

MSHCP Amendment: Conservation Focus Group Monitoring

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desert conservation
PROGRAM



MONITORING

Describes 3 types of monitoring:

1. Baseline monitoring: establishes current conditions, necessary to in order to assess changes to species/habitats over time
2. Compliance (or implementation) monitoring: ensures that the Permittees are complying with permit terms and conditions
3. Effectiveness monitoring:
 - Assesses Covered Species in the Plan Area
 - Tracks progress towards meeting biological goals and objectives
 - Evaluates effectiveness of management actions
 - Provides early warning of threats (or adaptive management triggers)

HABITAT MONITORING



Invasive species monitoring

- Develop an Early Detection Rapid Response Program for weed species within 3 years
- Develop a weed management plan for each SMA within 2 years

Habitat quality monitoring

- Review and update habitat suitability models every 10 years
- Use habitat quantification assessment at the landscape scale to track changes over time
- Site-specific assessments will use a habitat uplift tracking system (under development)

HABITAT MONITORING



Covered plant species sediment source monitoring

- Threecorner milkvetch and sticky buckwheat – identify sediment sources within 1 year
- Avoid impacts to sediment sources if feasible; if not, implement minimization and mitigation measures

Connectivity Monitoring

- Identify high priority connectivity corridors (desert tortoise, pocket mouse, Gila monster) within 3 years
- Identify key seed dispersal corridors for Covered Plants
- Develop a Connectivity Management Plan within 3 years; implement connectivity improvement projects

SPECIES MONITORING



Ensure Covered Species populations are stable or increasing within the Reserve System

- Baseline surveys for first 2-3 years (most species)
- Surveys conducted every 5-10 years thereafter
 - May be more frequent for federally listed species
- Monitoring protocols are species specific
- Remote sensing, use of drones, and passive acoustic methods are proposed where feasible to minimize monitoring costs

SPECIES MONITORING



Species	Monitoring Method
Golden Eagle	Point count/passive acoustic
Western burrowing owl	Point count/passive acoustic
Yellow-billed cuckoo	Protocol survey
Southwestern willow flycatcher	Protocol survey
Gilded flicker	Point count/passive acoustic
Loggerhead shrike	Point count
Ridgway's rail	Protocol survey
Bendire's thrasher	Point count
LeConte's thrasher	Point count
Arizona Bell's vireo	Point count

SPECIES MONITORING



Species	Monitoring Method
Desert pocket mouse	Species-specific
Townsend's big-eared bat	Passive acoustic
Spotted bat	Passive acoustic
Desert tortoise	Occupancy survey
Banded Gila monster	Species habitat model and assessments
Mojave poppy bee	Species-specific
Monarch butterfly	Species-specific
Sticky buckwheat	Species-specific
Las Vegas bearpoppy	Species-specific
Threecorner milkvetch	Species-specific