

## **PROJECTS**

### **Title – Natural Resources Golden Eagle Monitoring**

**Driver** – (Goal 1) 100% Compliance with Natural Resource Laws and Regulations, Executive Orders, Instructions, and other DoD/Army/WSMR Policies

(Goal 2) Maintain the Biodiversity of Native Flora and Fauna

(Goal 3) Maintain or Replicate Natural Ecosystem Processes

**Description** – Funds are required for ground and aerial-based surveys for golden eagles, roost sites, and nests. Data are used to inform WSMR management of eagles, to avoid impacts to eagles, and to apply for eagle nest take and non-purposeful take permits. Data from these recurring surveys has been critical to apply for and secure eagle take permits on WSMR.

**Timeframe** – 2022-2027

### **Title – Natural Resources Implement Avian Protection Plan**

**Driver** – (Goal 1) 100% Compliance with Natural Resource Laws and Regulations, Executive Orders, Instructions, and other DoD/Army/WSMR Policies

(Goal 2) Maintain the Biodiversity of Native Flora and Fauna

(Goal 3) Maintain or Replicate Natural Ecosystem Processes

**Description** – Funds are needed to continue field work documenting hazardous poles, to update the data matrix with new survey data, to update the GIS database with new survey data, to update both the matrix and GIS regarding lines that have been retrofitted, and for an annual report (described below) of APP implementation accomplished. This task addresses the efforts associated with protecting and managing bald and golden eagles and obtaining and maintaining a BGEPA standard permit or programmatic take permit issued by the Secretary of the Interior through the USFWS.

**Timeframe** – 2022-2027

### **Title – Natural Resources Raptor Protection to Prevent Eagle Mortality**

**Driver** – (Goal 1) 100% Compliance with Natural Resource Laws and Regulations, Executive Orders, Instructions, and other DoD/Army/WSMR Policies

(Goal 2) Maintain the Biodiversity of Native Flora and Fauna

(Goal 3) Maintain or Replicate Natural Ecosystem Processes

**Description** – This task addresses the efforts associated with protecting and managing bald and golden eagles and obtaining and maintaining a BGEPA standard permit or programmatic take permit issued by the Secretary of the Interior through the USFWS.

**Timeframe** – 2022-2027

#### **Title – Migratory Bird Monitoring**

**Driver** – (Goal 1) 100% Compliance with Natural Resource Laws and Regulations, Executive Orders, Instructions, and other DoD/Army/WSMR Policies

(Goal 2) Maintain the Biodiversity of Native Flora and Fauna

(Goal 3) Maintain or Replicate Natural Ecosystem Processes

**Description** – Funds will be used to purchase and install two Motus tracking stations on WSMR to track previously tagged birds from up to 30 km away. The data will provide information on the species and routes of migratory birds breeding, wintering, stopping over, and migrating through WSMR. This information is necessary to inform management of migratory bird species, especially sensitive species such as grassland birds and those listed on the DoD PIF Mission Sensitive Species and Watch Lists. It also allows us access to migration data from other Motus receivers in the network throughout the west to understand species-specific movement patterns. In outyears, WSMR can capture and tag birds on the installation to learn more about movements and habitat use of key species.

**Timeframe** – 2022-2027

#### **Title – Natural Resources Monitor Species at Risk (SAR) Bird Species (Pinyon Jay and Gray Vireo)**

**Driver** – (Goal 1) 100% Compliance with Natural Resource Laws and Regulations, Executive Orders, Instructions, and other DoD/Army/WSMR Policies

(Goal 2) Maintain the Biodiversity of Native Flora and Fauna

(Goal 3) Maintain or Replicate Natural Ecosystem Processes

**Description** – This activity addresses the costs associated with conducting candidate and Species At Risk (SAR) monitoring, PLSSs, and habitat conservation efforts with the purpose of preventing the listing of a SAR. The SAR management is identified in the installation INRMP and should be considered high management priority. The primary purposes of this project will be to 1) track the nest colony and nest sites in the Ocuras, especially at/near woodland treatment sites and 2) provide recommendations for woodland treatments to avoid/minimize impacts to Pinyon Jays. This project will survey for gray vireos and nest sites within treatment and control areas, and characterize nest site selection.

**Timeframe** – 2022-2027

**Title – Natural Resources Oscura Mountains Chipmunk (ARMY SAR) Monitoring and Management**

**Driver** – (Goal 1) 100% Compliance with Natural Resource Laws and Regulations, Executive Orders, Instructions, and other DoD/Army/WSMR Policies

(Goal 2) Maintain the Biodiversity of Native Flora and Fauna

(Goal 3) Maintain or Replicate Natural Ecosystem Processes

**Description** – This activity addresses the costs associated with conducting candidate and Species At Risk (SAR) monitoring, PLSs, and habitat conservation efforts with the purpose of preventing the listing of a SAR. The SAR management is identified in the installation INRMP and should be considered high management priority. Surveys are necessary to determine the distribution and habitat use by this subspecies needed to inform woodland management decisions. Trapping and radio-telemetry will be used to study and quantify habitat use.

**Timeframe** – 2022-2027

**Title – Natural Resources Bat Roost Monitoring and Management**

**Driver** – (Goal 1) 100% Compliance with Natural Resource Laws and Regulations, Executive Orders, Instructions, and other DoD/Army/WSMR Policies

(Goal 2) Maintain the Biodiversity of Native Flora and Fauna

(Goal 3) Maintain or Replicate Natural Ecosystem Processes

(Goal 4) Support Morale, Welfare, and Recreation of Residents and the Workforce.

**Description** – This activity addresses the costs associated with conducting a PLS and data analysis to identify and describe the presence or absence of a natural resource on the installation and to determine the approximate extent and magnitude of the resource. A new PLS may be required if data, information, or other factors result in substantial change to the existing PLS and it ceases to be accurate. This project includes the monitoring of roost sites and/or the installation of bat-friendly gate (or cupola) at additional sites with keyed human access for authorized individuals.

**Timeframe** – 2022-2027

**Title – Natural Resources Arid Montane Landsnail Planning Level Surveys**

**Driver** – (Goal 1) 100% Compliance with Natural Resource Laws and Regulations, Executive Orders, Instructions, and other DoD/Army/WSMR Policies

(Goal 2) Maintain the Biodiversity of Native Flora and Fauna

(Goal 3) Maintain or Replicate Natural Ecosystem Processes

**Description** – This activity addresses the costs associated with conducting a PLS and data analysis to identify and describe the presence or absence of a natural resource on the installation and to determine the approximate extent and magnitude of the resource. A new PLS may be required if data, information, or other factors result in substantial change to the existing PLS and it ceases to be accurate. The primary purposes of this project will be to 1) Delineate critical microhabitat characteristics of terrestrial gastropods species, subspecies, and endemic populations that occur on WSMR, 2) Determine species distribution of terrestrial gastropods, 3) Review Sullivan and Smartt December 18, 1995 to determine changes in previously described species.

**Timeframe** – 2022-2027

#### **Title – Natural Resources Wetland Planning Level Surveys**

**Driver** – (Goal 1) 100% Compliance with Natural Resource Laws and Regulations, Executive Orders, Instructions, and other DoD/Army/WSMR Policies

(Goal 2) Maintain the Biodiversity of Native Flora and Fauna

(Goal 3) Maintain or Replicate Natural Ecosystem Processes

**Description** – This task addresses the activities associated with conducting wetland Planning Level Surveys to determine the location, extent, and type of wetlands located within a particular sector of the installation or of the entire installation. Wetland planning levels studies are preliminary in level, in comparison to wetland delineations/determinations, and usually consist of the analysis of historic installation data, remote sensed data, and field location of wetlands.

**Timeframe** – 2022-2027

#### **Title – INRMP Implementation for WSMR**

**Driver** – (Goal 1) 100% Compliance with Natural Resource Laws and Regulations, Executive Orders, Instructions, and other DoD/Army/WSMR Policies

(Goal 2) Maintain the Biodiversity of Native Flora and Fauna

(Goal 3) Maintain or Replicate Natural Ecosystem Processes

(Goal 4) Support Morale, Welfare, and Recreation of Residents and the Workforce.

**Description** – Provide Natural Resource Technical support to execute state and federal agency requirements identified within the 2021 WSMR INRMP. Requirements include maintenance of state and federal collection, education, endangered, and Bald and Golden Eagle permits, non-native game species management (African oryx and Barbary Sheep), INRMP records maintenance, big game species monitoring and management activities to include population surveys (aerial and ground), and human animal capture for research and disease investigation (CWD, etc), mission related biological surveys, independent and professional reviews of documents from outside agencies, implementation of independent wildlife management plans, nuisance/injured wildlife incidents, and technical components

of plan preparation, NEPA documentation, environmental education briefing for soldiers and mission personnel, and for and project design.

**Timeframe** – 2022-2027

**Title –Implement INRMP Flora and Fauna Planning Level Surveys**

**Driver** – (Goal 1) 100% Compliance with Natural Resource Laws and Regulations, Executive Orders, Instructions, and other DoD/Army/WSMR Policies

(Goal 2) Maintain the Biodiversity of Native Flora and Fauna

(Goal 3) Maintain or Replicate Natural Ecosystem Processes

(Goal 4) Support Morale, Welfare, and Recreation of Residents and the Workforce.

**Description** – This activity includes labor (staff and contractor salaries), materials, travel, and ODCs associated with data collection, field investigations, coordinating with the federal and state resource agencies, geospatial data input, and report writing. PLS for WSMR will concentrate on species not previously surveyed for such as the burrowing owl (*Athene cunicularia*).

**Timeframe** – 2022-2027

**Title – INRMP Implementation GIS Conservation Support**

**Driver** – (Goal 1) 100% Compliance with Natural Resource Laws and Regulations, Executive Orders, Instructions, and other DoD/Army/WSMR Policies

**Description** – This activity includes costs for the development and update of GIS layers, utility/infrastructure surveys, and inventories of conservation points. The IGI&S Data Layer Prepotency Matrix Release 1 (R1) and ACSIM Implementation memo contain the list of standard I&E geospatial data layers that support Army military installation management processes.

**Timeframe** – 2022-2027

**Title – TES – White Sands Pupfish Habitat Water Resources Monitoring**

**Driver** – (Goal 1) 100% Compliance with Natural Resource Laws and Regulations, Executive Orders, Instructions, and other DoD/Army/WSMR Policies

(Goal 2) Maintain the Biodiversity of Native Flora and Fauna

(Goal 3) Maintain or Replicate Natural Ecosystem Processes

**Description** – Perform mandatory elements of the interagency conservation agreement to manage White Sands pupfish, for which WSMR is responsible. The data generated by this effort aids and

supports ongoing Army and DOD efforts to sustain the state endangered WS pupfish and its habitat. These efforts are critical to preventing the species from being listed on the Federal endangered species list which would result in potentially severe restrictions on WSMR Mission activities. This project includes maintenance of Salt Creek and Malpais Spring stream gauges to monitor perennial water flow. The work has been and would continue to be conducted by the USGS.

**Timeframe** – 2022-2027

**Title – White Sands Pupfish Habitat Rehabilitation and Protection**

**Driver** – (Goal 1) 100% Compliance with Natural Resource Laws and Regulations, Executive Orders, Instructions, and other DoD/Army/WSMR Policies

(Goal 2) Maintain the Biodiversity of Native Flora and Fauna

(Goal 3) Maintain or Replicate Natural Ecosystem Processes

**Description** – This activity addresses the costs associated with conducting candidate and Species At Risk (SAR) monitoring, PLSs, and habitat conservation efforts with the purpose of preventing the listing of a SAR. The SAR management is identified in the installation INRMP and should be considered high management priority. Perform mandatory elements of the interagency conservation agreement to manage White Sands pupfish, for which WSMR is responsible.

**Timeframe** – 2022-2027

**Title – INRMP – Wildland Fire & Habitat Restoration for Ecosystem Management**

**Driver** – (Goal 1) 100% Compliance with Natural Resource Laws and Regulations, Executive Orders, Instructions, and other DoD/Army/WSMR Policies

(Goal 2) Maintain the Biodiversity of Native Flora and Fauna

(Goal 3) Maintain or Replicate Natural Ecosystem Processes

**Description** –The scope of this project is to implement ecosystem management components of the Installation Wildland Fire Management Plan (IWFMP) and the Oscura Mountain Forest Management Plan. This effort contributes to the Installation Wildland Fire Management Plan, and specifically identifies management actions that need to occur to increase the overall health of the forests/grasslands while protecting/improving wildlife habitat and Range Assets.

**Timeframe** – 2022-2027

**Title – TES – Oscura Mountains Forest Health and Inventory in Support of SAR Management**

**Driver** – (Goal 1) 100% Compliance with Natural Resource Laws and Regulations, Executive Orders, Instructions, and other DoD/Army/WSMR Policies

(Goal 2) Maintain the Biodiversity of Native Flora and Fauna

(Goal 3) Maintain or Replicate Natural Ecosystem Processes

**Description** – The scope of this project is to complete a woodland inventory for the Oscura Mountains. Additionally, complete a forest health assessment to determine suitability and condition of the forest to support SAR, such as but not limited to Pinyon Jay and Oscura Mountain chipmunk. This project will seek to compare current forest health with requirements of occurring SAR.

**Timeframe** – 2022-2027

#### **Title – Natural Resources Megacarnivore Planning Level Surveys**

**Driver** – (Goal 1) 100% Compliance with Natural Resource Laws and Regulations, Executive Orders, Instructions, and other DoD/Army/WSMR Policies

(Goal 2) Maintain the Biodiversity of Native Flora and Fauna

(Goal 3) Maintain or Replicate Natural Ecosystem Processes

**Description** – This activity addresses the costs associated with conducting a PLS and data analysis to identify and describe the presence or absence of a natural resource on the installation and to determine the approximate extent and magnitude of the resource. A new PLS may be required if data, information, or other factors result in substantial change to the existing PLS and it ceases to be accurate. The San Andres Mountains (SAM) and Oscuras Mountains of White Sands Missile Range support 2 native species of megacarnivore, puma (*Puma concolor*) and American black bear (*Ursus americanus*). Further, WSMR is within colonization distance for two additional megacarnivores, the jaguar (*Felis onca*) and the Federally Listed Endangered Mexican wolf (*Canis lupus baileyi*).

**Timeframe** – 2022-2027

#### **Title – Natural Resources Invasive Plant Treatment for Ecosystem Management (African Rue, Saltcedar, and Hologeton)**

**Driver** – (Goal 1) 100% Compliance with Natural Resource Laws and Regulations, Executive Orders, Instructions, and other DoD/Army/WSMR Policies

(Goal 2) Maintain the Biodiversity of Native Flora and Fauna

(Goal 3) Maintain or Replicate Natural Ecosystem Processes

**Description** – This activity addresses the costs for implementing best management practices specified in an installation's INRMP and IPMP. Common INRMP BMPs include environmental considerations of invasive and non-native plant species effects on native plant communities, in sensitive areas and to species of concern, threatened and endangered species and their habitats. BMP's includes removing non-native and invasive plant species to improve or restore native plant communities, and/or soil productivity by using various methods to include chemical, mechanical or biological treatments.

**Timeframe** – 2022-2027

**Title – TES - Planning Level Surveys Rangwide Survey and Management of At-Risk-Bird Species**

**Driver** – (Goal 1) 100% Compliance with Natural Resource Laws and Regulations, Executive Orders, Instructions, and other DoD/Army/WSMR Policies

(Goal 2) Maintain the Biodiversity of Native Flora and Fauna

(Goal 3) Maintain or Replicate Natural Ecosystem Processes

**Description** – This activity addresses the costs associated with conducting PLSs for federally listed threatened, endangered, or candidate species, and for validated Army species at risk (ASAR). The PLS can provide data to and for coordination with the USFWS and/or NMFS for projects or activities that could potentially affect or impact federally listed candidate, threatened, or endangered species (flora and fauna) and/or their designated critical habitat. We propose to conduct baseline planning level surveys for at-risk bird species on WSMR.

**Timeframe** – 2022-2027

**Title – TES – SAR Study/Manage Impacts of Floodlights on Nocturnal Migrating Birds**

**Driver** – (Goal 1) 100% Compliance with Natural Resource Laws and Regulations, Executive Orders, Instructions, and other DoD/Army/WSMR Policies

(Goal 2) Maintain the Biodiversity of Native Flora and Fauna

(Goal 3) Maintain or Replicate Natural Ecosystem Processes

**Description** – This activity addresses the costs associated with conducting candidate and Species At Risk (SAR) monitoring, PLSs, and habitat conservation efforts with the purpose of preventing the listing of a SAR. The SAR management is identified in the installation INRMP and should be considered high management priority. Funds will be used to monitor for bird carcasses at multiple sites with floodlights to determine which sites are impacting birds, which species are impacted (including SAR and T&E species), to quantify the characteristics of lights that are affecting birds, and to determine solutions for preventing bird mortality range wide.

**Timeframe** – 2022-2027