

SCOPE OF WORK
NATURAL RESOURCES SUPPORT
NELLIS AIR FORCE BASE (NAFB)
Cooperative Ecosystem Studies Unit (CESU)
CESU-17-6

1. GENERAL: In accordance with FAR 7.503(e), projects for execution under this CA by USACE do not include any functions to be performed that are inherently governmental. This determination is made with the assessment that places emphasis on the degree to which conditions and facts restrict the discretionary authority, decision-making responsibility, or accountability of Government officials using recipient services or work products.

In accordance with FAR 37.104, this CA shall not be used for performance of personal services. These tasks provided by the customer for execution under this CA by USACE do not include functions to be performed that are personal services.

Any modifications to Cooperative Agreement activities as outlined by this SOW/PWS must be channeled through the Grants Officer's Technical Representative (GOTR) and Grants Officer (GO) prior to Non-Federal Entity (NFE) implementation.

NFE personnel shall also wear a distinctive NFE furnished security (ID) badge/lanyard readily identifying the individual as a NFE employee. The badge shall be worn in a conspicuous place at all times when performing work under the Cooperative Agreement including attendance at Government meetings and conferences that take place outside of the Government facility.

NFE personnel shall identify themselves as an NFE employee when answering or placing calls on a Government telephone and when leaving outgoing or incoming messages on voice mail. Use of acronyms in this identification is insufficient to meet this requirement.

All NFE email signatures shall identify them as such and will include their employer's name.

2. OBJECTIVES: The objectives of the work to be performed under this task order are to conduct natural resource tasks on the federal lands belonging to Nellis AFB, and to prepare reports detailing the results of this work for submission to the USACE Omaha District POC, AFCEC Nellis Installation Support Team (IST) POC, and Nellis AFB Natural Resource POC.

3. PERIOD OF PERFORMANCE: 18 months administrative 12 months technical

4. GOVERNMENT POCS:

USACE Omaha District POCs:

Mr. David Leptien, PM (402) 995-2742, david.b.leptien@usace.army.mil

Ms. Kali Evans, GOTR (402) 995-2295, kali.l.evans@usace.army.mil

Ms. Stephanie Rostermundt, GO (402) 995-2083, stephanie.a.rostermundt@usace.army.mil

5. TASKS PERFORMED UNDER THIS SCOPE OF WORK:

5.1. PLAN, UPDATE, INRMP (RKXF176315)

The NFE shall assist with annual review and update of Integrated Natural Resources Management Plan (INRMP) to bring it up-to-date with current laws and regulations in accordance with the Sikes Act (16 USC 670a) and with base management procedures. The update will be accomplished within ePLAN and thus requires the NFE have a Common Access Card (CAC) with appropriate certificates to access AF secure websites. Tasks may include meeting facilitation, creation of maps and other figures, as well as production of INRMP text.

INRMP Review and Stakeholder Consultation: The NFE shall conduct the necessary background research to perform an update of the existing INRMP. The NFE shall provide all the necessary labor, facilities, equipment, materials, transportation, and supplies necessary to perform the services.

The NFE shall visit the installation, as well as any Federal, State, and local agencies, as necessary, to acquire the information required to complete a coherent, comprehensive management plan.

Existing INRMP shall be distributed for review to appropriate stakeholders with a letter requesting review and comment of the current INRMP. Stakeholder contact information shall be provided by the Natural Resources Manager.

The NFE shall coordinate with the Natural Resources Manager to respond to comments received and create a comment response matrix for distribution to stakeholders. The NFE shall update the INRMP according to comments received, and submit ten (10) hard copies of the document and comment response matrix and ten (10) electronic CD copies in PDF format for distribution, final review and stakeholder's signatures.

The NFE shall attend all meetings with stakeholders to discuss comments and updates as necessary and requested by the Natural Resources Program Manager.

A Final Response to Comments Matrix document as well as the final updated INRMP with a prepared "letter of change" shall be submitted for stakeholder signature with ten (10) bound copies and ten (10) electronic copies on disks and CDs in an approved format. The letter of change format will be provided by the natural resources manager

The NFE shall provide the GIS data and an electronic final report as a Microsoft Word document and as one single PDF, including maps, supporting documentation, etc.

5.2. MONITOR WETLANDS (RKXF177312)

This study will expand upon work started on surveying the surface waters of the Nellis Test and Training Range (NTTR) for seeps and springs as authorized under the Sikes Act. This study will determine location using Global Positioning System (GPS); in addition a survey will be made to see if there are any rare, threatened or endangered plants and animals as defined under the Endangered Species Act at these locations. The Sikes Act authorizes the Secretary of Defense to develop lands for conservation and rehabilitation of military reservations. The Endangered Species Act provides a means whereby the ecosystems upon which endangered and threatened species depend may be conserved, and to provide a program for the conservation of these species. Increased pressures from the Southern Nevada Water Authority

and other agencies interested in using waters on Air Force lands make the need for this study urgent.

The purpose of this task is for the NFE to conduct seeps/springs survey and inventory on various areas on the NTTR. Areas to be studied will be prioritized based on these areas of the NTTR where outside pressures pose the largest risk to natural resources. The NFE will have adequate experience in working on wetlands/seeps/springs and determining water quality. Based on range access restrictions and mission training activities, field work will often be required to be conducted on weekends and holidays, in addition to normal weekdays. Required field work must be completed during biologically accepted activity (breeding, migratory, wintering, nesting, blooming,) seasons, based on range access availability. Surveys may be required to be conducted outside of the normal seasons if stipulated by various land/wildlife managing agencies and as approved by AFCEC/Nellis IST and the Nellis-Natural Resources Program Manager.

Scope

The overall purpose of this project is to continue to map, photograph, survey, and determine water quality and volume of each seep/spring survey on the NTTR, and provide best management practices to sustain military air training operations and readiness through ecosystem management. The project's product will be the continuation of mapping seeps and spring locations, water quality, and condition. Geographic Information System (GIS) data such as spring or seep designation, location, surrounding vegetation and wildlife use will be collected and entered into the Natural Resources GIS data base.

NFE personnel must be able to obtain clearance for NTTR and will be escorted by a Government employee/escort at all times while on the range. All specialized equipment must be cleared for use on the range prior to start of the project. The NFE will use rental or company vehicles, or helicopters, and as available Government owned vehicles (GOVs) for use on the range. No privately owned vehicles (POVs) are allowed on the range. Areas for surveys will be determined based on scheduled activities and range access.

Required photographs will be taken by a Government employee and not released for NFE use until after being cleared through the NTTR XPN office.

Initial Meeting

Within 30 days of award of this task order, the NFE will schedule an initial project kick off meeting with all parties involved (Nellis AFB, AFCEC/Nellis IST, NFEs, etc) to develop a project work schedule to implement the SOW. All deliverables/tasks will be submitted within the required timeframes as identified.

The NFE shall work with the Nellis-Natural Resources Program Manager to establish priority areas of survey areas to evaluate, map, and monitor seeps and springs on the NTTR. This determination should be made based on mission priority, range access, or by habitat priority as determined by the Nellis-Natural Resources Program Manager. Due to NTTR mission and training prioritization schedules and access restrictions, implementation of fieldwork activity/schedules may be require to be changed, as agreed upon as necessary by the NFE, AFCEC/Nellis IST and the Nellis-Natural Resources Program Manager.

Review Existing Data/Fieldwork Preparation

The NFE shall review historic wetlands, seeps, and springs data and information for the NTTR. Utilize existing datasets and GIS layers/aerial imagery to plan out locations for fieldwork and coordinate proposed locations with the Nellis-Natural Resources Program Manager at least one (1) week prior to event for coordinate and approval.

Coordinate with the Nellis-Natural Resources Program Manager to arrange and prepare for supplies, equipment, personnel, transportation, range access information, etc. in preparation for field events. Certain equipment and supplies must be picked up at Nellis AFB from the Natural Resources Program Office 1-2 days prior to the field event and returned immediately (1-2 days) after the field event is completed.

Fieldwork

The NFE will perform fieldwork for this project in order to conduct wetlands, seeps, and spring surveys and monitoring on the NTTR. Protocols for surveys will be coordinated with the Nellis-Natural Resources Program Manager during the initial meeting and included in the proposed work schedule submitted.

Draft/Draft Final/Final Project Reports

Three (3) copies of a draft project report will be submitted within 60 days of the conclusion of the field season. Nellis AFB will coordinate and consolidate Air Force comments/corrections on the draft within 30 days. Upon receipt of comments/corrections, on the draft project report, four (4) copies of a final draft project report will be submitted within 30 days for final review. Air Force review and comments on the final draft project report will be conducted within 30 days. Ten (10) hard copies and ten (10) electronic copies of the final project report will be due within 30 days upon receipt of Nellis AFB comments on the final draft project report. The project report format and contents will be approved during the initial project meeting by the Air Force. The report will include but is not limited to an executive summary, site characterization, survey methods, field notes and data sheets, results, population trend data where applicable, discussion and management recommendations, and military mission implications. Maps and drawings will be provided. All documents shall be provided in Microsoft Word and pdf formats. All photographs, data, and original data forms will be provided to 99 CES/CEIEA.

5.3. MGT, SPECIES, REPTILES AND AMPHIBIANS (RKXF177319)

This study will continue the process of surveying the Nellis Testing and Training Range (NTTR), Nellis AFB, and Creech AFB for populations of wildlife reptiles and amphibians as authorized under the Sikes Act and to determine if there are any rare, sensitive species of concern, threatened or endangered species, as defined under the Endangered Species Act, present on the NTTR, Nellis AFB, and Creech AFB. The Sikes Act authorizes the Secretary of Defense to develop lands for conservation and rehabilitation of military reservations. The Endangered Species Act provides a means whereby the ecosystems upon which endangered and threatened species depend may be conserved, and to provide a program for the conservation of these species. Currently, NTTR, Nellis AFB, and Creech AFB contain habitats for many reptile and amphibian species. Minimal data is available for the Air Force use to support or oppose potential habitat listings, resulting in the State, federal and other agencies

dictating courses of action under the Endangered Species Act. Failure to investigate these resources could result in land restrictions impacting the military mission of the Nellis Test and Training Range.

The purpose of this task is for the NFE to conduct reptile and amphibian surveys on areas on the NTTR, Nellis AFB, and Creech AFB determined as suitable habitat. Areas to be studied will be prioritized based on habitat, vegetation types and areas which might be developed in the future for military test and training missions. The NFE will have adequate experience in performing wildlife surveys, plant identification, and habitat mapping. Based on range access restrictions and mission training activities, field work will often be required to be conducted on weekends and holidays, in addition to normal weekdays. Required field work must be completed during biologically accepted activity (breeding, migratory, wintering, nesting, blooming,) seasons, based on range access availability. Surveys may be required to be conducted outside of the normal seasons if stipulated by various land/wildlife managing agencies and as approved by the Nellis-Natural Resources Program Manager.

Scope

The overall purpose of this project is to continue to document reptile and amphibian populations and seasonal habitat use on the NTTR, Nellis AFB, and Creech AFB, and provide best management practices to sustain military air training operations, readiness. The project's product will be the continuation of mapping and updating NTTR/Nellis AFB/Creech AFB reptile and amphibian populations, habitat use, and seasonal distribution. GIS data such as species occurrence, seasonal habitat use, and estimated population densities will be collected and entered into the Natural Resources GIS data base.

NFE personnel must be able to obtain clearance for the Nellis range and will be escorted by a Government employee at all times while on the range. All specialized equipment must be cleared for use on the range prior to start of the project. The NFE will use only rental or company vehicles, or Government owned vehicles (GOVs) as available, or helicopters for use on the range. No privately owned vehicles (POVs) are allowed on the range. Areas for wildlife surveys will be determined based on scheduled activities and range access.

Required photographs will be taken by a Government employee and not released for NFE use until after being cleared through the NTTR XPN office.

Initial Meeting

Within 30 days of award of this task order, the NFE will schedule an initial project kick off meeting with all parties involved (Nellis AFB, AFCEC/Nellis IST, NFEs, etc) to develop a project work schedule to implement the SOW. All deliverables/tasks will be submitted within the required timeframes as identified.

The NFE shall work with the Nellis-Natural Resources Program Manager to establish priority areas of survey areas to evaluate reptile and amphibian populations, habitats, seasonal use and species distribution on the NTTR, Nellis AFB, and Creech AFB. This determination should be made based on mission priority, range access, or by habitat priority as determined by the Nellis-Natural Resources Program Manager. Due to NTTR mission and training prioritization schedules and access restrictions, implementation of fieldwork activity/schedules may be

require to be changed, as agreed upon as necessary by the NFE, AFCEC/Nellis IST, and the Nellis-Natural Resources Program Manager.

Review Existing Data/Fieldwork Preparation

Review historic reptile and amphibian population data, and habitat use on the NTTR, Nellis AFB, and Creech AFB. Utilize existing datasets and GIS layers/aerial imagery to plan out locations for fieldwork and coordinate proposed locations with Nellis-Natural Resources Program Manager at least one (1) week prior to event for coordinate and approval.

Coordinate with the Nellis-Natural Resources Program Manager to arrange and prepare for supplies, equipment, personnel, transportation, range access information, etc. in preparation for field events. Certain equipment and supplies must be picked up at Nellis AFB from the Natural Resources Program Office 1-2 days prior to the field event and returned immediately (1-2 days) after the field event is completed.

Fieldwork

Required field work must be completed during biologically accepted seasons (breeding, migratory, wintering, nesting) as delineated for each type of survey listed below, based on range access availability. Surveys may be required to be conducted outside of the normal seasons if stipulated by various land/wildlife managing agencies and as approved by the Nellis-Natural Resources Program Manager. Approved survey protocols will be followed where possible, while ensuring compliance with Range access/restrictions. Adjustments to the protocols will be documented and submitted with data sheets to the Nellis-Natural Resources Program Manager.

The NFE will conduct surveys and monitoring fieldwork on the NTTR, Nellis AFB, and Creech AFB. Surveys will be conducted for specific species as approved by the Nellis-Natural Resources Program Manager. This determination should be made based on mission priority, range access, or by species priority as determined by the Nellis-Natural Resources Program Manager. Seasonal timing, survey protocols, and locations of surveys will be approved on a case by case basis. Survey types may include but are not limited to diurnal reptile surveys, nocturnal amphibian surveys, night driving/spotlighting surveys, live trapping, call recordings, pit fall trapping, etc.

Draft/Final Project Reports

Three (3) copies of a draft project report will be submitted within 60 days of the conclusion of the field season. Nellis AFB will coordinate and consolidate Air Force comments/corrections on the draft within 30 days. Upon receipt of comments/corrections, on the draft project report, four (4) copies of a final draft project report will be submitted within 30 days for final review. Air Force review and comments on the final draft project report will be conducted within 30 days. Ten (10) hard copies and ten (10) electronic copies of the final project report will be due within 30 days upon receipt of Nellis AFB comments on the final draft project report. The project report format and contents will be approved during the initial project meeting by the Air Force. The report will include but is not limited to an executive summary, site characterization, survey methods, field notes and data sheets, results, population trend data where applicable, discussion and management recommendations, and military mission implications. Maps and drawings will be provided. All documents shall be provided in

Microsoft Word and pdf formats. All photographs, data, and original data forms will be provided to 99 CES/CEIEA.

All new findings and data analysis conducted for specific species studied during this project will be incorporated into the existing Special Status Species Management Guidelines, a living document used by the Nellis-Natural Resources Program Manager for ecosystem management of the base and range.

5.4. MGT, SPECIES, WILDHORSE & LARGE MAMMAL (RKXF176318)

This study will continue the survey, inventory, and monitoring of large mammal wildlife species and wild horses potentially found on the Nellis Test and Training Range (NTTR). Numerous large mammal wildlife species and wild horses are known or suspected to exist on NTTR. Data for many of these large mammal wildlife species and their occurrence on the NTTR has not been historically collected and requires surveys to evaluate each species population health status and potential impacts to the natural ecosystem as well as impacts to sustaining the military mission. Baseline population data and continued monitoring of wild horses is necessary to evaluate this species status and trends in order to evaluate potential impacts to wildlife species, habitat conditions, personnel safety and mission activities. Failure to monitor and manage these resources could result in land degradation and potential restrictions impacting the military mission of the NTTR.

The purpose of this task is for a NFE to conduct large mammal wildlife species surveys and wild horse population monitoring on areas on the NTTR determined as suitable habitat. Areas to be studied will be prioritized based on habitat, vegetation types and areas which might be developed in the future for military test and training missions. The NFE will have adequate experience in performing wildlife surveys, plant identification, and habitat mapping. Based on range access restrictions and mission training activities, field work will often be required to be conducted on weekends and holidays, in addition to normal weekdays. Required field work must be completed during biologically accepted activity (breeding, migratory, wintering, nesting, blooming,) seasons, based on range access availability. Surveys may be required to be conducted outside of the normal seasons if stipulated by various land/wildlife managing agencies and as approved by the Nellis-Natural Resources Program Manager.

Scope

The overall purpose of this project is to conduct large mammal surveys and inventories for the purpose of collecting species composition, distribution, population health and trends, and ecosystem degradation/ rangeland utilization. Wild horse monitoring will be conducted to assist in determining wild horse herd impacts to over utilization of natural resources, potential safety issues to NTTR personnel and equipment, and impacts to continuation of the military mission. The project's product will be the evaluation of large mammal and wild horse populations, habitat use, range impacts, and seasonal distribution. GIS data such species, size or age, sex, and habitat occurrence of large mammals and wild horses will be collected and entered into the Natural Resources GIS data base.

NFE personnel must be able to obtain clearance for the Nellis range and will be escorted by a Government employee at all times while on the range. All specialized equipment must be cleared for use on the range prior to start of the project. The NFE will use only rental or company vehicles, or Government owned vehicles (GOVs) as available, or helicopters for use

on the range. No privately owned vehicles (POVs) are allowed on the range. Areas for wildlife species at risk surveys will be determined based on scheduled activities and range access.

Required photographs will be taken by a Government employee and not released for NFE use until after being cleared through the NTTR XPN office.

Initial Meeting

Within 30 days of award of this task order, the NFE will schedule an initial project kick off meeting with all parties involved (Nellis AFB, AFCEC/Nellis IST, NFEs, etc) to develop a project work schedule to implement the SOW. All deliverables/tasks will be submitted within the required timeframes as identified.

The NFE shall work with the Nellis-Natural Resources Program Manager to establish priority areas of survey areas to evaluate, map, monitor, and document large mammal species populations and seasonal habitat on the NTTR. Wild horse monitoring will be conducted to assist in determining wild horse herd impacts to over utilization of natural resources, potential safety issues to NTTR personnel and equipment, and impacts to continuation of the military mission. This determination should be made based on mission priority, range access, or by habitat priority as determined by the Nellis-Natural Resources Program Manager. Due to NTTR mission and training prioritization schedules and access restrictions, implementation of fieldwork activity/schedules may be require to be changed, as agreed upon as necessary by the NFE, AFCEC/Nellis IST, and the Nellis-Natural Resources Program Manager.

Review Existing Data/Fieldwork Preparation

Review historic large mammal and wild horse population data, and habitat use on the NTTR. Utilize existing datasets and GIS layers/aerial imagery to plan out locations for fieldwork and coordinate proposed locations with Nellis-Natural Resources Program Manager at least one (1) week prior to event for coordinate and approval.

Coordinate with the Nellis-Natural Resources Program Manager to arrange and prepare for supplies, equipment, personnel, transportation, range access information, etc. in preparation for field events. Certain equipment and supplies must be picked up at Nellis AFB from the Nellis AFB Natural Resources Program Office 1-2 days prior to the field event and returned immediately (1-2 days) after the field event is completed.

Fieldwork

Required field work must be completed during biologically accepted seasons as delineated for each type of survey listed below, based on range access availability. Surveys may be required to be conducted outside of the normal seasons if stipulated by various land/wildlife managing agencies and as approved by the Nellis-Natural Resources Program Manager. Approved survey protocols will be followed where possible, while ensuring compliance with Range access/restrictions. Adjustments to the protocols will be documented and submitted with data sheets to the Nellis-Natural Resources Program Manager.

The NFE will coordinate with NDOW for established bighorn sheep surveys conducted on the NTTR to obtain survey data for the south ranges of NTTR. Habitat utilization and sheep inventory of the North range will be conducted by the NFE. The NFE will conduct aerial surveys/inventories of bighorn sheep on the NTTR north range during the fall field season (1

September – 1 November). The NFE will conduct aerial surveys/inventories of pronghorn on the NTTR north range during the summer field season (1 July – 1 September). The NFE will set up, maintain and evaluate trail cameras for large mammal utilization of springs or water sources on the NTTR. Locations, directions, and setting will be approved by the Nellis-Natural Resources Program Manager and coordinated with the NTTR prior to installation of the cameras, ensuring compliance with Range access/restrictions. The NFE will coordinate with BLM for established range utilization surveys conducted on the NTTR to obtain survey data for the north ranges of NTTR. Conduct additional range utilization surveys for near natural water sources to supplement BLM survey efforts. Utilization surveys will be conducted for various springs or water sources on the NTTR during the spring season (1 May – 31 May).

Draft/Draft Final/Final Project Reports

Three (3) copies of a draft project report will be submitted within 60 days of the conclusion of the field season. Nellis AFB will coordinate and consolidate Air Force comments/corrections on the draft within 30 days. Upon receipt of comments/corrections, on the draft project report, four (4) copies of a final draft project report will be submitted within 30 days for final review. Air Force review and comments on the final draft project report will be conducted within 30 days. Ten (10) hard copies and ten (10) electronic copies of the final project report will be due within 30 days upon receipt of Nellis AFB comments on the final draft project report. The project report format and contents will be approved during the initial project meeting by the Air Force. The report will include but is not limited to an executive summary, site characterization, survey methods, field notes and data sheets, results, population trend data where applicable, discussion and management recommendations, and military mission implications. Maps and drawings will be provided. All documents shall be provided in Microsoft Word and pdf formats. All photographs, data, and original data forms will be provided to 99 CES/CEIEA.

5.5. MGT, SPECIES, SPECIES AT RISK (RKXF176314)

This study will continue the process of surveying the Nellis Testing and Training Range (NTTR), Nellis AFB, and Creech AFB for populations of wildlife species at risk as authorized under the Sikes Act and to determine if there are any rare, sensitive species of concern, threatened or endangered species, as defined under the Endangered Species Act, present on the NTTR, Nellis AFB, and Creech AFB. The Sikes Act authorizes the Secretary of Defense to develop lands for conservation and rehabilitation of military reservations. The Endangered Species Act provides a means whereby the ecosystems upon which endangered and threatened species depend may be conserved, and to provide a program for the conservation of these species. Currently, NTTR, Nellis AFB, and Creech AFB contain habitats for species such as northern shrike, Swainson's hawk, greater short-horned lizard, Gilbert's skink, rosy boa, round tail ground squirrel, ringtail and other species. There is no baseline data regarding habitat, species abundance, or existing conditions. Minimal data is available for Air Force use to support or oppose potential habitat listings, resulting in the State, federal and other agencies dictating courses of action under the Endangered Species Act. Failure to investigate these resources could result in land restrictions impacting the military mission of the NTTR, Nellis AFB, and Creech AFB.

The purpose of this task is for a NFE to conduct wildlife species at risk surveys on areas on the NTTR, Nellis AFB, and Creech AFB determined as suitable habitat. Areas to be studied will be prioritized based on habitat, vegetation types and areas which might be developed in the future for military test and training missions. The NFE will have adequate experience in performing wildlife surveys, plant identification, and habitat mapping. Based on range access restrictions and mission training activities, field work will often be required to be conducted on weekends and holidays, in addition to normal weekdays. Required field work must be completed during biologically accepted activity (breeding, migratory, wintering, nesting, blooming,) seasons, based on range access availability. Surveys may be required to be conducted outside of the normal seasons if stipulated by various land/wildlife managing agencies and as approved by the Nellis-Natural Resources Program Manager.

Scope

The overall purpose of this project is to continue to document species at risk populations and seasonal habitat use on the NTTR, Nellis AFB, and Creech AFB, and provide best management practices to sustain military air training operations, readiness. The project's product will be the continuation of mapping and updating NTTR, Nellis AFB, and Creech AFB species at risk and populations, habitat use, and seasonal distribution. GIS data such as species occurrence, seasonal habitat use, and estimated population densities will be collected and entered into the Natural Resources GIS data base.

NFE personnel must be able to obtain clearance for NTTR and will be escorted by a Government employee at all times while on the range. All specialized equipment must be cleared for use on the range prior to start of the project. The NFE will use only rental or company vehicles, or Government owned vehicles (GOVs) as available, or helicopters for use on the range. No privately owned vehicles (POVs) are allowed on the range. Areas for wildlife surveys will be determined based on scheduled activities and range access.

Required photographs will be taken by a Government employee and not released for NFE use until after being cleared through the NTTR XPN office.

Initial Meeting

Within 30 days of award of this task order, the NFE will schedule an initial project kick off meeting with all parties involved (Nellis AFB, AFCEC/Nellis IST, NFEs, etc) to develop a project work schedule to implement the SOW. All deliverables/tasks will be submitted within the required timeframes as identified.

The NFE shall work with the Nellis-Natural Resources Program Manager to establish priority areas of survey areas to evaluate, map, monitor, and document species at risk populations and seasonal habitat on the NTTR, Nellis AFB, and Creech AFB. This determination should be made based on mission priority, range access, or by habitat priority as determined by the Nellis-Natural Resources Program Manager. Due to NTTR mission and training prioritization schedules and access restrictions, implementation of fieldwork activity/schedules may be required to be changed, as agreed upon as necessary by the NFE, AFCEC/Nellis IST, and the Nellis-Natural Resources Program Manager.

Review Existing Data/Fieldwork Preparation

Review historic species at risk population data, and habitat use on the NTTR, Nellis AFB, and Creech AFB. Utilize existing datasets and GIS layers/aerial imagery to plan out locations for fieldwork and coordinate proposed locations with Nellis-Natural Resources Program Manager at least one (1) week prior to event for coordinate and approval.

Coordinate with the Nellis-Natural Resources Program Manager to arrange and prepare for supplies, equipment, personnel, transportation, range access information, etc. in preparation for field events. Certain equipment and supplies must be picked up at Nellis AFB from the Natural Resources Program Office 1-2 days prior to the field event and returned immediately (1-2 days) after the field event is completed.

Fieldwork

Required field work must be completed during biologically accepted seasons (breeding, migratory, wintering, nesting) as delineated for each type of survey listed below, based on range access availability. Surveys may be required to be conducted outside of the normal seasons if stipulated by various land/wildlife managing agencies and as approved by the Nellis-Natural Resources Program Manager. Approved survey protocols will be followed where possible, while ensuring compliance with Range access/restrictions. Adjustments to the protocols will be documented and submitted with data sheets.

The NFE will conduct live mammal trapping. Each trapping session will be coordinated with the Nellis-Natural Resources Program Manager. Trapping sessions on the NTTR will be scheduled based on range availability and weather to minimize mortality of trapped animals. Trapping protocols and locations will be coordinated and approved by the Nellis-Natural Resources Program Manager prior to initial trapping session.

The NFE will conduct Anabat recording nights for call detection/analysis. A recording night equals one (1) Anabat device recording for one (1) night. Recordings may be conducted from April thru October. Locations of recording will be focused at water sources, caves and mines, or targeted habitats as approved by the Nellis-Natural Resources Program Manager.

Surveys will be conducted for specific species as approved by the Nellis-Natural Resources Program Manager. This determination should be made based on mission priority, range access, or by species priority as determined by the Nellis-Natural Resources Program Manager. Seasonal timing, survey protocols, and locations of surveys will be approved on a case by case basis. Survey types may include but are not limited to avian point counts, diurnal field surveys, night driving/spotlighting surveys, live trapping, call recordings, mist netting, etc. The NFE will conduct fieldwork on the NTTR. All adjustments to the protocols will be documented and submitted with data sheets to the Nellis-Natural Resources Program Manager.

The NFE will set up, maintain and evaluate trail cameras for species specific utilization of springs/water sources, or species targeted locations on the NTTR. Locations, orientation, and settings will be approved by Nellis-Natural Resources Program Manager and coordinated with the NTTR prior to installation of the cameras, ensuring compliance with Range access/restrictions. The cameras will be checked at least once every three (3) months, where camera cards (and batteries as necessary) will be replaced and camera functionality/orientation will be checked. Survey protocols will be followed where possible, while ensuring compliance with Range access/restrictions. Adjustments to the protocols will be documented and submitted with data sheets to the Nellis-Natural Resources Program Manager.

Draft/Draft Final/Final Project Reports

Three (3) copies of a draft project report will be submitted within 60 days of the conclusion of the field season. Nellis AFB will coordinate and consolidate Air Force comments/corrections on the draft within 30 days. Upon receipt of comments/corrections, on the draft project report, four (4) copies of a final draft project report will be submitted within 30 days for final review. Air Force review and comments on the final draft project report will be conducted within 30 days. Ten (10) hard copies and ten (10) electronic copies of the final project report will be due within 30 days upon receipt of Nellis AFB comments on the final draft project report. The project report format and contents will be approved during the initial project meeting by the Air Force. The report will include but is not limited to an executive summary, site characterization, survey methods, field notes and data sheets, results, population trend data where applicable, discussion and management recommendations, and military mission implications. Maps and drawings will be provided. All documents shall be provided in Microsoft Word and pdf formats. All photographs, data, and original data forms will be provided to 99 CES/CEIEA.

All new findings and data analysis conducted for specific species studied during this project will be incorporated into the existing Special Status Species Management Guidelines, a living document used by the Nellis-Natural Resources Program Manager for ecosystem management of the base and range. All photographs, data, and original data forms will be provided to 99 CES/CEIEA.

Prior to final payment all GIS data must be reviewed and approved by 99 CES GIS office to ensure compliance with AF GIS compatibility.

5.6. MGT, SPECIES, MIGRATORY/NEO-TROPICAL BIRD (RKXF176312)

Migratory bird migration routes pose a major Bird Aircraft Strike Hazard (BASH) potential to military air operations during fall and spring bird migrations. Resident birds and raptor are also a BASH concern on Nevada Test and Training Range (NTTR), Nellis AFB, and Creech AFB. The NTTR is one of the military's largest air operations training range. Major raptor (birds of prey) migration routes are known to traverse Nevada following the mountainous ridge tops in the north/south directions. The Goshute Mountain Range (northern Nevada) and Spring Mountain Range (southern Nevada) are two known and documented migration routes. The NTTR, Nellis AFB, and Creech AFB are located between these two (2) known migration routes and the seasonal bird populations on these installations have not been thoroughly studied.

The purpose of this task is for the NFE to conduct migratory bird surveys on areas on NTTR, Nellis AFB, and Creech AFB. The NFE will have adequate experience in working with migratory birds in the western United States. Based on range access restrictions and mission training activities, field work will often be required to be conducted on weekends and holidays, in addition to normal weekdays. Required field work must be completed during biologically accepted activity (breeding, migratory, wintering, nesting, blooming,) seasons, based on range access availability. Surveys may be required to be conducted outside of the normal seasons if stipulated by various land/wildlife managing agencies and as approved by the USACE-PM/COR and the Nellis-Natural Resources Program Manager.

Scope

The overall purpose of this project is to continue to document the migratory bird and raptor populations and seasonal habitat use on the NTTR, Nellis AFB, and Creech AFB, and provide best management practices to sustain military air training operations, readiness and reduce potential BASH issues. These best management practices will provide awareness of habitat use for nesting and major migration activities to increase mission training safety. The project's product will be the continuation of mapping and updating the NTTR, Nellis AFB, and Creech AFB migratory bird and raptor populations, habitat use, and seasonal distribution. GIS data such as bird species occurrence, seasonal habitat use, average species migratory population densities, and known nesting areas will be collected and entered into the Natural Resources GIS data base.

NFE personnel must be able to obtain clearance for NTTR and will be escorted by a Government employee/escort at all times while on the range. All specialized equipment must be cleared for use on the range prior to start of the project. The NFE will use rental or company vehicles, or chartered helicopters, and as available Government owned vehicles (GOVs) for use on the range. No privately owned vehicles (POVs) are allowed on the range. Areas for surveys will be determined based on scheduled activities and range access.

Required photographs will be taken by a Government employee and not released for NFE use until after being cleared through the NTTR XPN office.

Initial Meeting

Within 30 days of award of this task order, the NFE will schedule an initial project kick off meeting with all parties involved (Nellis AFB, AFCEC/Nellis IST, NFEs, etc) to develop a project work schedule to implement the SOW. All deliverables/tasks will be submitted within the required timeframes as identified.

The NFE shall work with the Nellis-Natural Resources Program Manager to establish priority of survey areas to evaluate migratory bird and raptor species populations, habitats, foraging and nesting areas, seasonal use and species distribution on the NTTR, Nellis AFB, and Creech AFB. This determination should be made based on areas needed for future training and range access. Due to NTTR mission and training prioritization schedules and access restrictions, implementation of fieldwork activity/schedules may be require to be changed, as agreed upon as necessary by the NFE, the AFCEC/Nellis IST, and the Nellis-Natural Resources Program Manager.

Review Existing Data/Fieldwork Preparation

The NFE shall review historic migratory bird population data and habitat use on the NTTR, Nellis AFB, and Creech AFB. Utilize existing datasets and GIS layers/aerial imagery to plan out locations for fieldwork and coordinate proposed locations with Nellis-Natural Resources Program Manager at least one (1) week prior to event for coordinate and approval.

Coordinate with the Nellis-Natural Resources Program Manager to arrange and prepare for supplies, equipment, personnel, transportation, range access information, etc. in preparation for field events. Certain equipment and supplies must be picked up at Nellis AFB from the Natural Resources Program Office 1-2 days prior to the field event and returned immediately (1-2 days) after the field event is completed.

Fieldwork

Required field work must be completed during biologically accepted seasons (breeding, migratory, wintering, nesting) as delineated for each type of survey listed below, based on range access availability. If optics restrictions are in place, surveys will be cancelled for that day and rescheduled. Surveys may be required to be conducted outside of the normal seasons if stipulated by various land/wildlife managing agencies and as approved by the Nellis-Natural Resources Program Manager.

The NFE will conduct Great Basin Bird Observatory (GBBO) and raptor nesting surveys on the NTTR during the breeding season (South Range: 25 April – 30 June / North Range: 25 May – 10 July). Survey protocols from GBBO will be followed where possible, while ensuring compliance with Range access/restrictions. Adjustments to the protocols will be documented and submitted with data sheets.

The NFE will conduct stationary point count surveys on the NTTR during the breeding season (South Range: 25 April – 30 June / North Range: 25 May – 10 July). These surveys can be done after the completion of a GBBO survey in the morning hours. Protocol for stationary point count surveys will be provided by the Nellis-Natural Resources Program Manager during initial meeting. Stationary point counts may be conducted at developed waters, springs, seeps, or high quality habitat, as appropriate and based on range availability.

The NFE will conduct raptor driving surveys on the NTTR, twice a year. Raptor driving surveys will be conducted on established survey routes on the North range, and surveys will be conducted on the South Range on established survey routes. The raptor driving surveys will be conducted once in the winter (January – February) timeframe and once in the summer (May-June) timeframe. Protocol for raptor driving surveys as well as location of established routes will be provided by the Nellis-Natural Resources Program Manager during initial meeting.

The NFE will conduct stationary point counts on Nellis AFB and Creech AFB, four (4) times a year. These stationary surveys will be conducted in February, May, August, and November. Protocol for base stationary point count surveys as well as locations of surveys will be provided by the Nellis-Natural Resources Program Manager during initial meeting.

Draft/Draft Final/Final Project Reports

Three (3) copies of a draft project report will be submitted within 60 days of the conclusion of the field season. Nellis AFB will coordinate and consolidate Air Force comments/corrections on the draft within 30 days. Upon receipt of comments/corrections, on the draft project report, four (4) copies of a final draft project report will be submitted within 30 days for final review. Air Force review and comments on the final draft project report will be conducted within 30 days. Ten (10) hard copies and ten (10) electronic copies of the final project report will be due within 30 days upon receipt of Nellis AFB comments on the final draft project report. The project report format and contents will be approved during the initial project meeting by the Air Force. The report will include but is not limited to an executive summary, site characterization, survey methods, field notes and data sheets, results, population trend data where applicable, discussion and management recommendations, and military mission implications. Maps and drawings will be provided. All documents shall be provided in Microsoft Word and pdf formats. All photographs, data, and original data forms will be provided to 99 CES/CEIEA.

5.7. MGT, SPECIES, GOLDEN EAGLE (RKXF177323)

Golden eagles are declining throughout the western United States. Decline in population numbers and major impacts to eagle habitat have become a priority species with the U.S. Fish and Wildlife Services (USFWS). New guidance from the USFWS for the management of eagles and take permitting requires extensive inventory and monitoring of the eagles, their habitat, nesting success, and prey base population trends. The collection of this data will aid in the golden eagle take permitting process to support mission requirements that occur in golden eagle habitat and have the potential to impact golden eagles. Failure to collect data will delay mission projects and/or violate requirements of Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act. Resident and migratory golden eagles are also a Bird Aircraft Strike Hazard (BASH) concern on the NTTR. NTTR, Nellis AFB and Creech AFB are some of the military's largest air operations training ranges.

The purpose of this task is for the NFE to conduct required golden eagle surveys and inventories on areas on NTTR, Nellis AFB and Creech AFB. The NFE will have adequate experience in working with golden eagles and raptors in the western United States. Based on range access restrictions and mission training activities, field work will often be required to be conducted on weekends and holidays, in addition to normal weekdays. Required field work must be completed during biologically accepted activity (breeding, migratory, wintering, nesting, blooming,) seasons, based on range access availability. Surveys may be required to be conducted outside of the normal seasons if stipulated by various land/wildlife managing agencies and as approved by the Nellis-Natural Resources Program Manager.

Scope

The overall purpose of this project is to implement the required golden eagle surveys, inventories, and monitoring to document golden eagle populations that occur on the NTTR, Nellis AFB and Creech AFB and provide best management practices to sustain military air training operations, readiness and reduce potential BASH issues. These best management practices will provide guidance for eagle conservation while sustaining the military mission. The project's product will be the continuation of mapping and updating NTTR, Nellis AFB and Creech AFB golden eagle populations, productivity, foraging and nesting habitat, and prey population trends. Appropriate GIS data, as determined by the Nellis-Natural Resources Program Manager, will be collected and entered into the Natural Resources GIS data base.

NFE personnel must be able to obtain clearance for the NTTR and will be escorted by a Government employee/escort at all times while on the range. All specialized equipment must be cleared for use on the range prior to start of the project. The NFE will use rental or company vehicles, or helicopters, and as available Government owned vehicles (GOVs) for use on the range. No privately owned vehicles (POVs) are allowed on the range. Areas for surveys will be determined based on scheduled activities and range access.

Required photographs will be taken by a Government employee and not released for NFE use until after being cleared through the NTTR XPN office.

Initial Meeting

Within 30 days of award of this task order, the NFE will schedule an initial project kick off meeting with all parties involved (Nellis AFB, AFCEC/Nellis IST, NFEs, etc) to develop a

project work schedule to implement the SOW. All deliverables/tasks will be submitted within the required timeframes as identified.

The NFE shall work with the Nellis-Natural Resources Program Manager to establish priority areas of survey areas to evaluate golden eagle populations, habitats, seasonal use and species distribution on the NTTR, Nellis AFB, and Creech AFB. This determination should be made based on mission priority, range access, or by habitat priority as determined by the Nellis-Natural Resources Program Manager. Due to NTTR mission and training prioritization schedules and access restrictions, implementation of fieldwork activity/schedules may be required to be changed, as agreed upon as necessary by the NFE, AFCEC/Nellis IST, and the Nellis-Natural Resources Program Manager.

Review Existing Data/Fieldwork Preparation

Review and map golden eagle population data, and habitat use on the NTTR, Nellis AFB, and Creech AFB. Utilize existing datasets and GIS layers/aerial imagery to plan out locations for fieldwork and coordinate proposed locations with Nellis-Natural Resources Program Manager at least one (1) week prior to event for coordinate and approval.

Coordinate with the Nellis-Natural Resources Program Manager to arrange and prepare for supplies, equipment, personnel, transportation, range access information, etc. in preparation for field events. Certain equipment and supplies must be picked up at Nellis AFB from the Natural Resources Program Office 1-2 days prior to the field event and returned immediately (1-2 days) after the field event is completed.

Fieldwork

Required field work must be completed during biologically accepted seasons (breeding, migratory, wintering, nesting) as delineated for each type of survey listed below, based on range access availability. If optics restrictions are in place, surveys will be cancelled for that day and rescheduled. Surveys may be required to be conducted outside of the normal seasons if stipulated by various land/wildlife managing agencies and as approved by the Nellis-Natural Resources Program Manager.

The NFE will conduct eagle nest surveys and inventory all of the known golden eagle nests on the NTTR during the nesting season (South Range: March-May /North Range: April-June). The inventory will require fieldwork utilizing a helicopter during all surveys. Active nests (eggs/chicks) will be documented and the chicks aged for determination of fledging date. During the inventory, new nests will also be noted when found and added to the existing nest data. Survey guidelines from USFWS will be followed where possible, while ensuring compliance with Range access/restrictions. Adjustments to the protocols will be documented and submitted with data sheets to the Nellis-Natural Resources Program Manager.

The NFE will conduct eagle productivity surveys all active (contained eggs or chicks during the nest inventory) golden eagle nests on the NTTR once the young are at least 51 days old, but not yet fledged from the nest (Approx 75 days). Dates for these surveys will be dependent on the estimated fledging dates determined during the nest inventory (South Range: late May-early June/ North Range: late June – early July). The survey will require fieldwork utilizing a helicopter during all surveys. Productivity success will be documented for all active nests. During the inventory, new nests will also be noted when found and added to the existing nest

data for future surveys. Survey guidelines from USFWS will be followed where possible, while ensuring compliance with Range access/restrictions. Adjustments to the protocols will be documented and submitted with data sheets.

The NFE will conduct raptor driving and prey base surveys on the NTTR, twice a year. Raptor driving surveys will be conducted on the North range and the South Range on established survey routes. The raptor driving and prey base surveys will be conducted once in the spring (March-April) timeframe and once in the fall (October - November) timeframe. Protocol for raptor driving surveys as well as location of established routes will be provided by the Nellis-Natural Resources Program Manager during initial meeting.

Draft/Draft Final/Final Project Reports

Three (3) copies of a draft project report will be submitted within 60 days of the conclusion of the field season. Nellis AFB will coordinate and consolidate Air Force comments/corrections on the draft within 30 days. Upon receipt of comments/corrections, on the draft project report, four (4) copies of a final draft project report will be submitted within 30 days for final review. Air Force review and comments on the final draft project report will be conducted within 30 days. Ten (10) hard copies and ten (10) electronic copies of the final project report will be due within 30 days upon receipt of Nellis AFB comments on the final draft project report. The project report format and contents will be approved during the initial project meeting by the Air Force. The report will include but is not limited to an executive summary, site characterization, survey methods, field notes and data sheets, results, population trend data where applicable, discussion and management recommendations, and military mission implications. Maps and drawings will be provided. All documents shall be provided in Microsoft Word and pdf formats. All photographs, data, and original data forms will be provided to 99 CES/CEIEA.

All new findings and data analysis conducted for specific species studied during this project will be incorporated into the existing Special Status Species Management Guidelines, a living document used by the Nellis-Natural Resources Program Manager for ecosystem management of the base and range.

5.8. MGT, SPECIES, DESERT TORTOISE (RKXF177318)

The Mojave Desert Tortoise is a listed species under the Endangered Species Act that occurs on Nellis AFB and the Nevada Test and Training Range (NTTR). Current Biological Opinions have been issued by the U. S. Fish and Wildlife Service (USFWS), the agency that directs Desert Tortoise habitat management, conservation, protection and mitigation requirements. This project will continue the process of monitoring mission activities and their potential impacts to Desert Tortoise and their habitats, as authorized under the Sikes Act, Endangered Species Act, and Biological Opinions. Failure to implement these Biological Opinion's, could result in land restrictions impacting the military mission at Nellis AFB and the NTTR.

The purpose of this task is for the NFE to conduct required Desert Tortoise habitat management, conservation, protection and mitigation requirements on Nellis AFB and the NTTR. The NFE will have adequate experience in performing unique habitat surveys and mapping of the Desert Tortoise in the western United States. Based on range access restrictions and mission training activities, field work will often be required to be conducted on weekends and holidays, in addition to normal weekdays. Required field work must be completed during

biologically accepted activity (breeding, migratory, wintering, nesting, blooming,) seasons, based on range access availability. Surveys may be required to be conducted outside of the normal seasons if stipulated by various land/wildlife managing agencies and as approved by the Nellis-Natural Resources Program Manager.

Scope

The overall purpose of this project is to survey and document the desert tortoise population density habitat on Nellis AFB and the NTTR, and provide best management practices to sustain military air training operations and readiness through the development of a Desert Tortoise Management Guideline. These best management practices will provide guidance on proper management of desert tortoise habitat on Nellis AFB and NTTR in order to support mission activities. The project's product will be the continuation of surveying and mapping desert tortoise population density, habitat use, and distribution as well as the continued development of the desert tortoise management guidelines. GIS data such as desert tortoise occurrence, habitat use, and estimated population densities will be collected and entered into the Natural Resources GIS data base.

NFE personnel must be able to obtain clearance for the NTTR and will be escorted by a Government employee/escort at all times while on the NTTR. All specialized equipment must be cleared for use on the range prior to start of the project. The NFE will use rental or company vehicles, or helicopters, and as available Government owned vehicles (GOVs) for use on the range. No privately owned vehicles (POVs) are allowed on the range. Areas for surveys will be determined based on scheduled activities and range access.

Required photographs will be taken by a Government employee and not released for NFE use until after being cleared through the NTTR XPN office.

Initial Meeting

Within 30 days of award of this task order, the NFE will schedule an initial project kick off meeting with all parties involved (Nellis AFB, AFCEC/Nellis IST, NFEs, etc) to develop a project work schedule to implement the SOW. All deliverables/tasks will be submitted within the required timeframes as identified.

The NFE shall work with the Nellis-Natural Resources Program Manager to establish priority areas for habitat survey locations to identify potential population and habitat sites for the desert tortoise on Nellis AFB and NTTR. This determination should be made based on mission priority, range access, or by habitat priority as determined by the Nellis-Natural Resources Program Manager. Due to NTTR mission and training prioritization schedules and access restrictions, implementation of fieldwork activity/schedules may be required to be changed, as agreed upon as necessary by the NFE, AFCEC/Nellis IST, and the Nellis-Natural Resources Program Manager.

Review Existing Data/Fieldwork Preparation

The NFE shall review historic desert tortoise mapping and utilize available aerial imagery for the NTTR to map distinctive habitat locations using ArcView software. Location of mapping efforts will be coordinated during the initial meeting. Mapping efforts will include the creation of distinct polygons using ArcView, preliminary identification of the distinctive desert tortoise

habitat locations throughout the mapped area, and selection of ground truth points with an emphasis on accessibility, distribution, and coverage of the distinctive desert tortoise habitat locations. Established mapping protocols will be provided by Nellis-Natural Resources Program Manager.

Utilize existing datasets and GIS layers/aerial imagery to plan out locations for fieldwork and coordinate proposed locations with Nellis-Natural Resources Program Manager at least one (1) week prior to event for coordinate and approval.

Coordinate with the Nellis-Natural Resources Program Manager to arrange and prepare for supplies, equipment, personnel, transportation, range access information, etc. in preparation for field events. Certain equipment and supplies must be picked up at Nellis AFB from the Natural Resources Program Office 1-2 days prior to the field event and returned immediately (1-2 days) after the field event is completed.

Fieldwork

The NFE shall submit proposed locations of fieldwork to the Nellis-Natural Resources Program Manager for coordination and approval at least 30 days prior to proposed fieldwork.

The NFE shall collect ecosystem data as required and utilize existing data to initiate the process of acquiring coverage of Nellis AFB and NTTR tortoise habitat for use in evaluating and categorizing desert tortoise populations and habitat.

Required field work for population density analysis must be completed during biologically accepted seasons as delineated by current protocols from USFWS for large area surveys. Other habitat surveys may be required to be conducted outside of the normal seasons if stipulated by various land/wildlife managing agencies and as approved by the Nellis-Natural Resources Program Manager. The NFE shall acquire the services of qualified desert tortoise biologists as approved by the Nellis-Natural Resources Program Manager, to conduct field work for this scope of work.

Survey protocols from USFWS will be followed, while ensuring compliance with Range access/restrictions. Adjustments to the protocols will be documented and submitted with data sheets.

The NFE will conduct compliance surveys and clearances as necessary in order to support mission activities that occur in desert tortoise habitat. Surveys will be conducted by qualified biologists that are approved by the Nellis-Natural Resources Program Manager.

Species Management Guideline Development

Compile and evaluate all desert tortoise survey data collected on Nellis AFB and the NTTR for incorporation into the draft Desert Tortoise Management Guideline.

Develop a draft Desert Tortoise Management Guideline for Nellis AFB and the NTTR designated desert tortoise habitat locations that includes the latest scientific information regarding desert tortoise status, natural history, ecology, current survey data and results, , and provide best management practices for Nellis AFB and the NTTR to sustain military air training operations and readiness.

Draft/Draft Final/Final Project Reports

Three (3) copies of a draft project report will be submitted within 60 days of the conclusion of the field season. Nellis AFB will coordinate and consolidate Air Force comments/corrections on the draft within 30 days. Upon receipt of comments/corrections, on the draft project report, four (4) copies of a final draft project report will be submitted within 30 days for final review. Air Force review and comments on the final draft project report will be conducted within 30 days. Ten (10) hard copies and ten (10) electronic copies of the final project report will be due within 30 days upon receipt of Nellis AFB comments on the final draft project report. The project report format and contents will be approved during the initial project meeting by the Air Force. The report will include but is not limited to an executive summary, site characterization, survey methods, field notes and data sheets, results, population trend data where applicable, discussion and management recommendations, and military mission implications. Maps and drawings will be provided. All documents shall be provided in Microsoft Word and pdf formats. All photographs, data, and original data forms will be provided to 99 CES/CEIEA.

All new findings and data analysis conducted for specific species studied during this project will be incorporated into the existing Unique Habitats Guidelines, a living document used by the Nellis-Natural Resources Program Manager for ecosystem management of the base and range.

5.9. MGT, SPECIES, CANDIDATE SPECIES (RKXF177314)

This study will continue the process of surveying the Nellis Testing and Training Range (NTTR), Nellis AFB, and Creech AFB for populations of wildlife candidate species as authorized under the Sikes Act and to determine if there are any rare, sensitive species of concern, threatened or endangered species, as defined under the Endangered Species Act, present on the NTTR, Nellis AFB, and Creech AFB. The Sikes Act authorizes the Secretary of Defense to develop lands for conservation and rehabilitation of military reservations. The Endangered Species Act provides a means whereby the ecosystems upon which endangered and threatened species depend may be conserved, and to provide a program for the conservation of these species. Currently, NTTR, Nellis AFB, and Creech AFB contain habitats for species such as sage grouse, pygmy rabbits, phainopepla, Gila monster, chuckwalla, snowy plover, southwest willow flycatchers, pallid kangaroo mouse, dark kangaroo mouse, pallid bat, Townsend's big eared bat, and other species. There is no baseline data regarding habitat, species abundance, or existing conditions. Minimal data is available for Air Force use to support or oppose potential habitat listings, resulting in the State, federal and other agencies dictating courses of action under the Endangered Species Act. Failure to investigate these resources could result in land restrictions impacting the military mission of the NTTR, Nellis AFB, and Creech AFB.

The purpose of this task is for a NFE to conduct a wildlife candidate species surveys on areas on the NTTR, Nellis AFB, and Creech AFB determined as suitable habitat. Areas to be studied will be prioritized based on habitat, vegetation types and areas which might be developed in the future for military test and training missions. The NFE will have adequate experience in performing wildlife surveys, plant identification, and habitat mapping. Based on range access restrictions and mission training activities, field work will often be required to be conducted on weekends and holidays, in addition to normal weekdays. Required field work must be completed during biologically accepted activity (breeding, migratory, wintering, nesting,

blooming,) seasons, based on range access availability. Surveys may be required to be conducted outside of the normal seasons if stipulated by various land/wildlife managing agencies and as approved by the Nellis-Natural Resources Program Manager.

Scope

The overall purpose of this project is to continue to document candidate species populations and seasonal habitat use on the NTTR, Nellis AFB, and Creech AFB, and provide best management practices to sustain military air training operations, readiness. The project's product will be the continuation of mapping and updating NTTR, Nellis AFB, and Creech AFB candidate species and populations, habitat use, and seasonal distribution. GIS data such as species occurrence, seasonal habitat use, and estimated population densities will be collected and entered into the Natural Resources GIS data base.

NFE personnel must be able to obtain clearance for NTTR and will be escorted by a Government employee at all times while on the range. All specialized equipment must be cleared for use on the range prior to start of the project. The NFE will use only rental or company vehicles, or Government owned vehicles (GOVs) as available, or helicopters for use on the range. No privately owned vehicles (POVs) are allowed on the range. Areas for wildlife surveys will be determined based on scheduled activities and range access.

Required photographs will be taken by a Government employee and not released for NFE use until after being cleared through the NTTR XPN office.

Initial Meeting

Within 30 days of award of this task order, the NFE will schedule an initial project kick off meeting with all parties involved (Nellis AFB, AFCEC/Nellis IST, NFEs, etc) to develop a project work schedule to implement the SOW. All deliverables/tasks will be submitted within the required timeframes as identified.

The NFE shall work with the Nellis-Natural Resources Program Manager to establish priority areas of survey areas to evaluate, map, monitor, and document candidate species populations and seasonal habitat on the NTTR, Nellis AFB, and Creech AFB. This determination should be made based on mission priority, range access, or by habitat priority as determined by the Nellis-Natural Resources Program Manager. Due to NTTR mission and training prioritization schedules and access restrictions, implementation of fieldwork activity/schedules may be required to be changed, as agreed upon as necessary by the NFE, AFCEC/Nellis IST, and the Nellis-Natural Resources Program Manager.

Review Existing Data/Fieldwork Preparation

Review historic candidate species population data, and habitat use on the NTTR, Nellis AFB, and Creech AFB. Utilize existing datasets and GIS layers/aerial imagery to plan out locations for fieldwork and coordinate proposed locations with Nellis-Natural Resources Program Manager at least one (1) week prior to event for coordinate and approval.

Coordinate with the Nellis-Natural Resources Program Manager to arrange and prepare for supplies, equipment, personnel, transportation, range access information, etc. in preparation for field events. Certain equipment and supplies must be picked up at Nellis AFB from the

Natural Resources Program Office 1-2 days prior to the field event and returned immediately (1-2 days) after the field event is completed.

Fieldwork

Required field work must be completed during biologically accepted seasons (breeding, migratory, wintering, nesting) as delineated for each type of survey listed below, based on range access availability. Surveys may be required to be conducted outside of the normal seasons if stipulated by various land/wildlife managing agencies and as approved by the Nellis-Natural Resources Program Manager. Approved survey protocols will be followed where possible, while ensuring compliance with Range access/restrictions. Adjustments to the protocols will be documented and submitted with data sheets.

The NFE will conduct live mammal trapping. Each trapping session will be coordinated with the Nellis-Natural Resources Program Manager. Trapping sessions on the NTTR will be scheduled based on range availability and weather to minimize mortality of trapped animals. Trapping protocols and locations will be coordinated and approved by the Nellis-Natural Resources Program Manager prior to initial trapping session.

The NFE will conduct Anabat recording nights for call detection/analysis. A recording night equals one (1) Anabat device recording for one (1) night. Recordings may be conducted from April thru October. Locations of recording will be focused at water sources, caves and mines, or targeted habitats as approved by the Nellis-Natural Resources Program Manager.

Surveys will be conducted for specific species as approved by the Nellis-Natural Resources Program Manager. This determination should be made based on mission priority, range access, or by species priority as determined by the Nellis-Natural Resources Program Manager. Seasonal timing, survey protocols, and locations of surveys will be approved on a case by case basis. Survey types may include but are not limited to avian point counts, diurnal field surveys, night driving/spotlighting surveys, live trapping, call recordings, mist netting, etc. The NFE will conduct fieldwork on the NTTR. All adjustments to the protocols will be documented and submitted with data sheets to the Nellis-Natural Resources Program Manager.

The NFE will set up, maintain and evaluate trail cameras for species specific utilization of springs/water sources, or species targeted locations on the NTTR. Locations, orientation, and settings will be approved by Nellis-Natural Resources Program Manager and coordinated with the NTTR prior to installation of the cameras, ensuring compliance with Range access/restrictions. The cameras will be checked at least once every three (3) months, where camera cards (and batteries as necessary) will be replaced and camera functionality/orientation will be checked. Survey protocols will be followed where possible, while ensuring compliance with Range access/restrictions. Adjustments to the protocols will be documented and submitted with data sheets to the Nellis-Natural Resources Program Manager.

Draft/Draft Final/Final Project Reports

Three (3) copies of a draft project report will be submitted within 60 days of the conclusion of the field season. Nellis AFB will coordinate and consolidate Air Force comments/corrections on the draft within 30 days. Upon receipt of comments/corrections, on the draft project report, four (4) copies of a final draft project report will be submitted within 30 days for final review. Air Force review and comments on the final draft project report will be conducted within 30

days. Ten (10) hard copies and ten (10) electronic copies of the final project report will be due within 30 days upon receipt of Nellis AFB comments on the final draft project report. The project report format and contents will be approved during the initial project meeting by the Air Force. The report will include but is not limited to an executive summary, site characterization, survey methods, field notes and data sheets, results, population trend data where applicable, discussion and management recommendations, and military mission implications. Maps and drawings will be provided. All documents shall be provided in Microsoft Word and pdf formats. All photographs, data, and original data forms will be provided to 99 CES/CEIEA.

All new findings and data analysis conducted for specific species studied during this project will be incorporated into the existing Special Status Species Management Guidelines, a living document used by the Nellis-Natural Resources Program Manager for ecosystem management of the base and range. All photographs, data, and original data forms will be provided to 99 CES/CEIEA.

5.10. MGT, SPECIES, BATS (RKXF176313)

In 1997, a bat survey was conducted for Nellis Air Force Base (AFB) in which it was stated that twenty (20) species of bats could potentially occur in Nevada Test and Training Range (NTTR). Of those 20 species, six (6) species were actually identified and included the long-legged myotis (*Myotis volans*), fringe-tailed myotis (*M. thysanodes*), California myotis (*M. californicus*), pipistrelle (*Pipistrellus hesperus*), Townsend's big-eared bat (*Plecotus townsendii*), and pallid bat (*Antrozous pallidus*). All of the bats observed on NTTR primarily use caves, abandoned mines, trees, and abandoned buildings for roosts. Preferred foraging and roosting habitat was usually located near open water or desert springs.

Current plans for the military mission include use of springs, seeps, mines and caves in military activities to mimic similar battlefield environments. At the present time, few of these areas have been inventoried or surveyed to determine if any bat species of concern are present. Such surveys are paramount for the military mission to be in compliance with the Endangered Species Act (ESA) and the National Environmental Policy Act (NEPA). Surveys should be conducted in areas that are high priority for use in the military mission. These surveys will allow for clearance of the areas well in advance of their use, thus streamlining the preparation of areas for the military mission.

The purpose of this task is for the NFE to conduct bat surveys in and around seeps, springs, caves, and mines prioritized for use by the military mission on NTTR, Creech AFB, and Nellis AFB. Bats will be collected and identified to determine if any species of concern are present. The NFE will have adequate experience in working with bats in the western United States. Based on range access restrictions and mission training activities, field work will often be required to be conducted on weekends and holidays, in addition to normal weekdays. Required field work must be completed during biologically accepted activity (breeding, migratory, wintering, nesting, blooming,) seasons, based on range access availability. Surveys may be required to be conducted outside of the normal seasons if stipulated by various land/wildlife managing agencies and as approved by the Nellis-Natural Resources Program Manager.

Scope

The overall purpose of this project is to continue to inventory bat species presently inhabiting caves, mines, seeps, springs, crevices, and other potential habitats on NTTR, Nellis AFB and Creech AFB, and provide best management practices to sustain military air training operations, and readiness. These best management practices will provide awareness of habitat use of bat species, and sensitive areas that may impact bat health and overall populations, in order to prevent mission delays. The project's product will be the continuation of mapping and updating NTTR, Nellis AFB and Creech AFB bat species populations, habitat use, and seasonal distribution. Geographic Information Systems (GIS) data such as bat species occurrence, seasonal habitat use, population densities, and known roosting areas will be collected and entered into the Natural Resources GIS data base.

NFE personnel must be able to obtain clearance for NTTR and will be escorted by a Government employee/escort at all times while on the range. All specialized equipment must be cleared for use on the range prior to start of the project. The NFE will use rental or company vehicles, or helicopters, and as available Government owned vehicles (GOVs) for use on the range. No privately owned vehicles (POVs) are allowed on the range. Areas for surveys will be determined based on scheduled activities and range access.

Required photographs will be taken by a Government employee and not released for NFE use until after being cleared through the NTTR XPN office.

Initial Meeting

Within 30 days of award of this task order, the NFE will schedule an initial project kick-off meeting with all parties involved (Nellis AFB, the AFCEC/Nellis IST, NFEs, etc.) to develop a project work schedule to implement the SOW. All deliverables/tasks will be submitted within the required timeframes as identified.

The NFE shall work with Nellis-Natural Resources Program Manager to establish priority of survey areas to evaluate bat species populations, habitats, foraging and roosting areas, seasonal use and species distribution on the NTTR, Nellis AFB, and Creech AFB. This determination should be made based on areas needed for future training and range access. Due to the NTTR mission and training prioritization schedules and access restrictions, implementation of fieldwork activity/schedules may be changed, as agreed upon as necessary by the NFE, the AFCEC/Nellis IST, and Nellis-Natural Resources Program Manager.

Review Existing Data/Fieldwork Preparation

The NFE shall review historic bat population data, and habitat use for the NTTR, Nellis AFB, and Creech AFB locations. Utilize existing datasets and GIS layers/aerial imagery to plan out locations for fieldwork and coordinate proposed locations with the Nellis-Natural Resources Program Manager at least one (1) week prior to event for coordination and approval.

Coordinate with the Nellis-Natural Resources Program Manager to arrange and prepare for supplies, equipment, personnel, transportation, range access information, etc. in preparation for field events. Certain equipment and supplies must be picked up at Nellis AFB from the Natural Resources Program Office 1-2 days prior to the field event and returned immediately (1-2 days) after the field event is completed.

Fieldwork

Required field work must be completed during biologically accepted seasons (breeding, migratory, wintering, nesting) as delineated for each type of survey listed below, based on range access availability. If optics restrictions are in place, surveys will be cancelled for that day and rescheduled. Surveys may be required to be conducted outside of the normal seasons if stipulated by various land/wildlife managing agencies and as approved by the Nellis-Natural Resources Program Manager.

The NFE will conduct night mist netting surveys at open water or the entrances of caves/mines on the NTTR, Nellis AFB, and Creech AFB during the spring/summer season. Bat handling protocols and equipment cleaning techniques to prevent white nose syndrome will be followed at all times. All protocols used will also ensure compliance with Range access/restrictions. Adjustments to the protocols will be documented and submitted with data sheets.

The NFE will conduct passive bat call collection at night using Anabat bat detectors for analysis of bat calls /population composition at open water or caves/mines.

Draft/Draft Final/Final Project Reports

Three (3) copies of a draft project report will be submitted within 60 days of the conclusion of the field season. Nellis AFB will coordinate and consolidate Air Force comments/corrections on the draft within 30 days. Upon receipt of comments/corrections, on the draft project report, four (4) copies of a final draft project report will be submitted within 30 days for final review. Air Force review and comments on the final draft project report will be conducted within 30 days. Ten (10) hard copies and ten (10) electronic copies of the final project report will be due within 30 days upon receipt of Nellis AFB comments on the final draft project report. The project report format and contents will be approved during the initial project meeting by the Air Force. The report will include but is not limited to an executive summary, site characterization, survey methods, field notes and data sheets, results, population trend data where applicable, discussion and management recommendations, and military mission implications. Maps and drawings will be provided. All documents shall be provided in Microsoft Word and pdf formats. All photographs, data, and original data forms will be provided to 99 CES/CEIEA.

5.11. MGT, INVASIVE SPECIES (RKMF176304)

The rapid growth expansion of invasive plant species in southern Nevada pose potential problems for military air operations and ground training. In recent years, rainfall and weather patterns in southern Nevada have significantly increased plant populations and the areas occupied by invasive plants. Nellis AFB and the Nevada Test and Training Range (NTTR) are two (2) of the military's largest air operations training areas. The increase in invasive plants may have significant negative impacts on military mission flight training, bombing exercises and the expanding ground training mission. Of primary concern is the increased fire hazard from annual invasive plants which are flash fuels and easily ignite ecosystem degradation, and the loss of ground water from Tamarisk (salt cedar, *Tamarix sp.*). Invasive plants destroy native ecosystems and not only impact federally and state listed species found on Nellis AFB and the NTTR, but all native wildlife and vegetation.

The purpose of this task is for the NFE to conduct required Invasive Weed Surveys and Eradication on Nellis AFB and the NTTR. This work will concentrate first on invasive populations close to both the main base and range boundaries. The goal is to prevent invasive

plants from moving throughout Air Force property. While this work is ongoing an invasive plant inventory of areas on Nellis AFB and the NTTR will continue. The survey will concentrate on areas most likely to contain invasive plants based on review of maps, photographic imagery and ground surveys.

Based on the survey results efforts will continue to concentrate on the largest populations or areas where the potential for population expansion is high. Re-vegetation efforts will begin and continue if required and as soon as practical based on the type of treatment used. Re-seeding disturbed areas where invasive plants would pose additional wildland fire risk will be the primary focus of the re-vegetation efforts. All planted species will be native and drought tolerant. When possible the plants will help prevent erosion and be suitable for wildlife.

Based on range access restrictions and mission training activities, field work will often be required to be conducted on weekends and holidays, in addition to normal weekdays. Required field work must be completed during biologically accepted activity (breeding, migratory, wintering, nesting, blooming,) seasons, based on range access availability. Surveys may be required to be conducted outside of the normal seasons if stipulated by various land/wildlife managing agencies and as approved by the Nellis-Natural Resources Program Manager.

Scope

The overall purpose of this project is to continue to conduct surveys for and eradication of invasive plant populations Nellis AFB and the NTTR, and provide best management practices to sustain military air training operations and readiness through ecosystem management. The project's product will be the continuation of mapping and updating for Nellis AFB and the NTTR invasive plant populations and infestation areas using GIS to determine changes in populations and document eradication work completed. GIS data such as invasive species population locations, densities, and locations of treated areas will be collected and entered into the Natural Resources GIS data base.

The NFE will initiate/continue the eradication of annuals and salt cedar found during the survey to reduce potential impact on the military mission and maintain suitable habitat for wildlife. Various treatment techniques will continue to be investigated, utilized, and evaluated as to the effectiveness on large land areas.

The NFE will initiate and continue the evaluation of various potential re-vegetation methods in desert habitats and determine cost effectiveness. Initiate and continue the re-establishment of native vegetation for long term habitat health and soil stabilization where invasive plant species were removed and at disturbed areas where invasive species establishment would pose additional wildland fire risk.

NFE personnel must be able to obtain clearance for the Nellis range and will be escorted by a government employee/escort at all times while on the range. All specialized equipment must be cleared for use on the range prior to start of the project. The NFE will use rental or company vehicles and as available government owned vehicles (GOVs) for use on the range. No privately owned vehicles (POVs) are allowed on the range. Areas for surveys will be determined by the Nellis-Natural Resources Program Manager and will be based on scheduled activities and range access.

Required photographs will be taken by a Government employee and not released for NFE use until after being cleared through the NTTR XPN office.

Initial Meeting

Within 30 days of award of this task order, the NFE will schedule an initial project kick off meeting with all parties involved (Nellis AFB, AFCEC/Nellis IST, NFEs, etc) to develop a project work schedule to implement the SOW. All deliverables/tasks will be submitted within the required timeframes as identified.

The NFE shall work with the Nellis-Natural Resources Program Manager to establish priority areas of eradication efforts and evaluate invasive plant species distribution on Nellis AFB and the NTTR. This determination should be made based on mission priority, range access, or by habitat priority as determined by the Nellis-Natural Resources Program Manager. Due to NTTR mission and training prioritization schedules and access restrictions, implementation of fieldwork activity/schedules may be require to be changed, as agreed upon as necessary by the NFE, AFCEC/Nellis IST, and the Nellis-Natural Resources Program Manager.

Review Existing Data/Fieldwork Preparation

Review historic invasive species population data as well as available aerial photography to identify and prioritize areas for survey and eradication efforts on Nellis AFB and the NTTR. Utilize existing datasets and GIS layers/aerial imagery to plan out locations for fieldwork and coordinate proposed locations with Nellis-Natural Resources Program Manager at least one (1) week prior to event for coordinate and approval.

Coordinate with the Nellis-Natural Resources Program Manager to arrange and prepare for supplies, equipment, personnel, transportation, range access information, etc. in preparation for field events. Certain equipment and supplies must be picked up at Nellis AFB from the Natural Resources Program Office 1-2 days prior to the field event and returned immediately (1-2 days) after the field event is completed.

Fieldwork

Required field work must be completed during biologically accepted seasons based on range access availability. If optics restrictions are in place, surveys will be cancelled for that day and rescheduled. Surveys may be required to be conducted outside of the normal seasons if stipulated by various land/wildlife managing agencies and as approved by the Nellis-Natural Resources Program Manager.

The NFE shall conduct invasive species surveys and eradication efforts on Nellis AFB and the NTTR. Protocols for surveys will be coordinated with the Nellis-Natural Resources Program Manager during the initial meeting and included in the proposed work schedule submitted.

Evaluate treated areas and disturbed areas to determine potential re-vegetation sites for the purposed of soil stabilization and to avoid bare mineral soil, where invasive plants could grow without competition, causing increased wildland fire risk. Re-vegetation actions will be approved prior to initiation of the activity by the Nellis-Natural Resources Program Manager. Re-seeding disturbed areas where invasive plant species would pose additional wildland fire risk will be the primary focus of the re-vegetation efforts. These re-vegetation activities will be conducted only where they will not limit required mission activities.

Draft/Final Project Reports

Three (3) copies of a draft project report will be submitted within 60 days of the conclusion of the field season. Nellis AFB will coordinate and consolidate Air Force comments/corrections on the draft within 30 days. Upon receipt of comments/corrections, on the draft project report, four (4) copies of a final draft project report will be submitted within 30 days for final review. Air Force review and comments on the final draft project report will be conducted within 30 days. Ten (10) hard copies and ten (10) electronic copies of the final project report will be due within 30 days upon receipt of Nellis AFB comments on the final draft project report. The project report format and contents will be approved during the initial project meeting by the Air Force. The report will include but is not limited to an executive summary, site characterization, survey methods, field notes and data sheets, results, population trend data where applicable, discussion and management recommendations, and military mission implications. Maps and drawings will be provided. All documents shall be provided in Microsoft Word and pdf formats. All photographs, data, and original data forms will be provided to 99 CES/CEIEA.

5.12. MGT, HABITAT, VEGETATION CLASSIFICATION, SOUTH RANGE (RKXF177321)

Currently the Nevada Test and Training Range (NTTR) South Range contains habitats for various sensitive species such as burrowing owls, various bat species, gila monsters, southwest willow flycatchers, and other sensitive Mojave desert species. Vegetation classification is an important tool for the management of habitats of these sensitive species. Habitats classified by vegetation composition will be used to determine the potential for specific plant and wildlife species that are currently listed or being evaluated for listing and their associated habitats that could be designated as Critical Habitat. Vegetation classification is required for the NTTR to support or refute potential critical habitat designations if species were to become listed in the future.

Areas to be studied will be prioritized based on priority areas that are projected to be potential impacts to the Air Force mission. The NFE will have adequate experience in performing vegetation classification and mapping of these areas. Based on range access restrictions and mission training activities, field work will often be required to be conducted on weekends and holidays, in addition to normal weekdays. Required field work must be completed during biologically accepted activity (breeding, migratory, wintering, nesting, blooming,) seasons, based on range access availability. Surveys may be required to be conducted outside of the normal seasons if stipulated by various land/wildlife managing agencies and as approved by the Nellis-Natural Resources Program Manager.

Scope

The overall purpose of this project is to initiate the process of surveying and mapping habitats through vegetation classification on the South Range of the NTTR. The project's product will be the mapping of specific vegetation communities on the South Range and updating the Unique Habitat/Rare Plants Management program guidelines with the most current data collected/analyzed during this project. GIS data such as designated vegetation community boundaries will be collected and entered into the Natural Resources GIS data base.

NFE personnel must be able to obtain clearance for NTTR and will be escorted by a Government employee or authorized escort at all times while on the NTTR. All specialized

equipment must be cleared for use on the range prior to start of the project. The NFE will use only rental or company vehicles and as available Government owned vehicles (GOVs) for use on the range. No privately owned vehicles (POVs) are allowed on the NTTR.

If photographs are required they will be taken by a Government employee and not released for NFE use until after being cleared through the NTTR XPN office.

Initial Meeting

Within 30 days of award, the NFE will schedule an initial meeting with all parties (Nellis AFB, AFCEC/Nellis IST, and the NFE) to develop a project work schedule to implement this SOW. All deliverables/tasks will be submitted within the required timeframes as identified.

The NFE shall work with the Nellis-Natural Resources Program Manager to establish priority areas of survey locations to evaluate and map vegetation communities on the north range of the NTTR. This determination should be made based on mission priority, range access, or by habitat priority as determined by the Nellis-Natural Resources Program Manager. Due to the NTTR mission and training prioritization schedules and access restrictions, implementation of fieldwork activity/schedules may be changed, as agreed upon by the NFE, the Nellis-Natural Resources Program Manager, and the AFCEC/Nellis IST.

Review Existing Data/Fieldwork Preparation

The NFE shall review historic vegetation mapping and utilize available aerial imagery for the South Range of the NTTR to map distinctive vegetation communities using ArcView software.

Location of mapping efforts shall be coordinated during the initial meeting with the Nellis-Natural Resources Program Manager. Mapping efforts shall include the creation of distinct polygons using ArcView, preliminary identification of uniform plant community's types throughout the mapped area, and selection of ground truth points with an emphasis on accessibility, distribution, and coverage of the various preliminary identified types. Established mapping protocols will be provided by Nellis-Natural Resources Program Manager.

The NFE shall coordinate with the Nellis-Natural Resources Program Manager to arrange and prepare for supplies, equipment, personnel, transportation, range access information, etc. in preparation for field events. Certain equipment and supplies must be picked up at Nellis AFB from the Natural Resources Program Office 1-2 days prior to the field event and returned immediately (1-2 days) after the field event is completed.

Fieldwork

The NFE shall submit proposed locations of fieldwork to the Nellis-Natural Resources Program Manager for coordination and approval at least 30 days prior to proposed fieldwork.

The NFE shall perform the required fieldwork for this project in order to conduct vegetation community surveys on the NTTR South Range. Vegetation composition data will be collected according to the protocol established by the Nellis-Natural Resources Program Manager. Helicopter use will be necessary to access the remote areas of the designated survey area. Protocols for surveys will be provided by the Nellis-Natural Resources Program Manager during the initial meeting.

Draft/Draft Final/Final Project Reports

Three (3) copies of a draft project report will be submitted within 60 days of the conclusion of the field season. Nellis AFB will coordinate and consolidate Air Force comments/corrections on the draft within 30 days. Upon receipt of comments/corrections, on the draft project report, four (4) copies of a final draft project report will be submitted within 30 days for final review. Air Force review and comments on the final draft project report will be completed within 30 days. Ten (10) hard copies and ten (10) electronic copies of the final project report will be due within 30 days upon receipt of comments on the final draft project report. The project report format and contents will be approved during the initial project meeting by the Nellis AFB, and the AFCEC/Nellis IST. The report will include, but is not limited to an executive summary, site characterization, survey methods, field notes and data sheets, results, population trend data where applicable, discussion and management recommendations, and military mission implications. Maps and drawings will be provided. All documents shall be provided in Microsoft Word and pdf formats. All photographs, data, and original data forms will also be provided.

All new findings and data collected during this project will be analyzed and incorporated into the existing Unique Habitats Guidelines, a living document used by the Nellis-Natural Resources Program Manager for ecosystem management of the NTTR ranges.

5.13. MGT, HABITAT, VEGETATION CLASSIFICATION, NORTH RANGE (RKXF177320)

Currently the NTTR North Range contains habitats for various sensitive species such as burrowing owls, various bat species, pygmy rabbits, sage grouse, and other sensitive Great Basin desert species. Vegetation classification is an important tool for the management of habitats of these sensitive species. Habitats classified by vegetation composition will be used to determine the potential for specific plant and wildlife species that are currently listed or being evaluated for listing and their associated habitats that could be designated as Critical Habitat. Vegetation classification is required for the NTTR to support or refute potential critical habitat designations if species were to become listed in the future.

Areas to be studied will be prioritized based on priority areas that are projected to be potential impacts to the Air Force mission. The NFE will have adequate experience in performing vegetation classification and mapping of these areas. Based on range access restrictions and mission training activities, field work will often be required to be conducted on weekends and holidays, in addition to normal weekdays. Required field work must be completed during biologically accepted activity (breeding, migratory, wintering, nesting, blooming,) seasons, based on range access availability. Surveys may be required to be conducted outside of the normal seasons if stipulated by various land/wildlife managing agencies and as approved by the Nellis-Natural Resources Program Manager.

Scope

The overall purpose of this project is to initiate the process of surveying and mapping habitats through vegetation classification on the North Range of the NTTR. The project's product will be the mapping of specific vegetation communities on the North Range and updating the Unique Habitat/Rare Plants Management program guidelines with the most current data collected/analyzed during this project. GIS data such as designated vegetation community boundaries will be collected and entered into the Natural Resources GIS data base.

NFE personnel must be able to obtain clearance for NTTR and will be escorted by a Government employee or authorized escort at all times while on the NTTR. All specialized equipment must be cleared for use on the range prior to start of the project. The NFE will use only rental or company vehicles and as available Government owned vehicles (GOVs) for use on the range. No privately owned vehicles (POVs) are allowed on the NTTR.

If photographs are required they will be taken by a Government employee and not released for NFE use until after being cleared through the NTTR XPN office.

Initial Meeting

Within 30 days of award, the NFE will schedule an initial meeting with all parties (Nellis AFB, AFCEC/Nellis IST, and the NFE) to develop a project work schedule to implement this SOW. All deliverables/tasks will be submitted within the required timeframes as identified.

The NFE shall work with the Nellis-Natural Resources Program Manager to establish priority areas of survey locations to evaluate and map vegetation communities on the north range of the NTTR. This determination should be made based on mission priority, range access, or by habitat priority as determined by the Nellis-Natural Resources Program Manager. Due to the NTTR mission and training prioritization schedules and access restrictions, implementation of fieldwork activity/schedules may be changed, as agreed upon by the NFE, the Nellis-Natural Resources Program Manager, and the AFCEC/Nellis IST.

Review Existing Data/Fieldwork Preparation

The NFE shall review historic vegetation mapping and utilize available aerial imagery for the North Range of the NTTR to map distinctive vegetation communities using ArcView software.

Location of mapping efforts shall be coordinated during the initial meeting with the Nellis-Natural Resources Program Manager. Mapping efforts shall include the creation of distinct polygons using ArcView, preliminary identification of uniform plant community's types throughout the mapped area, and selection of ground truth points with an emphasis on accessibility, distribution, and coverage of the various preliminary identified types. Established mapping protocols will be provided by Nellis-Natural Resources Program Manager.

The NFE shall coordinate with the Nellis-Natural Resources Program Manager to arrange and prepare for supplies, equipment, personnel, transportation, range access information, etc. in preparation for field events. Certain equipment and supplies must be picked up at Nellis AFB from the Natural Resources Program Office 1-2 days prior to the field event and returned immediately (1-2 days) after the field event is completed.

Fieldwork

The NFE shall submit proposed locations of fieldwork to the Nellis-Natural Resources Program Manager for coordination and approval at least 30 days prior to proposed fieldwork.

The NFE shall perform the required fieldwork for this project in order to conduct vegetation community surveys on the NTTR North Range. Vegetation composition data will be collected according to the protocol established by the Nellis-Natural Resources Program Manager. Helicopter use will be necessary to access the remote areas of the designated survey area.

Protocols for surveys will be provided by the Nellis-Natural Resources Program Manager during the initial meeting.

Draft/Draft Final/Final Project Reports

Three (3) copies of a draft project report will be submitted within 60 days of the conclusion of the field season. Nellis AFB will coordinate and consolidate Air Force comments/corrections on the draft within 30 days. Upon receipt of comments/corrections, on the draft project report, four (4) copies of a final draft project report will be submitted within 30 days for final review. Air Force review and comments on the final draft project report will be completed within 30 days. Ten (10) hard copies and ten (10) electronic copies of the final project report will be due within 30 days upon receipt of comments on the final draft project report. The project report format and contents will be approved during the initial project meeting by the Nellis AFB, and the AFCEC/Nellis IST. The report will include, but is not limited to an executive summary, site characterization, survey methods, field notes and data sheets, results, population trend data where applicable, discussion and management recommendations, and military mission implications. Maps and drawings will be provided. All documents shall be provided in Microsoft Word and pdf formats. All photographs, data, and original data forms will also be provided.

All new findings and data collected during this project will be analyzed and incorporated into the existing Unique Habitats Guidelines, a living document used by the Nellis-Natural Resources Program Manager for ecosystem management of the NTTR ranges.

5.14. MGT, HABITAT, UNIQUE HABITATS & RARE PLANTS (RKXF177313)

Currently, Nellis AFB, Creech AFB, and the Nevada Test and Training Range (NTTR) contain habitats for species such as burrowing owls, pygmy rabbits, bats, southwest willow fly catchers, and other species. There is no baseline data regarding habitat, species abundance, or existing conditions. Existing data is minimal for the Air Force use to support or oppose potential habitat listings, resulting in the State, federal and other agencies dictating courses of action under the Endangered Species Act.

The purpose of this task is for the NFE to conduct unique habitat delineation and rare plant surveys on areas on Nellis AFB, Creech AFB, and the NTTR. The NFE will have adequate experience in working with golden eagles and raptors in the western United States. Based on range access restrictions and mission training activities, field work will often be required to be conducted on weekends and holidays, in addition to normal weekdays. Required field work must be completed during biologically accepted activity (breeding, migratory, wintering, nesting, blooming,) seasons, based on range access availability. Surveys may be required to be conducted outside of the normal seasons if stipulated by various land/wildlife managing agencies and as approved by the Nellis-Natural Resources Program Manager.

Scope

The overall purpose of this project is to conduct surveys and inventory the unique habitats/rare plants on Nellis AFB, Creech AFB, and the NTTR and provide best management practices to sustain military air training operations and readiness through ecosystem management. The project's product will be the continuation of mapping unique habitats as well as rare plants and updating the Unique Habitat/Rare Plants Management program guidelines with the most current

data collected/ analyzed during this project. GIS data such as unique habitat designations and boundaries, rare plant species population locations and densities, will be collected and entered into the Natural Resources GIS data base.

NFE personnel must be able to obtain clearance for the NTTR and will be escorted by a Government employee/escort at all times while on the range. All specialized equipment must be cleared for use on the range prior to start of the project. The NFE will use rental or company vehicles, or helicopters, and as available Government owned vehicles (GOVs) for use on the range. No privately owned vehicles (POVs) are allowed on the range. Areas for surveys will be determined based on scheduled activities and range access.

Required photographs will be taken by a Government employee and not released for NFE use until after being cleared through the NTTR XPN office.

Initial Meeting

Within 30 days of award of this task order, the NFE will schedule an initial project kick off meeting with all parties involved (Nellis AFB, AFCEC/Nellis IST, NFEs, etc) to develop a project work schedule to implement the SOW. All deliverables/tasks will be submitted within the required timeframes as identified.

The NFE shall work with the Nellis-Natural Resources Program Manager to establish priority areas of survey areas to evaluate and map unique habitats and rare plant populations and distributions on Nellis AFB, Creech AFB, and the NTTR. This determination should be made based on mission priority, range access, or by habitat priority as determined by the Nellis-Natural Resources Program Manager. Due to NTTR mission and training prioritization schedules and access restrictions, implementation of fieldwork activity/schedules may be require to be changed, as agreed upon as necessary by the NFE, AFCEC/Nellis IST, and the Nellis-Natural Resources Program Manager.

Review Existing Data/Fieldwork Preparation

Review historic unique habitats maps and rare plant population data on Nellis AFB, Creech AFB, and the NTTR. Utilize existing datasets and GIS layers/aerial imagery to plan out locations for fieldwork and coordinate proposed locations with Nellis-Natural Resources Program Manager at least one (1) week prior to event for coordinate and approval.

Coordinate with the Nellis-Natural Resources Program Manager to arrange and prepare for supplies, equipment, personnel, transportation, range access information, etc. in preparation for field events. Certain equipment and supplies must be picked up at Nellis AFB from the Natural Resources Program Office 1-2 days prior to the field event and returned immediately (1-2 days) after the field event is completed.

Fieldwork

Required field work must be completed during biologically accepted seasons (breeding, migratory, wintering, nesting) as delineated for each type of survey listed below, based on range access availability. If optics restrictions are in place, surveys will be cancelled for that day and rescheduled. Surveys may be required to be conducted outside of the normal seasons if stipulated by various land/wildlife managing agencies and as approved by the Nellis-Natural Resources Program Manager.

The NFE will conduct unique habitat delineation and rare plant surveys Nellis AFB, Creech AFB, and the NTTR. Dates for these surveys will be dependent on range access availability. The unique habitat delineation and rare plant surveys may require fieldwork utilizing a helicopter during surveys on the NTTR. Adjustments to the protocols will be documented and submitted with data sheets to the Nellis-Natural Resources Program Manager.

Draft/Draft Final/Final Project Reports

Three (3) copies of a draft project report will be submitted within 60 days of the conclusion of the field season. Nellis AFB will coordinate and consolidate Air Force comments/corrections on the draft within 30 days. Upon receipt of comments/corrections, on the draft project report, four (4) copies of a final draft project report will be submitted within 30 days for final review. Air Force review and comments on the final draft project report will be conducted within 30 days. Ten (10) hard copies and ten (10) electronic copies of the final project report will be due within 30 days upon receipt of Nellis AFB comments on the final draft project report. The project report format and contents will be approved during the initial project meeting by the Air Force. The report will include but is not limited to an executive summary, site characterization, survey methods, field notes and data sheets, results, population trend data where applicable, discussion and management recommendations, and military mission implications. Maps and drawings will be provided. All documents shall be provided in Microsoft Word and pdf formats. All photographs, data, and original data forms will be provided to 99 CES/CEIEA.

All new findings and data analysis conducted for specific species studied during this project will be incorporated into the existing Unique Habitats and Rare Plants Guidelines, a living document used by the Nellis-Natural Resources Program Manager for ecosystem management of the base and range.

6. Government Furnished Information or Equipment

The Government will not furnish any supplies or manpower in support of this agreement. The Government may furnish some sensitive equipment for use during field surveys as available and appropriate for specified field work. Sensitive equipment furnished may include Global Positioning Systems (GPS), binoculars, and digital cameras in an effort to standardize data collected as well as comply with sensitive equipment rules/restrictions while on the NTTR. The Government will also supply survey protocols and data sheet templates as appropriate for field surveys. The NFE will be required to fund helicopters as needed to expedite collection of data using an approved Air Force helicopter company for the NTTR. However, at the convenience of the Government lodging and meals may be made available at facilities on the north range complex to NFE personnel on a cost reimbursement basis.

7. Data Collection and Geographic Information System Database Requirements

Original data sheets will be delivered to the Nellis-Natural Resources Program Manager no later than seven (7) days after the completion of each field event. Data sheet format will be approved by the Nellis-Natural Resources Program Manager prior to first field event.

GPS waypoints will be submitted electronically using any Environmental Systems Research Institute's (ESRI) compatible GIS format or Garmin GPS exchange format (.gpx) if NFE equipment was used. All Government issued GPS /sensitive equipment will be turned in to the

Nellis-Natural Resources Program Manager immediately after each field event. GPS waypoint files will be provided electronically to the NFE for use in the data analysis.

All GIS data must be accepted and approved to be compatible by the 99 CES GIS office to ensure compliance with AF GIS format. Data for this project will be collected using in compliance with Spatial Data Standards for Facilities, Infrastructure, and Environment (SDSFIE). The latest version should be used for data collection. Maps generated from GIS data will be reduced and included in reports. Data collection will be accurate enough to ensure reasonable accuracy on large scale maps. The collected data will be made available in layers as agreed by the NFE and the Nellis-Natural Resources Program Manager. All GIS information and data shall be delivered in the required format.

8. Deliverables

Prior to Field Work

Within ten (10) business days of the initial meeting, the proposed work schedule will be submitted for review/approval to the AFCEC/Nellis IST and the Nellis-Natural Resources Program Manager.

Field Work Events

Original data sheets will be delivered to the Nellis-Natural Resources Program Manager no later than seven (7) days after the completion of each field event. Data sheet format will be approved by the Nellis-Natural Resources Program Manager prior to first field event.

Prior to Project Closeout

The NFE shall provide all draft/draft final/final reports as identified. All reports and information collected shall not be released to the public unless permission is obtained in advance from the AFCEC/Nellis IST, and the Nellis-Natural Resources Program Manager. All GIS data must be reviewed and approved by 99 CES GIS office to ensure compliance with AF GIS compatibility.