons. In such cases, we consult with our expert biologists based on the species to ensure the survey schedule complies with agency requirements for the target species. Additionally, permitting often requires review timelines that exceed minimum reviews published by the agencies. We are committed to establishing schedules that are realistic based on our permitting experience, as it is detrimental to projects to put forward schedules that cannot be met, no matter the reason. At the same time, we advocate on behalf of our clients with the agencies to streamline and expedite permit reviews. This requires frequent and responsive communication to ensure agency reviewers have all the information required to make a permit decision.

In addition to maintaining the schedule, we are committed to delivering projects within the approved scope and budget. Wetland studies and biological surveys can uncover previously undocumented resources that can alter the level of permitting and agency consultation required. We will keep LADOTD Environmental Staff abreast of fieldwork schedule, communicate identification of threatened or endangered

species immediately, and provide weekly progress updates. If the results of field investigations alter the TO scope we will communicate additional requirements to the LADOTD PM and assist with development of a supplemental work authorization, as needed.

Communication Plan



An overall communication plan will be developed for the contract with individual plans tailored to each TO. The communication plan will include points of contact for all resource and permitting agencies, as well as non-permitting agencies throughout the State. Agency jurisdiction and responsibilities will be clearly defined for each permit or regulatory action, and the plan will be updated throughout the life of the project. Communication protocols will be clearly defined for all parties. All coordination with the USACE, USFWS, and any other agency shall be through, or with, the consent of LADOTD's Environmental Section. The communication plan will also detail the process for obtaining landowner permission (i.e., right-of-entry) for projects requiring right-of-way acquisition or construction

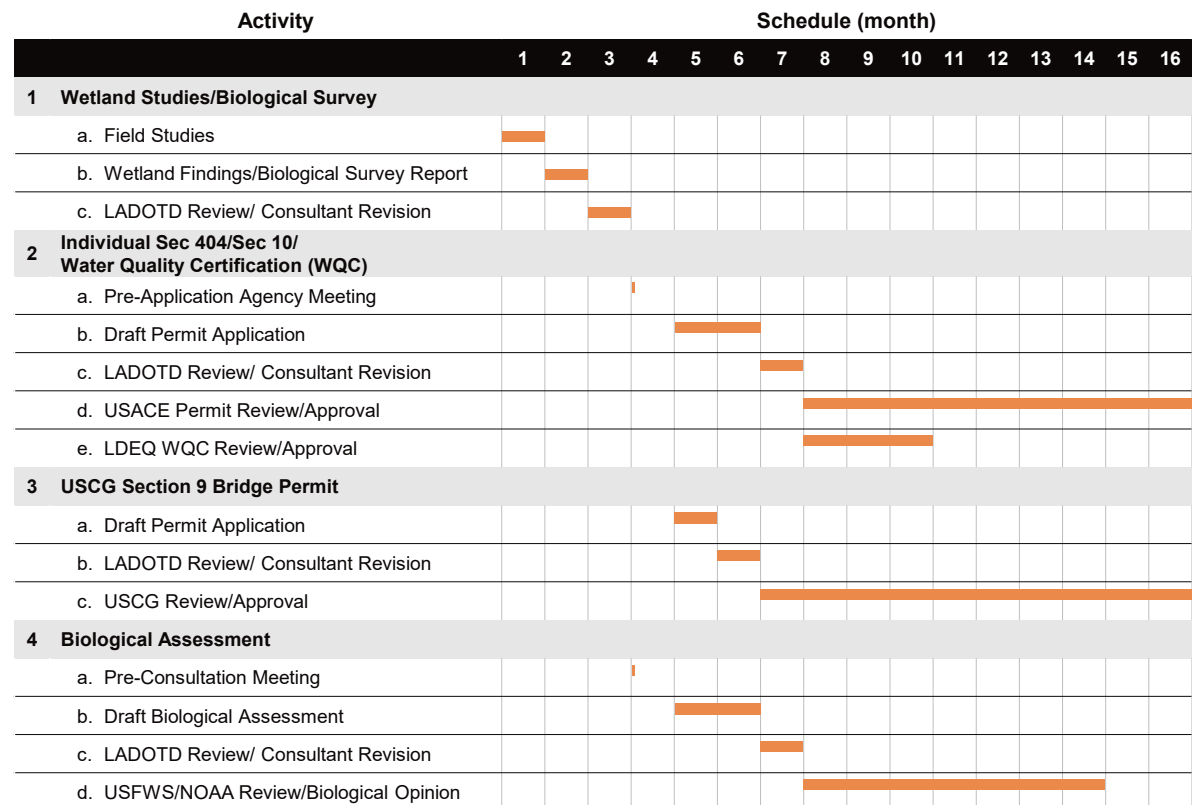


Exhibit A – Complex Environmental Permitting Schedule

servitudes. Public notice requirements for each permitting agency will be included with distribution protocols, and comment/response timelines. Public meeting procedures per LADOTD requirements will be provided, in the event public involvement is required.

Quality Matters



A quality management plan will be drafted for the project defining the protocol and responsibilities for quality assurance/quality control (QA/QC) reviews. A QA/QC review will be required for all deliverables and will be documented on forms included in the Quality Management Plan for each review and revision cycle. Data forms will be established for all field activities to maintain consistency across project teams and TOs, and will also be subject to QA/QC reviews. We will utilize automated field forms on mobile devices/tablets to collect field data. This will reduce labor cost associated with traditional data entry from paper fieldnotes and associated human errors. Following internal QA/QC, all permit applications and agency submittals will be submitted to LADOTD Environmental staff for review. All LADOTD comments will be addressed and LADOTD approval will be obtained prior to resource or permitting agency submittal.

Health and Safety

TRACK TO ZERO TRACK



Under our TRACK TO ZERO accidents initiative, Arcadis keeps health and safety first in all things. What that means for this contract is that a project-specific Health and Safety Plan (HASP) will be developed for each TO. The HASP defines all Tasks to be completed on a given project and includes a Hazard Assessment and Risk Control for each Task. Environmental fieldwork often presents unique health and

safety risks that must be recognized and assessed prior to staff deployment in order to be controlled, ensuring the safety of our staff and project teams. Each HASP will identify all responsible parties, incident reporting protocols, and required personal protective equipment (PPE) for all activities. Arcadis requires that all staff, as well as subconsultants, working on a given project review and sign the HASP. Subconsultants can also provide their own HASP that meets or exceeds the requirements of the Arcadis HASP. All dive staff on our team are Certified Divers and all dive plans will be reviewed by an Arcadis Dive Safety Board. This protects our staff and reduces the potential for an incident on a LADOTD project.

PERMITTING



Our approach to permitting begins with identifying the full extent of impacts to environmental resources based on project plans and consulting with LADOTD to identify impact avoidance and minimization measures (AMMs). Not only are AMMs required by permitting agencies, but they can also reduce the level of permitting effort and compensatory mitigation liability. Our permitting staff consult with in-house, LADOTD, or other roadway and bridge design staff to identify feasible, cost-effective AMMs based on project design. We bring alternative design solutions and their estimated cost, including mitigation, to LADOTD for consideration in developing a permitting strategy.

Upon alternative selection and preliminary design, a permitting strategy is developed that identifies all required permits for the project and establishes a schedule for obtaining approval from permitting agencies. Ideally, this process occurs during project scoping so there is opportunity for all parties to discuss the strategy and modify to align with LADOTD's delivery schedule and expectations.

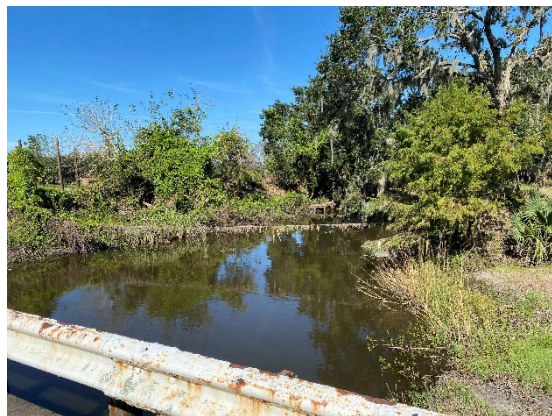
For complex permits and programmatic permitting efforts (e.g., Rural Bridge Initiative) our first step is to schedule a pre-application meeting with resource and permitting agencies.

The pre-application meeting is intended to identify all agency expectations and concerns prior to permit submittal so that they can be addressed in the permit application. This eliminates delay associated with responding to agency comments because these concerns haven't been adequately addressed upfront. It is also an opportunity to discuss options to streamline the permitting effort through concurrent agency reviews and eliminating unnecessary information for agency reviews.

We ensure that permit applications include all required information to be considered "complete" by permitting agencies through internal QA/QC thereby avoiding requests for additional information. We will collaborate with roadway and structural design staff to deliver permit drawings/exhibits that clearly illustrate impacts to environmental resources to permitting agencies.



For projects requiring compensatory mitigation for unavoidable impacts, a plan will be developed based on project location utilizing the Louisiana Wetland Rapid Assessment Method (New Orleans District), Charleston Functional Assessment (Vicksburg District), or Interim Hydrogeomorphic (iHGM) Wetland Functional Assessment and/or Stream Condition Assessment (Galveston



District). In the event compensatory mitigation credits are not available from a mitigation bank, Arcadis will consult with LADOTD to identify other viable options including in-lieu fee payment or permittee-responsible mitigation. If permittee-responsible mitigation is selected, our restoration ecologists and hydrologist can assist with selection, design,

and permitting of suitable, cost-effective mitigation sites.

We will leverage our multi-disciplinary team experience to prepare comprehensive applications that meet permitting agency requirements. Our structural engineers and hydrologists will assist with U.S. Coast Guard bridge permit application where maintenance of adequate flows and vessel safety are primary agency concerns. Our team includes former Louisiana Department of Natural Resources, Office of Coastal Management staff responsible for Coastal Use Permit (CUP) application review that will bring this experience to the preparation of CUP applications on behalf of LADOTD. Our local staff in Baton Rouge, Metairie, and New Orleans will facilitate coordination with Louisiana Levee Districts for levee permit review and approval.

WETLAND DELINEATION/FINDINGS



Given the recent U.S. Supreme Court decision in *Sackett v. Environmental Protection Agency* and ever-changing status of wetlands and waters of the U.S. (WOTUS) subject to Clean Water Act (CWA) regulations, wetland delineation requires an understanding of both science and policy. Our team of Professional Wetland Scientists will employ current science and USACE Regulatory Division policy when making decisions regarding wetlands and other WOTUS subject to CWA permitting on LADOTD projects. We will work with USACE staff to finalize or revisit previously submitted jurisdictional determinations for LADOTD projects, including facilitating site visits, to ensure consistency with current regulatory policy.

To streamline wetland findings reports, we will utilize Microsoft PowerApps and PowerBI to develop automated field forms and report templates allowing for seamless data collection and reporting. Data collected in the field will automatically populate wetland findings reports via cloud flow to reduce labor cost associated with traditional data entry and reporting. All wetlands and other WOTUS delineated in the field will also be GPS located with submeter accuracy. A geodatabase containing all resource delineations will be developed, maintained, and shared with LADOTD for each TO. Our GIS professionals will utilize ArcGIS Pro to prepare required maps and figures for all wetland findings reports, as well as permit applications and biological assessments.

BIOLOGICAL ASSESSMENTS & SURVEYS



While biological surveys are often the most effective method of confirming the presence/absence of a species they are often costly, time consuming, and labor intensive. Part of our approach to biological assessment and surveys involves identifying innovative solutions for Endangered Species Act (ESA) consultations. For example, development of Programmatic Agreements with the Federal Highway Administration (FHWA) and U.S. Fish and Wildlife Service (USFWS) have allowed State DOT projects to proceed through ESA consultation without intensive field surveys. Although this approach requires a lot of upfront work, it can pay dividends once executed.



Due to the spread of white-nose syndrome since its discovery in the U.S. in 2006, several bat species have been listed under the ESA, with the number of species listed steadily increasing. With the recent elevation of the Northern long-eared bat (*Myotis septentrionalis*) as an Endangered species, consultation with USFWS for the species has caused delay on LADOTD projects. While the northern long-eared bat is primarily limited to northern Louisiana, the tri-color bat (*Perimyotis subflavus*) range covers a majority of the state and is proposed to be listed as Endangered with listing anticipated Fall 2023.

Rather than completing expensive acoustic and/or mist-net surveys for projects within the bats range, a programmatic agreement would allow for issuance of a “not likely to adversely affect” determination provided a project complies with AMM included in the agreement. Our team of biologists are currently finalizing a Bat Programmatic Agreement with another state DOT and can leverage this experience to benefit LADOTD.

Migratory birds are another federally protected species that can be addressed through a cost effective, programmatic approach. Arcadis previously completed an assessment of Best Management Practices for migratory birds on transportation structures. Based on our findings, a partnership with the USDA Animal and Plant Health Inspection Service (APHIS) was determined to be the most cost effective method for managing migratory birds on bridges and allowing bridge demolition and/or maintenance to proceed on schedule. Our staff can assist LADOTD with developing similar solutions that avoid the need for migratory bird inspections on all programmed projects by LADOTD or consultant staff.



While programmatic agreements and agency partnerships can streamline program delivery, there will always be projects that require traditional biological surveys. Our team of biologists hold federal and state collection permits to conduct surveys for many threatened and endangered species in Louisiana. If our team does not hold a required species permit, we will coordinate with USFWS and LDWF to obtain the necessary permits to complete surveys. The Arcadis aquatic survey team includes Certified Divers that are governed by a Dive Safety Board to improve staff health and safety. We own the necessary equipment and employ skilled staff to mobilize for aquatic surveys of waters of any size throughout the state. All aquatic surveys will be completed per USFWS and NOAA Fisheries guidelines.

Our initial step in biological assessment is reviewing the USFWS Information for Planning and Conservation database to identify species potentially occurring in a project area, as well as Solicitation of Views responses from LDFW. Our ecologists then assess habitats within the project area for suitability to support the species of concern. If suitable habitat is identified, we will coordinate with LADOTD and the resource agencies to determine the appropriate survey methodology, providing our recommendations based on prior experience surveying for the target species in similar habitats. Upon survey methodology approval we will execute the biological survey and report the results to

LADOTD. In the event that species presence is confirmed, we will immediately contact LADOTD and discuss next steps for agency coordination.

Similar to permitting, our approach to Biological Assessment involves early and ongoing coordination with resource agencies. For projects “likely to adversely affect” federally listed species, we will meet with LDWF, USFWS, and/or NOAA Fisheries staff prior to drafting a Biological Assessment. Similar to a pre-application meeting, this meeting will identify agency concerns and facilitate the development of AMM to reduce adverse effects to the species. The meeting will also aid in identifying the project action area that will need to be assessed and species relocation plan development, if required. Following initial agency coordination, we will draft a comprehensive Biological Assessment in accordance with Section 7 of the ESA. We will continue to coordinate with USFWS and/or NOAA Fisheries throughout the Biological Assessment review and assist with development of the Biological Opinion, as needed. Upon issuance of a Biological Opinion, we will assist LADOTD with project compliance including execution of species relocation and monitoring.




Scientific Name	Common Name	ESA Listing Status	Group	Arcadis Team Holds Federal Collection Permit
<i>Grus americana</i>	Whooping crane	Endangered	Birds	✓
<i>Picoides borealis</i>	Red-cockaded woodpecker	Endangered	Birds	✓
<i>Charadrius melodus</i>	Piping Plover	Threatened	Birds	✓
<i>Lampsilis abrupta</i>	Pink mucket (pearly mussel)	Endangered	Clams	✓
<i>Potamilus capax</i>	Fat pocketbook	Endangered	Clams	✓
<i>Potamilus inflatus</i>	Inflated heelsplitter	Threatened	Clams	✓
<i>Quadrula cylindrica cylindrica</i>	Rabbitsfoot	Threatened	Clams	✓
<i>Myotis septentrionalis</i>	Northern Long-Eared Bat	Endangered	Mammals	✓


Sections 19-20


*The Arcadis team assisted the Georgia Department of Transportation (GDOT) and Georgia Department of Natural Resources with a successful gopher tortoise (*Gopherus polyphemus*) relocation prior to construction of I-75 interchange improvements in Lowndes County, GA (GDOT PI# 0007386).*




19. Workload:

Firm(s) ALL FIRMS MUST BE REPRESENTED IN THIS TABLE	Past Performance Evaluation Discipline(s) *	Contract Number and State Project Number	Project Name	Remaining Unpaid Balance**
	Env	44-09703 / H.000688.2	US 11 Norfolk Southern Railroad	\$3,008
		44-07175 / H.011328.2	I-49 South (Ricohoc to Berwick)	\$926,361
		44-19338 / Multiple State Project Numbers	Rural Bridge Replacement Initiative Phase II – Multiple State Project Numbers – Districts 02, 03, 07, 61, and 62	\$116,335
		44-09281 / H.009932	US 80 Widening: Vancil Road to Well Road EA	\$5,343
		44-24307 / H.015052	I-20: Widening/Ovrly (Vancil Rd-LA 34)	\$83,913
	Traffic	44-07175 / H.011328.2	I-49 South (Ricohoc to Berwick)	\$110,826
		44-24204 / H.012889.5	I-20 Rehab (Pines Road to I-220)	\$80,568
		44-18646 / H.004100.5	I-10: LA 415 to Essen Lane on I-10 and I-12	\$424,687
		44-17033 / H.005121	LA 1/LA 415 Connector	\$41,984
		44-14845 / H.012018.6	Adaptive Traffic Signal Design and Implementation	\$17,741
		44-19379 / H.013797	LA 30: EBR PL – I-10	\$315,981
		44-21121 / H.000413	Cross Bayou Bridge Replacement	\$61,852
		44-24307 / H.015052	I-20: Widening/Ovrly (Vancil Rd-LA 34)	\$226,566
		44-23690 / H.015213.5	District 04 Pedestrian Safety Improvements	\$191,182
		44-21325 / H.012837.5	I-10 New Orleans Master Plan	\$513,925
	Road	44-07175 / H.011328.2	I-49 South (Ricohoc to Berwick)	\$304,616
		44-16923 / H.012901.6, H.010634.6	US 90Z (Bodenger Blvd. – Stumpf Blvd.)	\$219,389
		44-19010 / H.010116.5	LA 1088: Sault and Trinity Roundabouts	\$83,268
		44-24084 / H.009300.5	CMAR Contract for Hooper Road Widening (LA 3034 – LA 37)	\$52,059
		44-24307 / H.015052	I-20: Widening/Ovrly (Vancil Rd-LA 34)	\$109,087
	Bridge	44-18646 / H.004100.5	I-10: LA 415 to Essen Lane on I-10 and I-12	\$780,876
		44-21121 / H.000413	Cross Bayou Bridge Replacement	\$92,777
	ITS	44-16811 / H.013868.6 (B)	ITS Responsive/Emergency Maintenance Engineering and Inspection (ME&I) (2022)	\$16,678
		44-16811 / H.013868.5	ITS Program Management and Operations (2023)	\$654,513
		44-16811 / H.013868.6 (A)	ITS Routine Maintenance Engineering and Inspection (ME&I) (2023)	\$660,838
		44-16811 / H.013868.6 (B)	ITS Responsive/Emergency Maintenance Engineering and Inspection (ME&I)	\$153,308
		44-18646 / H.004100.5	I-10: LA 415 to Essen Lane on I-10 and I-12	\$164,395
	CE&I/OV	44-25046 / H.013710.6	I-10: US 61 to LaPlace ITS Deployment (CE&I)	\$178,821
		44-25665 / H.013482.6	I-10 WBR Queue Warning System	\$471,338

Firm(s) ALL FIRMS MUST BE REPRESENTED IN THIS TABLE	Past Performance Evaluation Discipline(s) *	Contract Number and State Project Number	Project Name	Remaining Unpaid Balance**
	Environmental	N/A	N/A	N/A

Firm(s) ALL FIRMS MUST BE REPRESENTED IN THIS TABLE	Past Performance Evaluation Discipline(s) *	Contract Number and State Project Number	Project Name	Remaining Unpaid Balance**
	Environmental	State Project No. H.014530 (contract number unknown; sub)	Almonaster Bridge Replacement	969





Firm(s) ALL FIRMS MUST BE REPRESENTED IN THIS TABLE	Past Performance Evaluation Discipline(s) *	Contract Number and State Project Number	Project Name	Remaining Unpaid Balance**
	Environmental	N/A	N/A	N/A

* The **only** past performance evaluation disciplines to be used are: Road, Bridge, Traffic, CE&I/OV, Geotech, Survey, Environmental, Data Collection, Planning, Right-of-Way, CPM, ITS, Appraiser and Other (please specify). If a firm has more than one past performance evaluation discipline for any single project, the firm can use multiple rows to express the remaining unpaid balance per evaluation discipline.





** Round to the nearest dollar. **Do not** round to the nearest thousands. If there are no active contracts with a remaining unpaid balance, place N/A in the Remaining Unpaid Balance column. NOTE: ALL FIRMS MUST BE REPRESENTED IN THIS TABLE. LEAVING THE “REMAINING UNPAID BALANCE” COLUMN BLANK IS NOT ACCEPTABLE.

20. **Certifications/Licenses:**

If the advertisement requires submission of licenses and/or certificates, include them here. Otherwise, leave this section blank.

CERTIFICATIONS															 DBE	 Morris P. Hebert, Inc. client focused solutions		
	Jason Morrell, PWS	Jeremy Henson, CE	Angela Dalsis, PWS	Bonnie Bynum	Jayun Thibodeaux, PWS	Matt Frackelton	Nick Firman	Jose L. Rodriguez, PE	Catherine Bruns	Gabriel Arias, PE	Jan (Grenfell) Hughes	Lee Droppelman	Kory Armstrong, CWB	Martin Melville	Tonja Marking, PhD, PE	Dakota Dagenhardt	Joshua Curry, PWS	Cal R. Fontenot, PWS
Meeting Minimum Personnel Requirement	3, 7	3, 4, 6, 7, 8	2	1	3	6	6	9				4	4	6	7	8	8	
DBE Certification															•			
Professional Engineer (LA)								•										
Professional Wetland Specialist	•		•		•												•	•
Certified Ecologist		•																
ATSSA – Traffic Control Technician								•		•								
ATSSA – Traffic Control Supervisor								•		•								
LADOTD TEPR – Module 1	•																	
LADOTD TEPR – Module 2	•																	
LADOTD TEPR – Module 3	•																	
Certified Wildlife Biologist													•					
Certified Biologist																•	•	
USFWS 10(A)1(a) Permit		•										•	•	•				
Louisiana Department of Wildlife and Fisheries – Scientific Collecting Permit																•		
NHI course No. 142005, “National Environmental Policy Act and Transportation Decision Making”	•			•							•							
NHI – Fundamentals of Title VI/Environmental Justice											•							
NHI Course No. 142049 – Beyond Compliance: Historic Preservation in Transportation Project Development											•							
NHI – Federal Aid Highways – 101 (State Version)											•							
FHWA – NHI Course No. 142047 – Water Quality Management of Highway Runoff	•																	
Institute for Wetland & Environmental Education & Research, Inc. – Corps Wetland Delineation Manual	•																	

Joshua Curry was previously a PWS holder but is now going through recertification. Old cert removed and no updated cert available

CERTIFICATIONS														 DBE				
	Jason Morrell, PWS	Jeremy Henson, CE	Angela Dalsis, PWS	Bonnie Bynum	Jayun Thibodeaux, PWS	Matt Frackelton	Nick Firman	Jose L. Rodriguez, PE	Catherine Bruns	Gabriel Arias, PE	Jan (Grenfell) Hughes	Lee Droppelman	Kory Armstrong, CWB	Martin Melville	Tonja Marking, PhD, PE	Dakota Dagenhardt	Joshua Curry, PWS	Cal R. Fontenot, PWS
Watershed Hydrology Consultants, LLC – Assessing and Advancing Watershed management – Identification of Intermittent and Perennial Streams	●																	
ACF Freshwater Mussel Workshop	●																	
Wetland Training Institute – Basic Wetland Delineation																		
Wetland Biochemistry Institute - Wetland Delineation Training Workshop											●							
LADOTD – Endangered Species Act – Section 7 Consultation Process											●							



***Society of Wetland Scientists
Professional Certification Program, Inc***

renews the designation

Professional Wetland Scientist

For

Jason E. Morrell

In recognition of all the professional requirements approved by the Society of Wetland Scientists Certification
Renewal Program, and verified by the Society's Certification Renewal Review Panel.
Professional Wetland Scientist Number 2319 issued on 4/1/2013 and recertified on 5/2/2023.
Due to recertify again by 4/1/2028.



Rob McInnes, PWS
President

Pat Frost, PWS
Certification Renewal Chair



U.S. Department
of Transportation
**Federal Highway
Administration**

National Highway Institute



Certificate of Training

JASON MORRELL

has participated in

***FHWA-NHI-142005 NEPA and the Transportation
Decisionmaking Process***

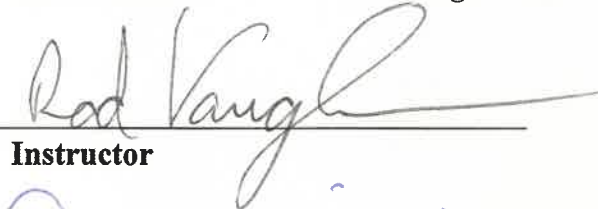
hosted by

LA DOTD/LTRC

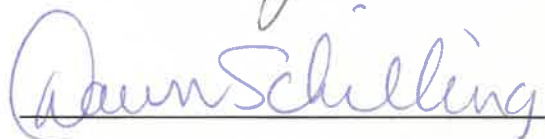
Date: December 3-5, 2018

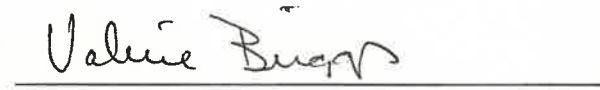
Hours of Instruction: 18

Location: Baton Rouge, LA


Instructor


Local Coordinator


Instructor


Valerie Briggs, Director
National Highway Institute

Apalachicola, Chattahoochee, and Flint River Basins

Certificate of Completion

AWARDED TO

Jason Morrell

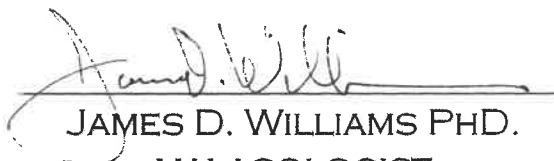
FOR SUCCESSFULLY COMPLETING THE

ACF FRESHWATER MUSSEL WORKSHOP

TOPICS INCLUDED: MUSSEL EVOLUTION, TAXONOMY, BIOLOGY, ECOLOGY, TERMINOLOGY, SHELL IDENTIFICATION, ISSUES AFFECTING MUSSEL POPULATIONS, CURRENT RESEARCH, PROPOSED FEDERAL AND STATE LISTINGS, MOLECULAR, GENETIC AND PROPAGATION TECHNIQUES, SURVEY METHODS, AS WELL AS RECOVERY EFFORTS.

THE COURSE INSTRUCTION INCLUDED LECTURE, HANDS -ON CLASSROOM AND FIELD IDENTIFICATION OF FRESHWATER MUSSELS OF THE ACF.

Newton, Georgia
August 6-9, 2012


JAMES D. WILLIAMS PHD.
MALACOLOGIST

INSTITUTE FOR WETLAND & ENVIRONMENTAL
EDUCATION & RESEARCH, INC.

CERTIFICATE OF TRAINING


This certifies that

JASON MORRELL

has completed wetland delineation training in the use of the

CORPS WETLAND DELINEATION MANUAL

Note: This training has been based in part on the U.S. Army Corps of Engineers Wetlands Manual, Technical Report Y-87-1 (1987 Manual), as provided for in the training materials developed in conjunction with Section 307(e) of the Water Resources Development Act of 1990 for the Wetland Delineator Certification Program.


Barbara J. Tiner, President

September 2002
Date

P.O. Box 288, Leverett, MA 01054 (413) 548-8866 www.wetlanded.com



WATERSHED HYDROLOGY
CONSULTANTS

Watershed Hydrology Consultants LLC
Assessing and Advancing Watershed Management

Certificate of Training

This certifies that

Jason Morrell

has successfully completed the

**Training Course on the Identification
of Intermittent and Perennial Streams**

May 21-23, 2012
Atlanta, Georgia

Classroom instruction and field instruction and practice were provided on: (1) The science of stream networks; hydrologic functions of streams and riparian zones; stream maps; and the geomorphologic, hydrologic, and biologic characteristics of headwaters streams; and (2) North Carolina Division of Water Quality, *Methodology for Identification of Intermittent and Perennial Streams and Their Origins, Version 4.11, 2010*.

Instruction provided by: Watershed Hydrology Consultants LLC, 1114 Upper Reach Drive, Wilmington, NC 28409; James D. Gregory; Principal/Senior Scientist and Lead Instructor

A handwritten signature in black ink, reading 'James D. Gregory', is written over a horizontal line.

James D. Gregory, Ph.D., CPSS, PWS
Course Director



U.S. Department
Of Transportation
Federal Highway
Administration

National Highway Institute



NATIONAL HIGHWAY INSTITUTE
Training Solutions for Transportation Excellence

Certificate of Training

Jason Morrell

has participated in

FHWA-NHI-142047 Water Quality Management of Highway Runoff

hosted by

Georgia Department of Transportation


Date: ***October 25-26, 2011***

Hours of Instruction: ***12 hours***

Location: ***Atlanta, GA***




Instructor



Instructor



Local Coordinator



Richard Barnaby, Director
National Highway Institute



The Ecological Society of America

Founded 1915

*The Ecological Society of America,
upon recommendation of the
Board of Professional Certification, hereby certifies that*

Jeremy Henson

meets the requirements as a certified

Ecologist

and is governed by the Society's Code of Ethics.

*Certified by the Ecological Society of America from
June 1, 2020 through June 30, 2025*

Carmen R. Cid

Chair, Board of Professional Certification

O. Lala

President, Ecological Society of America

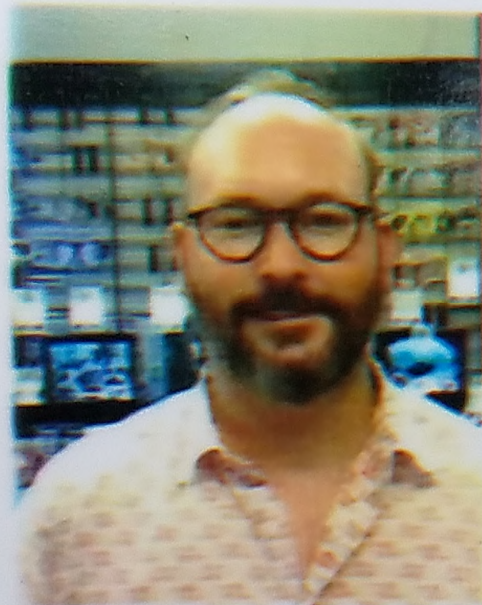
Open Water Diver



PADI



JEREMY D. HENSON



Diver No. 20090Y4438

BirthDate 11-Oct-1977

Cert.Date 30-Aug-2020

Instr.No. OWSI-394492

BART M. HUDSON

2143

SCUBALAND ADVENTURES INC.

1001 WEST ANDERSON LANE

AUSTIN, TX 78757

512 323-6999

This qualification meets ISO 24801-2: Diver Level 2 – Autonomous Diver Standard
This diver has satisfactorily met the standards
for this certification level as set forth by PADI
www.padi.com



Attention: Jeremy D Henson

The following PADI Certification has been processed and as requested will be shipped directly to you.

Date: 25 Jul 2023

Student Name: Jeremy D Henson

Certification Number: 23070W4972

Certification Date: 15 Jul 2023

Certification Level: FULL FACE MASK

Certifying Instructor: John E Pratt

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Name: Jeremy Henson
Approved: September 29, 2020
Instructor: Harold Bach ID# 9226

(Card expires 2 years after Approved date.)

This person has met or exceeded the performance requirements for course completion as set by Divers Alert Network, 6 W Colony Place, Durham, NC 27705.





NATIVE ENDANGERED SP. RECOVERY - ENDANGERED
WILDLIFE

Permit Number: ES81811B

Version Number: 1

Effective: 2023-04-10 **Expires:** 2028-04-10

Issuing Office:

Department of the Interior

U.S. FISH AND WILDLIFE SERVICE

ES Albuquerque Permit Office

500 Gold Avenue S.W., P.O.Box 1306

Albuquerque, New Mexico 87103-1306

Permittee:

JEREMY HENSON

2308 OXFORD BOULEVARD

ROUND ROCK, TX 78664

US

Marty Tuegel

Digitally signed by

Marty Tuegel

2023-04-10 10:45:21

Program Leader - Division of
Environmental Review

Authority: Statutes and Regulations: 16 U.S.C. 1539 (a), 16 U.S.C 703-712 50 CFR 17.22, 50 CFR 17.62, 50 CFR 21.23, 50 CFR 21.27, 50 CFR 13

Location where authorized activity may be conducted:

At locations specified within permit terms and conditions.

Reporting requirements:

See permit terms and conditions.

Authorizations and Conditions:

A. General conditions set out in Subpart B of 50 CFR 13, and specific conditions contained in Federal regulations cited above, are hereby made a part of this permit. All activities authorized herein must be carried out in accord with and for the purposes described in the application submitted. Continued validity, or renewal of this permit is subject to complete and timely compliance with all applicable conditions, including the filing of all required information and reports.

B. The validity of this permit is also conditioned upon strict observance of all applicable foreign, state, local tribal, or other Federal law.

C. Valid for use by Permittee named above.

D. Your permit has been renewed and amended as follows. The terms and conditions set forth in the most recent permit (TE81811B-0 dated May 17, 2017), and any previous amendments or renewals are hereby superseded by this document.



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E. Acceptance of this permit serves as evidence that Permittee agrees to abide by the "General Conditions for Native Endangered and Threatened Wildlife Species Permits" (copy attached).

F. Acceptance of this permit serves as evidence that Permittee agrees to abide by all conditions stated. **Some terms and conditions within this permit may have changed, either to reflect the most current language available or in response to requests by applicants or requirements by species' lead biologist(s).** Terms and conditions of this permit are inclusive. Any activity not specifically permitted is prohibited. Please read through these conditions carefully as violations of permit terms and conditions could result in your permit being revoked or denial of a new permit when the current one expires. Violations of your permit terms and conditions which contribute to a violation of the Endangered Species Act (ESA or Act) could also subject the Permittees to criminal or civil penalties.

G. Disposal, transplant, or release of live wildlife/plants or plant parts taken or held under the terms of this permit, unless specifically authorized, requires prior written approval by the species' lead U.S. Fish and Wildlife Service (USFWS) office. You must dispose of dead wildlife/plants or plant parts as specified by the terms of this permit. If terms are not specified, specimens can be destroyed or transferred to a public institution. A copy of this permit and a cover letter referencing your permit number, must accompany each shipment and must be retained with the specimens. The cover letter must specify who will receive the specimens and the numbers involved. A copy of the letter must be furnished to the following addresses:

U.S. Fish and Wildlife Service
Southwest Region 2 Office
Division of Environmental Review - Recovery Permits
P.O. Box 1306
Albuquerque, New Mexico 87103
fw2_te_permits@fws.gov

U.S. Fish and Wildlife Service – Midwest Region (Region 3)
Ecological Services – Endangered Species
5600 American Blvd. W., Suite 990
Bloomington, Minnesota 55437-1458
612/713-5343; fax 612/713-5292
permitsR3ES@fws.gov

Arizona Ecological Services Tucson Sub-Office
201 N. Bonita Ave., Suite 141
Tucson, Arizona 85745
520/670-6145

Arlington Ecological Services Field Office
501 West Felix Street, Suite 1105
Fort Worth, Texas 76115



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arles@fws.gov

Arlington Ecological Services Field Office East Texas Sub-Office
506 Hayter Street
Nacogdoches, Texas 75965
936/569-7981 ext. 4017

Austin Ecological Services Field Office
1505 Ferguson Lane
Austin, Texas 78754
esaustininfo@fws.gov

Illinois - Iowa Ecological Services Field Office
1511 47th Avenue
Moline, IL 61265
309/757-5800 ext. 203

New Mexico Ecological Services Field Office
2105 Osuna Road NE
Albuquerque, New Mexico 87113
505/346-2525
nmesfo@fws.gov

Oklahoma Ecological Services Field Office
9014 East 21st Street
Tulsa, Oklahoma 74129
918/382-4500

Texas Coastal Ecological Services Clear Lake Sub-Office
17629 El Camino Real, Suite 211
Houston, Texas 77058
281/286-8282

Texas Coastal Ecological Services Corpus Christi Sub-Office
4444 Corona Dr., Suite 215
Corpus Christi, Texas 78411
361/994-9005

A copy should also be retained in your files. Transfers deviating from the above conditions require prior written approval by the USFWS.



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H. *Unless otherwise instructed within the species-specific language below*, an **annual report** based on each species and activity conducted under the authority of this permit (including where activities took place, number and location of species collected/captured, and field data forms, if appropriate) must be **uploaded to** <https://fwsepermits.servicenowservices.com/fwse/> (<https://fwsepermits.servicenowservices.com/fwse/>) as an attachment to your most current permit record in ePermits, *and* submitted to the respective **Ecological Services Field Office (ESFO)** listed above, including negative data (i.e., negative survey findings or lack of breeding success) **by March 1st following each year the permit is in effect**. The annual report should also include recovery permit number, species' common and scientific name, date of survey, observer, observer contact information (in case of questions), location (provide GPS or UTM coordinates, or Township and Range and at least quarter Section), number of individuals observed, their sex, age class, and breeding condition, if known or determined in recovery permit report for all surveys conducted. If habitat quality/condition was noted at the time of surveys, please include that information.

Data collected in lat/long, NAD 83 is preferred. If collected in an alternate coordinate system, please report the coordinate system and datum the information was collected in. Optional information that can be included to help further define the precision of the locational information includes: 1) Positional Dilution of Precision (PDOP) level at time of acquisition, and 2) whether the Wide Area Augmentation System (WAAS) was enabled.

If no activities were conducted under this permit, for one or more species during the calendar year, a report stating such will satisfy the annual reporting requirements. Failure to submit a report, or failure to submit an adequate report, is a violation of the permit and is cause for suspension or revocation of the permit. A violation may disqualify a person from receiving or exercising the privileges of a permit as long as the deficiency exists.

For all surveys conducted within New Mexico, you must submit your annual report in the University of New Mexico's Natural Heritage Program **USFWS Permit Data Template** available at http://nhnm.unm.edu/data/fwse_permit_template (http://nhnm.unm.edu/data/fwse_permit_template). Completed annual reports must be submitted to **nhnm@unm.edu** as well as the appropriate ESFO listed above in Condition G. If your annual report is too large to send via e-mail, you may submit required copies on a CD. To send a CD to the Natural Heritage Program by mail or courier, please use the following addresses:

Mail To:

Natural Heritage New Mexico
UNM Biology Department
MSC03 2020
1 University of New Mexico
Albuquerque, NM 87131-0001
505/277-3822
Email: **nhnm@unm.edu**

Courier Delivery:

Natural Heritage New Mexico
University of New Mexico Main Campus
Castetter Hall – Room 167
Albuquerque, NM 87131

I. Copies of any unpublished or published reports generated by the studies or projects covered by this permit and other data that would be useful for the conservation or recovery of the species should also be submitted to the ESFO(s). Reports should include one copy of USGS 7.5 minute quad sheets or larger scale maps, depicting sites where listed species covered by this permit were found or not found. These reports may be disclosed pursuant to the Freedom of Information Act.



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J. Should any mortality or physical injury occur to an individual of the species during permitted activities (above the amount that may be specified below for a specific species) all operations must immediately cease and you are required to contact the ESFO(s) above within 24 hours.

K. Please note that this permit is limited to the activities and species described below, and is functional only when used in combination with a valid state permit.

L. Activities involving migratory birds and their parts (see 50 CFR 10, Migratory Bird Treaty Act (16 USC 703 et seq.) and implementing Regulations at 50 CFR 21) or bald and golden eagles (see Bald and Golden Eagle Protection Act (16 USC 668a) and 50 CFR 22), may require additional permits or authorizations. Please contact the respective Regional Migratory Bird Permit Office, FWS Contact Us (servicenowservices.com) (https://fwsepermits.servicenowservices.com/fws?id=fws_contact_us), for additional information.

M. This permit does not, either directly or by implication, allow or grant right of trespass. Permission to enter lands must be obtained in writing from the landowner or land managing agency.

N. If conducting research on a National Wildlife Refuge, you must obtain a refuge special use permit. The refuge permit will need to be used in conjunction with this permit and a valid state permit in order to meet all applicable laws.

O. You must furnish the USFWS, Division of Environmental Review - Recovery Permits (address above) with a copy of the permit issued to you by the Indian Tribal Government(s) prior to conducting research and recovery activities on Tribal lands.

P. You must have a copy of this permit and any other pertinent information in your possession while conducting the authorized activities.

Q. A request for renewal, if appropriate, must be submitted via ePermits prior to the expiration date of the current permit. Any person holding a valid, renewable permit who submits an electronic request ([application 3-200-59](https://fwsepermits.servicenowservices.com/fws/?id=fws_kb_view&sys_id=881899b11b5f50101f45dbdbe54bcb33) (https://fwsepermits.servicenowservices.com/fws/?id=fws_kb_view&sys_id=881899b11b5f50101f45dbdbe54bcb33)) for renewal at least 30 days prior to the expiration date, may continue to conduct those activities under the expired permit while the USFWS takes action on such person's request for renewal.

If a request for permit renewal is received less than 30 days prior to permit expiration, all activities authorized by the permit must cease upon permit expiration.

All requests to renew, amend, or obtain a new permit will require submittal of an application via ePermits. Applicants can create an account and apply by going to the following website: <https://fwsepermits.servicenowservices.com/fws/> (<https://fwsepermits.servicenowservices.com/fws/>). Please submit this application and a cover letter describing your request.

GOLDEN-CHEEKED WARBLER



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Presence/Absence Protocol Surveys and Habitat Assessments

R. Jeremy Henson (Permittee) is authorized for research and recovery purposes to conduct presence/absence protocol surveys and habitat assessments for the Golden-cheeked Warbler (*Setophaga chrysoparia*); "GCWA" or "warbler") within Texas. The following conditions apply:

1. We encourage permittees to use the current species range information available through the Service's Environmental Conservation Online System (<https://ecos.fws.gov> (<https://ecos.fws.gov>)). For the purpose of avoiding potential adverse effects to the species as a result of development projects, the USFWS recommends the project area and adjacent areas (within 300 feet) that contain suitable habitat be surveyed for the species. Suitable habitat for the warbler is described in Campbell (2003). Please note that surveys of suitable breeding habitat that result in "absence" apply only to that year in which the surveys were conducted. Additionally, habitat that is determined to be occupied by the species through surveys is considered to be occupied even while the birds are on the wintering grounds of Mesoamerica.
2. Methodology and reporting for GCWA surveys must follow the "USFWS Section 10(a)(1)(A) Scientific Permit Requirements for Conducting Presence/Absence Surveys and Habitat Assessments for Endangered Golden-cheeked Warblers." This document is available on the Austin ESFO website or upon request to the Austin ESFO GCWA lead biologist. Please refer back to the Austin ESFO website on or before March 1 each year before initiating GCWA surveys, as this document is subject to revision annually.
3. Three reporting events are required:
 - a. Presence/Absence Survey Data: Due June 30th of each survey year. Recommended data reporting format is available on the Austin ESFO website or upon request to the Austin ESFO GCWA species lead. Reports for surveys conducted according to the protocol outlined in the "USFWS Section 10(a)(1)(A) Scientific Permit Requirements for Conducting Presence/Absence Surveys and Habitat Assessments for Endangered Golden-cheeked Warblers" must be submitted no later than June 30, of that same year. Reports for bird detections or surveys not conducted according to protocol (such as casual observations) must be submitted within 10 business days of completion of the survey. Survey reports for this data should be submitted electronically to **GCWAreporting@fws.gov** and should be titled "GCWA Bird Survey Report."
 - b. Habitat Assessment Reports: Due on a continual basis throughout each survey year as needed. If any area of any assessed property meets any of the vegetation associations listed under "Potential GCWA Habitat" in the "U. S. Fish and Wildlife Service Section 10(a)(1)(A) Scientific Permit Requirements for Conducting Presence/Absence Surveys and Habitat Assessments for Endangered Golden-cheeked Warblers" and either: (1) those associations are considered suitable GCWA habitat but were not surveyed, or (2) a determination of non-GCWA habitat was made, then a report on those areas must be submitted within 5 business days of that decision. Habitat assessment reports should be submitted electronically to **GCWAreporting@fws.gov** and should be titled "GCWA Habitat Assessment."

Each report should include:

1. A map with a clear understanding of the location of that property within the county;



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2. an aerial photo with the date the photo was taken (no older than 2006), and the property boundary;
3. detailed descriptions of the habitat on site;
4. detailed descriptions of what factors were assessed to make the determination (for example, aerial photographs, Landsat imagery, and/or site visits); and
5. an explanation of why a survey for the GCWA was not performed or why the site was determined to be unsuitable.

Reporting With GIS Data:

If reporting with GIS shape files, it is not necessary to include the information requested in numbers 1 and 2 above in the report. Instead, follow the "GCWA Habitat Assessment Directions" available on the Austin ESFO website (or available upon request to the Austin ESFO GCWA species lead) and submit those data as an attribute table with appropriate shape files; a sample spreadsheet is also available.

Habitat Assessment Non-Concurrence:

1. We will do our best to respond in writing within 10 business days if we do not concur with the non-habitat determination.
2. If we notify you that we do not concur with the non-habitat determination, you must notify the person that hired and/or requested you do the assessment within 10 business days of our non-concurrence.

c. Annual Scientific Permit (Narrative) Reports: Due December 15th of each survey year. It is not necessary to resubmit bird survey data previously or habitat assessment data previously submitted. However, annual reports must include detailed descriptions of all habitats found on all parcels surveyed and submitted. No further information is necessary in the annual report for the habitat assessments previously submitted. Annual reports should be submitted electronically to **GCWAreporting@fws.gov** and should be titled "GCWA Annual Report."

Literature cited:

Campbell, L. 2003. Endangered and Threatened Animals of Texas: their life history and management. Golden-cheeked warbler (*Dendroica chrysoparia*). Texas Parks and Wildlife Department, Austin, Texas. Available online: https://tpwd.texas.gov/publications/pwdpubs/media/pwd_bk_w7000_0013_golden_cheeked_warbler_mgmt.pdf (https://tpwd.texas.gov/publications/pwdpubs/media/pwd_bk_w7000_0013_golden_cheeked_warbler_mgmt.pdf).

INTERIOR LEAST TERN



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S. A final rule to delist the Interior least tern (*Sternula antillarum*) due to recovery was published in the Federal Register on January 13, 2021 (86 FR 2564); thus, a permit is no longer required from the USFWS to conduct simple presence/absence surveys for Interior least terns in the U.S. As required under the Endangered Species Act, the USFWS is working with state wildlife agencies, and other partners, to monitor least tern populations to ensure it continues to thrive. This post-delisting monitoring period is likely to continue for several years. Data on breeding birds collected incidentally or voluntarily would be helpful for completing the post-delisting monitoring plan. Although not required, we request any survey findings, and other reports that include information on Interior least terns be sent to the Field Supervisor, U.S. Fish and Wildlife Service, Mississippi Ecological Services Field Office, 6578 Dogwood View Parkway, Jackson, MS 39213; telephone 601/321-1122. Individuals who use a telecommunications device for the deaf (TDD), may call the Federal Relay Service at 800/877-8339. All applicable local, State, and Federal laws apply.

The proposed and final rules, supporting documents, and the comments received on the proposed rule are available on the internet at <http://www.regulations.gov> (<http://www.regulations.gov/>) under Docket No. FWS-R4-ES-2018-0082, at <https://www.fws.gov/mississippiES/> (<https://www.fws.gov/mississippiES/>), or at <https://ecos.fws.gov>.

NORTHERN APLOMADO FALCON

T. Jeremy Henson (Permittee) is authorized for scientific research and recovery purposes to conduct surveys for northern aplomado falcons (*Falco femoralis septentrionalis*) within Arizona, New Mexico, and Texas. The following conditions also apply:

1. Permittees should follow the most recent version of the survey methodology established for northern aplomado falcon surveys, which can be obtained from species contacts (listed below). If you wish to utilize survey methodology differing from this, the study proposals or survey designs must be reviewed by the appropriate ESFO at least 30 days prior to proposed implementation.

In New Mexico:	Mark Brennan at mark_brennan@fws.gov
In Texas:	Chris Perez at chris_perez@fws.gov Tim Anderson at tim_anderson@fws.gov
In Arizona:	Jason Douglas at jason_douglas@fws.gov

2. The northern aplomado falcon breeding season in New Mexico extends from February 1 through July 31, and breeding surveys in New Mexico should be conducted throughout this time period. In Texas, the breeding season begins somewhat later than in New Mexico (the earliest documented initiation of incubation occurring during the first week of March, with courtship and nest selection happening a week or 2 earlier than that). These events more typically take place towards the middle or latter part of March and into early April, and most young fledge by early July. Re-nesting, although not common, could produce young that fledge as late as early August (P. Juergens, Peregrine Fund, pers. comm. 2017). This slightly delayed timeframe should be taken into account when breeding surveys are conducted in coastal Texas.

3. Suspected/confirmed northern aplomado falcon nests must be observed with optical equipment from a minimum distance of 75 to 100 meters in order to minimize disturbance to nesting individuals. Disturbance to nesting individuals early in egg-laying or incubation may cause nest abandonment and subsequent failure of reproduction for a breeding season. If birds are exhibiting



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behaviors that indicated stress (e.g., short flights, nervous agitation, alarm vocalizations, etc.), the observer should withdraw from the nest area to an acceptable distance, as determined by the bird's reaction.

4. It is recognized that in obtaining identifiable observations and/or photographs of suspected northern aplomado falcons, individuals may be disturbed and/or flushed from perch sites. Disturbance should be minimized by using high powered photographic lenses and spotting scopes to maximize the distance between the observer and the subject. Repeated approaches to individual falcons should be avoided.

5. Permittees are not authorized to approach nests or suspected nests. Additionally, no capturing or handling of northern aplomado falcons is authorized. Paris of breeding northern aplomado falcons observed in any location must be reported within 24 hours of detection to the NMESFO at 505/761-4718 or to the Texas Coastal ESFO at 361/994-9005.

6. For surveys covering large geographic areas, you must contact the respective ESFO where surveys are to be conducted in order to coordinate survey efforts so that survey duplication is avoided and disturbance to northern aplomado falcons is minimized.

7. All observations of unpaired northern aplomado falcons in a previously unreported location must be reported within 3 working days to the appropriate ESFO and State Department of Game and Fish. For sightings in New Mexico, please contact the New Mexico ESFO at 505/346-2525, and the New Mexico Department of Game and Fish. For sightings in Texas, please contact the Texas Coastal ESFO in Corpus Christi at 361/994-9005 and the Texas Parks and Wildlife Department's Wildlife Diversity Program.

8. In the event that mortality occurs to any adult or chick as a consequence of permitted activities, all operations are to cease, and the New Mexico ESFO and Texas Coastal ESFO in Corpus Christi must be notified within 24 hours.

PIPING PLOVER

U. Jeremy Henson (Permittee) is authorized for scientific research and recovery purposes to conduct presence/absence surveys for breeding or migrating piping plovers (*Charadrius melodus*) within New Mexico. Permittee must coordinate with the New Mexico ESFO prior to conducting surveys. The following conditions apply:

1. Presence/absence surveys of nesting piping plovers should be conducted from April through late July (nesting season). In years with high water levels in April and May, the first survey should not take place until nesting substrate (sand) has been exposed for at least one week to allow birds time to initiate nests. Presence/absence surveys do not require entering nesting areas (usually islands or sandbars). **You are not authorized to enter nesting areas.**

2. Permittee should approach potential nesting areas cautiously, using binoculars to scan for nesting and foraging ILTs from a boat or near the water's edge if on foot, and be aware of signs of agitation caused by the observers' presence. Agitated piping plovers (or piping plovers defending nests) will flush from the ground and circle observers while giving distress calls. Observers should immediately move away from nesting areas until birds no longer appear agitated (usually at least 120 feet) to allow piping plovers to return to their nests.

When a nesting area is identified, observers should stay far enough away to avoid disturbing nesting birds and use a spotting scope to estimate the number of adult birds, nests, chicks, and fledglings in colonies. Any evidence of a piping plover mortality (nests, young, or adults), predators, or human disturbance of nesting areas should also be noted and reported.

3. For surveys covering large geographic areas, you must contact the respective ESFO where surveys are to be conducted in order to coordinate survey efforts so that survey duplication is avoided and disturbance to piping plovers is minimized.



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4. In the event of the mortality-of any adult or chick as a consequence of permitted activities, all operations are to cease, and the New Mexico ESFO must be notified within 24 hours at 505/346-2525.
5. In New Mexico, evidence of predation or human disturbance of piping plovers, and all new observations of breeding piping plovers must be reported within 24 hours to the New Mexico ESFO at 505/346-2525, and to the New Mexico Department of Game and Fish (NMDGF) at 505/476-8000.
6. Permittees shall notify the New Mexico Ecological Services by phone or email if the presence of or nesting Piping plover's (*Charadrius melodus*) are discovered in New Mexico. Information such as a GPS point locations, time, date, and any other pertinent information is needed during the time of notification. The notification needs to occur within 48 hours of detecting a nesting pair.

New Mexico Ecological Services Field Office
2105 Osuna Rd. NE
Albuquerque, NM 87113
Notification to: **vance_wolf@fws.gov** or 505/761-4726

V. Jeremy Henson (Permittee) is authorized for scientific research and recovery purposes to conduct presence/absence surveys for piping plover (*Charadrius melodus*) within Oklahoma and Texas. You must coordinate with the Texas Coastal Ecological Services Clear Lake Sub-Office prior to conducting surveys. The following conditions apply:

1. Survey Criteria: Permittee should be knowledgeable about bird identification and must be capable of discerning all members of the maritime shorebird guild. Surveyors should be familiar with piping plover winter ecology as well as the various types of shorebird habitat that may be encountered along the Texas coast.
2. Observations in feeding habitats should be conducted during falling or low tides to increase the exposure of mud and/or sand flats. Wind speed during surveys should be less than 25 miles per hour and inclement weather conditions (heavy rain, severe cold) should be avoided. If birds vacate a site due to disturbance (human or predator), the observation and the disturbance should be so noted.
3. Surveys should be restricted to a nine month period beginning August 1 and ending May 1 and one month of the surveys (four surveys) should fall within a single migratory window (August 1 - November 1 or February 1 - May 1). Surveys should be conducted from 30 minutes after sunrise to 30 minutes before sunset. The surveyor should allocate observation time to a minimum of five one-hour blocks (segments) evenly apportioned across the survey day and encompassing all proximate tidal regimes and habitat types. The amount of time necessary to survey each respective tract will obviously vary with the amount and type of habitat to be covered. The intent should be to thoroughly survey each site for the piping plover, and the surveyor should make every effort to achieve that goal regardless of the time involved. Where possible, areas of appropriate habitat adjacent to the project area should be included in the survey in order to anticipate possible secondary impacts. Surveys may be conducted on a weekly basis (one survey per day per week), or a semi-monthly basis (two sequential survey days during each semi-monthly period). In the Laguna Madre, surveyors should be particularly aware of wind conditions since wind is the primary factor controlling tides in that system.
4. If piping plovers are observed, a reasonable effort should be made to determine if plovers are banded. If a banded plover is discovered, a reasonable effort should be made to determine the band combination of the bird. This would include the location (right or left, upper or lower legs) of any color or metal bands. Banded piping plovers should be reported to the Texas Coastal



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Ecological Services Clear Lake Sub-Office, within 24 hours.

5. If the birds are flushed, please take note of whether the birds return to the area they were using.
6. The use of all-terrain vehicles (ATVs) to cross mud, sand, and algal flats should be minimized. The justification for this restriction is as follows: algal flats in coastal areas of south Texas are the primary wintering area and preferred feeding habitat for wintering piping plovers. The blue-green algal layer is sustained by the wind-driven tides which are otherwise micro-tidal in nature. These flats are easily damaged by vehicular traffic. ATVs can create ruts in the algal mat that collect water, thereby allowing the germination of halophytes that might not otherwise be able to grow there. As a result, the algal mat can be replaced by halophytes invading across the mud and sand flats and are then no longer preferred foraging habitat for the piping plovers.
7. Caution should be used in approaching shorelines by boat in order to avoid damaging shallow water habitat, especially sea grass beds. Navigation charts should be consulted to identify locations of existing access channels (if any). If none exist, then boat engines should be stopped before shallow bottoms are impacted, and boats floated, pushed, or poled, into the shore. Visually inspect shorelines before access.
8. No capture or handling of piping plovers is allowed under this permit.
9. Site Assessment: The surveyor should conduct a single-day inspection and assess and delineate the habitat contained within the site being considered for occurrence of piping plovers. A map should be created that outlines these general habitat types. Habitat types of potential importance to piping plovers include: sandy beach, bay/barrier island margin, barrier island flats, intertidal sand/mud/algal flats, unvegetated areas within washover passes, and unvegetated intertidal flats associated with man-made sites such as dredge material islands.

If project sites contain areas that correlate with any of these habitat profiles, the survey should proceed to determine the presence of guild members (V.10 below). Projects on sites which do not contain any of these habitats will not require additional surveys to determine the presence of piping plovers.

10. Determine Presence of Guild Members: The surveyor should conduct a series of field surveys (see criteria under V.3 above) extending over a contiguous 30-day period during which the site should be inspected for the presence or absence of members of the maritime shorebird guild. Guild species include: black-bellied plover, snowy plover, Wilson's plover, semipalmated plover, piping plover, American oystercatcher, American avocet, willet, long-billed curlew, marbled godwit, ruddy turnstone, red knot, sanderling, western sandpiper, least sandpiper, dunlin, and short-billed dowitcher. Surveys may be conducted on a weekly basis (one survey per week), or a semi-monthly basis (two sequential survey days during each semi-monthly [15 day] period) during the period from August through April. Sites that are surveyed and found to contain no members of the winter maritime shorebird guild (as confirmed by USFWS) will not require further surveys to establish absence of piping plovers. Sites that are found to contain members of the winter maritime shorebird guild should be surveyed subsequently for the presence of piping plovers (see V.11 below). Survey time accumulated at the end of the 30- day study period will be credited toward the extended study required to determine the presence of piping plovers.

11. Determine Presence of Piping Plovers: The surveyor should conduct a series of field surveys (see V.3) extending over a 90-day period (which includes the 30-day survey period required to determine presence of the winter maritime guild of shorebirds), during which the site should be inspected for the absence or presence of piping plovers. One month of this period must fall



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within a single migratory window (August 1 - November 1 or February 15 - May 1). Surveys may be conducted on a weekly basis (one survey per week), or a semi-monthly basis (two sequential survey days during each semi-monthly [15 day] period).

12. Survey Reports: Survey reports should include at least one map, preferably at a scale of 1:24,000 or larger, delineating habitat types of potential importance to piping plovers. The survey site should be identified on a copy of the appropriate USGS topographic quadrangle map(s). Survey reports must include the following information for each survey segment (a minimum of five per day): name(s) of surveyor(s), date, tidal conditions during the survey segment, wind speed and direction during the survey segment, time of beginning and end of survey segment, number and type of disturbances occurring during the segment, total number of individuals of each guild species, and total number of piping plovers observed during the segment.

If the survey site consists of more than one habitat type, numbers of individuals of each shorebird species should be recorded separately for each habitat type. Daily summary sheets (summarizing segment results) must include a map delineating habitat types, indicating areas of high use by shorebirds, and identifying locations of observed piping plovers. Daily summaries must also include date, time of sunrise and sunset, times of daily high and low tides and a total number of individuals of each species observed during the survey day. A full report including maps, daily summaries, and segment data sheets must be provided to the Texas Coastal Ecological Services Clear Lake Sub-Office.

13. Prior to submitting amendment requests to add individuals to conduct piping plover surveys, please be sure all individuals have met the following criteria: all Permittees conducting surveys are required to obtain specific species training and experience by a qualified individual approved by the USFWS prior to conducting any surveys. In addition, please include the name of the sponsor and the date the training was taken. Permittee may contact Moni Belton in the Texas Coastal Ecological Services Clear Lake Sub-Office

at 281/286-8282 for further information regarding USFWS approved qualified individuals.

RED-CKOKADED WOODPECKER

W. Jeremy Henson (Permittee) is authorized for scientific research and recovery purposes to conduct presence/absence surveys for red-cockaded woodpecker (*Picoides borealis*) (RCW) within Texas. The following conditions also apply:

1. Surveys for RCW should be conducted according to the protocol set out in Appendix 4 of the January 2003 Second Revision of the Red-cockaded Woodpecker Recovery Plan (Revised RCW Recovery Plan).

2. All persons surveying for RCW must be able to positively identify the species from appearance and vocalizations under ideal and adverse conditions, as well as recognize the habitat required for colonization and foraging and the activity that indicates presence such as cavities, starts, and resin wells on cavity trees.

3. In Texas, historic and current RCW locality information should be obtained from the Texas Natural Heritage Program 512/448-4311 or the Arlington ESFO East Texas Sub Office (936/569-7981 ext. 4017). If the project area is on or near U.S. Forest Service National Forests lands, the District Wildlife Biologists should be contacted for current information.



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4. Obtain and inspect current aerial photographs and 7.5 minute USGS topographic maps (1:24,000) of the project area. The aerial photography should expedite the identification of the older pine stands (large old pine trees should have a smooth, dense appearance). The area should then be marked on a topographic map.
5. Ground-truth identified areas utilizing the topographic map to determine if mature pine stands suitable for potential RCW occupation exist within or near the project area.
6. Survey along parallel transects within suitable tracts to identify if RCWs are present (vocalizations, observation of individuals, cavities and/or resin wells in live pine trees, start holes). Transects must be spaced so that all trees are inspected. Necessary spacing will vary with habitat structure and season from a maximum of 91 m (100 yards) between transects in very open pine stands to 46 m (50 yards) or less in areas with dense midstory. Transects are run north-south, because many cavity entrances are oriented in a westerly direction, and can be set using a hand compass.
7. When surveying pipeline/powerline rights-of-way, survey the area within 1/2-mile on either side where habitat is suitable for RCWs.
8. When cavity trees are found, their location should be recorded in the field using a Global Positioning System (GPS) unit, aerial photograph, and/or field map. All potentially disruptive activities near these trees should then cease unless the surveyors are trained and certified to assess RCW cavity status in accordance with Appendix 1 of the Revised RCW Recovery Plan. Activities within active RCW clusters must be conducted only by trained, certified, and permitted individuals. Discoveries should immediately be reported to the Arlington ESFO East Texas Sub-office (address above in Section G).
9. If cavity trees are found, more intense surveying within 457 m (1500 ft) of each cavity tree is conducted to locate all cavity trees in the area.
10. Annual survey reports associated with RCWs in Texas will be directed to the Arlington ESFO East Texas Sub-office referenced in #8 above.

AQUATIC SPECIES DISEASE CONTROL PROTOCOL

X. To prevent inadvertent movement of pathogens, parasites, and invasive non-native species, research and management activities shall conform to the Declining Amphibians Population Task Force Fieldwork Code of Practice (<https://www.fws.gov/media/declining-amphibian-task-force-fieldwork-code-practice> (<https://www.fws.gov/media/declining-amphibian-task-force-fieldwork-code-practice>)), with the exception that 1% quaternary ammonia (Quat 128) should be used to clean equipment rather than 70% ethanol. Abiding by this Code would effectively limit the potential spread of pathogens via fish sampling equipment.

HOUSTON TOAD

Y. Jeremy Henson (Permittee) is authorized for research and recovery purposes to conduct presence/absence surveys for the Houston toad (*Anaxyrus houstonensis*) in accordance with all permit conditions below.



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Permittees may directly supervise biologists to conduct presence/absence surveys of Houston toads until they are able to demonstrate abilities to recognize and identify Houston toads using accepted resource agency or scientific techniques. Written certification and level of competence must be submitted by a permitted biologist who is experienced in the biology, ecology, and scientific techniques needed to identify and conduct research on the species.

Surveys

Methodology and reporting for Houston toad surveys must follow the Service's approved Houston toad survey protocol and annual reporting guidelines, which can be found here:

<https://www.fws.gov/library/collections/houston-toad-protocol-and-permit-guidelines>

(<https://www.fws.gov/library/collections/houston-toad-protocol-and-permit-guidelines>).

Please refer to this website on or before January 1st each year before initiating Houston toad surveys, as this document may be updated annually.

Search and Salvage

Permittees are authorized to collect by hand and temporarily capture "salvaged" Houston toads prior to transport. Salvaged Houston toads are individuals (adults, eggs, tadpoles, or juveniles) from areas or under conditions that will likely result in their desiccation or destruction.

Permittees are also authorized for the following activities associated with the hand collection and capture of Houston toads: (1) searching for Houston toads under debris piles and (2) handling Houston toads for the purposes of identification, relocation, and collection. The following permit conditions apply:

1. Salvaged toads will be relocated to adjacent suitable habitat 200 meters (656.2 feet) beyond any minimization barriers to protect salvaged individuals from construction activities. Suitable habitat for relocation should be identified prior to any search and salvage activities. Refer to the Houston toad habitat module on our website (see above) for detailed information on Houston toad habitat definitions. Permittees are authorized to relocate salvaged individuals to the identified site(s) only after coordinating with the RCC Branch of the Austin ESFO and receiving written approval for their release at this site.
2. If no suitable habitat is available for relocation, salvaged toads will be transported to the Welsh property in Bastrop County, Texas and released into field exclosures until they can be released into the wild. Alternatively, if salvaged individuals would be of benefit to the Houston toad captive breeding or captive assurance colony, they may be transported to the Houston Zoo. Permittees are authorized to return salvaged individuals to the wild only after coordinating the selection of the new site with the RCC Branch of the Austin ESFO and receiving written approval for their release at this site.
3. Any mortality resulting from the above activities should be reported to the RCC Branch of the Austin ESFO within 24 hours.
4. Permittees are authorized to collect dead Houston toads. Specimens will be deposited with the Texas Cooperative Collection of Texas A&M University, College Station, Texas or another facility approved by the RCC Branch of the Austin ESFO.



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5. Annual reports must include the following: (1) dates that each Houston toad was collected and transported; (2) the GPS coordinates (in decimal degrees) of collection locations on each date; (3) the GPS coordinates (in decimal degrees) of the relocation locations and (4) observations on the physical condition of each Houston toad collected.

SHEEPNOSE MUSSEL

Z. Jeremy Henson (Permittee) is authorized for research and recovery purposes to take (capture, handle, and release, tag and relocate under special circumstances) by hand via wading, snorkeling, or diving for scientific research (presence/absence surveys, studies to document habitat use, population monitoring, relocation to enhance the survival of the species, and evaluation of potential impacts) aimed at recovery of the Sheepnose Mussel (*Plethobasus cyphus*) within Illinois.

1. Permittee shall notify and request approval from the USFWS Field Supervisor for the state in which activities are proposed to occur at least 15 days prior to conducting any activities. Contact information is available at: <https://www.fws.gov/service/3-200-59-scientific-purposes-enhancement-propagation-or-survival-permits-recovery-permits> Your request for this site-specific approval must be in writing and must indicate:

- a. Species for which activities are proposed.
- b. Location of proposed activities, including project site (legal description and lat/long), county, and state.
- c. A full description of activities (i.e., proposed project plan, including purpose and need, surveys, methods, etc.)
- d. Dates when the project is proposed to take place.
- e. Evidence that Permittee has received any required contracts to complete the activities.
- f. Whether all annual reporting requirements have been fulfilled.

2. Permittee shall adhere to the following conditions regarding the capture, handling, tagging and relocation/release of mussels:

- a. Permittee may take (remove from the substrate, by hand, for identification and data collection) mussels via wading, snorkeling, or diving and temporarily hold healthy specimens.
- b. Permittee may temporarily hold specimens in mesh bags, either suspended in the water or held in a container containing river water, while awaiting identification and data collection. Specimens may be held for up to three hours if they are held in the water in bags that allow free movement of water in the river from which the mussels were taken or held in containers of water that is changed every hour [every half-hour when air temperatures are at or above 80° Fahrenheit (F)] and replaced with water freshly taken from the water where the mussels were collected. When practicable, specimens held in containers must remain in the shade. Specimens must be returned to the locality from which they were taken. Live specimens that cannot be identified at the site must be photographed for identification purposes.



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- c. Collection of live mussel specimens must be done only when the water temperature is above 40° F. Mussels must be returned by hand to suitable habitat, by divers if necessary. When air temperatures are below 32° F or above 90 ° F, specific details regarding collection and handling activities as well as how mussels should be placed (i.e., reburying instructions) shall be coordinated with the field office(s) where activities are occurring (Condition G).
- d. All live mussels shall be measured (length and height) and, if possible, sexed and aged. No intrusive activities are permitted. Data collected shall include descriptions of external morphometry and reproductive status. All specimens of federally listed species – or a representative sample for each species – must be photographed prior to release.
- e. Capture and relocation shall be authorized under this permit only under special circumstances when listed mussels are anticipated to be harmed by dewatering and/or stranding and only with written approval from the USFWS Field Supervisor for the state(s) in which the activity is proposed and in accordance with the conditions described below. Such specimens may be moved into deeper water at the survey site; to a suitable location near the survey site; or, to an alternative location within the same HUC 12 watershed, coordinated with and approved by the appropriate U.S. Fish and Wildlife Field office.
- i. Take (remove from the substrate by hand) the species via wading, snorkeling or diving.
- ii. For transportation purposes, Permittee may temporarily hold specimens in either river water within aerated holding tanks or in ice chests draped in damp burlap and may move specimens to relocation site(s) as authorized in writing by the U.S. Fish and Wildlife Service Field Office. In all cases, handling and exposure shall be kept to a minimum during relocation effort.
- iii. Specimens shall be measured, photographed, and tagged prior to transporting them to approved relocation sites. Tagging of mussels may be omitted under special circumstances, such as emergency salvage, when time does not allow for adherence to established tagging procedures. The locations for replanting must have a stable substrate and characteristics (temperature and water chemistry) conducive to survival of specimens.
- iv. Specimens shall be measured, photographed, and marked/ tagged prior to transporting them to approved relocation sites, in accordance with the associated biological opinion. The locations for replanting must have a stable substrate and characteristics (temperature and water chemistry) conducive to survival of specimens. Permittee should loosen substrate by hand or with a small tool to a depth of about one-half the length of the mussel. Place the mussel approximately half way into the loosened substrate, near the center of the loosened area, siphon (posterior) end up and pointing upstream.
- v. Permittee may temporarily hold specimens in mesh bags, either suspended in the water or held in a container containing river water, while awaiting identification and data collection. Specimens may be held for up to 3 hours provided that they are held in the water in bags that allow free movement of water in the water body from which the mussels were taken from or held in buckets/containers of water that is changed every hour [every half-hour when air temperatures are at or above 80o Fahrenheit (F)] and replaced with water freshly taken from the water where the mussels were collected. When practicable, specimens held in containers must remain in the shade. Live specimens that cannot be identified at the site must be photographed for identification purposes.



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vi. Collection of live mussel specimens for prior approved relocation must be done only when the water temperature is above 40° Fahrenheit. When air temperatures are below 32° F or above 90 ° F, specific details regarding collection and handling activities as well as how mussels should be placed (i.e., reburial instructions) shall be coordinated with the field office(s) where activities are occurring (Condition G).

vii. Specimens must be returned to a suitable locality. A suitable location for replanting of specimens shall be determined prior to taking mussels from the original site. The location for replanting must have a stable substrate and have characteristics similar to the substrate from which the specimens are collected (and approved by the Field Office as explained in Condition Z.1).

viii. The permittee shall obtain, record, and report the geographic coordinates of the specific relocation site(s) using a GPS receiver. In addition to GPS data, the permittee shall describe the general relocation area using unique river or bank identifiers to provide a general location of the site using triangulation. Live mussels must be returned unharmed to the substrate within three hours of collection. Divers should follow the protocol in Z.2.c, above to position the relocated specimens in the substrate by hand.

ix. The USFWS Field Supervisor for the state(s) in which the activity is proposed will specify in writing whether all listed mussels shall be marked or etched with a unique identifier and will also describe in writing the nature of marking (e.g., shellfish tag vs. etching) to be used. This USFWS field office may convey this in any site-specific authorization provided or in writing separately.

f. The shells of all live specimens collected or captured temporarily must be thoroughly inspected for the presence of zebra mussels (*Dreissena polymorpha*). Unionids with zebra mussels attached must be cleaned by scrubbing prior to returning to the substrate. Document the incidence of zebra mussels and Asiatic clams (*Corbicula fluminea*) at project sites.

i. Equipment used in multiple waterbodies to capture and handle freshwater mussels shall be cleaned and decontaminated, including personal gear such as boots and gloves, sediment screens, buckets, boats, or other sampling equipment. Current data on nonindigenous aquatic species (NAS) distribution should be checked prior to surveying to be aware of known occurrences of NAS (<https://nas.er.usgs.gov/viewer/omap.aspx?SpeciesID=5> (<https://nas.er.usgs.gov/viewer/omap.aspx?SpeciesID=5>)).

g. Any dead endangered or threatened mussel shells and any specimens accidentally killed or that are moribund or freshly-dead and contain soft tissue are to be preserved according to standard museum practices, properly identified and indexed (collection site, UTM coordinates, site conditions when collected, date collected, and permit authorizing collection). All dead specimens shall be sent to a public scientific or educational facility or museum in the state the individuals were collected along with a copy of the permit(s) under which they were collected. All specimens retained under this permit remain the property of the United States Government and must clearly be identified as such.



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h. Permittee shall notify the U.S. Fish and Wildlife Service Field Supervisor(s) in writing of any newly discovered species locations (previously undocumented sites only) within 48 hours of discovery unless otherwise specified by the Field Supervisor(s). Notification shall be provided in writing with a copy to the office identified in Condition G. No voucher specimens may be collected. Any newly identified mussel sites shall be vouchered with photographs and/or video recordings.

i. Accidental injuries and/or mortalities of listed species may not exceed two (2) specimens of a permitted species. In the event this number is met, all permitted activities must cease. The Permittee must report any mortality or serious injury to the Region 3 Regional Permit Coordinator (*Condition G*) and the USFWS Field Office within the geographic location of study areas (<https://www.fws.gov/service/3-200-59-scientific-purposes-enhancement-propagation-or-survival-permits-recovery-permits>) within 48 hours. Your initial contact may be made by telephone, however, a written explanation must be provided within five (5) days of the incident. Following mortality or injury of two specimens of a permitted species, you may not resume activities authorized by this permit without written permission of the U.S. Fish and Wildlife Service, Regional office in Bloomington, Minnesota (*Condition G*).

3. The "3-2523_USFWS Freshwater Mussel Reporting Form" is required for reporting data and can be found on the FWS Midwest Permits website (<https://www.fws.gov/service/3-200-59-scientific-purposes-enhancement-propagation-or-survival-permits-recovery-permits>). Prior to reporting, check the permits website to ensure you are using the most up to date form. Using the reporting form will help standardize data collection and increase efficiency in reporting.

a. A complete discussion of field procedures, data collection methods, results, and conclusions;

b. The date, time, and locations (state, county, locality, UTM coordinates or GIS data with projection information) where each listed and/or proposed species was encountered and the location it was returned. We would also appreciate receiving this information for all candidate species encountered.

c. The locations of the surveyed sites where no listed species were located.

d. A description of locations surveyed (including negative surveys where no listed species were found) including: date, time, geographic locations (state, county, and geographic coordinates (using latitude and longitude in decimal degrees), water depth, substrate composition, sedimentation, and any other relevant data.

e. The size, estimated age, sex and condition (if determinable) of any listed individuals encountered, and any other data you may have collected for individual naiads, such as evidence of damage or injury, and observations of zebra mussel (*Dreissena polymorpha*) and/or Asiatic clam (*Corbicula fluminea*) infestation.

f. A complete description of injuries and/or mortalities to listed species while in your possession, the dates of occurrence, any circumstances surrounding the incidents, and a description of any steps taken to reduce the likelihood that such injuries and/or mortalities will occur in the future;

g. If applicable, any identification numbers or marks added to live specimens



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- h. If applicable, a list of any salvaged specimens, locations where salvaged, their disposition, and where they are being maintained
- i. Copies of any separate reports and/or publications resulting from work conducted under the authority of this permit.
- j. Photographs of the identifying characteristics for each individual federally-listed species captured are encouraged, but not required.
- k. Copies of all site specific authorization letters required under Condition Z.1.

If no activities occurred over the course of the year, indication of such shall be submitted as an annual report.

4. Copies of your reports shall be sent to **all offices** indicated in Condition G. Your transmittal letter (or email) must cite your Federal permit number, Permittee name, and the Annual Report year in the subject line. Electronic copies shall be submitted in MS Word, Portable Document Format, Rich Text Format, or other file format that is compatible with the receiving office (**thumb drives/flash drives and links to documents cannot be accepted**).

Additionally, based on geographic area, **reports and publications shall be submitted to** the applicable offices at:

<https://www.fws.gov/service/3-200-59-scientific-purposes-enhancement-propagation-or-survival-permits-recovery-permits>

LISTED PLANTS

Applicants are not required to receive a permit for conducting a presence/absence survey for a threatened and/or endangered plant species on private lands, provided no collection is involved. However, information regarding the large-fruited sand-verbena and/or the Navasota ladies'-tresses or any other federally-listed species is helpful to our field office, and a copy of survey findings would be appreciated as it could assist in the species recovery. This information can be provided directly to the Texas Coastal Ecological Services Clear Lake Sub-Office species leads. Surveying activities causing damage and destruction of this species may require a USFWS permit if Federal jurisdiction is involved. Additionally, the applicant is subject to all other local, State, and Federal laws while surveying.

LARGE-FRUITED SAND-VERBENA

AA. Jeremy Henson (Permittee) is authorized for scientific research and recovery purposes to conduct presence/absence surveys for large-fruited sand-verbena (*Abronia macrocarpa*) within Texas, where applicable. The large-fruited sand-verbena is found within Freestone, Leon, and Roberston counties, Texas. Suitable habitat for the large-fruited sand-verbena is detailed in the species' recovery plan (USFWS 1992) as well as from Williamson's Final Reports (1996 and 2008).

BB. In cases where work is being performed on federal land, and thus a USFWS permit is required, we request that surveying be conducted in accordance with the following best management practices for each species listed:

1. Assess the habitat and delineate soils prior to conduct any survey work.



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- a. Extant populations are known from the Post Oak Savannah woodlands region in eastern and central Texas. Habitat should include the appropriate plant associates (Williamson 2008).
 - b. The large-fruited sand-verbena is generally restricted to the deep sandy soils of the Arenosa and Padina series. Refer to Williamson (1996) and other resources (recovery plan, soil mapping sources such as the Natural Resources Conservation Service's online soil mapper) to determine site-specific soils.
2. Conduct surveys primarily after spring rains in March to early April when the plant is blooming to accurately determine the population size. The largest number of plants will be present during this growing period however fall rains may stimulate a second blooming period.
 3. Conduct a minimum of 3 years of surveys to adequately assess the presence/absence of this plant species at a specific site. If 3 years of surveys cannot be accomplished, then suitable habitat is considered to be occupied by the species.
 4. Provide a copy of survey findings to the Texas Coastal Ecological Services Clear Lake Sub-Office within 30 days of the completed work. At a minimum, the report should include:
 - a. A map that clearly identifies the location (property name, ownership, county, state), with given written landowner consent.
 - b. Aerial photos with the dates taken and property identified (Google Earth), with given written landowner consent.
 - c. Photos of the individual or population with GPS points. For any new site observed, please contact Amber Bearb, species lead, in the the Texas Coastal Ecological Services Clear Lake Sub-Office for procedures.
 - d. Detailed description of the habitat on site (soils, associated species, invasive species, proximity to important land features (drainages, river, creeks), etc.).
 - e. Detailed description of each population:
 - i. Estimated size of a population.

****Please note: Williamson found that only about 25% of plants in a population are in flower in a given year; therefore, surveying efforts should be especially careful to identify seedlings and juvenile plants when estimating population size.****
 - ii. Estimated numbers of plants per population.
 - iii. Estimated age structure of plants (i.e. seedling, vegetative, reproductive (flower, fruit)).
 - iv. Flowering/not flowering.
 - v. Plant vigor and/or threats.



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vi. Observed pollinator/insect activity.

5. Records of approval to access lands, regardless of ownership status (i.e. federal, state, private), should be maintained for your records and provided to our office prior to accessing lands to conduct surveys.

Literature cited:

U.S. Fish and Wildlife Service. 1992. Large-fruited sand-verbena (*Abronia macrocarpa*) Recovery Plan. U.S. Fish and Wildlife Service, Albuquerque, New Mexico. 37 pp.

Williamson, P. 2008. Final Report: *Protection on Private Lands and Research for Recovery of Large-fruited Sand-verbena*. 2008. Section 6 grant No. E-58. 54 pp.

Williamson, P. and G. Janssen. 1996. Final Report 44: *Large-fruited sand-verbena monitoring and management study*. 1996. Section 6 grant No. E-3-1. 107 pp.

NAVASOTA LADIES'-TRESSES

CC. Jeremy Henson (Permittee) is authorized for scientific research and recovery purposes to conduct presence/absence surveys for Navasota ladies'-tresses (*Spiranthes parksii*) within Texas, where applicable. Navasota ladies'-tresses (NLT) is currently known to occur in 13 Texas Counties, Freestone, Limestone, Leon, Robertson, Milam, Burleson, Brazos, Madison, Grimes, Washington, Fayette, Bastrop, and Jasper. The species is endemic to the Oak Woodlands and Prairies region of east-central Texas. They occur primarily in seasonally moist soils along open wooded margins of creeks, drainages, and intermittent tributaries of the Brazos and Navasota Rivers. Navasota ladies'-tresses is thought to require small-scale, patchy natural disturbances that provide canopy openings necessary to maintain habitat. Suitable habitat for the NLT is detailed in the species profile on the ECOS website: <https://ipac.ecosphere.fws.gov/> (<https://ipac.ecosphere.fws.gov/>).

Navasota ladies'-tresses bud from early to late October, flower from mid-October to mid-November, and form fruit from mid-October to the first frost (usually late November). The fruit breaks apart during mid-November and December. After frost, the plants die back and do not reappear until early spring, when basal rosettes can be seen.

CC. In cases where work is being performed on federal land, and thus a USFWS permit is required, we request that presence/absence surveys be conducted for the NLT that meet the following conditions:

1. Assess the habitat and delineate soils prior to conducting any survey work.
2. Conduct surveys primarily after flowering occurs late October to mid-November as this is the only time plants will be visible enough to determine the species accurately.



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3. Conduct a minimum of 3 years of surveys to adequately assess the presence/absence of this plant species at a specific site. If 3 years of surveys cannot be accomplished, then suitable habitat is considered to be occupied by the species.
4. Provide a copy of survey findings to our office within 30 days of the completed work. At a minimum, the report should include:
 - a. A map that clearly identifies the location (property name, ownership, county, state), with given written landowner consent.
 - b. Aerial photos with the dates taken and property identified (Google Earth), with given written landowner consent.
 - c. Photos of the individuals or population with GPS points. For any new site observed, please contact Moni Belton, species lead, in the Texas Coastal Ecological Services Clear Lake Sub-Office for procedures.
 - d. Detailed description of the habitat on site (soils, associated species, invasive species, proximity to important land features (drainages, river, creeks), etc.).
 - e. Detailed description of each population:
 - i. Estimated size of a population.
 - ii. Estimated numbers of plants per population.
 - iii. Estimated age structure of plants (i.e. seedling, vegetative, reproductive (flower, fruit)).
 - iv. Flowering/not flowering.
 - v. Plant vigor and/or threats.
 - vi. Observed pollinator/insect activity.
5. Records of approval to access lands, regardless of ownership status (i.e. federal, state, private), should be maintained for your records and provided to Texas Coastal Ecological Services Clear Lake Sub-Office prior to accessing lands to conduct surveys.

*****End Permit ES81811B-1*****

Wetland Training Institute

This certifies that

Jeremy Henson

*has completed the Wetland Training Institute, Inc.
Course entitled*

Regional Supplement Seminar

Given at Plano, Texas

On March 29, 2010

Robert J. Peirce
Course Coordinator

Richard Chinn Environmental Training, Inc.

certifies that

Jeremy Henson

has successfully completed a

38 Hour Army Corps of Engineers Wetland Delineation & Management Training Program

issued Certificate No. 3175 and 3.8 CEUs on this sixth day of May, 2004, in Houston, Texas



Richard Chinn, PWS, CET,

Richard Chinn Environmental Training, Inc.

804 Cottage Hill Way, Brandon, FL 33511-8098

1.800.427.0307 • FAX: 1.888.457.6331 • info@richardchinn.com • <http://www.richardchinn.com>



This training has been based in part on the U. S. Army Corps of Engineers Wetlands Delineation Manual Technical Report Y-87-1 (1987 manual), as provided for in the training materials developed in conjunction with Section 307(e) of the Water Resources Development Act of 1990 for the Wetland Delineator Certification Program.



***Society of Wetland Scientists
Professional Certification Program, Inc***

renews the designation

Professional Wetland Scientist

For

Angela Dalsis

In recognition of all the professional requirements approved by the Society of Wetland Scientists Certification Renewal Program, and verified by the Society's Certification Renewal Review Panel.
Professional Wetland Scientist Number 2299 issued on 01/03/2013 and recertified on 1/16/2023.
Due to recertify again by 01/03/2028.



Rob McInnes, PWS
President

Pat Frost, PWS
Certification Renewal Chair



U.S. Department
Of Transportation
Federal Highway
Administration



NATIONAL HIGHWAY INSTITUTE
Training Solutions for Transportation Excellence

National Highway Institute

Certificate of Training

Bonnie Bynum

has participated in

FHWA-NHI-142005

NEPA and Transportation Decision-making

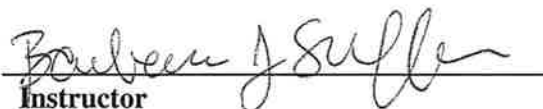
hosted by

South Carolina Department of Transportation

Date: April 22-24, 2014

Location: Columbia, SC

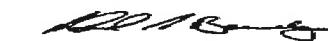
Hours of Instruction: 19.5


Instructor


Instructor



SCDOT – Training Resource Manager



Richard Barnaby, Director
National Highway Institute



***Society of Wetland Scientists
Professional Certification Program, Inc***

grants the designation

Professional Wetland Scientist

For

Jayun Thibodeaux

In recognition of all the professional requirements approved by the Society of Wetland Scientists Certification Program, Inc. and verified by the Society's Certification Review Panel on 9/19/2022.
Professional Wetland Scientist number 3565. Due to recertify by 9/19/2027.



Rob McInnes, PWS
President

Robert D. Shannon, Ph.D., PWS
Review Panel Chair

MATT H. FRACKELTON



Diver No. 14070S0989

BirthDate 28-Feb-1982

Cert.Date 01-Jul-2014

Instr.No. OWSI-330685

JOHN E. PRATT

168

AQUATIC WORLD

114 KRIESCHER ROAD

N SYRACUSE, NY 13212

315 458-1955

This qualification meets ISO 24801-2: Diver Level 2 -- Autonomous Diver Standard
This diver has satisfactorily met the standards
for this certification level as set forth by:
PADI, 30151 Tomas, RSM, CA 92688-2125
www.padi.com

Certificate of Completion
awarded to

Matt Frackelton

has completed 8 hours of
SWIFT WATER RESCUE
training at Blasland, Bouck, & Lee, Inc.
April 3rd, 2006

Bob Day

BOB DAY, INSTRUCTOR



 Nautical Know How

This certifies that
MATT FRACKELTON
has successfully completed
**The Basic Boating Safety
Certification Course**

Student ID Number
40195415711810


Capt. Matt Miser

March 1, 2010

Date

Completion of this course not only makes the student a safer boater
but also makes the waterways safer for all boaters.



Nautical Know How, Inc., 51 N 3rd St, Suite 240, Philadelphia, PA 19106

Phone: (267) 519-9856 Fax: (772) 382-7601 Email: captmatt@boatsafe.com

www.boatsafe.com

MATT

Congratulations on the completion of your Nautical Know How Basic Boating Certification Course. Please tell your friends about us. Just ask them to go to <http://boatsafe.com>. We hope you, too, come back often for more boating tips, quizzes, simulations and information.

Please keep this letter in a safe place in case you should loose your certification or ID card.

If you want to move forward in your boating education, you might consider the Nautical Know How Coastal Navigation Course or just to keep your knowledge close at hand you may find the Skipper's Onboard Source a handy item to have. Visit our ship's store for more detail.

The address is:

<http://boatsafe.com/shipstore/index.htm>

Sincerely Yours,



Captain Matt Miser

**MATT FRACKELTON
58 WEST GENESEE ST.
BALDWINVILLE, NY 13027**



NICHOLAS J. FIRMAN



Diver No. 16030F0015
BirthDate 05-Oct-1992
Cert.Date 28-Feb-2016
Instr.No. MI-233414
KEN VAN PELT

This qualification meets ISO 24801-2: Diver Level 2 – Autonomous Diver Standard
This diver has satisfactorily met the standards
for this certification level as set forth by PADI
www.padi.com

Meets ILCOR/AHA 2015 Guidelines



Oxygen First Aid for Scuba Diving Injuries

PROVIDER

Name: Nick Firman

Approved: September 29, 2020

Instructor: Harold Bach ID# 9226

(Card expires 2 years after Approved date.)

This person has met or exceeded the performance requirements for course completion as set by Divers Alert Network, 6 W Colony Place, Durham, NC 27705.





**New York State
Boating Safety Certificate**

boat-ed.com™

This Boating Safety Certificate has been issued to:

NICHOLAS J FIRMAN

DOB:
10/05/1982

Eye Color:
Blue

Gender:
M

Boater ID Number:
9281733

pursuant to the laws of New York State by New York State Parks.
Where boating safety instruction is required, this card must be
carried and exhibited upon the request of a police officer. Failure to
do so may result in a citation.

The National Association of Boating Law Administrators
has approved the course of instruction successfully
completed by the holder.



provided by boat-ed.com™



**LOUISIANA PROFESSIONAL
ENGINEERING & LAND SURVEYING BOARD
(LPELS)**

9643 Brookline Avenue, Suite 121
Baton Rouge, LA 70809
Phone (225) 925-6291
www.lapels.com

Mr. Jose Luis Rodriguez

License/Certificate Type - Number

PE.0030492

Expiration Date

03/31/2025

Status: **Active**


Please be advised that your license must be in "Active" status in order for you to (a) provide or offer to provide engineering or land surveying services in Louisiana or (b) use the words "engineer", "engineering", "land surveyor", "land surveying" or any modification or derivative thereof in your name or in connection with your business or activities in Louisiana. Licensees whose licenses are in "Retired", "Inactive", or "Expired" status are prohibited from engaging in the activities described above in items (a) and (b).

LA R. S. 37:689 requires firms practicing or offering to practice engineering or land surveying in the state of Louisiana to be licensed by the Board prior to offering such services.



LOUISIANA PROFESSIONAL ENGINEERING AND LAND SURVEYING BOARD

As of 10/11/2023, the Louisiana Professional Engineering and Land Surveying Board (LPELS) has the following information on file:

	LOUISIANA PROFESSIONAL ENGINEERING & LAND SURVEYING BOARD (LPELS)	
	9643 Brookline Avenue, Suite 121 Baton Rouge, LA 70809 Phone (225) 925-6291 www.lapels.com	
Mr. Gabriel Sebastian Arias		
License/Certificate Type - Number	Expiration Date	
PE.0042599	09/30/2025	
Status: Active		

Please be advised that your license must be in "Active" status in order for you to (a) provide or offer to provide engineering or land surveying services in Louisiana or (b) use the words "engineer", "engineering", "land surveyor", "land surveying" or any modification or derivative thereof in your name or in connection with your business or activities in Louisiana. Licensees whose licenses are in "Retired", "Inactive", or "Expired" status are prohibited from engaging in the activities described above in items (a) and (b).

LA R. S. 37:689 requires firms practicing or offering to practice engineering or land surveying in the state of Louisiana to be licensed by the Board prior to offering such services.



PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Gabriel Arias

has attended


Traffic Control Technician-LA State Specific

Training Course

11/9/2022 to 11/9/2026
Training Valid Through

New Orleans, LA
Location


Director of Training


President, CEO

ATSSA provides training and certification but neither constitutes employment by ATSSA.



American Traffic Safety Services Association ATSSA.com



PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Gabriel Arias

has attended

Traffic Control Supervisor-LA State Specific

Training Course

11/10/2022 to 11/10/2026
Training Valid Through

New Orleans, LA
Location

Ramona Smith
Director of Training

Alison Tetlow
President, CEO

ATSSA provides training and certification but neither constitutes employment by ATSSA.



American Traffic Safety Services Association ATSSA.com



PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Catherine Bruns

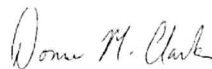
has attended

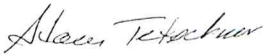
Louisiana Traffic Control Technician

Training Course

7/11/2023 to 7/11/2027
Training Valid Through

Baton Rouge, LA
Location


Vice President of Education and Technical Services


President, CEO

ATSSA provides training and certification but neither constitutes employment by ATSSA.



American Traffic Safety Services Association ATSSA.com

University of Nevada, Reno
Heritage Resources Management Program

This will verify that

Jan Grenfell

has successfully completed

Introduction to Section 106 Review

New Orleans, Louisiana

July 17-18, 2001

Heath Ferguson
Associate Vice President & Dean,
College of Extended Studies

Lee Vestuige
Instructor
Charlene Davis Vaughn

Don Fowler
Program Director



U.S. Department
Of Transportation
Federal Highway
Administration



NATIONAL HIGHWAY INSTITUTE
Training Solutions for Transportation Excellence

National Highway Institute
Certificate of Training

Jan Grenfell

has participated in

Fundamentals of Title VI/Environmental Justice

hosted by

LA DOTD/LTRC

Location: Baton Rouge, LA

Hours of instruction: 12

Date: June 14 – 15, 2006

Jo Petersen
Instructor
Morgan Ayala

Director, National Highway Institute
Federal Highway Administration

Sandra Romo
Coordinator
M.H.

Director, Office of Professional and Corporate Development
Federal Highway Administration

The
WETLAND BIOGEOCHEMISTRY INSTITUTE

of

LOUISIANA STATE UNIVERSITY
and Agricultural and Mechanical College

Certifies that

Jan Grenfell

has successfully completed

Wetland Delineation Training Workshop

This training has been based in part on the U.S. Army Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1 (1987 Manual), as provided for in the training materials developed in conjunction with Section 307(e) of the Water Resources Development Act of 1990 for the Wetland Delineator Certification Program.

May 26, 2000

Granted on

Instructor

B. David Zuchet
Instructor

Debra Fink
Instructor



National Highway Institute

Certificate of Training

Jan Grenfell

has participated in

NHI Course No. 142049 – Beyond Compliance: Historic Preservation in Transportation Project Development

hosted by

LA DOTD/LTRC

Date: January 29-31, 2013

Location: Baton Rouge, LA

Tim N. Klein
Instructor

M. W. Jahn
Instructor

Hours of Instruction: 18

Allison H. Landry
Local Coordinator

Richard Barnaby
Richard Barnaby, Director
National Highway Institute

The
Louisiana Department of Transportation and Development
and
U.S. Fish & Wildlife Service

Certify that

JAN GRENFELL

has successfully completed

**Endangered Species Act -
Section 7 Consultation Process**

ETR No: 4-2536A

Held on July 22, 2004

and has been awarded 5.0 Professional Development Hours

Kenneth G. Perrel
Kenneth Perrel
Assistant Secretary Planning and Programming

Vincent Russo, Jr.
Vincent Russo, Jr.
Environmental Engineer Administrator



National Highway Institute Certificate of Training

Jan Grenfell

has participated in

Federal-Aid Highways - 101 (State Version)

hosted by

LADOTD / LTRC

Location: Baton Rouge, LA

Date: June 27 - 28, 2005

Danielle P. Smith
Instructor

Moges Ayalew
Director, National Highway Institute
Federal Highway Administration

Hours of instruction: 12

William M. Shultz
Coordinator

William M. Shultz
Director, Office of Professional and Corporate Development
Federal Highway Administration



NATIVE ENDANGERED & THREATENED SP. RECOVERY -
E & T WILDLIFE

Permit Number: ES836329

Version Number: 3

Effective: 2022-10-27 **Expires:** 2024-05-31

Issuing Office:

Department of the Interior

U.S. FISH AND WILDLIFE SERVICE

ES Albuquerque Permit Office

500 Gold Avenue S.W., P.O.Box 1306

Albuquerque, New Mexico 87103-1306

Permittee:

BLANTON & ASSOCIATES, INC

5 LAKEWAY CENTRE COURT SUITE 200

AUSTIN, TX 78734

US

Name and Title of Principal Officer:

Richard Phillips President

Marty Tuegel

Digitally signed by

Marty Tuegel

2022-10-27 07:32:07

Program Leader - Division of
Environmental Review

(Blanton & Associates acquired by ICF)

Authority: Statutes and Regulations: 16 U.S.C. 1539 (a), 16 U.S.C. 1533 (d), 16 U.S.C 703-712 50 CFR 17.22, 50 CFR 17.32, 50 CFR 21.23, 50 CFR 21.27, 50 CFR 13

Location where authorized activity may be conducted:

At locations specified within permit terms and conditions.

Reporting requirements:

See permit terms and conditions.

Authorizations and Conditions:

A. General conditions set out in Subpart B of 50 CFR 13, and specific conditions contained in Federal regulations cited above, are hereby made a part of this permit. All activities authorized herein must be carried out in accord with and for the purposes described in the application submitted. Continued validity, or renewal of this permit is subject to complete and timely compliance with all applicable conditions, including the filing of all required information and reports.

B. The validity of this permit is also conditioned upon strict observance of all applicable foreign, state, local tribal, or other Federal law.

C. Valid for use by Permittee named above.



NATIVE ENDANGERED & THREATENED SP. RECOVERY -
E & T WILDLIFE

Permit Number: ES836329

Version Number: 3

Effective: 2022-10-27 **Expires:** 2024-05-31

D. Your permit has been amended as follows. The terms and conditions set forth in the most recent permit (TE836329-1 dated February 24, 2020), and any previous amendments or renewals are hereby superseded by this document.

E. Acceptance of this permit serves as evidence that Permittee agrees to abide by the "General Conditions for Native Endangered and Threatened Wildlife Species Permits" (copy attached).

F. Acceptance of this permit serves as evidence that Permittee agrees to abide by all conditions stated. **Some terms and conditions within this permit may have changed, either to reflect the most current language available or in response to requests by applicants or requirements by species' lead biologist(s).** Terms and conditions of this permit are inclusive. Any activity not specifically permitted is prohibited. Please read through these conditions carefully as violations of permit terms and conditions could result in your permit being revoked or denial of a new permit when the current one expires. Violations of your permit terms and conditions which contribute to a violation of the Endangered Species Act (ESA or Act) could also subject the Permittees to criminal or civil penalties.

G. Disposal, transplant, or release of live wildlife/plants or plant parts taken or held under the terms of this permit, unless specifically authorized, requires prior written approval by the species' lead U.S. Fish and Wildlife Service (USFWS) office. You must dispose of dead wildlife/plants or plant parts as specified by the terms of this permit. If terms are not specified, specimens can be destroyed or transferred to a public institution. A copy of this permit and a cover letter referencing your permit number, must accompany each shipment and must be retained with the specimens. The cover letter must specify who will receive the specimens and the numbers involved. A copy of the letter must be furnished to the following addresses:

U.S. Fish and Wildlife Service
Regional Office
Division of Environmental Review - Recovery Permits
P.O. Box 1306
Albuquerque, New Mexico 87103
fw2_te_permits@fws.gov

Arizona Ecological Services Tucson Sub-Office
201 N. Bonita Ave., Suite 141
Tucson, Arizona 85745
520/670-6145

Arizona Ecological Services Flagstaff Sub-Office
Southwest Forest Science Complex
2500 South Pine Knoll Drive
Flagstaff, AZ 86001-6381
928/556-2157

Arlington Ecological Services Field Office
2005 NE Green Oaks Blvd., Suite 140
Arlington, Texas 76006
817/277-1100



NATIVE ENDANGERED & THREATENED SP. RECOVERY -
E & T WILDLIFE

Permit Number: ES836329

Version Number: 3

Effective: 2022-10-27 **Expires:** 2024-05-31

Arlington Ecological Services Field Office East Texas Sub-Office
506 Hayter Street
Nacogdoches, Texas 75965
936/569-7981 ext. 4017

Austin Ecological Services Field Office
10711 Burnet Road, Suite 200
Compass Bank Building
Austin, Texas 78758
512/490-0057

Colorado Ecological Services Field Office
134 Union Blvd, Suite 670
Lakewood, Colorado 80228
303/236-4747

New Mexico Ecological Services Field Office
2105 Osuna Road NE
Albuquerque, New Mexico 87113
505/346-2525
nmesfo@fws.gov

Oklahoma Ecological Services Field Office
9014 East 21st Street
Tulsa, Oklahoma 74129
918/382-4500

Texas Coastal Ecological Services Field Office
17629 El Camino Real, Suite 211
Houston, Texas 77058
281/286-8282

Texas Coastal Ecological Services Corpus Christi Sub-Office
P.O. Box 81468
Corpus Christi, Texas 78468-1468
361/994-9005

U.S. Fish and Wildlife Service
Hilary Swarts, Wildlife Biologist
Laguna Atascosa National Wildlife Refuge
22817 Ocelot Road
Los Fresnos, Texas 78566



NATIVE ENDANGERED & THREATENED SP. RECOVERY -
E & T WILDLIFE

Permit Number: ES836329

Version Number: 3

Effective: 2022-10-27 **Expires:** 2024-05-31

956/748-3607 ext. 103

U.S. Fish and Wildlife Service
Terry Rossignol, Refuge Manager
Attwater Prairie Chicken Nation Wildlife Refuge
P.O. Box 519
Eagle Lake, Texas 77434
979/234-3021

A copy should also be retained in your files. Transfers deviating from the above conditions require prior written approval by the USFWS.

H. *Unless otherwise instructed within the species-specific language below*, an **annual report** based on each species and activity conducted under the authority of this permit (including where activities took place, number and location of species collected/captured, and field data forms, if appropriate) must be **uploaded to** <https://fwsepermits.servicenowservices.com/fws/> (<https://fwsepermits.servicenowservices.com/fws/%20>) as an attachment to your most current permit record in ePermits, *and* submitted to the respective **Ecological Services Field Office (ESFO)** listed above, including negative data (i.e., negative survey findings or lack of breeding success) **by March 1st following each year the permit is in effect**. The annual report should also include recovery permit number, species' common and scientific name, date of survey, observer, observer contact information (in case of questions), location (provide GPS or UTM coordinates, or Township and Range and at least quarter Section), number of individuals observed, their sex, age class, and breeding condition, if known or determined in recovery permit report for all surveys conducted. If habitat quality/condition was noted at the time of surveys, please include that information.

Data collected in lat/long, NAD 83 is preferred. If collected in an alternate coordinate system, please report the coordinate system and datum the information was collected in. Optional information that can be included to help further define the precision of the locational information includes: 1) Positional Dilution of Precision (PDOP) level at time of acquisition, and 2) whether the Wide Area Augmentation System (WAAS) was enabled.

If no activities were conducted under this permit, for one or more species during the calendar year, a report stating such will satisfy the annual reporting requirements. Failure to submit a report, or failure to submit an adequate report, is a violation of the permit and is cause for suspension or revocation of the permit. A violation may disqualify a person from receiving or exercising the privileges of a permit as long as the deficiency exists.

For all surveys conducted within New Mexico, you must submit your annual report in the University of New Mexico's Natural Heritage Program **USFWS Permit Data Template** available at http://nhnm.unm.edu/data/fws_permit_template (http://nhnm.unm.edu/data/fws_permit_template). Completed annual reports must be submitted to **nhnm@unm.edu** as well as the appropriate ESFO listed above in Condition G. If your annual report is too large to send via e-mail, you may submit required copies on a CD. To send a CD to the Natural Heritage Program by mail or courier, please use the following addresses:

Mail To:

Natural Heritage New Mexico
UNM Biology Department

Courier Delivery:

Natural Heritage New Mexico
University of New Mexico Main Campus



NATIVE ENDANGERED & THREATENED SP. RECOVERY -
E & T WILDLIFE

Permit Number: ES836329

Version Number: 3

Effective: 2022-10-27 **Expires:** 2024-05-31

MSC03 2020
1 University of New Mexico
Albuquerque, NM 87131-0001
505/277-3822
Email: nhnm@unm.edu

Castetter Hall – Room 167
Albuquerque, NM 87131

I. Copies of any unpublished or published reports generated by the studies or projects covered by this permit and other data that would be useful for the conservation or recovery of the species should also be submitted to the ESFO(s). Reports should include one copy of USGS 7.5 minute quad sheets or larger scale maps, depicting sites where listed species covered by this permit were found or not found. These reports may be disclosed pursuant to the Freedom of Information Act.

J. Should any mortality or physical injury occur to an individual of the species during permitted activities (above the amount that may be specified below for a specific species) all operations must immediately cease and you are required to contact the ESFO(s) above within 24 hours.

K. Please note that this permit is limited to the activities and species described below, and is functional only when used in combination with a valid state permit.

L. Activities involving migratory birds and their parts (see 50 CFR 10, Migratory Bird Treaty Act (16 USC 703 et seq.) and implementing Regulations at 50 CFR 21) or bald and golden eagles (see Bald and Golden Eagle Protection Act (16 USC 668a) and 50 CFR 22), may require additional permits or authorizations. Please contact the respective Regional Migratory Bird Permit Office, [FWS Contact Us \(servicenowservices.com\)](https://fwsepermits.servicenowservices.com/fws?id=fws_contact_us) (https://fwsepermits.servicenowservices.com/fws?id=fws_contact_us), for additional information.

M. This permit does not, either directly or by implication, allow or grant right of trespass. Permission to enter lands must be obtained in writing from the landowner or land managing agency.

N. If conducting research on a National Wildlife Refuge, you must obtain a refuge special use permit. The refuge permit will need to be used in conjunction with this permit and a valid state permit in order to meet all applicable laws.

O. You must furnish the USFWS, Division of Environmental Review - Recovery Permits (address above) with a copy of the permit issued to you by the Indian Tribal Government(s) prior to conducting research and recovery activities on Tribal lands.

P. You must have a copy of this permit and any other pertinent information in your possession while conducting the authorized activities.

Q. A request for renewal, if appropriate, must be submitted via ePermits prior to the expiration date of the current permit. Any person holding a valid, renewable permit who submits an electronic request ([application 3-200-59](https://fwsepermits.servicenowservices.com/fws/?id=fws_kb_view&sys_id=881899b11b5f50101f45dbdbe54bcb33)) (https://fwsepermits.servicenowservices.com/fws/?id=fws_kb_view&sys_id=881899b11b5f50101f45dbdbe54bcb33) for renewal at least 30 days prior to the expiration date, may continue to conduct those activities under the expired permit while the USFWS takes action on such person's request for renewal.



NATIVE ENDANGERED & THREATENED SP. RECOVERY -
E & T WILDLIFE

Permit Number: ES836329

Version Number: 3

Effective: 2022-10-27 **Expires:** 2024-05-31

If a request for permit renewal is received less than 30 days prior to permit expiration, all activities authorized by the permit must cease upon permit expiration.

All requests to renew, amend, or obtain a new permit will require submittal of an application via ePermits. Applicants can create an account and apply by going to the following website: <https://fwsepermits.servicenowservices.com/fwse/> (<https://fwsepermits.servicenowservices.com/fwse/>). Please submit this application and a cover letter describing your request.

JAGUAR

R. Based on guidance provided on April 6, 2016, by the USFWS Region 2 Branch of Recovery and Restoration and Office of Law Enforcement, a Federal Endangered Species Permit is not required to conduct presence/absence surveys for the jaguar (*Panthera onca*) using wildlife cameras as described in the Permittees study plan (paired wildlife cameras, no use of attractants or baits, no use of scat dogs) because no take is involved regarding this activity. However, information regarding jaguars (or ocelots) would be helpful toward recovery efforts. If a jaguar or ocelot is detected, the USFWS would appreciate receiving the following information: General location description (e.g. mountain range), Date, Time, Geodetic Datum (e.g., NAD83, WGS84), UTM Zone, UTM E (rounded to the nearest kilometer; e.g., 488000), UTM N 9rounded to the nearest kilometer; e.g., 3475000), Elevation, Habitat Type, Species, Sex, and Estimated Age. We request that any sightings of jaguars or ocelots be reported to the Arizona Ecological Services Tucson Sub-Office (attention to jaguar lead biologist at incomingazcorr@fws.gov or 620-670-6145), as well as to the ESFO in the state where the sighting occurred (if different) as soon as possible, preferably within 24 hours.

OCELOT/JAGUARUNDI

S. Gary Galbraith, Don Blanton, Rick Phillips, Mark Kainer, Brent W. Hall, Kim Jenkins-Johnson, Michael Green, Clifton Ladd, Clay Fischer, and Lon Grassman (Permittees) are authorized for scientific and recovery purposes to conduct visual surveys and/or hair snare surveys of ocelots (*Leopardus pardalis*) and jaguarundis (*Herpailurus yagouaroundi cacomitli*) within Texas. Permittees are also authorized to live capture (using live box traps), anesthetize, collect samples (blood, fecal, tissue, and parasite), take body measurements, attach radio or global positioning system (GPS) collars, and tag with passive integrated transponders (PIT tags) ocelots/jaguarundis (cat(s)). The following conditions also apply:

1. All activities with cats require prior contact, coordination, and approval by Hilary Swarts. Her contact information is as follows:

Hilary Swarts
Wildlife Biologist
Laguna Atascosa National Wildlife Refuge
22817 Ocelot Trail Road
Los Fresnos, Texas 78566
956/748-3607 phone
956/748-3609 fax
hilary_swarts@fws.gov

2. All permitted activities are authorized with the understanding that:



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- a. Any ocelot or jaguarundi caught and immobilized, unless injured, too young, or otherwise unsuitable, will be tagged with a PIT tag.
 - b. Any ocelot or jaguarundi fitted with a radio, global positioning system (GPS), or satellite collar will be regularly monitored for the life of the collar.
 - c. Any information gathered by invasive methods relevant to the survival and recovery of these species in the U.S. will be made available to the USFWS for use in recovery efforts. Exceptions to reporting can be found in section S.57 below.
3. Documentation of a jaguarundi in the United States, through capture, photograph, specimen, or any other evidence, must be reported to the Texas Coastal ESFO Corpus Christi Sub-Office listed above and the LANWR Ocelot Biologist within 24 hours. Exceptions to reporting can be found in section S.57 below.
 4. All collected remains and Class I sightings (Tewes and Everett 1986) of ocelots and jaguarundis shall be reported to Hilary Swarts of LANWR and the Texas Coastal ESFO Corpus Christi Sub-Office within 48 hours of receiving the information. Exceptions to reporting can be found in section S.57 below.
 5. Should any ocelot or jaguarundi mortality occur during permitted activities or within 5 days of capture and handling, all operations must immediately cease and you are required to contact Hilary Swarts of LANWR and the Texas Coastal ESFO Corpus Christi Sub-Office within 24 hours.
 6. Any serious injury or mortality to an ocelot or jaguarundi must be reported Hilary Swarts of LANWR and the Texas Coastal ESFO Corpus Christi Sub-Office within 24 hours. If an injury or condition requires transport of an ocelot or jaguarundi to a zoo or veterinary facility for treatment, Hilary Swarts of LANWR and the Texas Coastal ESFO Corpus Christi Sub-Office must be contacted immediately for coordination and notification.
 7. Within one week of the discovery of any listed felid mortality, whether associated with or not associated with permitted activities, Permittees shall provide Hilary Swarts of LANWR and the Texas Coastal ESFO Corpus Christi Sub-Office with a written report detailing the gender, age, physical condition, suspected or known cause of death, location of death (see REPORTING), and planned disposition of carcass.
 8. Any indication of disease among wild felids or mammals that may pose a threat to ocelots or jaguarundis shall be reported to the Texas Coastal ESFO Corpus Christi Sub-Office listed above and the LANWR Ocelot Biologist within 24 hours.

Use of attractants

9. Due to the potential risk of influencing listed felid movement patterns or other behaviors, use of attractants must be coordinated with and approved by Hilary Swarts of LANWR.
10. If use of attractants is authorized, attractants known to be effective at attracting ocelots must be used to be effective. If used in association with remotely triggered cameras, the attractant should be placed in full view of at least one of the cameras at each site. Currently, no scent attractant is known to be effective at attracting jaguarundis.



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11. Use of scent or hormonal (e.g., scat, urine) attractants is restricted to no more than 120 consecutive days for the entire project area, followed by a minimum of 90 consecutive days without the use of scent or hormonal attractants in the project area.

Minimum standards for presence/absence surveys

12. Due to the secretive nature of these species, visual surveys (e.g., using binoculars or scopes) to evaluate the presence/absence of ocelots or jaguarundis are unacceptable. Presence/absence surveys for ocelots and jaguarundis must use non-invasive techniques (i.e., no capturing/handling) unless specifically permitted to live capture and handle these species.

13. Survey methods to evaluate presence/absence must follow established, published methodologies specific to ocelots or jaguarundis. Recommended methods include use of multiple survey sites of remotely-triggered cameras associated with or without an attractant and distributed strategically along game trails such that potential habitat is effectively surveyed as described below.

14. Potential habitat for ocelots or jaguarundis can include, but is not limited to, linear or non-linear patches, stands, mottes, blocks, or lines of Tamaulipan thornscrub, riparian, or live oak habitat; vegetated drainage ditches, irrigation canals, or fence lines; or other thickly vegetated corridors or habitats. Potential habitat for jaguarundis can also include tall, dense, grassy habitats adjacent to these brushy areas.

15. Hair snare techniques and materials must be approved by Hilary Swarts of LANWR.

16. Camera survey sites should be strategically located (i.e., near game trails with cat sign) and the cameras must be distributed throughout potential habitat, to maximize survey effectiveness.

17. Each camera survey site should include 2 cameras to help ensure continuous camera operation at each site and possibly provide photographs of both sides of ocelots for identification purposes.

18. Sampling should be continuous for at least 30 consecutive days (i.e., at least one camera at each site should be functional each of 30 consecutive days).

19. If surveying all sites in a project area simultaneously is not possible due to availability of equipment or other factors, Permittees may group nearby camera sites and conduct surveys by groups consecutively, provided a rationale is included in the sampling design and all survey sites in the project area are effectively sampled within 90 days if attractants are used or within 120 days if attractants are not used.

20. For presence/absence surveys using attractants:

a. A minimum of 2 camera survey sites per 1 km² of potential habitat is recommended.

b. Each camera survey site with attractant should be sampled for a minimum of 30, but not more than 120 consecutive days.

21. For presence/absence surveys conducted without attractants:

a. A minimum of 5 camera survey sites per 1 km² of potential habitat is recommended.



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b. Each camera survey site without attractant should be sampled for a minimum of 30 consecutive days. A 120-day sampling period is recommended.

22. For areas proposed for development or that are undergoing a Section 7 or other consultation with USFWS, a minimum of 12 months of continuous data is recommended. For surveys using attractants, restrictions on the duration of attractant use require that this 12-month study period include alternating periods of up to 120 days with attractants followed by at least 90 days without attractants. Cameras may remain in place with or without attractants for the entire 12 months (i.e., only the attractant must be removed). Exceptions to reporting can be found in section S.57 below.

Training

23. Permittees must receive specific training and then hands-on experience as the primary handler (not just observation) in chemical immobilization, handling, drawing blood, recovery, and release of at least five wild felids prior to independently conducting these capture-related activities with a listed felid.

Capture

24. Live box traps must be used in areas where ocelots, jaguarundis, or their habitats are known to occur. For specific information on these areas, please contact Hilary Swarts at the LANWR. No leg-hold traps, snares, or other capture methods may be used in these areas.

25. Trap-stations are defined here as a single trap or 2 adjacent traps, separated by no more than 10 feet. No more than 40 traps-stations may be used concurrently per independent primary handler in suitable habitat areas where ocelots are not known or suspected to occur. If ocelots are known to occur in an area, no more than 25 trap-stations may be used concurrently per independent primary handler. Each independent handler should have their own vehicle, communication equipment, handling/sedation equipment, and labor crew as necessary, etc., to be considered independent and to be responsible for their own maximum of 25-40 trap-stations.

26. To limit the stress of repeated captures of the same individual in a short period, traps must be removed from any area where an individual ocelot is captured 3 or more times within 30 days.

27. Individuals captured less than 45 days after undergoing chemical immobilization and handling must be released without handling, except in the case of an emergency requiring veterinary intervention or a situation requiring emergency intervention in the field (e.g., the radio collar shifted from the neck to around the mouth of the animal).

28. Due to documented ocelot mortality from heat stress in a live trap, trapping must cease during summer (June-August) and when daily ambient temperatures are expected to exceed 90 degrees Fahrenheit for more than 5 consecutive days. Trapping may re-commence if temperatures are expected to drop below 90 degrees Fahrenheit for more than 3 consecutive days.

29. To minimize the risk of hypothermia, traps must be closed when the temperature is expected to be at or below 40 degrees Fahrenheit.



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30. A daily routine of checking traps between 8:00-10:30 a.m. and caring for bait animals will be established. Traps should be shaded for both captured animals and bait animals.

31. When closed, traps placed in areas with public access must be secured shut (with cable ties or other means) to reduce the likelihood of tampering.

32. Traps shall be thoroughly shaded to protect both captured animals and bait animals.

Immobilization and handling

33. Ocelots and jaguarundis will be chemically immobilized using only established anesthetic drugs and dosages accepted for use on these species.

34. Immobilized cats will be placed on a cloth and/or table and in shade during handling. Measures to prevent corneal drying of the eyes (e.g., ophthalmic ointment and/or covering the eyes with a cloth) will be used.

35. Internal body temperature, respiration rates, and pulse rates will be monitored regularly. Body temperature should be maintained within 3 degrees of normal. If the temperature exceeds 3 degrees of normal (hyperthermia), measures to reduce temperature (e.g., application of water or alcohol to foot pads, placement of ice bottle against abdomen) will be used. If the temperature drops more than 3 degrees of normal (hypothermia), measures to increase temperature (e.g., covering the ocelot with a blanket, placement of thermal/heating pads against abdomen) will be used.

36. The following data shall be collected, unless doing so would jeopardize the health of the animal:

- a. Morphometric measurements, including weight, total body length, tail length, hind foot length, canine length, neck circumference, and head circumference;
- b. Sex and age;
- c. Photographs of all aspects of each individual, including left and right sides, chest area, hind area, forehead, back/spine, tail, underside, and teeth must be taken and provided to USFWS;
- d. Blood samples shall be collected and analyzed for both genetic and disease profile information (blood collected shall not exceed 20 ml per individual per capture);
- e. Ectoparasite load;
- f. General coat and body condition;
- g. Current or previous injuries or scars shall be photographed; and
- h. Hair and parasite samples may be collected (optional).

Recovery and release



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37. Once handling is completed, cats must be placed in a pet carrier, box trap, or other safe, secure container and allowed to recover completely from the effects of immobilization drugs prior to release.
38. The recovery area must be isolated from human disturbance (other than visual monitoring by handlers). If the area is open to the public, barricades or other barriers must be used to prevent public access to the recovery area.
39. During recovery, cats will be kept in shade and monitored until fully recovered. Recovering cats should be placed such that they are shaded and partially hidden, but so that they can still have airflow and be visually monitored from a distance as they recover. Monitoring should be done quietly and from a distance to avoid stimulating the recovering animal unless necessary. Monitoring should include visual assessment of head/body control, thermoregulation, respiration, alertness and visual focus, and mobility to determine when the animal is ready for release.
40. Immobilized individuals shall be allowed to recover fully (back to pre-immobilization function) and be fully aware, alert, and able to function and move normally prior to release. However, if conditions arise indicating that, for the safety/welfare of the animal, a recovering cat needs to be released as soon as possible (e.g., it becomes extremely overheated as evidenced by constant panting for more than 10-15 minutes), it may be released as soon as it is fully mobile (able to use all 4 legs, able to stand and move around without stumbling).
41. Captured animals must be released at the capture site unless pre-authorized by the Texas Coastal ESFO Corpus Christi Sub-Office listed above, Hilary Swarts at LANWR, and the Ocelot Recovery Team.
42. Feces may be collected from the trap and examined for prey, disease, parasites, etc.

Tagging

43. Total weight of all tags, collars, and other materials placed on captured listed felids must not exceed 3% of the individual's body weight.
44. A radio (VHF), global positioning system (GPS), or satellite collar may be attached.
45. Collars or other materials placed on captured felids must be attached by temporary means such that the collar can break off or drop off later and not be attached for life or choke the animal as it grows. **Collars may not be bolted on or attached with steel hardware unless such hardware is required for a functioning of a remote- or timed-release mechanism on a collar.** Plastic cable ties with metal tongues, or natural fiber or cloth "bridges," may be used on territorial adults but not sub-adults or juveniles. Waxed cotton thread (sewing the collar together) or other more temporary methods of collar attachment may be used on sub-adults and juveniles. Listed felids estimated to be less than 1 year old will not be collared. Contact Hilary Swarts of LANWR and the Texas Coastal ESFO Corpus Christi Sub-Office to discuss and determine what materials may be available and acceptable.
46. Unless injured, too young, or otherwise unsuitable, each ocelot or jaguarundi that is immobilized and handled must be injected, into the loose skin of the back between the shoulder blades, with a passive integrated transponder (PIT) tag to aid with long-term individual identification.

Health/safety & emergencies



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47. Activities must be conducted in a manner not to threaten the life or health of any individual animal.

48. With the exception of emergency situations, capture and anesthetization of ocelots or jaguarundis will not be conducted when daily ambient temperatures consistently exceed 90 degrees Fahrenheit, including at least June-August, to reduce the risk of heat-related mortality.

49. Prior to conducting permitted activities, Permittees must ensure that a veterinarian experienced with exotic/wild/zoo animals is available to provide veterinary support either on-site or within one hour's drive of the study area in case of serious injury or emergency. This veterinarian must be added to your permit, or have their own permit, to authorize providing veterinary treatment and support for ocelots and jaguarundis. Permittees are authorized to transport ocelots or jaguarundis to a veterinary treatment facility only in situations of serious injury or emergency.

50. Due to small population numbers and increasing genetic erosion, vulnerability to disease is a major concern. Consequently, field practices must effectively minimize risk of disease transmission to listed felids, from any felid or other mammal. All materials, excluding traps, which come into contact with more than one felid or mammal shall be disinfected prior to re-use. If any animal with obvious signs of disease or infection is captured, all materials (including traps) that come into contact with that animal shall be disinfected before re-use.

Samples, specimens, and salvage

51. Blood samples obtained through permitted activities will be processed and properly stored for genetic and/or disease analyses through coordination with the LANWR Ocelot Biologist.

52. Ocelots and jaguarundis found dead may be transported for necropsy, analysis, preservation, and salvage.

53. Within 72 hours of discovery, all dead ocelots and jaguarundis found, whether associated with or not associated with permitted activities, will be sent to the Texas Veterinary Medical Diagnostic Laboratory System, College Station, Texas for necropsy and histopathological analyses. Parasites will be sent to Dr. Dan Pence, Department of Pathology, Health Sciences Center, Texas Tech University, Lubbock, Texas for examination.

54. Permittees may collect tissue samples for genetic analyses from dead ocelots and jaguarundis.

55. Once analyzed, all sample materials from and specimens or parts of ocelots or jaguarundis salvaged are to be maintained at Caesar Kleberg Wildlife Research Institute in a protected collection, or a similar collection after coordination with the LANWR Ocelot Biologist.

56. With prior approval of USFWS, samples and parts may be transferred to other institutions holding valid permits for educational display.

Reporting



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57. In order to address private landowner confidentiality concerns, any ocelot data collected within the boundaries of the polygon (a USFWS map which includes 8 south Texas counties) does not require any accompanying level of location information beyond "within the polygon." But the locations and other information submitted must provide enough information to be of value to recovery efforts (e.g., assist us in the placement of road crossings, knowledge of new populations).

58. For data collected on public lands and for data associated with proposed development projects or USFWS Section 7 or other consultations, specific location information must be provided, including global positioning system (GPS) coordinates in Universal Transverse Mercator (UTM) format.

59. Permittees must submit an annual report, in both digital and hard copy format, of all ocelot and jaguarundi activities conducted, **no later than August 31** of each calendar year. Information reported must include, at a minimum:

- a. A summary of research projects conducted for each species, including project status.
- b. Maps depicting locations and habitats of project activities (e.g., areas where trapping or camera surveys were conducted and where ocelots were documented) and results. Private properties do not need to be delineated or identified on these maps.
- c. Summary design and methodology information for each project, including general size and habitat characteristics of study area, survey protocols, and type and dates of any attractants used.
- d. Total project effort, including number of traps or cameras used, dates of use, and total trap or camera nights.
- e. Results for each project, including total number of different ocelot and jaguarundi individuals photographed or captured, total number of photographs and captures of each species, project start and end dates, and partial or complete findings.
- f. Specific information on each ocelot and jaguarundi captured or photographed, including as applicable: species; sex; date(s) of capture(s) or photograph(s); total captures for that animal; approximate age; weight; measurements; PIT tag number; radio collar frequency; photographs of all aspects including right and left sides; health and condition of the animal, and location of capture or photograph.
- g. To allow identification of individual ocelots that may be photographed in different areas by different researchers, digital copies of all ocelot and jaguarundi photographs must be provided on digital media such as a CD or DVD. Digital media must be clearly marked with the Permittees' name, permit number, the state, the county, and the start and end dates of the project. File names of digital photographs should include the species, date, time, and county location at a minimum. All photographs submitted remain the property of the Permittees and will not be used for any other purposes without written approval of the Permittees.
- h. A summary of ocelot and jaguarundi movement patterns and population information that is relevant to recovery efforts. This can consist of a short narrative and must include a general description of the area and habitat used by individual cats and summaries of any information indicating changes in known population size or distribution; existence or establishment of new or unknown populations; sudden changes in use of an area; attempted dispersal (successful or unsuccessful) to other populations or areas; areas where road crossing structures may be needed; and existing or potential corridors or connections between populations.



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i. Summary data for any documented mortality or disease among ocelots or jaguarundis. This summary must include species, sex, age, date recovered, estimated date of death, any measurements taken, condition, suspected or known cause of death, general location, necropsy/analysis results, and disposition of carcass.

j. Summary data for any documented reproduction of ocelots or jaguarundis, including data on adult females and data on offspring or dens found. This summary must include species, sex, age, measurements, date and type of documentation (e.g., capture of lactating female, den found), number of offspring, specific habitat at den site, location of den site in relation to nearest human structures and activities (roads, houses, agricultural fields, etc.), general area description (e.g., ranch, small habitat tract in agricultural area), and general location.

60. If no ocelot or jaguarundi activities were conducted during that year, a negative report shall be submitted for documentation and notification purposes.

61. This report shall be submitted by mail, fax, or e-mail to Hilary Swarts of LANWR and the Texas Coastal ESFO Corpus Christi Sub-Office (addresses listed above).

62. Hard copies of any unpublished or published reports generated by activities conducted under this permit and other information valuable for conservation or recovery of these species shall also be submitted to Hilary Swarts of LANWR and the Texas Coastal ESFO Corpus Christi Sub-Office. A copy of the cover letter must be submitted to the Regional Office (address listed above in section G), except in cases outlined in section S.57 above

63. Information provided will not be used for publication, for identification of private properties, or for any other purpose other than species recovery efforts.

ATTWATER'S GREATER PRAIRIE CHICKEN

T. Clifton Ladd, Nick Wallisch, Gary Galbraith, Lon Grassman, Bonnie Doggett, Gabriela Casares, Don Blanton, Rick Phillips, Kim Jenkins-Johnson, Mark Kainer, Jason Schindler, Brent W. Hall, and Michael Green (Permittees) are authorized to conduct surveys for the Attwater's greater prairie-chicken (*Tympanuchus cupido attwateri*) within Texas. Before any survey activities can begin, Permittees must coordinate with the Attwater Prairie Chicken National Wildlife Refuge (John Magera, Refuge Manager, at 979/234-3021).

BLACK-CAPPED VIREO

A final rule to delist the black-capped vireo (*Vireo atricapilla*) due to recovery was published in the Federal Register on April 16, 2018 (83 FR 16228); thus, a permit is no longer required from the USFWS to conduct simple presence/absence surveys for the black-capped vireo in the U.S. As required under the Endangered Species Act, the USFWS is working with state wildlife agencies, and other partners, to monitor the black-capped vireo to ensure it continues to thrive. This post-delisting monitoring period is likely to continue through the 2030 breeding season. Data on breeding birds and brown-headed cowbird parasitism rates collected incidentally or voluntarily would be helpful for completing the post-delisting monitoring plan. Although not required, we request any survey findings, incidental detections, and other reports that include information on the black-capped vireo be sent to the Arlington ESFO. All applicable local, State, and Federal laws apply.



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U. Rick Phillips, Kim Jenkins-Johnson, Mark Kainer, Nick Wallisch, Jason Schindler, Clifton Ladd, Gabriela Casares, Clay Fischer, Elizabeth Hauss, and Dean Tesmer (Permittees) are authorized for scientific research and recovery purposes to conduct presence/absence surveys for black-capped vireos (*Vireo atricapilla*) within Texas. The following conditions also apply:

1. The USFWS maintains a current list of the counties where the black-capped vireo is known or has been documented to occur at the website: http://www.fws.gov/southwest/es/ES_Lists_Main.cfm (http://www.fws.gov/southwest/es/ES_Lists_Main.cfm). For the purpose of avoiding potential adverse effects to the species as a result of development projects, the USFWS recommends the project area and adjacent areas (within 300 feet) that contain suitable habitat be surveyed for the species. Suitable habitat for the black-capped vireo is described in Campbell (2003). Please note that surveys of suitable breeding habitat that result in "absence" are only applied to the year of the survey. Additionally, habitat that is shown to be occupied by the species through surveys is still considered occupied while the birds are on the wintering grounds.
2. The survey season is April 10-July 1. A minimum of 50 percent of the surveys must take place between April 10 and May 31.
3. We recommend survey times start 30 minutes before sunrise. All surveys must be completed by 1:00 pm.
4. A minimum of 5 visits, with no more than 1 visit within any 5-day period, is necessary.
5. Total survey time should be a minimum of 1 hour per 25 acres (or less) of habitat per visit. Habitat is defined in Campbell (2003), https://tpwd.texas.gov/publications/pwdpubs/media/pwd_bk_w7000_0013.pdf (https://tpwd.texas.gov/publications/pwdpubs/media/pwd_bk_w7000_0013.pdf).
6. Surveys should not be conducted under the following weather conditions: wind speeds greater than 12 mph, fog, light to heavy precipitation, and temperatures less than 45 degrees Fahrenheit (Robbins 1981, Verner 1985).
7. Taped or play-back recordings of black-capped vireos or screech owl calls may be used only after the above methodology (5 visits) has been exhausted and no birds have been located. Recordings must be used to verify negative results (absence of black-capped vireo). At each survey point, recordings should be played for only 30 to 60 seconds, followed by a quiet period of at least 15 seconds before repeating this process once. After the second quiet period with no detection, Permittees should move to next survey point. Upon sighting or hearing a black-capped vireo, the recordings must be stopped immediately.
8. Exceptions to this methodology may be allowed only through coordination with, and approval of, the Arlington ESFO. Survey reports will be directed to Arlington ESFO (address above in section G).
9. Reports:
 - a. Presence - Reporting forms can be found at http://www.fws.gov/southwest/es/AustinTexas/ESA_Sci_permits.html (http://www.fws.gov/southwest/es/AustinTexas/ESA_Sci_permits.html) under "Golden-cheeked warbler (GCWA) and black-capped vireo (BCVI) reporting for 10(a)(1)(A) Scientific Research and Recovery Permits." Reports for surveys conducted according to the protocol must be submitted no later than August 1st of that same year. Reports for bird detections or surveys not conducted according to protocol (such as casual observations) must be submitted within 10 business days of completion of the survey.



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b. Absence - Reports of determinations of "absence" of black-capped vireo where habitat on-site meets the description of breeding habitat as in Campbell (2003) should be submitted within 30 business days of the determination. Each report should include a map delineating the survey area and detailed descriptions of the habitat(s).

c. Annual - It is not necessary to resubmit the data reported under a) above. However, annual reports must include detailed descriptions of all vegetation associations found on all parcels surveyed and submitted under a.

Literature cited:

Campbell, L. 2003. Endangered and threatened animals of Texas: their life history and management. Black-capped vireo (*Vireo atricapilla*). Texas Parks and Wildlife Department, Austin, Texas.

Robbins, C.S. 1981. Bird activity levels related to weather. Pp. 301-310. in C.J. Ralph and J.M Scott (eds.). Estimating numbers of terrestrial birds. Studies in Avian Biology No. 6 Cooper Ornithological Society, Lawrence, Kansas.

Verner, J. 1985. Assessment of counting techniques. Pp. 247-302. in R.F. Johnston (ed.). Current Ornithology, Volume 2. Plenum Press, New York.

GOLDEN-CHEEKED WARBLER

V. Gary Galbraith, Rick Phillips, Kim Jenkins-Johnson, Mark Kainer, Nick Wallisch, Jason Schindler, Dean Tesmer, Clifton Ladd, Gabriela Casares, Bonnie Doggett, Clay Fischer, Danielle Macedo, and Elizabeth Hauss (Permittees) are authorized for research and recovery purposes to conduct presence/absence surveys and habitat assessments for the golden-cheeked warbler (*Dendroica chrysoparia*) within Texas. The following conditions apply:

1. The USFWS maintains a current list of the counties where the golden-cheeked warbler is known or has been documented to occur at the website: http://www.fws.gov/southwest/es/ES_Lists_Main.cfm (http://www.fws.gov/southwest/es/ES_Lists_Main.cfm). For the purpose of avoiding potential adverse effects to the species as a result of development projects, the USFWS recommends the project area and adjacent areas (within 300 feet) that contain suitable habitat be surveyed for the species. Suitable habitat for the golden-cheeked warbler is described in Campbell (2003). Please note that surveys of suitable breeding habitat that result in "absence" are only applied to the year of the survey. Additionally, habitat that is shown to be occupied by the species through surveys is still considered occupied while the birds are on the wintering grounds.
2. Methodology and reporting for golden-cheeked warbler surveys must follow the **"USFWS Section 10(a)(1)(A) Scientific Permit Requirements for Conducting Presence/Absence Surveys and Habitat Assessments for Endangered Golden-cheeked Warblers."** This document can be found at the following website: <http://www.fws.gov/southwest/es/AustinTexas> (<http://www.fws.gov/southwest/es/AustinTexas>). Please refer to this website on or before March 1st each year before initiating golden-cheeked warbler surveys, as this document may be updated annually.
3. Three reporting events are required:



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a. **Bird Surveys:** Go to: <http://www.fws.gov/southwest/es/AustinTexas> (<http://www.fws.gov/southwest/es/AustinTexas>) and scroll down to "Golden-cheeked warbler (GCWA) and black-capped vireo (BCVI) reporting for 10(a)(1)(A) Scientific Research and Recovery Permits" for the reporting forms. Reports for surveys conducted according to the protocol outlined in the "USFWS Section 10(a)(1)(A) Scientific Permit Requirements for Conducting Presence/Absence Surveys and Habitat Assessments for Endangered Golden-cheeked Warblers" must be submitted no later than June 30th of that same year. Reports for bird detections or surveys not conducted according to protocol (such as casual observations) must be submitted within 10 business days of completion of the survey. **Survey reports for this data should be submitted electronically to GCWAreporting@fws.gov and should be titled "GCWA Bird Survey Report."**

b. **Habitat Assessments:** If any area of any assessed property meets any of the vegetation associations listed under number 2 in the "USFWS Section 10(a)(1)(A) Scientific Permit Requirements for Conducting Presence/Absence Surveys and Habitat Assessments for Endangered Golden-cheeked Warblers" and either: a) those associations are considered suitable GCWA habitat but are not surveyed, or b) a determination of non-GCWA habitat was made, then a report on those areas must be submitted within 5 business days of that determination. **Habitat assessment reports should be submitted electronically to GCWAreporting@fws.gov and should be titled "GCWA Habitat Assessment."**

Each report should include:

1. A map with a clear understanding of the location of that property within the county;
2. an aerial photo with the date the photo was taken (no older than 2006), and the property boundary;
3. detailed descriptions of the habitat on site;
4. detailed descriptions of what factors were assessed to make the determination (for example, aerial photographs, Landsat imagery, and/or site visits); and
5. an explanation of why a survey for the GCWA was not performed or why the site was determined to be unsuitable.

Reporting With GIS Data:

If reporting with GIS shapefiles, it is not necessary to include the information requested in numbers 1 and 2 above in the report. Instead, complete the "GCWA Habitat Assessment" form found at <http://www.fws.gov/southwest/es/AustinTexas> (<http://www.fws.gov/southwest/es/AustinTexas>) and submit it as the attribute table with the shapefile(s).

Habitat Assessment Non-Concurrence:

1. We will do our best to respond in writing within 10 business days if we do not concur with the non-habitat determination.
2. If we notify you that we do not concur with the non-habitat determination, you must notify the person that hired and/or requested you do the assessment within 10 business days of our non-concurrence.

c. **Annual:** It is not necessary to resubmit the data reported under a) above. However, annual reports must include detailed descriptions of all habitats found on all parcels surveyed and submitted under a). No further information is necessary in the annual report for the items required under b). **Annual reports should be submitted electronically to GCWAreporting@fws.gov and should be titled "GCWA Annual Report."**

Literature cited:



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Campbell, L. 2003. Endangered and Threatened Animals of Texas: their life history and management. Golden-cheeked warbler (*Dendroica chrysoparia*). Texas Parks and Wildlife Department, Austin, Texas.

INTERIOR LEAST TERN

W. A final rule to delist the Interior least tern (*Sternula antillarum*) due to recovery was published in the Federal Register on January 13, 2021 (86 FR 2564); thus, a permit is no longer required from the USFWS to conduct simple presence/absence surveys for Interior least terns in the U.S. As required under the Endangered Species Act, the USFWS is working with state wildlife agencies, and other partners, to monitor least tern populations to ensure it continues to thrive. This post-delisting monitoring period is likely to continue for several years. Data on breeding birds collected incidentally or voluntarily would be helpful for completing the post-delisting monitoring plan. Although not required, we request any survey findings, and other reports that include information on Interior least terns be sent to the Field Supervisor, U.S. Fish and Wildlife Service, Mississippi Ecological Services Field Office, 6578 Dogwood View Parkway, Jackson, MS 39213; telephone 601/321-1122. Individuals who use a telecommunications device for the deaf (TDD), may call the Federal Relay Service at 800/877-8339. All applicable local, State, and Federal laws apply.

The proposed and final rules, supporting documents, and the comments received on the proposed rule are available on the internet at <http://www.regulations.gov> (<http://www.regulations.gov>) under Docket No. FWS-R4-ES-2018-0082, at <https://www.fws.gov/mississippiES/> (<https://www.fws.gov/mississippiES/>), or at <https://ecos.fws.gov/ecp/> (<https://ecos.fws.gov/ecp/>).

LESSER PRAIRIE-CHICKEN

Lesser Prairie-Chicken Status

A court order to vacate the listing of the lesser prairie-chicken (*Tympanuchus pallidicinctus*) as a threatened species was filed on September 1, 2015, and subsequently the lesser prairie-chicken was removed from the List of Endangered and Threatened Wildlife on July 19, 2016 in accordance with the court order. Therefore, at the time of this issuance a 10(a)(1)(A) permit is not required for this species. However, information regarding lesser-prairie chickens would be helpful for the conservation of this species. The USFWS would appreciate copies of such information, plus any survey findings, and request that the information be sent to the appropriate ESFO based upon where the activities occur. All applicable local, state, and Federal laws will apply. Should the lesser-prairie chicken be relisted during the effective dates of this permit, the Permittee shall be authorized as follows:

X. Gary Galbraith, Nick Wallisch, Eric Herbez, Mark Kainer, Rick Phillips, Jason Schindler, Clifton Ladd, Michael Green, Kim Johnson, and Lon Grassman (Permittees) are authorized for research and recovery purposes to conduct ground surveys for lesser prairie-chicken within Colorado, Kansas, New Mexico, Oklahoma, and Texas. The following conditions also apply:

1. Methodology and reporting for surveys must follow the USFWS's Survey Protocol for the Lesser Prairie-Chicken. This document can be found at the following website: http://www.fws.gov/southwest/es/Documents/R2ES/LPC_Survey_Protocol.pdf (http://www.fws.gov/southwest/es/Documents/R2ES/LPC_Survey_Protocol.pdf).

Please refer to this website after September 1st each year before initiating lesser prairie-chicken surveys, as this document may be updated annually. It is important to note that activities pursuant to the Lesser Prairie-Chicken Range-wide Conservation Plan and associated Range-Wide Oil and Gas CCAA which are administered by WAFWA should continue to follow the survey protocols identified by the plan administrator.



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2. In the event of a fatality of any lesser prairie-chicken during permitted activities, all operations must immediately cease and Permittees are required to contact the appropriate ESFO (phone numbers above in section G) in the State where surveys were conducted within 24 hours.

3. Depending on the specifics of the proposed action, there are potential differences in regulatory options. Please contact the appropriate ESFO in the State where surveys are being conducted to ensure you are in regulatory compliance and following the correct protocol.

4. Annual reports are due to the appropriate ESFOs (contact in section G above) by July 1st of every year. Permittees must report on both positive and negative survey results and additionally, must report if no surveys were conducted for the permit on a given year.

MEXICAN SPOTTED OWL

Y. Kim Jenkins-Johnson and Nick Wallisch (Permittees) are authorized for research and recovery purposes to conduct presence/absence surveys for Mexican spotted owl (*Strix occidentalis lucida*) within New Mexico and Texas. The following conditions also apply:

1. Surveys must be conducted according to the USFWS's "2012 Mexican Spotted Owl Survey Protocol" (or most recent version located at <http://www.fws.gov/southwest/es/arizona/MSO.htm> (<http://www.fws.gov/southwest/es/arizona/MSO.htm>)).

2. Permittees must have at least 40 hours of experience or be accompanied by a permitted individual who has one year or more of experience surveying. In addition, we recommend all new surveyors complete a USFWS-approved Mexican spotted owl survey training prior to conducting surveys.

3. Permittees are required to avoid calling Mexican spotted owls during periods of rain, snow, thunder, or in winds greater than 15 miles per hour.

4. Permittees are required to watch for and record aggression by known Mexican spotted owl predators, including northern goshawks (*Accipiter gentilis*), red-tailed hawks (*Buteo jamaicensis*), and great horned owls (*Bubo virginianus*). If this behavior is observed, Permittees are to proceed with caution and use good judgment whether to continue or discontinue surveying.

5. Permittees are not authorized to capture and/or handle Mexican spotted owls during surveying activities, except in the case of a dead Mexican spotted owl(s) encountered during surveys. Any dead birds are to be properly preserved and Permittees should immediately contact the New Mexico ESFO (contact information in Condition G above) and Shaula Hedwall, Arizona ESFO - Flagstaff Sub-Office (928/556-2118) for disposition instructions. Injured birds should be reported immediately to the office above as well, but not collected.

6. In the event of a fatality of any Mexican spotted owl during permitted activities, all operations must immediately cease and Permittees are required to contact the New Mexico ESFO and Shaula Hedwall within 24 hours.

7. Collection of Mexican spotted owl feathers, eggs, or parts thereof is not authorized.



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8. Mexican spotted owl locations found while working under this permit may not be posted on eBird or other public bird location forums.

9. In addition to annual reporting requirements outlined in Section H above, copies of all reports, data forms with positive and negative survey results for Mexican spotted owls, USGS quad maps clearly delineating survey areas and detections, should be submitted to the New Mexico ESFO and Arizona ESFO - Flagstaff Sub-Office by December 1 of each year.

NORTHERN APLOMADO FALCON

Z. Gary Galbraith, Bonnie Doggett, Don Blanton, Rick Phillips, Kim Jenkins-Johnson, Mark Kainer, Jason Schindler, Brent W. Hall, Nick Wallisch, Clifton Ladd, Michael Green, Lon Grassman, Gabriela Casares, and Alvin Lyckman (Permittees) are authorized for scientific research and recovery purposes to conduct surveys for northern aplomado falcons (*Falco femoralis septentrionalis*) within Texas and New Mexico. The following conditions also apply:

1. Permittees should follow the most recent version of the survey methodology established for northern aplomado falcon surveys, which can be found at:

https://www.fws.gov/southwest/es/NewMexico/documents/SP/Northern_Aplomado_Falcon_survey_protocol.pdf

(https://www.fws.gov/southwest/es/NewMexico/documents/SP/Northern_Aplomado_Falcon_survey_protocol.pdf). If you wish to utilize survey methodology differing from this, the study proposals or survey designs must be reviewed by the appropriate ESFO within 30 days of their proposed implementation.

2. The northern aplomado falcon breeding season in New Mexico extends from February 1 through July 31, and breeding surveys in New Mexico should be conducted throughout this time period. Suspected/confirmed northern aplomado falcon nests will be observed with optical equipment from a minimum distance of 75 to 100 meters in order to minimize disturbance to nesting individuals. Disturbance to nesting individuals early in egg-laying or incubation may cause nest abandonment and subsequent failure of reproduction for a breeding season. If birds are exhibiting behaviors that indicate stress (e.g., short flights, nervous agitation, alarm vocalizations, etc.), the observer should withdraw from the nest area to an acceptable distance, as determined by the bird's reaction.

3. It is recognized that in obtaining identifiable observations and/or photographs of suspected northern aplomado falcons, individuals may be disturbed and/or flushed from perch sites. Disturbance should be minimized by using high powered photographic lenses and spotting scopes to maximize the distance between the observer and the subject. Repeated approaches to individual falcons should be avoided.

4. Permittees are not authorized to approach nests or suspected nests. Additionally, no capturing or handling of northern aplomado falcons is authorized. Pairs or breeding northern aplomado falcons observed in any location must be reported within 24 hours of detection to the NMESFO at 505/761-4718.

5. For surveys covering large geographic areas, you must contact the respective ESFO where surveys are to be conducted in order to coordinate survey efforts so that survey duplication is avoided and disturbance to northern aplomado falcons is minimized.



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6. All observations of unpaired northern aplomado falcons in a previously unreported location must be reported within 3 working days to the appropriate ESFO and State Department of Game and Fish. For sightings in New Mexico, please contact the New Mexico ESFO at 505/346-2525, and the New Mexico Department of Game and Fish.

7. In the event that mortality occurs to any adult or chick as a consequence of permitted activities, all operations are to cease, and the New Mexico ESFO and Texas Coastal ESFO Corpus Christi Sub-Office must be notified within 24 hours.

PIPING PLOVER

AA. Lon Grassman, Bonnie Doggett, Gabriela Casares, Don Blanton, Rick Phillips, Kim Jenkins-Johnson, Mark Kainer, Nick Wallisch, Clifton Ladd, Michael Green, David Long, and Clay Fischer (Permittees) are authorized for scientific research and recovery purposes to conduct presence/absence surveys for piping plover (*Charadrius melodus*) within Texas and Oklahoma. You must coordinate with the Texas Coastal ESFO Corpus Christi Sub-Office prior to conducting surveys. The following conditions apply:

1. Survey Criteria - Surveyors should be knowledgeable about bird identification and must be capable of discerning all members of the maritime shorebird guild. Surveyors should be familiar with piping plover winter ecology as well as the various types of shorebird habitat that may be encountered along the Texas coast.
2. Observations in feeding habitats should be conducted during falling or low tides to increase the exposure of mud and /or sand flats. Wind speed during surveys should be less than 25 miles per hour and inclement weather conditions (heavy rain, severe cold) should be avoided. If birds vacate a site due to disturbance (human or predator), the observation and the disturbance should be so noted.
3. Surveys should be restricted to a nine month period beginning August 1 and ending May 1 and one month of the surveys (four surveys) should fall within a single migratory window (August 1 - November 1 or February 1 - May). Surveys should be conducted from 30 minutes after sunrise to 30 minutes before sunset. The surveyor should allocate observation time to a minimum of five one-hour blocks (segments) evenly apportioned across the survey day and encompassing all proximate tidal regimes and habitat types. The amount of time necessary survey each respective tract will obviously vary with the amount and type of habitat to be covered. The intent should be to thoroughly survey each site for the piping plover, and the surveyor should make every effort to achieve that goal regardless of the time involved. Where possible, areas of appropriate habitat adjacent to the project area should be included in the survey in order to anticipate possible secondary impacts. Surveys may be conducted on a weekly basis (one survey per day per week), or a semi-monthly basis (two sequential survey days during each semi-monthly period). In the Laguna Madre, surveyors should be particularly aware of wind conditions since wind is the primary factor controlling tides in that system.
4. If piping plovers are observed, a reasonable effort should be made to determine if plovers are banded. If a banded plover is discovered, a reasonable effort should be made to determine the band combination of the bird. This would include the location (right or left, upper or lower legs) of any color or metal bands. Banded plovers should be reported immediately to the CCESFO.
5. If the birds are flushed, please take note of whether the birds return to the area they were using.
6. The use of all-terrain vehicles (ATV's) to cross mud, sand and algal flats should be minimized. The justification for this restriction is as follows: Algal flats in coastal areas of South Texas are the primary wintering area and preferred feeding habitat for wintering piping plovers. The blue-green algal layer is sustained by the wind-driven tides which are otherwise micro-tidal in



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nature. These flats are easily damaged by vehicular traffic. ATV's can create ruts in the algal mat that collect water, thereby allowing the germination of halophytes that might not otherwise be able to grow there.

7. Caution should be used in approaching shorelines by boat in order to avoid damaging shallow water habitat, especially seagrass beds. Navigation charts should be consulted to identify locations of existing access channels (if any). If none exist, then boat engines should be stopped before shallow bottoms are impacted, and boats floated, pushed, or poled, in to the shore. Visually inspect shorelines before access.

8. No capture or handling of piping plovers is allowed under this permit.

9. Site Assessment - The surveyor should conduct a single-day inspection and assess and delineate the habitat contained within the site being considered for occurrence of piping plovers. A map should be created that outlines these general habitat types. Habitat types of potential importance to piping plovers include: sandy beach, bay/barrier island margin, barrier island flats, intertidal sand/mud/algal flats, unvegetated areas within washover passes, and unvegetated intertidal flats associated with man-made sites such as dredge material islands.

If project sites contain areas that correlate with any of these habitat profiles, the survey should proceed to determine the presence of guild members (Item 10 below). Projects on sites which do not contain any of these habitats will not require additional surveys to determine the presence of piping plovers.

10. Determine Presence of Guild Members - The surveyor should conduct a series of field surveys (see criteria under #3 above) extending over a contiguous 30-day period during which the site should be inspected for the presence or absence of members of the maritime shorebird guild. Guild species include: black-bellied plover, snowy plover, Wilson's plover, semipalmated plover, piping plover, American oystercatcher, American avocet, willet, long-billed curlew, marbled godwit, ruddy turnstone, red knot, sanderling, western sandpiper, least sandpiper, dunlin, and short-billed dowitcher. Surveys may be conducted on a weekly basis (one survey per week), or a semi-monthly basis (two sequential survey days during each semi-monthly period) during the period from August through April. Sites that are surveyed and found to contain no members of the winter maritime shorebird guild (as confirmed by USFWS) will not require further surveys to establish absence of piping plovers. Sites that are found to contain members of the winter maritime shorebird guild should proceed to determine the presence of piping plovers (see #11 below). Survey time accumulated at the end of the 30-day study period will be credited toward the extended study required to determine the presence of piping plovers.

11. Determine Presence of Piping Plovers - The surveyor should conduct a series of field surveys (see #3) extending over a 90-day period (which includes the 30-day survey period required to determine presence of the winter maritime guild of shorebirds), during which the site should be inspected for the absence or presence of piping plovers. One month of this period must fall within a single migratory window (August 1 - November 1 or February 15 - May 1). Surveys may be conducted on a weekly basis (one survey per week), or a semi-monthly basis (two sequential survey days during each semi-monthly period).

12. Survey Reports - Survey reports should include at least one map, preferably at a scale of 1:24,000 or larger, delineating habitat types of potential importance to piping plovers. The survey site should be identified on a copy of the appropriate USGS topographic quadrangle map(s). Survey reports must include the following information for each survey segment (a minimum of



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five per day): name(s) of surveyor(s), date, tidal conditions during the survey segment, wind speed and direction during the survey segment, time of beginning and end of survey segment, number and type of disturbances occurring during the segment, total number of individuals of each guild species, and total number of piping plovers observed during the segment.

If the survey site consists of more than one habitat type, numbers of individuals of each shorebird species should be recorded separately for each habitat type. Daily summary sheets (summarizing segment results) must include a map delineating habitat types, indicating areas of high use by shorebirds, and identifying locations of observed piping plovers. Daily summaries must also include date, time of sunrise and sunset, times of daily high and low tides and a total number of individuals of each species observed during the survey day. A full report including maps, daily summaries, and segment data sheets must be provided to the CCESFO.

RED-COCKADED WOODPECKER

BB. Gary Galbraith, Colleen Harvey, Gabriella Casares, Don Blanton, Rick Phillips, Kim Jenkins-Johnson, Mark Kainer, Jason Schindler, Brent Hall, Nick Wallisch, Clifton Ladd, and Michael Green Permittees are authorized for scientific research and recovery purposes to conduct presence/absence surveys for red-cockaded woodpecker (*Picoides borealis*) (RCW) within Texas. The following conditions also apply:

1. Surveys for RCW should be conducted according to the protocol set out in Appendix 4 of the January 2003 Second Revision of the Red-cockaded Woodpecker Recovery Plan (Revised RCW Recovery Plan).
2. All persons surveying for RCW should be familiar with the appearance and vocalizations of this species, as well as the habitat required for colonization and foraging, and the activity which indicates presence such as cavities, starts, and resin wells on cavity trees.
3. In Texas, historic and current RCW locality information should be obtained from the Texas Natural Heritage Program 512/448-4311 or the Arlington ESFO East Texas Sub Office (936/569-7981 ext. 4017). If the project area is on or near U.S. Forest Service National Forests lands, the District Wildlife Biologists should be contacted for current information.
4. Obtain and inspect current aerial photographs and 7.5 minute USGS topographic maps (1:24,000) of the project area. The aerial photography should expedite the identification of the older pine stands (large old pine trees should have a smooth, dense appearance). The area should then be marked on a topographic map.
5. Ground-truth identified areas utilizing the topographic map to determine if mature pine stands suitable for potential RCW occupation exist within or near the project area.
6. Survey along parallel transects within suitable tracts to identify if RCWs are present (vocalizations, observation of individuals, cavities and/or resin wells in live pine trees, start holes). Transects must be spaced so that all trees are inspected. Necessary spacing will vary with habitat structure and season from a maximum of 91 m (100 yards) between transects in very open pine stands to 46 m (50 yards) or less in areas with dense midstory. Transects are run north-south, because many cavity entrances are oriented in a westerly direction, and can be set using a hand compass.
7. When surveying pipeline/powerline rights-of-way, survey the area within 1/2-mile on either side where habitat is suitable for RCWs.



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8. When cavity trees are found, their location should be recorded in the field using a Global Positioning System (GPS) unit, aerial photograph, and/or field map. All potentially disruptive activities near these trees should then cease unless the surveyors are trained and certified to assess RCW cavity status in accordance with Appendix 1 of the Revised RCW Recovery Plan. Activities within active RCW clusters must be conducted only by trained, certified, and permitted individuals. Discoveries should immediately be reported to the Arlington ESFO East Texas Sub-office 506 Hayter Street, Nacogdoches, Texas 75965 (936/569-7981 ext. 4017).

9. If cavity trees are found, more intense surveying within 457 m (1500 ft) of each cavity tree is conducted to locate all cavity trees in the area.

10. Annual survey reports associated with RCWs in Texas will be directed to the Arlington ESFO East Texas Sub-office referenced in # 8 above.

SOUTHWESTERN WILLOW FLYCATCHER

CC. Gabriela Casares, and Clay Fischer (Permittees) are authorized for scientific research and recovery purposes to survey for southwestern willow flycatchers (*Empidonax traillii extimus*; SWWF) using vocalization tape playback within New Mexico and Texas. The following conditions apply:

1. All Permittees conducting surveys are required to participate in and complete one of the SWWF survey training seminars conducted by the USFWS, USGS Biological Resources Division, and State game and fish agencies prior to conducting any SWWF surveys. Additionally, any Permittees who have not conducted surveys with positive results for a couple of years are encouraged by the USFWS to attend another SWWF training seminar as a refresher course.
2. All surveys shall be conducted according to the most recent USFWS-accepted survey protocol. Currently, that protocol is: Sogge, M.K., Ahlers, Darrell, and Sferra, S.J., 2010, A natural history summary and survey protocol for the Southwestern Willow Flycatcher: U.S. Geological Survey Techniques and Methods 2A-10, 38 pp. A copy of this revision can be retrieved from the SWWF document library located on the following USGS link: <http://pubs.usgs.gov/tm/tm2a10/> (<http://pubs.usgs.gov/tm/tm2a10/>). The new survey forms to be used should also be retrieved from this web site.
3. You are not authorized to conduct nest monitoring, nest searching, capture, and/or handle any SWWF unless stated so, below.
4. You shall make reasonable efforts to determine if SWWF are marked with a silver aluminum band and/or color bands. If banded birds are sighted, you shall also make reasonable efforts to determine the band combination noting the number of bands, colors, and band location and sequence on the SWWF's legs (e.g., red over yellow right leg/blue split pink over silver left leg).
5. If banded or unbanded SWWF are sighted when surveying in **Texas**, contact the Austin ESFO at 512/490-0057, within 24 hours. For sightings during the 2nd and 3rd survey periods (1-21 June and 22 June - 17 July) you must notify the following personnel via e-mail.

In New Mexico

Jennifer Davis at jennifer_l_davis@fws.gov

Mark Sogge at Mark_K_Sogge@usgs.gov (banded birds only)



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In Texas

Michael Warriner at michael_warriner@fws.gov

Mark Sogge at Mark_K_Sogge@usgs.gov (banded birds only)

If banded SWWF are sighted in **New Mexico**, contact the New Mexico ESFO at 505/346-2525, and Mark Sogge, of the USGS Southwest Biological Science Center, at 928/556-7311 x232, within 24 hours. Additionally, when surveying in New Mexico, if SWWF are detected during the 2nd or 3rd survey periods (1-21 June or 22 June - 17 July) in a location where they were not present the previous breeding season, please contact the New Mexico ESFO and the, within 24 hours.

For surveyors issued a permit covering large geographic areas, you must contact the respective ESFO where surveys are to be conducted to coordinate survey efforts so that survey duplication is avoided and disturbance minimized.

6. You are required to furnish copies of all field data forms with positive or negative survey results, including copies of USGS 7.5 minute quadrangle maps and copies of any aerial photos used in surveying or reconnaissance to the appropriate ESFO Supervisor, and State Game and Fish Nongame Birds Program Coordinator at the addresses listed below. Photos and/or maps must clearly delineate all areas covered during each survey and the locations of SWWF detections. Results must be furnished by August 15, following each survey season covered by this permit. These survey requirements will replace the annual reporting activities listed in H above, for this species only.

Texas Parks and Wildlife Department
4200 Smith School Road
Austin, Texas 78744
512/389-8900

7. Permittees must possess valid state and/or land use permits where required and follow terms and reporting requirements. This Federal recovery permit is not valid without the necessary state and/or land use permits, which may differ between states and land owners. It is the responsibility of the Permittees to ensure that they have the proper permits in the areas where surveys will be conducted. If you are unsure if a state and/or land use permit is required, you may contact the USFWS species lead in the state in which you wish to conduct surveys.

WESTERN YELLOW-BILLED CUCKOO

DD. Gabriela Casares (Permittee) are authorized for scientific research and recovery purposes to survey for western yellow-billed cuckoos (*Coccyzus americanus*; YBCU) using vocalization playback within Arizona, New Mexico and Texas. The following conditions also apply:

1. Permittees and agents who have not attended training within four years are encouraged to attend a USFWS-approved training workshop to ensure they receive new information on yellow-billed cuckoo status of the species, survey protocol, field forms, and permits. Permittees planning to conduct surveys within Arizona or New Mexico are encouraged to take training within one of these states to learn about unique habitat conditions where YBCU are found.

2. Permittee must notify Meaghan Conway at meaghan_conway@fws.gov (Arizona ESFO), Jennifer Davis at jennifer_l_davis@fws.gov (New Mexico ESFO), and Michael Warriner at michael_warriner@fws.gov (Texas ESFO Austin Sub-Office) respectively where surveys will be conducted in Arizona, New Mexico, and Texas prior to the beginning of the each field season.



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3. All surveys shall be conducted according to the most recent USFWS-accepted survey protocol which can be found at: <https://www.fws.gov/southwest/es/arizona/Yellow.htm> (<https://www.fws.gov/southwest/es/arizona/Yellow.htm>). Permittees must visit this website prior to conducting YBCU surveys.
4. Permittees conducting surveys must be able to hear and distinguish between all YBCU vocalizations in the field. Permittees with little previous bird survey and YBCU observation experience are highly encouraged to accompany experienced surveyors to hone auditory and visual identification skills.
5. Nesting YBCU can be very sensitive to human disturbance and may abandon nests. Permittees shall exercise extreme caution while surveying by minimizing noise and time spent in suspected nest areas. Permittees shall avoid making new trails or damaging vegetation. Surveyors must be alert to YBCUs' behavioral signs of disturbance near a nest, which include alarm calls given repeatedly while watching the intruder, broken wing displays, or flying in with prey and eating the prey item instead of going to the nest. If these occur, the observer has been detected, the YBCU is distressed, and the observer should move back (Halterman et al. 2016).
6. If a nest is inadvertently found, observers should move away slowly to avoid startling the birds or force-fledging the young. Avoid physical contact with the nest or nest tree, to prevent physical disturbance and leaving a scent. Do not leave the nest area by the same route that you approached. This leaves a "dead end" trail that could guide a potential predator to the nest/nest tree. Mark the general nest location with a GPS and record the general description of the nest site (e.g., plant species used for nest substrate, approximate height of nest, and placement within the tree/shrub canopy). GPS readings are taken no closer than 10 m from the nest, to avoid disturbance. A general description of the nest site should be completed soon after leaving the area. This information may be used for follow-up monitoring by an appropriately permitted individual (Halterman et al. 2016).
7. Non-indigenous plants and animals can pose a significant threat to YBCU habitat and may be unintentionally spread by field personnel, including those conducting surveys. Simple avoidance and sanitation measures can help prevent the spread of these organisms to other environments. To avoid being a carrier of non-indigenous plants or animals from one field site to another, visually inspect and clean your clothing, gear, and vehicles before moving to a different field site. A detailed description on how to prevent and control the spread of these species is available by visiting the Hazard Analysis and Critical Control Point Planning for Natural Resource Management web site (<http://www.haccp-nrm.org> (<http://www.haccp-nrm.org>)). Several non-native species of concern in survey locations are: the tamarisk leaf beetle (*Diorhabda* spp.), quagga mussel (*Dreissena rostriformis bugensis*), cheatgrass (*Bromus tectorum*), red brome (*Bromus rubens*), giant salvinia (*Salvinia molesta*), water milfoil (*Myriophyllum spicatum*), parrot's feather (*M. aquaticum*), and amphibian chytrid fungus (*Batrachochytrium dendrobatidis*) (Halterman et al. 2016).
8. Permittees shall note if YBCUs are fitted with attachments such as transmitters with antennae or geolocators and/or marked with a silver aluminum band and/or color bands. If banded birds are sighted and the band combination can be determined without disturbing the birds, note the number of bands, colors, and band location and sequence on the birds' legs (e.g., blue over pink over silver left leg/red over yellow right leg).
9. If banded YBCUs are sighted when surveying in Arizona, Permittees must contact Meaghan Conway at **meaghan_conway@fws.gov** at the Arizona ESFO within 24 hours. If banded YBCUs are sighted when surveying in New Mexico, Permittee must contact Jennifer Davis at **jennifer_l_davis@fws.gov** at the New Mexico ESFO within 24 hours. If banded YBCUs are sighted when surveying in Texas, Permittees must contact Michael Warriner at **michael_warriner@fws.gov** at the Texas ESFO Austin Sub-Office within 24 hours.



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10. Permittees must possess valid State permits where required and follow terms and reporting requirements. This Federal recovery permit is not valid without the necessary state permits, which may differ between states. It is the responsibility of the Permittees to ensure that they have the proper permits in the states in which surveys will be conducted.

11. For annual reports, Permittees are required to furnish digitally: (1) copies of all field data forms with positive or negative survey results; (2) copy of USGS quad/topographical map or similar (REQUIRED) of survey area, outlining survey site and location of cuckoo detections; (3) sketch or aerial photo (preferred) showing site location, patch shape, survey route covered during each survey, location of any detected cuckoos or their nests; (4) photos (if taken) of the interior of the patch, exterior of the patch, and overall site and (5) bird photos (if taken) to the appropriate ESFO listed above in Section G (***meaghan_conway@fws.gov***, ***jennifer_l_davis@fws.gov***, ***michael_warriner@fws.gov***). Permittees will be responsible for making sure that they submit the appropriate data to the states in which surveys were conducted. Permittees must complete the forms digitally (Excel posted at <http://www.fws.gov/southwest/es/arizona/Yellow.htm> (<http://www.fws.gov/southwest/es/arizona/Yellow.htm>)) and submit them via email with attached topographic maps, GIS data (i.e., shapefile, personal or file geodatabase), and photographs. Photographs and topographic maps may be in pdf format to reduce file size. Results must be furnished by October 15, following each survey season covered by this permit (***meaghan_conway@fws.gov*** for Arizona, ***jennifer_l_davis@fws.gov*** for New Mexico, ***michael_warriner@fws.gov*** for Texas). These survey requirements will replace the annual USFWS reporting activities for this species.

12. Permittees are not authorized to monitor nests, mist net, capture, handle, band, or fit cuckoos with geolocator or telemetry gear unless indicated below. Permittees must submit a nest monitoring study plan for review prior to approval.

Literature Cited:

Halterman, M., M.J. Johnson, J.A. Holmes, and S.A. Laymon. 2016. A Natural History Summary and Survey Protocol for the Western Distinct Population Segment of the Yellow-billed Cuckoo.

WHOOPING CRANE

EE. Rick Phillips, Mark Kainer, Nick Wallisch, Bonnie Doggett, Clifton Ladd, Jason Schindler, Lon Grassman, Gabriela Casares, and Gary Gilbraith (Permittees) are authorized for research and recovery purposes to conduct visual surveys only for whooping crane (*Grus americana*) within Texas. For reported sightings and/or salvage, please contact:

Wade Harrell
USFWS Whooping Crane Coordinator
Aransas NWR at 361/286-3559, ext. 221

AQUATIC SPECIES DISEASE CONTROL PROTOCOL

FF. To prevent inadvertent movement of disease or parasitic organisms among sites, research and management activities shall conform to the Declining Amphibians Population Task Force Fieldwork Code of Practice (<https://www.fws.gov/media/declining-amphibian-task-force-fieldwork-code-practice> (<https://www.fws.gov/media/declining-amphibian-task-force-fieldwork-code-practice>)), with the exception that 10% bleach solution, quaternary ammonia (Quat 128), or 1 mg per ml Virkon® should be used to clean equipment rather than 70% ethanol.



HOUSTON TOAD

GG. Gary Galbraith, Travis Coats, Catherine Wiggins, Don Blanton, Rick Phillips, Kim Jenkins-Johnson, Mark Kainer, Jason Schindler, Michael Green, Michael Nance, Clifton Ladd, Brent Hall, Lon Grassman, Gabriela Casares, Patsy Turner, Eddie Vasser, John McWilliams, Alvin Lyckman, Elizabeth Hauss, Clay Fischer, Bonnie Doggett, Karen Perez, John Kuhl, and Jasmine Hernandez (Permittees) are authorized for scientific research and recovery purposes to conduct presence/absence surveys for the Houston toad (*Bufo houstonensis*). Permittees are authorized to collect by hand and temporarily capture "salvaged" Houston toads prior to transport. Salvaged Houston toads are individuals (adults, eggs, tadpoles, or juveniles) from areas or under conditions that will likely result in their desiccation or destruction. Permittees are authorized to conduct or oversee projects associated with research or management of the Houston toad. **All research or management activities shall be reviewed and approved in writing by the RCC Branch of the Austin ESFO through the submission of a study plan prior to implementation.**

Permittees are authorized to collect by hand and temporarily capture "salvaged" Houston toads prior to transport. Salvaged Houston toads are individuals (adults, eggs, tadpoles, or juveniles) from areas or under conditions that will likely result in their desiccation or destruction.

Permittees are authorized to conduct or oversee projects associated with research or management of the Houston toad. All research or management activities shall be reviewed and approved in writing by the RCC Branch of the Austin Ecological Services Field Office through the submission of a study plan prior to implementation.

Permittees are also authorized for the following activities associated with the hand collection and capture of Houston toads: (1) searching for Houston toads under debris piles and (2) handling Houston toads for the purposes of identification and collection. The following permit conditions apply:

Surveys

1. Methodology and reporting for Houston toad surveys must follow the USFWS Section 10(a)(1)(A) Scientific Permit Requirements for Conducting Houston Toad Presence/Absence Surveys. This document can be found at the following website:
http://www.fws.gov/southwest/es/Documents/R2ES/Houston_toad_survey_requirements.pdf

Please refer to this website on or before January 1st each year before initiating Houston toad surveys, as this document may be updated annually.

Collection of Salvaged Houston Toads

2. Salvaged individuals will be transported to the Welsh property in Bastrop County, Texas and released into field exclosures or into the Houston toad headstarting facility until they can be returned to the wild. Permittees are authorized to return salvaged individuals to the wild only after coordinating the selection of the new site with the RCC Branch of the Austin ESFO and receiving written approval for their release at this site. Alternatively, if salvaged individuals would be of benefit to the Houston toad captive breeding or captive assurance colony, they may be transported to the Houston Zoo.



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3. Permittees will coordinate with Dr. Michael Forstner, Texas State University or other individuals permitted to transport Houston toads immediately following the collection of salvaged individuals, so that Houston toads may be promptly transferred to the facilities on the Welsh property or the Houston Zoo.
4. Any mortality resulting from the above activities should be reported to the RCC Branch of the Austin ESFO within 24 hours.
5. Permittees are authorized to collect dead Houston toads. Specimens will be deposited with the Texas Cooperative Collection of Texas A&M University, College Station, Texas.
6. Annual reports must include the following: (1) dates that each Houston toad was collected and transported; (2) the locations at which collections took place on each date; and (3) observations on the physical condition of each Houston toad collected.

Research and Management Activities

7. Efforts will be made to minimize stress to all salamanders that are handled and released.
8. Permittees are to follow the "Fieldwork Code of Practice" developed by the Declining Amphibian Task Force, "Guidelines for use of live amphibians and reptiles in field and laboratory research (2nd edition, Herpetological Animal Care and Use Committee of the American Society of Ichthyologists and Herpetologists, available on-line at www.asih.org (<http://www.asih.org>)).
9. Employees not mentioned above, including staff, interns, and volunteers may conduct activities authorized for these species **only under the direct, on-site supervision of a Permittee.**
10. Annual reports must include the following: (1) dates that any of the above listed research or management activities were conducted; (2) number of Houston toads captured, tagged, and/or tissue-sampled at each location; (3) means by which toads were captured; (4) all data collected from captured toads such as length, weight, and number of times an individual was captured; (5) any notable observations on the physical condition of each Houston toad captured; and (6) any other results, analyses (genetic or otherwise), or reports resulting from all of the permitted activities listed above.

BARTON SPRINGS and AUSTIN BLIND SALAMANDERS

HH. Clifton Ladd and Gabriela Casares (Permittees) are authorized for scientific research and recovery purposes to conduct presence/absence surveys, harry/herd, conduct research on, temporarily collect while conducting habitat restoration efforts, and map new locations for the Barton Springs salamander (*Eurycea sosorum*) and Austin blind salamander (*Eurycea waterlooensis*). Permittees are also authorized collect voucher specimens of these species from undocumented locations. The following permit conditions also apply:

1. Each Permittee is authorized to collect (for positive identification) no more than **three** adult voucher specimens (each) of Barton Springs and Austin blind salamanders. Voucher specimens must be collected from previously **undocumented** locations. Salamanders collected as voucher specimens should be maintained or preserved as follows (in order of preference):



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- a. maintained alive in aquaria with spring ambient conditions for the short-term (one or two weeks unless otherwise approved by the Austin ESFO in writing) until disposition of tissue samples (i.e., liver, muscle, or both) and the voucher specimen can be arranged, or
 - b. fixated in 95 to 100 percent ethanol (not denatured), or
 - c. (i) have the liver tissue (or other mitochondrial DNA-rich tissue such as muscle) excised and preserved in 95 to 100 percent ethanol or ultra cold conditions [-49°F to -121°F (-45°C to -85°C)], (ii) the rest of the specimen be fixed in 10 percent buffered formalin solution for 1 day, (iii) rinsed in water at least three times (rinse an additional two times after the formalin smell is completely gone), and (iv) be preserved in 95 to 100 percent ethanol).
2. Newly discovered localities for Barton Springs salamander and Austin blind salamander will be reported with precise locality information within 30 days of collection to: (a) Dr. Andrew Gluesenkamp, TPWD, Austin (512-389-8722) and (b) Paige Najvar, USFWS, Austin ESFO (512-490-0057, ext. 229).
 3. Voucher specimens must be delivered with precise locality and observer information within 30 days of collection to either the Texas Natural History Collections at University of Texas-Austin, the Amphibian and Reptile Diversity Research Center at University of Texas-Arlington, Dr. Andrew Gluesenkamp (Texas Parks and Wildlife Department, at (512) 389-8722), or another public facility approved by the Austin ESFO in writing.
 4. Information (such as the number and species of observed, handled, and marked; dates and times of survey attempts; and the behavior and condition of salamanders marked) for unlisted neotenic salamanders is appreciated, but not required.
 5. All habitat restoration activities that will require the temporary collection of Barton Springs or Austin blind salamanders shall be reviewed and approved in writing by the RCC Branch of the Austin ESFO prior to implementation.
 6. Previously documented locations must be acquired prior to surveying. Sources for documented localities include but are not limited to the Barton Springs Salamander Recovery Plan (USFWS 2005) and information from the Texas Parks and Wildlife Department and the USFWS - Austin Ecological Services Office. No surveys will be conducted within the following locations: Barton Springs complex (including Upper Barton Springs, Barton Springs swimming pool, Eliza springs, and Sunken Garden Spring).
 7. Cave clothing and equipment will be thoroughly cleaned between visits to sites in different spring systems.
 8. Efforts will be made to minimize stress to all salamanders that are handled and released.
 9. Employees not mentioned above, including staff, interns, and volunteers may conduct activities authorized for these species **only under the direct, on-site supervision of a Permittee.**
 10. Permittees are to follow the "Fieldwork Code of Practice" developed by the Declining Amphibian Task Force, "Guidelines for use of live amphibians and reptiles in field and laboratory research (2nd edition, Herpetological Animal Care and Use Committee of the American Society of Ichthyologists and Herpetologists, available on-line at www.asih.org).



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11. The annual report must include: (1) the locations that were surveyed identified on either a USGS topographic map (7.5 minute or larger scale) or on a GIS (Geographic Information System) layer with reference layers such as roads, political boundaries, and Digital Ortho Quarter Quads (DOQQs) with survey results (**both positive and negative**) including number and species of salamanders observed, (2) the number and species of salamanders handled and collected as voucher specimens, (3) dates and times of survey attempts, (4) any observations on the behavior and condition of salamanders handled and/or marked, (5) the approximate lengths of salamanders handled or observed, and (6) the location and accession numbers of any voucher specimens deposited in curated collections, as appropriate.

12. Research/management activities – Permittees are authorized to conduct or oversee projects associated with research or management of the Barton Springs and Austin blind salamanders. All research or management activities shall be reviewed and approved in writing by the RCC Branch of the Austin ESFO through the submission of a study plan prior to implementation.

TEXAS BLIND and SAN MARCOS SALAMANDERS

II. Clifton Ladd and Gabriela Casares (Permittees) are authorized for scientific research and recovery purposes to conduct presence/absence surveys, document, conduct research on, and map new locations for the San Marcos salamander (*Eurycea nana*) and the Texas blind salamander (*Eurycea rathbuni*). Methods developed by Nelson (1993) for salamander surveys are recommended. The following permit conditions also apply:

1. Each permittee is authorized to collect (for positive identification) no more than **three** adult voucher specimens (each) of the San Marcos and Texas blind salamanders. Voucher specimens of the San Marcos salamander must be collected from previously **undocumented** locations. Voucher specimens of the Texas blind salamander must be collected from previously **undocumented** locations or locations that have not been collected from since January 1, 2005 (check with Austin ESFO prior to conducting surveys for this information). Salamanders collected as voucher specimens should be maintained or preserved as follows (in order of preference):

a. maintained alive in aquaria with spring ambient conditions for the short-term (one or two weeks unless otherwise approved by the Austin ESFO in writing) until disposition of tissue samples (i.e., liver, muscle, or both) and the voucher specimen can be arranged, or

b. fixated in 95 to 100 percent ethanol (not denatured), or

c. (i) have the liver tissue (or other mitochondrial DNA-rich tissue such as muscle) excised and preserved in 95 to 100 percent ethanol or ultra cold conditions [-49°F to -121°F (-45°C to -85°C)], (ii) the rest of the specimen be fixed in 10 percent buffered formalin solution for 1 day, (iii) rinsed in water at least three times (rinse an additional two times after the formalin smell is completely gone), and (iv) be preserved in 95 to 100 percent ethanol.

2. Voucher specimens must be delivered with precise locality and observer information within 30 days of collection to either the Texas Natural History Collections at University of Texas-Austin, the Amphibian and Reptile Diversity Research Center at University of Texas-Arlington, Dr. Andrew Gluesenkamp (Texas Parks and Wildlife Department, at (512) 389-8722), or another public facility approved by the Austin ESFO in writing.



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3. Information (such as the number and species of observed, handled, and marked; dates and times of survey attempts; and the behavior and condition of salamanders marked) for unlisted neotenic salamanders is appreciated, but not required.
4. Previously documented locations must be acquired prior to surveying. Sources for documented localities include but are not limited to the San Marcos and Comal Springs and Associated Aquatic Ecosystems (revised) Recovery Plan (USFWS 1996) and information from TPWD and the USFWS Austin ESFO (512 490-0057).
5. No surveys will be conducted within the following locations: springs encompassed by Spring Lake and the San Marcos River from the Spring Lake Dam to the University Street bridge; or the artesian well on the campus of Texas State University.
6. Cave clothing and equipment will be thoroughly cleaned between visits to sites in different spring systems (e.g., between sites in Comal Springs and San Marcos Springs).
7. Efforts will be made to minimize stress to all salamanders that are handled and released.
8. Newly discovered localities for the San Marcos salamander and Texas blind salamander will be reported with precise locality information within 30 days of collection to: (a) Dr. Andrew Gluesenkamp, TPWD, Austin (512-389-8722) and (b) Patrick Connor, USFWS, Austin ESFO (512-490-0057, ext. 227).
9. San Marcos salamander and Texas blind salamander voucher specimens will be deposited in a curated collection within 30 days of collection from the wild. The name and location of the collection in which voucher specimens were deposited and the accession numbers of each individual salamander must be provided in the annual report to the USFWS.
10. Any surveys for the San Marcos salamander on the upper San Marcos River below University Drive will be coordinated with Patrick Connor, USFWS – Austin ESFO (512-490-0057, ext.227) prior to being conducted.
11. While suspended traps may be used, they will not be used in any well or cave locations known as a source for Texas blind salamanders. Care shall be taken to ensure that no traps are lost in any cave.
12. Employees not mentioned above, including staff, interns, and volunteers may conduct activities authorized for these species **only under the direct, on-site supervision of a Permittee.**
13. Permittees are to follow the “Fieldwork Code of Practice” developed by the Declining Amphibian Task Force, “Guidelines for use of live amphibians and reptiles in field and laboratory research (2nd edition, Herpetological Animal Care and Use Committee of the American Society of Ichthyologists and Herpetologists, available on-line at www.asih.org).
14. Research/management activities – Permittees are authorized to conduct or oversee projects associated with research or management of the San Marcos and Texas blind salamanders. All research or management activities shall be reviewed and approved in writing by the Austin ESFO through the submission of a study plan prior to implementation.

JOLLYVILLE PLATEAU, GEORGETOWN, and SALADO SALAMANDERS



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JJ. Clifton Ladd, Gabriela Casares, and Elizabeth Hauss (Permittees) are authorized for scientific and recovery purposes to monitor populations; survey; capture; handle; measure; photograph; and immediately release unharmed at the captive site an unlimited number of Georgetown (*Eurycea naufragia*), Jollyville Plateau (*Eurycea tonkawae*), and Salado (*Eurycea chisholmensis*) salamanders within known sites and previously undocumented locations, including springs, spring runs, streams, caves, wells, or boreholes. In order for the Service to coordinate monitoring studies among different permit holders, Permittees must submit a request to the Austin Ecological Services Field Office (ESFO) (Attn: Recovery and Candidate Conservation Branch) that identifies which known sites will be monitored. **The Permittees must receive written approval from the Austin ESFO prior to implementation of monitoring at known sites not identified in the permit application.**

1. Voucher specimens – Permittees are authorized to collect no more than three adult voucher specimens (for positive identification) per site **from previously undocumented locations**. No more than one voucher specimen per year may also be collected from known locations if the individual salamander appears to be significantly different than other salamanders normally observed at that site.
2. Salamander surveys - All demographic monitoring of salamander populations and presence/absence surveys **must follow the methodology and reporting as described in the most current version of the document: "Section 10(a)(1)(A) Scientific Permit Requirements For Conducting Georgetown, Jollyville Plateau, and Salado Salamander Surveys."** This document can be found on the Austin ESFO website. Please refer to this website on or before January 1st each year before initiating salamander surveys, as this document may be updated annually.
3. Tail clipping – Permittees are authorized to take tail clips from Georgetown, Jollyville Plateau, and Salado salamanders in known locations in the wild for the purpose of obtaining genetic information. All tail clipping activities will be coordinated with the RCC Branch of the Austin ESFO prior to implementation. **Coordination will be accomplished through the submission and written approval of a study plan prior to obtaining tail clips.** No more than 20 percent or 5 mm (0.2 in) of the tail (whichever is less) may be clipped.
4. Research/management activities – Permittees are authorized to conduct or oversee projects associated with research or management of the Georgetown, Jollyville Plateau, and Salado salamanders. **All research or management activities shall be reviewed and approved in writing by the Austin ESFO through the submission of a study plan prior to implementation.** Any results from these activities must be included in annual reports.
5. Water quality sampling – Permittees are authorized for scientific and recovery purposes to conduct water quality sampling in areas occupied by the Georgetown, Jollyville Plateau, and Salado salamanders. Efforts shall be made to minimize disturbance to salamander habitat during sampling events. Any results from this sampling and the lab that analyzed the samples must be included in annual reports.
6. The following conditions also apply:
 - a. Employees not mentioned above, including staff, interns, and volunteers may conduct activities authorized on this permit **only under the direct, on-site supervision of a Permittee.**
 - b. Efforts will be made to minimize stress to all salamanders that are handled and/or released.



COMAL SPRINGS RIFFLE BEETLE, COMAL SPRINGS DRYOPID BEETLE, AND PECK'S CAVE AMPHIPOD

KK. Clifton Ladd (Permittee) is authorized for scientific research and recovery purposes to conduct presence/absence surveys, document, and map locations for the Comal Springs riffle beetle (*Heterelmis comalensis*), Comal Springs dryopid beetle (*Stygoparnus comalensis*), and Peck's Cave amphipod (*Stygobromus pecki*). The following permit conditions also apply:

1. The Permittee is authorized to collect (for positive identification) no more than three adult voucher adult voucher specimens (each) of the Comal Springs riffle beetle, Comal Springs dryopid beetle, and Peck's cave amphipod. Voucher specimens of all species may only be collected from previously undocumented locations. Documented locations currently include: Comal Springs, Hueco Springs, San Marcos Springs, Sessoms Creek Springs, and Fern Bank Springs.
2. Employees not mentioned above, including staff, interns, and volunteers may conduct activities authorized on this permit only under the direct, on-site supervision of a Permittee.

DIAMOND TRYONIA, GONZALES TRYONIA, PHANTOM TRYONIA, PHANTOM SPRINGSNAIL, PECOS AMPHIPOD, PECOS ASSIMINEA, AND DIMINUTIVE AMPHIPOD

LL. Clifton Ladd (Permittee) is authorized for scientific research and recovery purposes to conduct presence/absence surveys according to approved USFWS protocols, map locations, and collect (for positive identification) no more than 3 voucher specimens per survey location of the following federally protected species in Texas:

- Diamond tryonia (*Pseudotryonia adamantina*)
- Gonzales tryonia (*Tryonia circumstriata*)
- Phantom tryonia (*Tryonia cheatumi*)
- Phantom springsnail (*Pyrgulopsis texana*)
- Pecos amhipod (*Gammarus pecos*)
- Diminutive amphipod (*Gammarus hyalleloides*)
- Pecos assiminea (*Assiminea pecos*)

In addition, the following conditions apply:

1. All surveys will be conducted in previously **undocumented locations** or locations where the species are **believed extirpated only**. No authorization is given to conduct surveys within areas where the species is currently known to occur without prior written approval from the USFWS, Austin Ecological Services Field Office (Austin ESFO) (contact Paige Najvar, (512) 490-0057).
2. Voucher specimens of these species collected from previously undocumented locations should be provided to the Texas Memorial Museum of the University of Texas at Austin within one year of collection unless alternative arrangements have been approved in writing by the Austin ESFO. Specimens must be preserved in: (1) a minimum of 95 percent non-denatured ethanol without formalin or (2) ultra-cold conditions [-49°F to -121°F (-45°C to -85°C)] unless an alternative preservation method has been approved by the Austin ESFO.



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3. The Permittee must ensure that all equipment that comes in contact with water or wet soil is thoroughly cleaned and decontaminated between aquatic sites. To prevent inadvertent movement of disease or parasitic organisms among sites, research and management activities shall conform to the Declining Amphibians Population Task Force Fieldwork Code of Practice (<https://www.fws.gov/media/declining-amphibian-task-force-fieldwork-code-practice> (<https://www.fws.gov/media/declining-amphibian-task-force-fieldwork-code-practice>)), with the exception that 10% bleach solution, quaternary ammonia (Quat 128), or Virkon® should be used to clean equipment rather than 70% ethanol.

Annual Reporting Requirements: The Permittee will maintain organized data records for required annual reports. Annual reports are to be sent to the USFWS – Austin ESFO, 10711 Burnet Road, Suite 200, Austin, Texas 78758 on or before December 15 of each year. Reports shall include results of all activities authorized by this permit, including (1) dates and times of collection activities, (2) the specific locations of collections with pictures and maps (preferably identified on either USGS topographic map, 7.5 minute or larger scale, or on GIS (Geographic Information System) layer with reference layers such as roads, political boundaries, and Digital Ortho Quarter Quads (DOQQs), (3) a description of the current conditions of the collection sites, with an emphasis on noting any unusual conditions such as extremely low water levels, any noticeable effects of prolonged drought, vegetation overgrowth or encroachment into the aquatic habitat, significant ground disturbance in or around the site, and/or any conditions which may indicate a possible pollutant or contamination of the site, (4) the total number of individuals collected from each location, and (5) any other significant biological findings. Additionally, copies of any reports or publications associated with the invertebrates collected under this permit should also be provided to the Austin ESFO when available.

KARST INVERTEBRATES

MM. Clifton Ladd (Permittee) is authorized for scientific research and recovery purposes to 1) conduct presence/absence surveys, 2) document and map locations of, 3) supervise personnel conducting excavation if it is being done as part of implementing these protocols, and 4) collect (for positive identification) the following federally listed species from Travis, Williamson, and Bexar Counties.

Bexar County

Rhadine exilis (ground beetle, no common name)
Rhadine infernalis (ground beetle, no common name)
Batrises ventyivi (Helotes mold beetle)
Texella cokendolpheri (Cokendolpher cave harvestman)
Cicurina baronia (Robber Baron Cave meshweaver)
Cicurina madla (Madla Cave meshweaver)
Cicurina venii (Bracken Bat Cave meshweaver)
Cicurina vespera (Government Canyon Bat Cave meshweaver)
Tayshaneta (= *Neoleptoneta*) *microps* (Government Canyon Bat Cave spider)

Travis & Williamson Counties

Tayshaneta (= *Neoleptoneta*) *myopica* (Tooth Cave spider)
Tartarocreagris texana (Tooth Cave pseudoscorpion)
Texella reddelli (Bee Creek Cave harvestman)
Texamauropis reddelli (Kretschmarr Cave mold beetle)
Rhadine persephone (Tooth Cave ground beetle)



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Texella reyesi (Bone Cave harvestman)

Batrissodes texanus (Coffin Cave mold beetle)

The following conditions also apply:

1. Methodology and reporting must follow the most recent version of the **USFWS Section 10(a)(1)(A) Scientific Permit Requirements for Conducting Presence/Absence Surveys for Endangered Karst Invertebrates in Central Texas** posted at <https://www.fws.gov/library/collections/terrestrial-karst-invertebrates> (<https://www.fws.gov/library/collections/terrestrial-karst-invertebrates>). As this document may be updated annually, please refer to this website on June 1st of each year before initiating any karst invertebrate surveys.
2. Permittee is not authorized to enter or collect endangered species from sites previously known to be occupied unless a recovery research proposal (formerly referred to as monitoring plans) is approved in writing by the Austin ESFO or unless specifically requested to do so by the Service in writing as a part of maintaining a reference library of voucher specimens of listed species for research purposes.
3. No more than a cumulative total of three specimens per genus (of the endangered species above) per cave over the duration of the fourteen presence/absence surveys may be collected.
4. Permittee must provide direct on-site supervision of any assistants and also ensure that they collect no more than the total number of voucher specimens approved per survey location.
5. All personnel entering a cave that may contain bats or bat habitat should follow the white-nosed bat syndrome decontamination procedures (dated April 2016 or most current version) found at: <https://www.whitenosesyndrome.org/topics/decontamination> (<https://www.whitenosesyndrome.org/topics/decontamination>).

In addition to directly assisting Karst Invertebrate Permittees in above activities, Margaret Behnke, under the responsible charge of a Permittee, is authorized to independently 1) conduct karst invertebrate biota monitoring and collection activities as part of an established, Service-approved, monitoring plan 2) conduct construction void monitoring/collecting activities, if part of an established, Service-approved, protocol under a biological opinion or Section 10(a)(1)(B) permit and 3) enter caves with listed species for purposes of mapping, provided it does not interfere with survey efforts. All other terms and conditions of the permit apply.

AMERICAN BURYING BEETLE

NN. Doug Hagemeier (Permittee) is authorized for scientific recovery purposes to survey for American burying beetle (ABB) (*Nicrophorus americanus*) within Oklahoma and Texas as described below:

1. All of the documents listed below can be downloaded from the Oklahoma ESFOs ABB website at http://www.fws.gov/southwest/es/oklahoma/ABB_Add_Info.htm (http://www.fws.gov/southwest/es/oklahoma/ABB_Add_Info.htm). All forms must be complete; any incomplete forms will be returned as insufficient.



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2. Contact the Oklahoma ESFO or visit their website annually between April 1st and May 1st for the current version of all of the following guidance, protocols, and forms. It is the responsibility of the Permittee to ensure they have the most recent version of the protocols to be used in the state for which surveys will be performed.

Presence/absence survey activities:

3. Survey and collection methods must adhere to those identified in the Oklahoma ESFOs most recent *ABB Survey Guidance*.

a. Permittees authorized to work in the above named states must coordinate all survey activities with the local ESFO in the respective state prior to survey implementation and should apply for appropriate state permits as needed (i.e., State Scientific Collectors Permit).

Research conducted to aid in the recovery of the ABB where individuals are held for more than 3 hours:

4. The details of each research proposal need to be finalized with the species national lead, Kevin Stubbs, at 918/382-4516 (ESFO phone numbers are listed above in section G) and coordinated with the local ESFO.

a. Modifications to research proposals must be coordinated with the species national lead and with the local ESFO.

b. All data collected, reports, and publications generated must be made available to the Oklahoma ESFO and to the respective local ESFO.

5. Trapping and relocation as an avoidance measure, or to mitigate for project impacts is not permitted.

Incidental death or injury of ABBs:

6. All ABB deaths must be reported to the Oklahoma ESFO and local ESFO.

a. ABB specimens should be preserved according to the appropriate ESFO requirements and deposited in an institution approved by the appropriate ESFO.

b. When the number of ABBs killed annually exceeds two individuals, operation must cease by the following workday and the appropriate ESFO and Albuquerque Regional Office must be contacted immediately or if on a weekend, the following Monday. See condition G above for contact information.

c. Reporting requirements for all ABB deaths:

i. An *ABB Accidental Death Form* must be completed for each individual specimen. This form must be completed and submitted to the Oklahoma ESFO and the local ESFO within 14 calendar days of the ABB death.

ii. An *ABB Accidental Death Summary Report* must be submitted to the Oklahoma ESFO and the local ESFO annually by October 31 of each year. This *ABB Accidental Death Summary Report* must be submitted electronically (without the *ABB Accidental Death Forms*) to the Oklahoma ESFO via electronic mail to **abbcontact@fws.gov**, or compact disc via regular mail to the address provided above.



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iii. ABB specimens are to be deposited at an institution authorized by the Oklahoma ESFO or the local ESFO. Each ABB specimen submitted for deposit must be accompanied by a copy of the corresponding *ABB Accidental Death Form*.

iv. All dead or moribund ABBs will remain the property of the USFWS. The Oklahoma ESFO or the local ESFO will indicate an acceptable public depository. Specimens are not to be destroyed.

v. ABB specimens are to be preserved as stipulated by the Oklahoma ESFO or the local ESFO.

Reporting requirements:

7. All ABB surveys must be reported to the Oklahoma ESFO and coordinated with the local ESFO.

a. Reporting requirements for all ABB Surveys include *ABB Survey Data Collection Form*, *ABB Survey Summary Report*, photos of captured ABBs, and any supplemental area maps and/or weather data. Details are as follows:

i. Permittee is to utilize and complete an ABB Survey Data Collection Form for each night of survey effort. These forms can be found on the Oklahoma ESFO ABB website at: https://www.fws.gov/southwest/es/oklahoma/ABB_Add_Info.htm (https://www.fws.gov/southwest/es/oklahoma/ABB_Add_Info.htm).

ii. A PDF (or similar format) of all field copies of the *ABB Survey Data Collection Form* should be created and must be submitted electronically to the Oklahoma ESFO and the local ESFO within 30 days of survey efforts. All forms must be complete, any incomplete forms will be returned as insufficient. In Oklahoma, all *ABB Survey Data Collection Forms* must be accompanied by an *ABB Summary Report*, photos of captured ABBs, and any supplementary maps and/or weather information (see below). Permittee is to utilize and complete an *Electronic ABB Summary Report* for each survey effort. This *Electronic ABB Summary Report* (or its counterpart *USFWS Automated Surveyor Forms*) summarizes all information collected during the survey, and is to be submitted to the Oklahoma ESFO. This report can be submitted via electronic mail to **abbcontact@fws.gov** or CD via regular mail to the address provided in section G.

1. An explanation and description of each heading title and field in the above mentioned *ABB Summary Report* is available in the *ABB Summary Report Entry Guidance* from the Oklahoma ESFO website at: https://www.fws.gov/southwest/es/oklahoma/ABB_Add_Info.htm (https://www.fws.gov/southwest/es/oklahoma/ABB_Add_Info.htm).

2. Two variations of ABB data collection and summary reporting are available for use by Permittees:

Separate *ABB Survey Data Collection Form* + *ABB Survey Summary Report*. These collection forms are hardcopy and need to be converted to electronic format such as PDF for submission.

OR



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USFWS Automated Surveyor Forms. These are a combination *ABB Survey Data Collection Form-ABB Survey Summary Report*. This form combines the daily collections with the summary and is used instead of the *ABB Survey Data Collection Form* and the associated *ABB Survey Summary Report*. As the data is collected in the field electronically, it will automatically populate the corresponding fields within the summary report. However, not all fields populate and the Permittee will need to populate those fields that are not auto-filled.

Only one variation is required to be submitted. Both variations can be found on the Oklahoma ESFO ABB webpage at:

https://www.fws.gov/southwest/es/oklahoma/ABB_Add_Info.htm

(https://www.fws.gov/southwest/es/oklahoma/ABB_Add_Info.htm). [

Qualification requirements for ABB activities as they apply to Permittees and field assistants:

8. Permittees must meet the following educational and field experience requirements:

- a. Permittees must have at least a bachelor's degree in wildlife management, entomology, wildlife ecology, or similar field.
- b. Requirements for the minimum necessary field experience:
 - i. Completion of baited pitfall surveys using the most recent Range Wide Presence/Absence Survey Guidance recommended method (available on our website provided above);
 - ii. Must demonstrate ability to identify ABB (including an adult male, adult female, and young of the year),
 - iii. Must demonstrate ability to identify other species of *Nicrophorus* found within the permitted area (necessary to gain experience in distinguishing between the sex and age of the ABB and different types of *Nicrophorus* species).
- c. Field experience can be attained by one or more of the following methods:
 - i. Working with a section 10 permitted biologist currently authorized by the USFWS to conduct surveys for the ABB.
 - ii. Attending USFWS certified training (dates for training events are not regularly scheduled, and are dependent on demand and USFWS availability).

9. Field assistants, those individuals that are assisting the Permittee(s), but are not formally added to the permit, do not work independent of a Permittee, and must meet the following requirements:

- a. Must review relevant published literature to gain knowledge about the ABB,
- b. Must train under the direct supervision of the Permittee, and
- c. Must work under the direct or indirect supervision of the Permittee, as described below:



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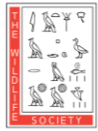
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i. Direct supervision is defined as the assistant working along-side a Permittee, in the same transect line. A field assistant must work under direct, on-site supervision until they have acquired the necessary field experience as noted above. The Permittee is responsible for being able to document that this experience has been acquired.

ii. Indirect supervision is defined as the field assistant working the same survey as the Permittee, but not necessarily the same transect. This means the Permittee needs to be in the general vicinity (i.e., less than five minutes away) to aid the assistant. A field assistant may work under the indirect supervision once they have acquired the necessary field experience.

d. Field assistants are not authorized to run traps without a Permittee present.

*****End Permit ES836329-3*****



THE WILDLIFE SOCIETY

Leaders in Wildlife Science, Management and Conservation

13 November 2020

Kory M. Armstrong, CWB®

535 River Valley Road

Atlanta, GA 30328

RE: Professional Certification Status with The Wildlife Society

Dear Kory,

This letter is to verify that you are a Certified Wildlife Biologist® through The Wildlife Society whose membership is in good standing.

The Wildlife Society was founded in 1937 and is a non-profit, scientific and professional organization representing more than 10,000 professional wildlife biologists and managers, dedicated to excellence in wildlife stewardship through science and education. Our mission is to inspire, empower, and enable wildlife professionals to sustain wildlife populations and habitats through science-based management and conservation. As part of this mission, we maintain a professional certification program to establish and recognize professional standards.

You obtained your Certified Wildlife Biologist® credential in October 2020. Per The Wildlife Society's certification policies you are required to **renew this certification every five years**. Your CWB® certificate remains valid for five years, provided you maintain current membership in the Society and you continue to uphold The Wildlife Society's Code of Ethics and Standards for Professional Conduct.

Please contact me if you have any questions regarding our professional certification program or your status as a Certified Wildlife Biologist®.

Sincerely,

Jamila Blake, AWB®

Professional Development Manager

NATIVE ENDANGERED & THREATENED SP. RECOVERY
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Issuing Office:

Department of the Interior
U.S. FISH & WILDLIFE SERVICE
Endangered Species Permit Office
5600 American Boulevard, West, Suite 990
Bloomington, MN 55437-1458
permitsR3ES@fws.gov

Permittee:

KORY M. ARMSTRONG
535 RIVER VALLEY RD.
ATLANTA, GA 30328
U.S.A.

CHIEF - ENDANGERED SPECIES

Authority: Statutes and Regulations: 16 USC 1539(a), 16 USC 1533(d); 50 CFR 17.22, 50 CFR 17.32, 50 CFR 13.

Location where authorized activity may be conducted:

Alabama, Arkansas, Connecticut, Delaware, District of Columbia, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Vermont, Virginia, West Virginia, Wisconsin, and Wyoming.

Reporting requirements:

ANNUAL REPORT DUE: 01/31

See permit conditions for reporting requirements

Authorizations and Conditions:

- A. General Conditions set out in Subpart B of 50 CFR 13, and specific Conditions contained in Federal regulations cited above, are hereby made a part of this permit. All activities authorized herein must be carried out in accord with and for the purposes described in the application submitted. Continued validity, or renewal of this permit is subject to complete and timely compliance with all applicable Conditions, including the filing of all required information and reports.
- B. The validity of this permit is also conditioned upon strict observance of all applicable foreign, state, local, tribal, or other Federal law.
- C. Valid for use by Kory M. Armstrong.
- C.1. Unnamed assistants may work on permitted activities under the direct and on-site supervision of Kory Armstrong. "On-site supervision" is defined as having the Permittee at a distance close enough to enable immediate assistance to a supervised individual, as needed, while the supervised individual conducts an authorized activity. **Kory Armstrong must remain present at each mist-net site and harp trap site while it is being operated.**
- D. Acceptance of this permit serves as evidence that the Permittee and its authorized agents understand and agree to abide by the terms of this permit and all sections of Title 50 Code of Federal Regulations, Parts 13 and

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17, pertinent to issued permits (<https://www.fws.gov/permits/ltr/ltr.html>). Section 11 of the Endangered Species Act of 1973, as amended, provides for civil and criminal penalties for failure to comply with permit Conditions.

A request for permit renewal using Application Form 3-200-59 and the \$100 application processing fee must be received **at least 30 days prior to the expiration date** of this permit to continue conducting authorized activities under the expired permit while your application is being processed (subject to compliance with 50 CFR, Parts 13.21 and 13.22: https://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&sid=a1d34199d1ab36c8b78ecd06a7fa5180&tpl=/ecfrbrowse/Title50/50cfr13_main_02.tpl). When these requirements are not met, this permit becomes invalid on the expiration date. *Unless otherwise instructed within the Authorizations and Conditions, annual reports* are due by January 31 following each year your permit is in effect and shall be submitted to all offices identified in the permit Conditions, as appropriate. The following website link provides the permit application Form 3-200-59 and the mailing address to the Bloomington, MN - U.S. Fish and Wildlife Service, Endangered Species Office: <https://www.fws.gov/endangered/permits/how-to-apply.html>.

- E. Permittee is authorized to take (capture with mist-nets or harp traps, handle, identify, band, attach radio-transmitter, collect non-intrusive measurements, and release) gray bat (*Myotis grisescens*), Indiana bat (*M. sodalis*), northern long-eared bat (*M. septentrionalis*), Ozark big-eared bat (*Corynorhinus townsendii ingens*) and Virginia big-eared bat (*C. t. virginianus*) for scientific research aimed at recovery of the species: presence/absence surveys, studies to document habitat use, population monitoring, and to evaluate potential impacts. This permit does **not** authorize the collection of voucher specimens.
- F. Activities are authorized at the following locations:
- F.1. Within the U.S. Fish and Wildlife Service (USFWS) Regional New Mexico office State: Oklahoma upon receipt of written concurrence from the Field Supervisor, and upon coordination with Ozark Plateau National Wildlife Refuge prior to 1) surveys of caves known to be used by federally-listed bats, and 2) examinations of caves suspected of containing federally-listed bat species (some presence/absence surveys may require the presence of a USFWS Biologist), and as outlined in Condition G.
 - F.2. Within the USFWS Regional Minnesota office States: Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio and Wisconsin upon receipt of written concurrence from the Field Supervisor, as outlined in Condition G.
 - F.3. Within the USFWS Regional Georgia office States: Alabama, Arkansas, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina and Tennessee upon receipt of written concurrence from the Field Supervisor, as outlined in Condition G.
 - F.4. Within the USFWS Regional Massachusetts office States: Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Virginia and West Virginia upon receipt of written concurrence from the Field Supervisor, as outlined in Condition G.
 - F.5. Within the USFWS Regional Colorado office States: Kansas, Montana, Nebraska, North Dakota, South Dakota, and Wyoming upon receipt of written concurrence from the Field Supervisor, as outlined in Condition G.
- G. Permittee shall notify and request approval from the USFWS Field Supervisor at least 15 days prior to conducting any activities. Contact information is available at: <https://www.fws.gov/midwest/endangered/permits/index.html>. Your request for this site-specific approval must be in writing and must indicate:



- G.1. Species for which proposed activities are being conducted.
- G.2. Location of proposed activities, including project site, county, and state.
- G.3. A complete description of activities (i.e., proposed project plan, including purpose and need, surveys, methods, etc.
- G.4. Dates when the project is proposed to take place.
- G.5. Evidence that Permittee has received any required contracts to complete the activities.
- G.6. Whether all annual reporting requirements have been fulfilled.

You may proceed with only the activities described in your written concurrence letter, upon receipt from the applicable USFWS Field Supervisor. ***Your concurrence letter must be carried with this permit to authorize site-specific activities.***

H. Permittee shall adhere to the following Conditions involving capture and handling of bats:

- H.1. Bats may be captured with mist nets following the protocol included in the Range-wide Indiana Bat Summer Survey Guidelines. Guidelines are available at: <https://www.fws.gov/midwest/endangered/mammals/inba/inbasummersurveyguidance.html>. Note: You must use the most up-to-date version of the Summer Survey Guidelines, available on the USFWS website page, for your summer surveys. The monitoring interval for mist nets is +/- 10 minutes and may not exceed 15 minutes. Captured bats may be held for a maximum of 30 minutes, unless injured. In extenuating circumstances, bats shall be held for no longer than 45 minutes.
- H.2. Bats may only be captured with harp traps with written concurrence from the Field Supervisor in the state in which trapping is proposed. **Harp traps must be continually monitored.** Captured bats may be held for a maximum of 30 minutes, unless injured. In extenuating circumstances, bats shall be held for no longer than 45 minutes.

Kory M. Armstrong must remain present at each mist-net site and harp trap site while it is being operated.

- H.3. Permittee shall carry out non-intrusive measurements on all captured bats. Data shall be recorded for all bats captured and include, but not be limited to, the data requested in any automated or species specific data sheet provided by the USFWS (e.g., Bat Reporting Spreadsheet). Handling should be limited to the maximum extent practicable and should cease immediately at signs of undue stress (e.g., bat becoming unresponsive, etc.). Bats that appear stressed from handling should be placed in a dark, quiet location away from activity where it can safely fly away after recovery, and should be checked to ensure successful recovery before leaving the study site. Photographs of the identifying characteristics for each individual federally-listed species captured are encouraged. The Permittee may be requested to provide individual photographs after submittal of annual reporting data.
- H.4. Lipped metal bands having a unique identifier may be applied to the forearm of captured bats prior to release. No more than one band per bat may be used. Bands should be applied to the forearm of captured bats prior to release. Position the band on the wing so that when the bat is hanging upside down, the band numbers are right-side up. A single band should be placed on the right forearm of each male and the left forearm of each female bat.

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- H.5. Radio transmitters may be applied during spring, summer, and fall roosting and migration periods via nontoxic skin bond adhesive. The total weight of the transmitter may not exceed 5% of the bat's body weight and the total weight of the package (transmitter and adhesive) may not exceed 6% of the bat's body weight. The lightest package (both transmitter and adhesive) capable of accomplishing the required task should be used, especially with pregnant females and newly volant juveniles. Bats carrying transmitters must be monitored daily for at least three days, or until the transmitter falls off, whichever occurs first. ***Although not required as a Condition of this permit, in order to gather needed information to promote the conservation of the northern long-eared bat, it is recommended that the permittee radio-track female and juvenile northern long-eared bats captured when conducting mist-netting and radio-tracking of Indiana bats within the white-nose syndrome zone of the range of the northern long-eared bat. Specifics on the number of females and juvenile bats to be tracked will be determined in coordination with the appropriate Field Office, as specified in Condition G.***
- H.6. No trapping activities shall occur within 20 meters of a known Indiana bat maternity roost site, either natural or artificial roosts, unless Permittee receives prior written approval from the USFWS Field Supervisor for the state in which the activities are proposed to occur.
- H.7. Equipment used to capture and handle bats shall be cleaned and decontaminated, including personal gear such as boots and gloves, using products cited in decontamination guidelines and in compliance with label directions. The most recent decontamination guidance is found on the web at:
<https://www.whitenosesyndrome.org/topics/decontamination>.
- H.8. Ozark big-eared bats (*Corynorhinus townsendii ingens*) and Virginia big-eared bats (*C. t. virginianus*) shall be immediately removed from the net/trap after capture, processed, and released. When there are multiple bats in the net, Ozark big-eared bats (OZBB) and Virginia big-eared bats (VABB) shall be removed first and processed as quickly as possible. If this is not possible, the species shall be placed into a **HOLDING CAGE** and held no longer than 10 minutes. Place the cage in a dark, quiet location, and process all as soon as possible. **Do not put these bat species in holding bags, nor in an individual holding bag or container** (*C. t. ingens* and *C. t. virginianus* are highly social and being held individually in a bag increases stress and can lead to mortality). Holding cage options include small rubber/plastic/vinyl coated soft-sided (mesh) pet carriers or modified standard minnow traps with rubber coated mesh where the top of the trap is either a plastic bucket or flower pot with a hole in the center (contact the OZBB or VABB Lead Recovery Biologist for further information on acceptable enclosures -- see Condition M.4. and Condition M.5., respectively, for contact information). A holding cage shall contain only multiple OZBBs, or only multiple VABBs (avoid overcrowding). Do not place other species/subspecies in either cage(s). Holding cages shall be decontaminated using the most current White-nose Syndrome decontamination guidance after a night of use (<https://www.whitenosesyndrome.org/topics/decontamination>). Do not decontaminate holding cages within a single net night.

When a OZBB or VABB appear to be going into shock (i.e., becomes limp and unresponsive), place the bat in a dark, quiet location either on a rock or other flat surface considered the safest option for the bat in that situation to recover (removed from capture activities and predators) and monitor it periodically. **Do not continue to handle the bat, nor place it in a holding cage or in a holding cage with other OZBBs or VABBs.** If the stressed bat recovers, release it immediately without an attempt to gather additional data, collect samples, apply a band or a transmitter, etc.

- I. Upon determination that endangered or threatened bats are present at previously undocumented sites, Permittee shall notify the following within 48 hours: the USFWS Regional Minnesota office Recovery Permit Coordinator (Condition L.), the Species Recovery Lead (Condition M.), and the USFWS Field Office within the geographic location of study areas (<https://www.fws.gov/midwest/endangered/permits/index.html>).

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- J. Accidental injury or mortality may not exceed two (2) specimens. In the event of any accidental injury or mortality, all activities must immediately cease. The Permittee shall immediately report (in writing) any bat mortality or serious injury to the applicable USFWS Field Office in the state in which the incident occurred (contact information provided at: <https://www.fws.gov/midwest/endangered/permits/index.html>). Written notification shall also be made within 48 hours to the Regional Minnesota office Recovery Permit Coordinator (see Condition L.) and the Species Recovery Lead (Condition M.). The Permittee's statement must document the cause of the injury or mortality, and identify all remedial measures employed by the Permittee to eliminate future mortality or injury events. Based on consultation between the USFWS offices, decisions will be made regarding remedial measures that will be implemented and whether and/or when any of the authorized activities may continue. The Species Recovery Lead Office will provide a decision within five (5) business days concerning the disposition of any injured or dead specimen. Dead or moribund bats may be retained for further study only with the written permission of the USFWS. Any bats that are not authorized for retention are to be chilled and promptly transferred to the USFWS Species Recovery Lead for potential necropsy and/or contaminants analysis. Permitted activities may resume upon receipt of written approval from the Species Recovery Lead Office.
- K. An Annual Report of all activities conducted under the authority of this permit is due by January 31 following each year this permit is in effect. In addition, copies of all publications and reports resulting from work conducted under this permit must be submitted as they become available. Failure to furnish any reports required by this permit is cause for permit revocation and/or denial of future permit applications. At a minimum, your report shall include:
- K.1. The date, time, geographic locations (including datum and projection information), species, age, sex, and weight of all bats encountered.
 - K.2. A description of locations surveyed where no bats were encountered.
 - K.3. Band numbers of all bats banded.
 - K.4. Information on any injuries and/or mortalities and disposition of specimens.
 - K.5. Location and characteristics of roost trees and bat colonies.
 - K.6. Copies of any separate reports and/or publications resulting from work conducted under the authority of this permit.
 - K.7. A completed data collection form as found in the Summer Survey Guidelines, Appendix B, cited in Condition H.1.
 - K.8. Data shall be submitted for all bats captured and include, but not be limited to, the data requested in any automated or species-specific data sheet provided by the USFWS (e.g., the data collection sheets found on the current Rangewide Indiana Bat Summer Survey Guidelines website page cited in Condition H.1., or other species specific data sheets). Photographs of the identifying characteristics for each individual federally-listed species captured are encouraged. The Permittee may be requested to provide individual photographs after submittal of annual reporting data.
 - K.9. Copies of all site-specific authorization letters required under Condition G.

IF NO ACTIVITIES OCCURRED OVER THE COURSE OF THE YEAR, INDICATION OF SUCH SHALL BE SUBMITTED AS AN ANNUAL REPORT.



L. Copies of your reports shall be sent to **all applicable offices** indicated below. Your transmittal letter (or email) must cite your Federal permit number. Electronic copies shall be submitted in MS Word, Portable Document Format, Rich Text Format, or other file format that is compatible with the receiving office (**thumb drives/flash drives cannot be accepted**).

L.1. Regional Recovery Permit Coordinator
U.S. Fish and Wildlife Service
Ecological Services - Endangered Species
5600 American Blvd. W., Suite 990
Bloomington, Minnesota 55437-1458
(612/713-5343; fax 612/713-5292)
permitsR3ES@fws.gov

L.2. Regional Recovery Permit Coordinator
U.S. Fish and Wildlife Service
Division of Classification & Recovery Permits
P.O. Box 1306
Albuquerque, New Mexico 87103-1306
(505/248-6420; fax 505/248-6922)
permitsR2ES@fws.gov

L.3. Regional Recovery Permit Coordinator
U.S. Fish and Wildlife Service
Endangered Species Permits
1875 Century Blvd.
Atlanta, Georgia 30345-3301
(404/679-7097; fax 404/679-7081)
permitsR4ES@fws.gov

L.4. Regional Recovery Permit Coordinator
U.S. Fish and Wildlife Service
Endangered Species Division
300 Westgate Center Drive
Hadley, Massachusetts 01035-9589
(413/253-8212; fax 413/253-8482)
permitsR5ES@fws.gov

L.5. Regional Recovery Permits Coordinator
U.S. Fish and Wildlife Service
Endangered Species Permits
Denver Federal Center, P.O. Box 25486
Denver, Colorado 80225-0489
(303/236-4224; fax 303/236-0027)
permitsR6ES@fws.gov

M. Additionally, based on species, reports and publications shall be submitted to the following:

M.1. ***For studies involving gray bat:***
Iwona Kuczynska



U.S. Fish and Wildlife Service
Missouri Field Office
101 Park DeVille Drive, Suite A
Columbia, Missouri 65203-0007
(573/234-2132; fax 573/234-2181)

M.2. *For studies involving Indiana bat:*

Lori Pruitt
U.S. Fish and Wildlife Service
Indiana Field Office
620 S. Walker Street
Bloomington, Indiana 47403-2121
(812/334-4261 x1213; fax 812/334-4273)

M.3. *For studies involving northern long-eared bat:*

Jill Utrup
U.S. Fish and Wildlife Service
Minnesota-Wisconsin Field Office
4104 American Blvd. E.
Bloomington, Minnesota 55425-1665
(952/252-0092; fax 952/646-2873)

M.4. *For studies involving Ozark big-eared bat:*

Richard Stark
U.S. Fish and Wildlife Service
Ozark Plateau National Wildlife Refuge
9014 East 21st Street
Tulsa, Oklahoma 74129
(918/382-4520; fax 918/581-7467)

M.5. *For studies involving Virginia big-eared bat:*

Barbara Douglas
U.S. Fish and Wildlife Service
West Virginia Field Office
6263 Appalachian Highway
Davis, West Virginia 26260
(304/704-2731)

N. Additionally, based on geographic areas, reports and publications shall be submitted to the applicable offices under "For Fish and Wildlife Permit Holders" at: <https://www.fws.gov/midwest/endangered/permits/index.html>.

cc: FWS/Region 2, 4, 5, and 6 (Attn: Regional Recovery Permit Coordinator)

FWS, TE Coordinator: Illinois/Iowa, Indiana, Michigan, Minnesota/Wisconsin, Missouri, Ohio

DNR/DOC, TE Coordinator: Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, Wisconsin

END



Office of the Secretary

PO Box 94245 | Baton Rouge, LA 70804-9245
PH: 225-379-1200 | FX: 225-379-1851

John Bel Edwards, Governor

Eric Kalivoda, Secretary

April 20, 2023

GAEA Consultants, LLC

Attn: Tonja Koob
536 Washington Ave.
New Orleans, LA 70130

Dear Tonja Koob,

The Louisiana Department of Transportation and Development (LADOTD) has received your firm's Disadvantaged Business Enterprise (DBE) and Small Business Element (SBE) annual affidavit. Based on the information, which you provided, it has been confirmed that your firm continues to meet the eligibility requirements of our program and remains certified for only the following specific work categories that fall under the listed NAICS and/or DOTD Work codes:

NC518210 – Data Processing, Hosting and Related Services
NC541330 – Engineering Services
NC541340 – Drafting Services
NC541360 – Geophysical Surveying and Mapping Services
NC541370 – Surveying and Mapping (Except Geophysical) Services
NC541611 – Administrative Management and General Management Consulting Services
NC541620 – Environmental Impact Assessment
 C20 – Environmental Impact Assessment
 C22 – Environmental Engineering
NC541690 – Other Scientific and Technical Consulting Services
NC541720 – Research and Development in the Social Sciences and Humanities
NC712110 – Museums
NC712120 – Historical Sites

Please note that per the federal regulations, suppliers only receive 60% goal credit towards the materials they provide. Also, note that any contractor performing work in excess of \$50,000 with the exception of electrical, mechanical and plumbing requires A Louisiana Contractor's License, which are required to have a license if work is in excess of \$10,000. You may contact the State Licensing Board for Contractors at (225) 765-2301 for more information. All participants of the Louisiana Unified Certification Program will recognize your firm's certification. This includes all entities receiving federal transportation funding within the boundaries of our state.

You will be required to submit an annual affidavit with all supporting documents (**Business taxes with all attachments, such as 1098, 1099, K-1's and/or W-2's**) stating your firm continues to meet the eligibility requirements of the program. An email informing you to submit the necessary documentation will be forwarded to you approximately six (6) weeks prior to your anniversary date of **March 31, 2024**. However, should you not receive notification from this office for your annual affidavit; it is your responsibility to contact us. Additionally, you must notify our office immediately regarding any changes, which affect the social and economic disadvantage, size, ownership or control of your firm.

The LADOTD has contracted with Urban League of Louisiana Center for Entrepreneurship & Innovation to provide DBE Supportive Services to all certified DBEs, in the LAUCP, at no cost to you. This consultant can offer your firm assistance and guidance on areas such as marketing, estimating, bidding, financial preparations, etc. Contact Klassi Duncan with Urban League of Louisiana Center for Entrepreneurship and Innovation at (504) 620-9647 for any assistance needed to grow your organization.

The Louisiana UCP certifying entity reserves the right to withdraw this certification, if at any time, it is determined that **DBE and SBE** certifications was knowingly obtained by the submission of false, misleading or incorrect data. The Louisiana UCP certifying entity also reserves the right to request additional information and/or conduct an on-site visit at any time during your certification period.

We are pleased to have you as a participant in the LAUCP and wish you much success.

If you have any questions regarding the content of this letter, contact the LADOTD DBE Certification Unit at (225) 379-1382.

Respectfully,

Rhonda Wallace

Rhonda Wallace

DBE/SBE Programs Manager

Enclosure (Certificate)



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Respectfully,

Rhonda Wallace

Rhonda Wallace

DBE/SBE Programs Manager

Enclosure (Certificate)



Office of the Secretary

PO Box 94245 | Baton Rouge, LA 70804-9245
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April 20, 2023

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536 Washington Ave.
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Respectfully,

Rhonda Wallace

Rhonda Wallace

DBE/SBE Programs Manager

Enclosure (Certificate)



LOUISIANA UNIFIED CERTIFICATION PROGRAM

Disadvantaged Business Enterprise Program (DBE)

Small Business Element (SBE)

This is to certify that under Title 49, Part 26 of the Code of Federal Regulations
& under the State of Louisiana United Certification Program (LAUCP)

GAEA Consultants, LLC

Is a Certified Disadvantaged Business Enterprise (DBE) & Small Business Element (SBE) in the following specialties:

**NC518210, NC541330, NC541340, NC541360, NC541370, NC541611,
NC541620, NC541720, NC712110, NC712120**

NOTE: There may be other approved NAICS Codes. The online DBE Directory includes a complete list of approved codes.

Certificate Eligibility: March 2023 to March 2024

This certificate is valid through the above date provided. This firm meets the on-going programmatic standard and fulfills the annual update requirement to remain in good standing as a DBE. This certification is subject to annual verification and suspension or revocation based upon reasonable cause to believe that the firm is ineligible.

Rhonda Wallace


Rhonda Wallace, DBE/SBE Programs Manager

Louisiana Department of Transportation & Development



LOUISIANA PROFESSIONAL ENGINEERING AND LAND SURVEYING BOARD

As of 10/11/2023, the Louisiana Professional Engineering and Land Surveying Board (LPELS) has the following information on file:

	LOUISIANA PROFESSIONAL ENGINEERING & LAND SURVEYING BOARD (LPELS)	
	9643 Brookline Avenue, Suite 121 Baton Rouge, LA 70809 Phone (225) 925-6291 www.lapels.com	
Ms. Tonja Lea Koob		
License/Certificate Type - Number	Expiration Date	
PE.0030749	09/30/2025	
Status: Active		

Please be advised that your license must be in "Active" status in order for you to (a) provide or offer to provide engineering or land surveying services in Louisiana or (b) use the words "engineer", "engineering", "land surveyor", "land surveying" or any modification or derivative thereof in your name or in connection with your business or activities in Louisiana. Licensees whose licenses are in "Retired", "Inactive", or "Expired" status are prohibited from engaging in the activities described above in items (a) and (b).

LA R. S. 37:689 requires firms practicing or offering to practice engineering or land surveying in the state of Louisiana to be licensed by the Board prior to offering such services.

(<http://www.facebook.com/pages/Baton-Rouge-LA/Louisiana-Department-of-Natural->



DEPARTMENT OF NATURAL RESOURCES

Oyster Lease Damage Evaluation Board

To request the names of the three certified biologists for selection under the rules, please send the request to:

Deputy Secretary

Louisiana Department of Natural Resources
617 North Third Street, 12th Floor
Baton Rouge, LA 70802

Certified Biologists

List updated 4/12/2023

Gabriel Johnson

MREC Environmental, LLC
3036 Pritchard Road
Marrero, LA 70072
(504) 432-3107
Gjohnson@mrecenvironmental.com (mailto:Gjohnson@mrecenvironmental.com)

David D. Hebert

248 Aris Avenue
Metairie, LA 70005
(504) 309-1144 phone
(504) 881-5777 cell
david.dallas.hebert@gmail.com (mailto:david.dallas.hebert@gmail.com)

Aaron Petty

Freese & Nichols, Inc.
10431 Morado Circle, Suite 300
Austin, TX 78759
(512) 617-3124 (o)
(832) 257-9415 (c)
aaron.petty@freese.com (mailto:aaron.petty@freese.com)

Matthew Chastain

Compass Environmental Solutions, Inc.
1625 Cottonwood School Road
Rosenburg, TX 77471
(832) 595-9064
(214) 686-6344
mchastain@compassenvs.com (mailto:mchastain@compassenvs.com)

Eldon C. Blancher, PhD B.C.E.S.

Moffatt Nichol
11 N. Water Street, Suite 20220
Mobile, AL 36602

Marissa Weber

Lloyd Engineering, Inc.
6565 West Loop South, Suite 708
Bellaire, TX 77401
(832) 426-4656 ext 215
(713) 419-3479 (cell)
marisa@lloydeng.com (mailto:marisa@lloydeng.com)

Sydney Renard

T. Baker Smith
107 Global Circle, Suite 100
Lafayette, LA 70503
(337) 735-2842
(337) 412-5632
Sydney.Renard@tbsmith.com (mailto:Sydney.Renard@tbsmith.com)

Billy J. Culpepper

Culpepper and Associates
P. O. Box 1407
Long Beach, MS 39560
(228) 518-0905
billyculpepper@gmail.com (mailto:billyculpepper@gmail.com)

Adam Trahan

T. Baker Smith
17927 Old Jefferson Hwy
Prairieville, LA 70769
(225) 744-2100 (office)
(225) 317-1491 (cell)
Adam.Trahan@tbsmith.com (mailto:Adam.Trahan@tbsmith.com)

Mark H. Gagliano

Coastal Environments, Inc.
1260 Main Street
Baton Rouge, LA 70802-4657
(225) 383-7455
(225) 383-7925 (f)
mgagliano@coastalenv.com (mailto:mgagliano@coastalenv.com)

Read Hendon

Coastal Fisheries, LLC
3300 North 1st Street
Ocean Springs, MS 39564
(228) 238-3326
coastalfisheriesllc@gmail.com (mailto:coastalfisheriesllc@gmail.com)

Dakota D. Dagenhardt

Morris P. Hebert
116 Venture Blvd.
Houma, LA 70360
(985) 879-2731 ext 3988
(985) 876-3455 (f)
DDagenhardt@mphinc.com (mailto:DDagenhardt@mphinc.com)

Kenneth King, Jr.

Delta Coast LLC
4924 Highway 311
Houma, LA 70360
(985) 655-3116
kennethk@deltacoastllc.com (<mailto:kennethK@delta>)

Joshua Curry**Morris P. Hebert**

10353 Siegen Lane Building 4-B
Baton Rouge, LA 70810
(985) 860-2693
(225) 766-5866 (f)
jcurry@mphinc.com (<mailto:jcurry@mphinc.com>)

Coy Leblanc

Fenstermaker
135 Regency Square
Lafayette, LA 70508
(337) 237-2300 ext 1139 (office)
(337) 350-0416 (cell)
coy@fenstermaker.com (<mailto:coy@fenstermaker.com>)

Caleb Bourgeois

Geosyntec Consultants, Inc
5420 Corporate Blvd, Ste 202
Baton Rouge, LA 70808
(225)929-7333 (office)
(985) 228-1293 (cell)
CalebBourgeois@Geosyntec.com (<mailto:CalebBourgeois@Geosyntec.com>)

Jason Shackelford

Freese and Nichols, Inc.
301 Main Street, Suite 2200
Baton Rouge, LA 70825
(225) 572-1655 (cell)
jkshackelford@hotmail.com (<mailto:jkshackelford@hotmail.com>)

Michael F. Rayle, Biologist

E & E Group, LLC
P.O. Box 69
Kenner, LA 70063
(504) 464-9906
(888) 203-9481 (f)
mrayle@EEGroupLLC.net (<mailto:mrayle@EEGroupLLC.net>)

Brady S. Trahan

T. Baker Smith, LLC
107 Global Circle, Suite 100
Lafayette, LA 70503
(337) 735-2800
(337) 735-2850 fax
Brady.Trahan@tbsmith.com (<mailto:brady.trahan@tbsmith.com>)

Houston, Texas 77024

(713) 854-6503

kelly.brezovar@erm.com (mailto:kelly.brezovar@erm.com)

John Cirino

Cirino Consulting Services

9212 Warbler Ave

Ocean Springs, MS 39564

(228) 875-0429

(228) 875-0429 (f)

BACK TO TOP

(<https://www.dnr.louisiana.gov/index.cfm?md=pagebuilder&tmp=home&pid=76#Top>)

Society of Wetland Scientists Professional Certification Program, Inc

grants the designation

Professional Wetland Scientist

For

Cal Randal Fontenot

In recognition of all the professional requirements approved by the Society of Wetland Scientists Certification Program, Inc.
and verified by the Society's Certification Review Panel on 07/25/19
Professional Wetland Scientist number 2836. Due to recertify by 07/25/2024.



James E. Perry, PhD, PWS
President

Robert D. Shannon, Ph.D., PWS
Review Panel Chair

JOHN BEL EDWARDS
GOVERNOR



JACK MONToucET
SECRETARY

PO BOX 98000 | BATON ROUGE LA | 70898

**OFFICE OF FISHERIES
SCIENTIFIC COLLECTING PERMIT**

ISSUED TO: **Dakota Dagenhardt**
COMPANY: **Morris P Hebert, INC**
ADDRESS: **116 Venture Blvd Houma, LA 70360**
ISSUE DATE: **24-Jan-23**

PERMITTEE # **SCP 205**

EXPIRATION DATE: **31-Dec-23**

PERMITTED ACTIVITIES:

This permit allows the holder to take the fish listed in **Attachment A** of this permit, by the means and in the areas authorized in **Attachment A**, provided that the Region Captain of the Louisiana Department of Wildlife and Fisheries, Enforcement Division is notified in advance and shall accompany you, or direct somebody to accompany you, if he deems it necessary, when fish are taken under the authority of this permit. If electric seines, electrofishers or chemicals are to be used, it will be necessary that the Area Fisheries Biologist be notified in addition to the Region Enforcement Captain. This permit does not allow anyone to use chemicals that are not approved for use in Louisiana by other state and federal agencies or exempt permit holders from any regulations by other state or federal agencies. This permit is valid only in the areas listed in **Attachment A**.

RESTRICTIONS:

- (1) This permit may be cancelled at any time if in the judgment of the designated authority; the permit is being used for purposes other than those for which the permit was issued. Sale of any organisms collected under this permit, or their progeny, is prohibited. No item collected under this permit may be used for human consumption. One of the permittees must be in the company of the samples at all times. This permit and **Attachment A** must be in possession when taking or possessing organisms under the conditions of the permit.
- (2) This permit does not allow the taking of oysters from private leases unless accompanied by written permission of the lease holder. Any sack, vessel or container into which any oysters collected under this permit are deposited or held, regardless of where harvested, shall be clearly labeled "Polluted Oysters Not Safe for Human Consumption". The permit holders shall individually and collectively be responsible for maintaining security of all oysters removed from the site and retained such that no human consumption will be possible. In addition, permit holders individually and collectively shall hold the Louisiana Department of Wildlife and Fisheries, the Louisiana Department of Health and Hospitals, the State of Louisiana and its employees harmless for any and all consequences relating to human contact with oysters collected under this permit.
- (3) In saltwater areas, gill nets must be attended to at all times with tags on each end of the net clearly identifying the owner and operator of the gear.
- (4) Alligators are not permitted to be taken with this permit.
- (5) Holder agrees to provide a summary of the research results and/or a copy of any published findings pertaining to the research and an annual report giving a detailed description and inventory of all specimens collected within 60 days following expiration of this permit to: Louisiana Department of Wildlife and Fisheries, Office of Fisheries - Permits Manager, P.O. Box 98000, Baton Rouge, LA 70898-9000. Reports are mandatory even if no collections were made during the permit year.
- (6) Failure to report may result in denial of future permit requests or suspension of existing permits.
- (7) See **Attachment A** for additional information regarding permit restrictions.

PERMIT COMPLIANCE - PERMIT IS NOT VALID UNLESS SIGNED BY PERMITTEE

I

(Permittee Signature)

agree to abide by all State and Federal fish and wildlife laws and regulations, and all State and Federal laws and regulations which relate to this permit or the permitted activity, and by all other terms and conditions of this permit.

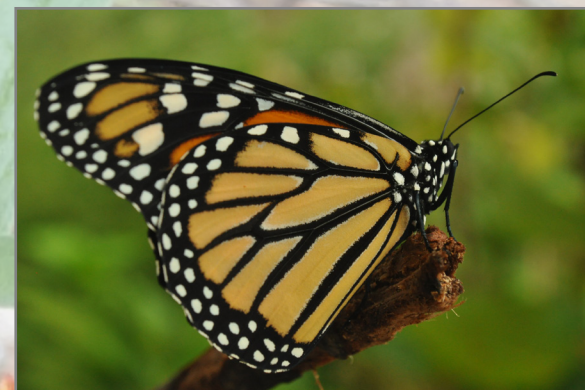
LEGAL AUTHORITY: authority delegated by the Secretary of the Louisiana Department of Wildlife and Fisheries in memo dated: 9/30/2020 LA R.S. 56:318


Robert P. Bourgeois, Biologist DCL-B

cc: Col. Chad Hebert, Enforcement

Sections 21-23

Arcadis assisted the Georgia Department of Transportation (GDOT) with development of a Roadside Habitat Suitability GIS Model for the monarch butterfly (*Danaus plexippus*), a federal Candidate species for Endangered Species Act listing. The model was developed to assist GDOT Landscape Architects with identifying suitable right-of-way to adopt for management under the Monarch Candidate Conservation Agreement with Assurances. Arcadis ecologists also assisted with ground verification of Monarch Roadside Habitat Suitability results utilizing the Rapid Assessment Tool developed by the Monarch Joint Venture.



21. QA/QC Plan:

If the advertisement requires submission of a QA/QC plan, include it here. **Otherwise, leave this section blank. If a QA/QC plan is included in this section and was not required by the advertisement, it will be redacted.**

22. Sub-consultant information:

If one or more sub-consultants will be used, provide the name, address, point of contact and phone number for each. Otherwise, leave this section blank.

Firm Name (Name must match as registered with Louisiana's Secretary of State)	Address	Point of Contact and email address	Phone Number
ICF Jones & Stokes, Inc.	3867 Plaza Tower Drive Baton Rouge, LA 70816	Lee Droppelman Lee.Droppelman@icf.com	502-548-0960
GAEA Consultants, L.L.C.	536 Washington Avenue New Orleans, LA 70130	Tonja Koob Marking Tonja.k.marking@gaeaconsultants.com	504-962-5360
Morris P. Hebert, Inc.	116 Venture Blvd. Houma, LA 70360	William "Cass" Cagle wcagle@mphinc.com	985-879-2731

(Add rows as needed)

23. Location:

If location is an evaluation criterion for this advertisement and the prime consultant intends to establish a local presence, describe the plan for doing so. **Otherwise, leave this section blank. Any information included in this section will be redacted if not required by the advertisement.**



Arcadis

10352 Plaza Americana Drive
Baton Rouge, LA 70816
T. 225 292 1004
www.arcadis.com



www.arcadis.com



Arcadis



Arcadis North America



@ARCADIS_US