



RECON



Management Change Analysis for the Clark County Multiple Species Habitat Conservation Plan

Prepared for: Bureau of Land Management, Las Vegas Field Office

Multiple Species Habitat Conservation Plan (MSHCP)

- The MSHCP for Clark County was approved in 2001.
- MSHCP evaluated existing management policies and actions that may have a potential effect on species conservation.
- Lands were categorized as one of four basic conservation management categories:
 - Intensively Managed Areas IMAs
 - Less Intensively Managed Areas LIMAs
 - Multiple Use Managed Areas MUMAs
 - Unmanaged Areas UMAs

Changed Circumstances

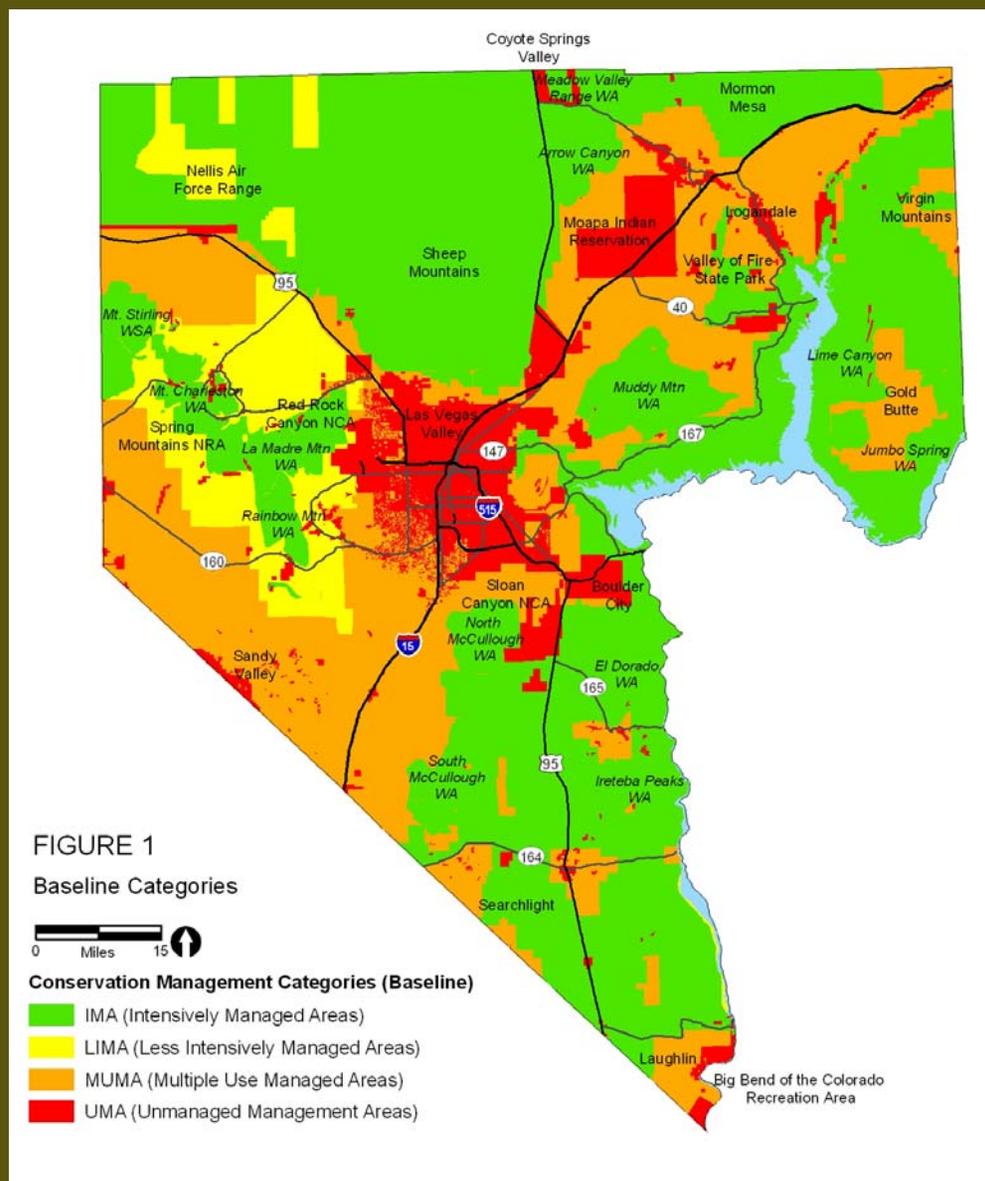
- MSHCP specifies procedures for “Changed Circumstances”
 - Clark County Conservation of Public Land and Natural Resources Act of 2002:
 - Designated 17 Wilderness Areas
 - Released 220,000 acres from study (former Wilderness Study Areas and Instant Study Areas)
 - Adjusted boundary of Red Rock Canyon NCA; established Sloan Canyon NCA
 - Territory adjustment between Nye and Clark Counties in 2001
 - 22,776 acres of Clark County land transferred to Nye County

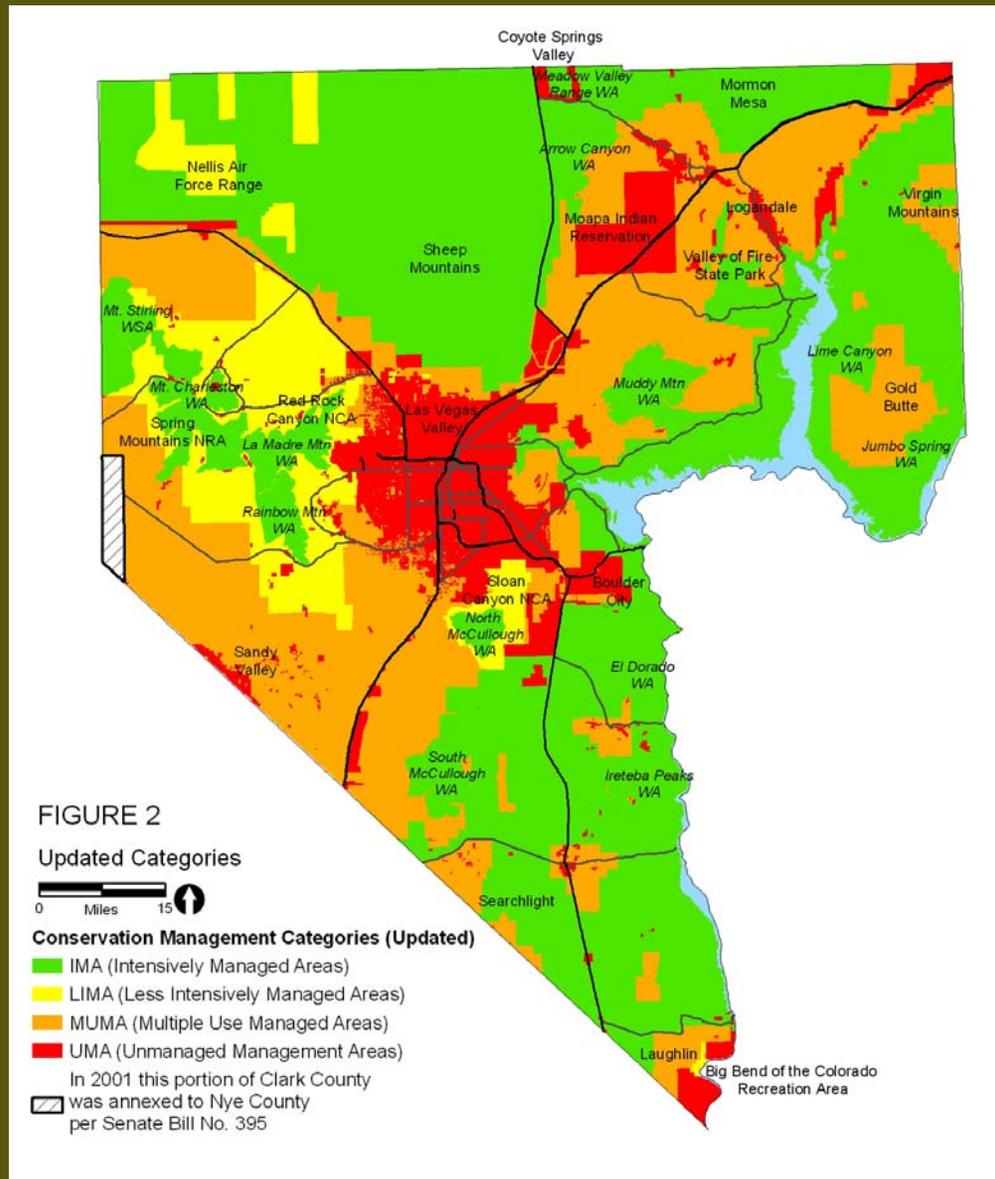
Change Analysis Methods

- Change analysis starts with baseline data from the MSHCP.
 - Projected data into same coordinates as current data
 - Clip narrow slivers where the old and new County boundaries don't have common coverage
 - Retained the acreage transferred to Nye County in the baseline acreage

Change Analysis Methods

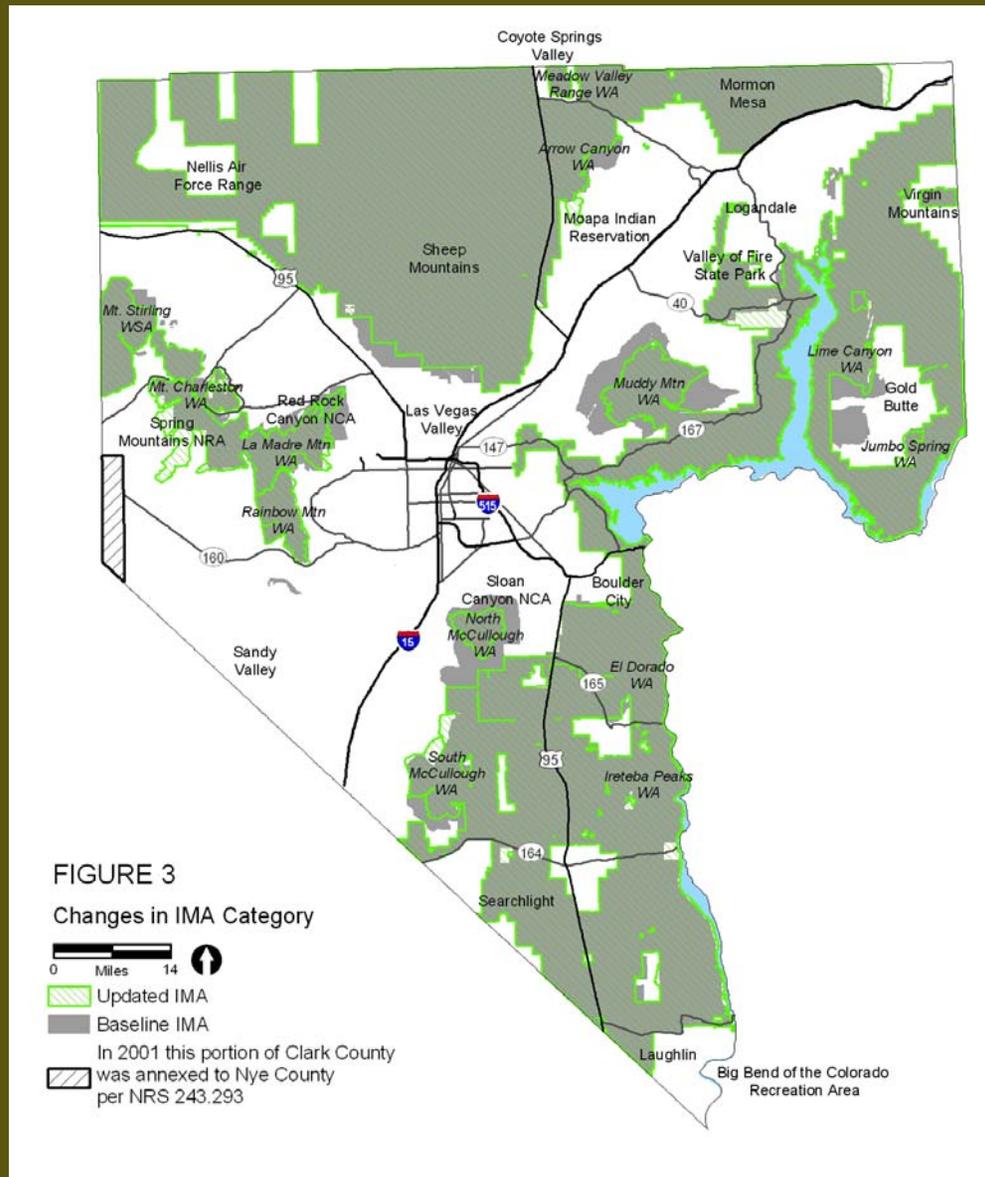
- Noted changes in management category and conservation for:
 - total acres;
 - acres of each ecosystem;
 - acres of each vegetation community; and
 - acres/known locations of potential habitat for covered species (where identified).

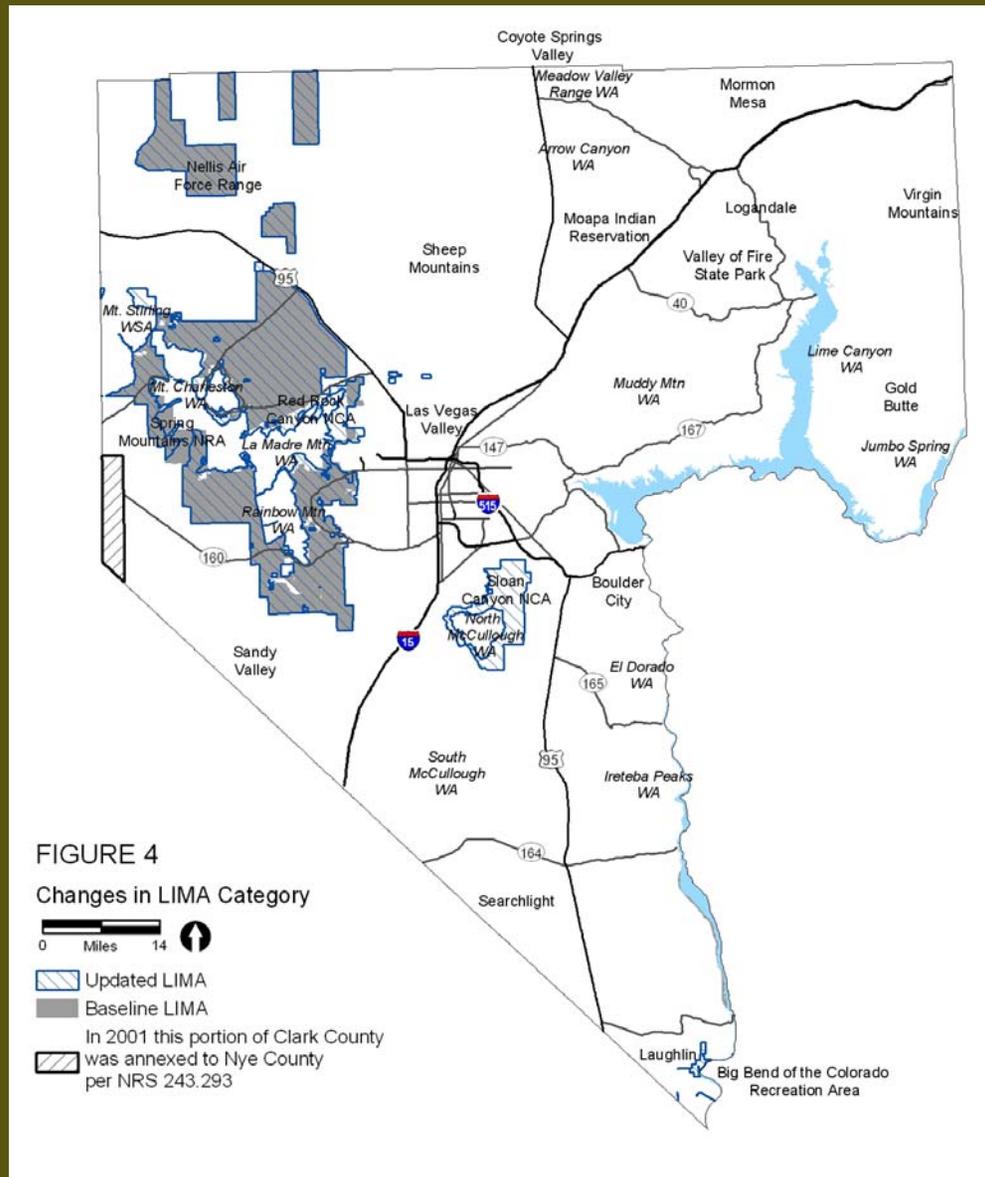


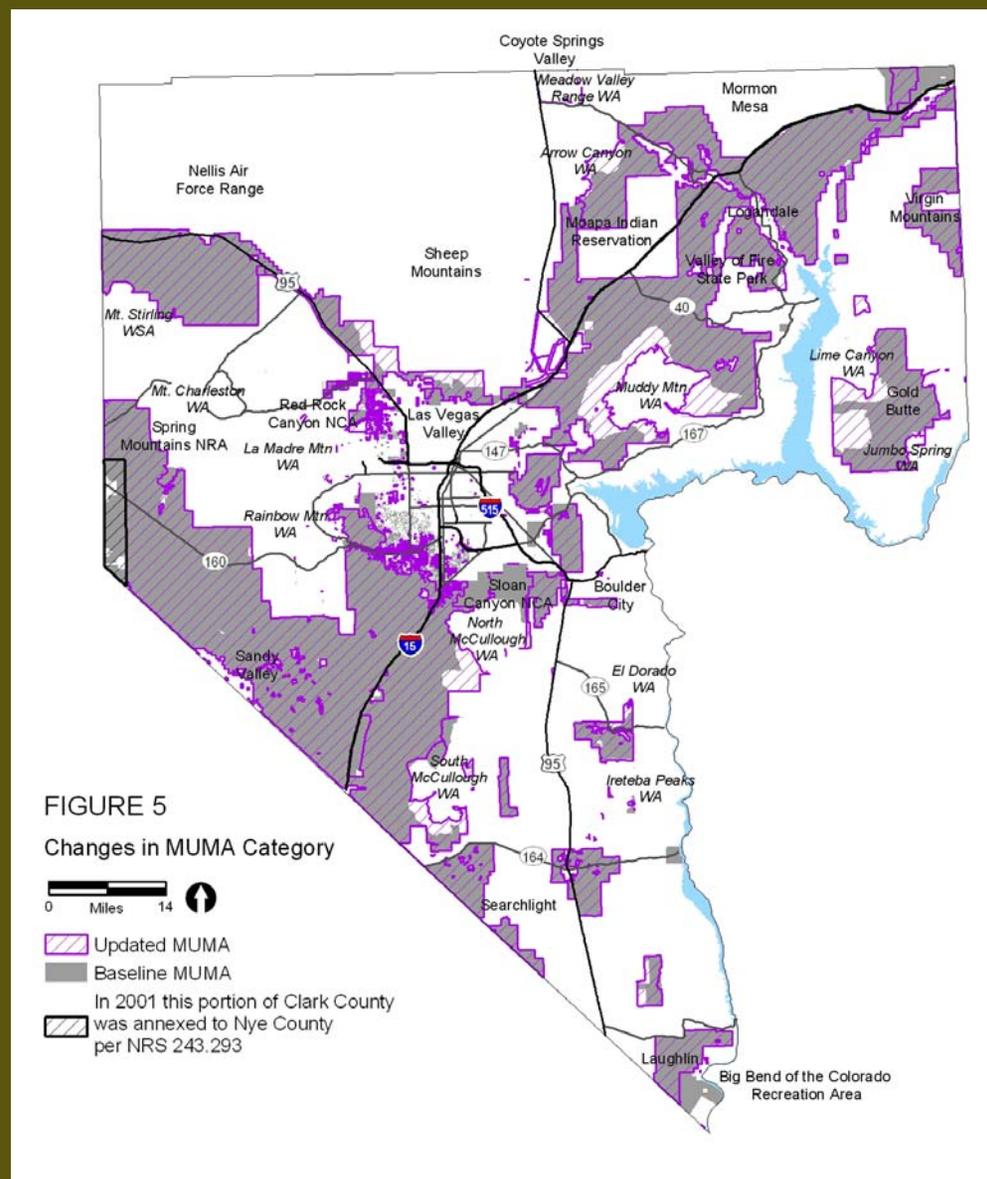


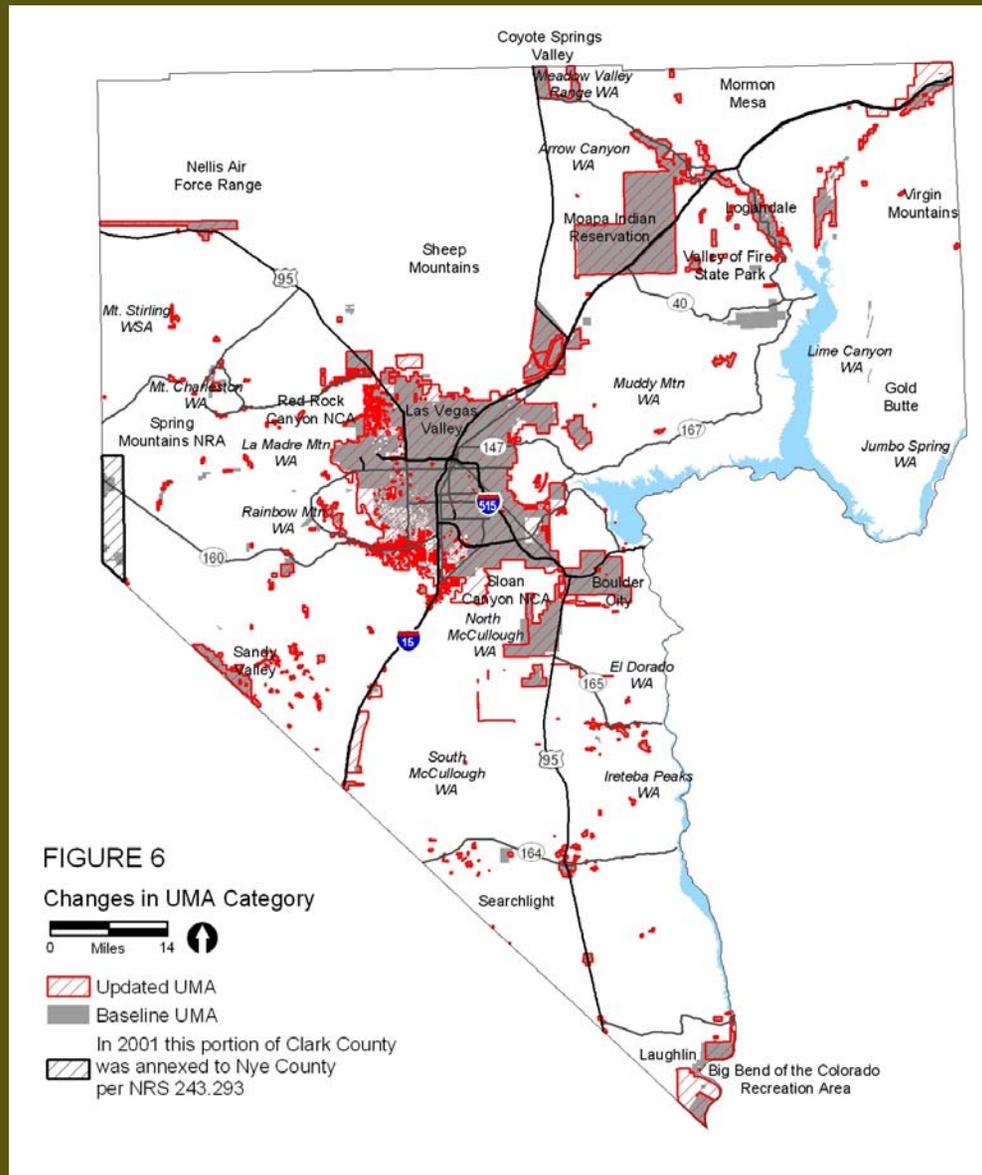
Summary Matrix of Conservation Management Area Changes

Baseline Conservation Management Categories	Baseline Acreage Totals	Revised Conservation Management Categories					Change (Baseline to Revised)
		IMA	LIMA	MUMA	No Data*	UMA	
IMA	2,646,728	2,471,484	47,995	117,000	0	10,249	-118,932
LIMA	380,722	16,163	360,506	1,510	0	2,543	53,020
MUMA	1,505,743	23,352	16,377	1,367,468	18,920	79,624	891
UMA	519,665	16,797	8,864	20,655	3,855	469,494	42,245
Total	5,052,858	2,527,796	433,742	1,506,634	22,776	561,910	









Quantifying Change

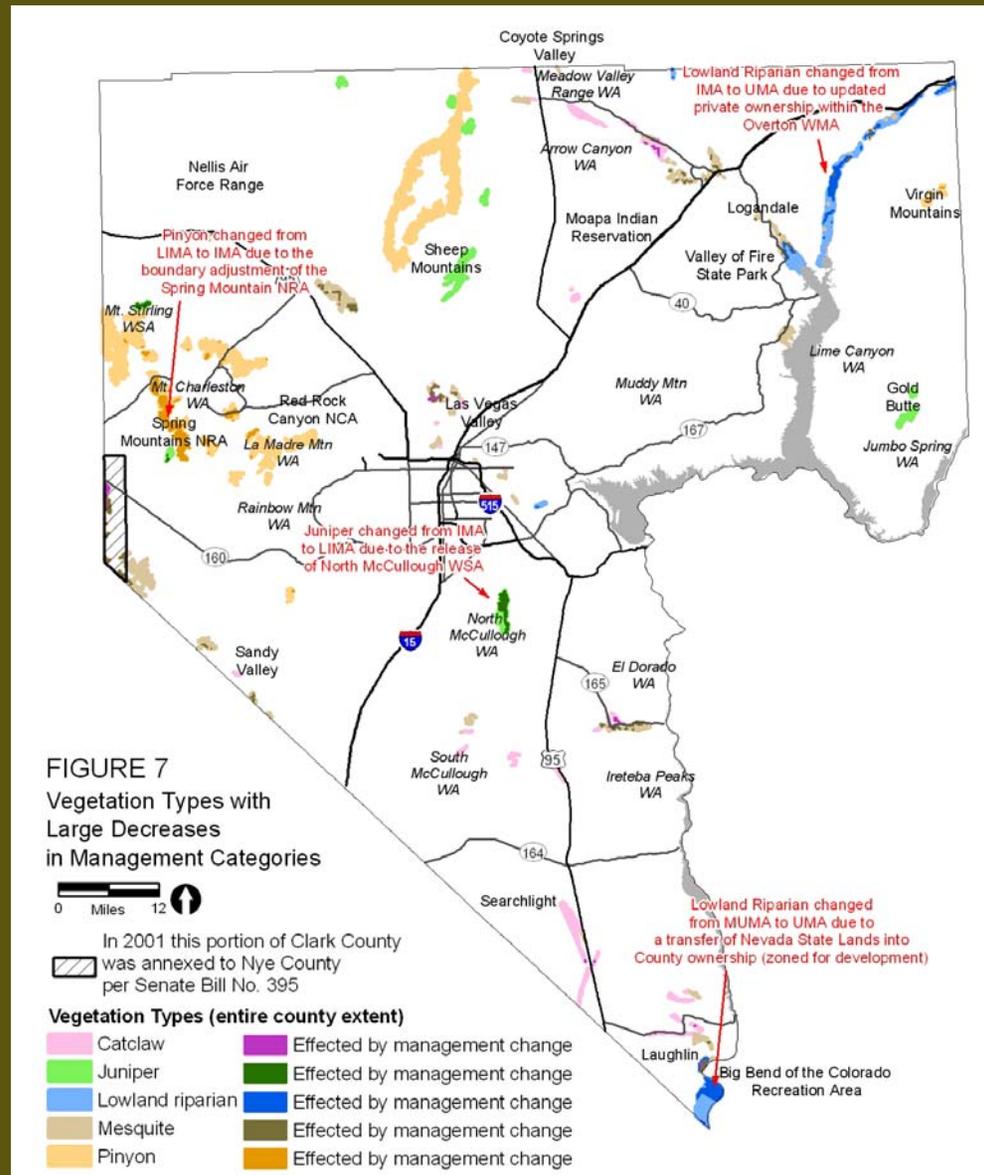
- large increase: $>+5$ % change
- small increase: between $+1$ and $+5$ %
- no change: between -1 and $+1$ %
- small decrease: between -1 and -5 %
- large decrease: >-5 % change

Change by Vegetation Type

- Conservation (IMA + LIMA):
 - Large decrease in lowland riparian
 - Small decreases in creosote-bursage and Mojave mixed scrub
- IMA:
 - Large decrease in lowland riparian (updated private ownership within the Overton WMA)
 - Large decrease in juniper (release of North McCullough WSA lands); IMA + LIMA gives small net increase in juniper

Change by Vegetation Type (continued)

- LIMA:
 - Large loss of Pinyon which corresponds to a large increase in IMA due to the adjusted boundary of Spring Mountain NRA
- MUMA:
 - Large loss in Lowland Riparian; primarily represents former State-owned lands near Big Bend transferred to private ownership (now UMA)
 - Large losses in Catclaw and Mesquite vegetation types; predominant current category UMA and lost in the territory adjustment between Nye and Clark Counties



Former State Lands near Big Bend/Laughlin Area

- Certain former State Lands in this area (outside of Big Bend Recreation Area) have been transferred to private ownership and zoned for development; change in category from MUMA to UMA.
- Vegetation Types
 - 6,461 acres of creosote-bursage (<1% of County coverage)
 - 224 acres of Mojave mixed scrub (<1% of County coverage)
 - 2,470 acres of lowland riparian (14% of County coverage)

Big Bend of the Colorado Recreation Area

- Lands of the Big Bend of the Colorado Recreation Area were included as UMA in the original analysis. The current analysis correctly includes the lands of this State Park as a LIMA.
- Vegetation Types
 - 1,484 acres of creosote-bursage (<1% of County coverage)
 - 178 acres of Mojave mixed scrub (<1% of County coverage)
 - 269 acres of lowland riparian (<2% of County coverage)
 - 235 acres of mesquite (<2% of County coverage)

Change by Ecosystem Type

- Conservation (IMA + LIMA):
 - No large losses
 - Small decrease in Mojave Desert scrub
 - Small decrease in desert aquatic
- IMA:
 - Large decrease of desert aquatic (updated private ownership within the Overton WMA; IMA + LIMA gives small net loss)
 - Small decrease in blackbrush, Mojave Desert scrub, and sagebrush; IMA + LIMA only decrease in Mojave Desert scrub (see above)

Change by Ecosystem Type (continued)

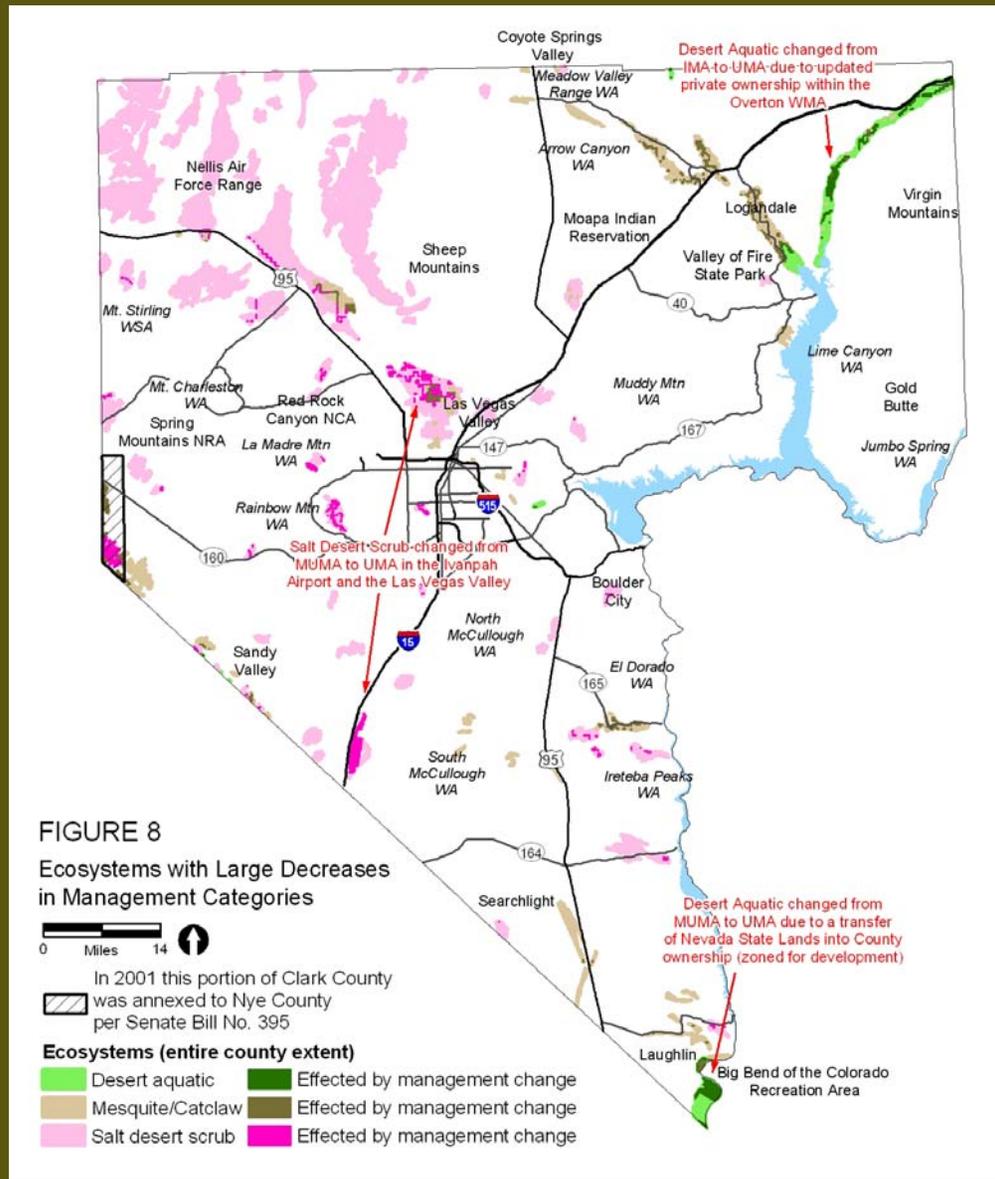
- MUMA:
 - Large loss in desert aquatic; primarily represents former State-owned lands near Big Bend transferred to private ownership (now UMA)
 - Small loss in mesquite/catclaw ecosystem type; predominantly land lost in the territory adjustment between Nye and Clark Counties
 - Small loss in salt desert scrub ecosystem type; predominant current category UMA at Ivanpah Airport and Las Vegas Valley

Former State Lands near Big Bend/Laughlin Area

- Certain former State Lands in this area (outside of Big Bend Recreation Area) have been transferred to private ownership and zoned for development; change in category from MUMA to UMA.
- Ecosystem Types
 - 2,470 acres of desert aquatic (11% of County coverage)
 - 6,684 acres of Mojave Desert scrub (<1% of County coverage)

Big Bend of the Colorado Recreation Area

- Lands of the Big Bend of the Colorado Recreation Area were included as UMA in the original analysis. The current analysis correctly includes the lands of this State Park as a LIMA.
- Ecosystem Types
 - 269 acres of desert aquatic (<1% of County coverage)
 - 258 acres of mesquite/catclaw (<1% of County coverage)
 - 1,689 acres of Mojave Desert scrub (<1% of County coverage)

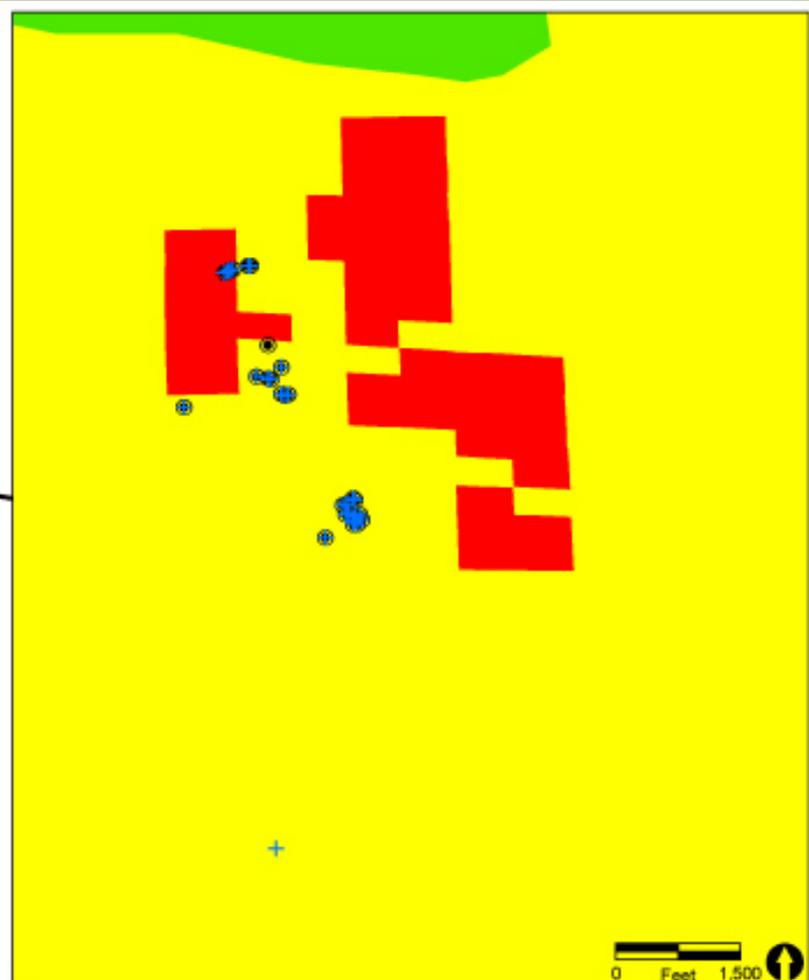
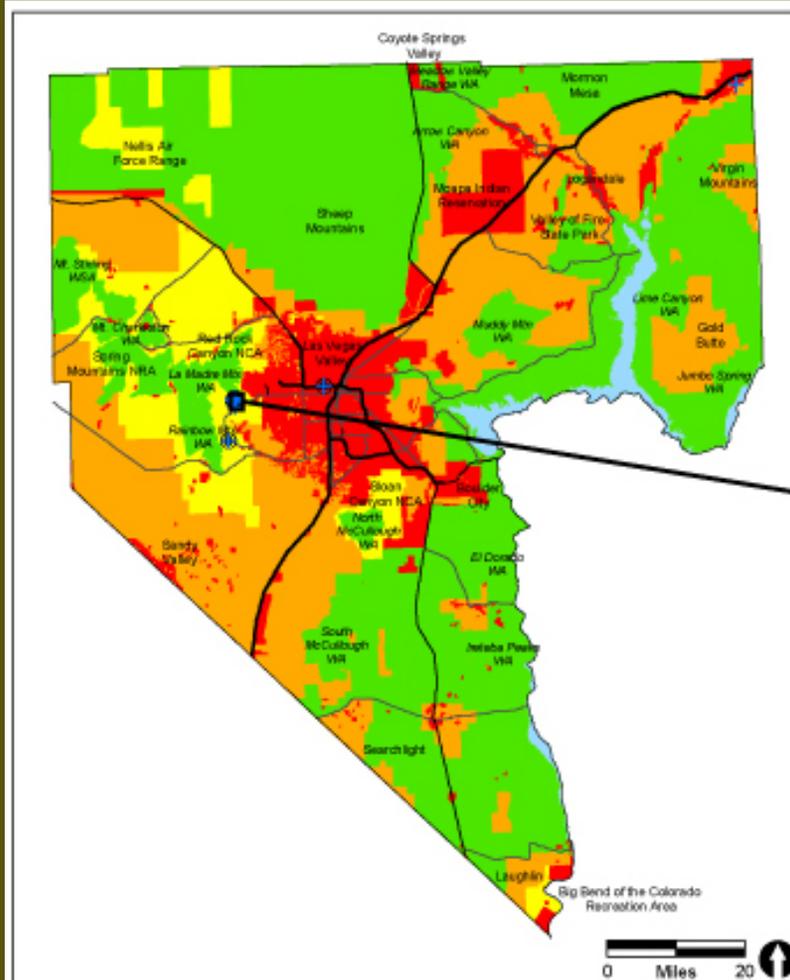


Change by Covered Species

- **Summary of Changes in Potential Habitat or Known Locations of Covered Species in IMA and LIMA**
 - Large decrease: 7 Species
 - Small decrease: 14 Species
 - No change: 48 Species
 - Small increase: 4 Species
 - Large increase: 6 Species

Change by Covered Species

- Seven species with large decreases in area under conservation (IMA or LIMA):
 - alkali mariposa lily (*Calochortus striatus*)
 - white-margined beardtongue (*Penstemon albomarginatus*)
 - yellow-billed cuckoo, southwestern willow flycatcher, summer tanager, blue grosbeak, and Arizona bell's vireo.



- + Alkali mariposa lily (Original Data)
- Alkali mariposa lily (Updated Data)

Conservation Management Categories (Updated)

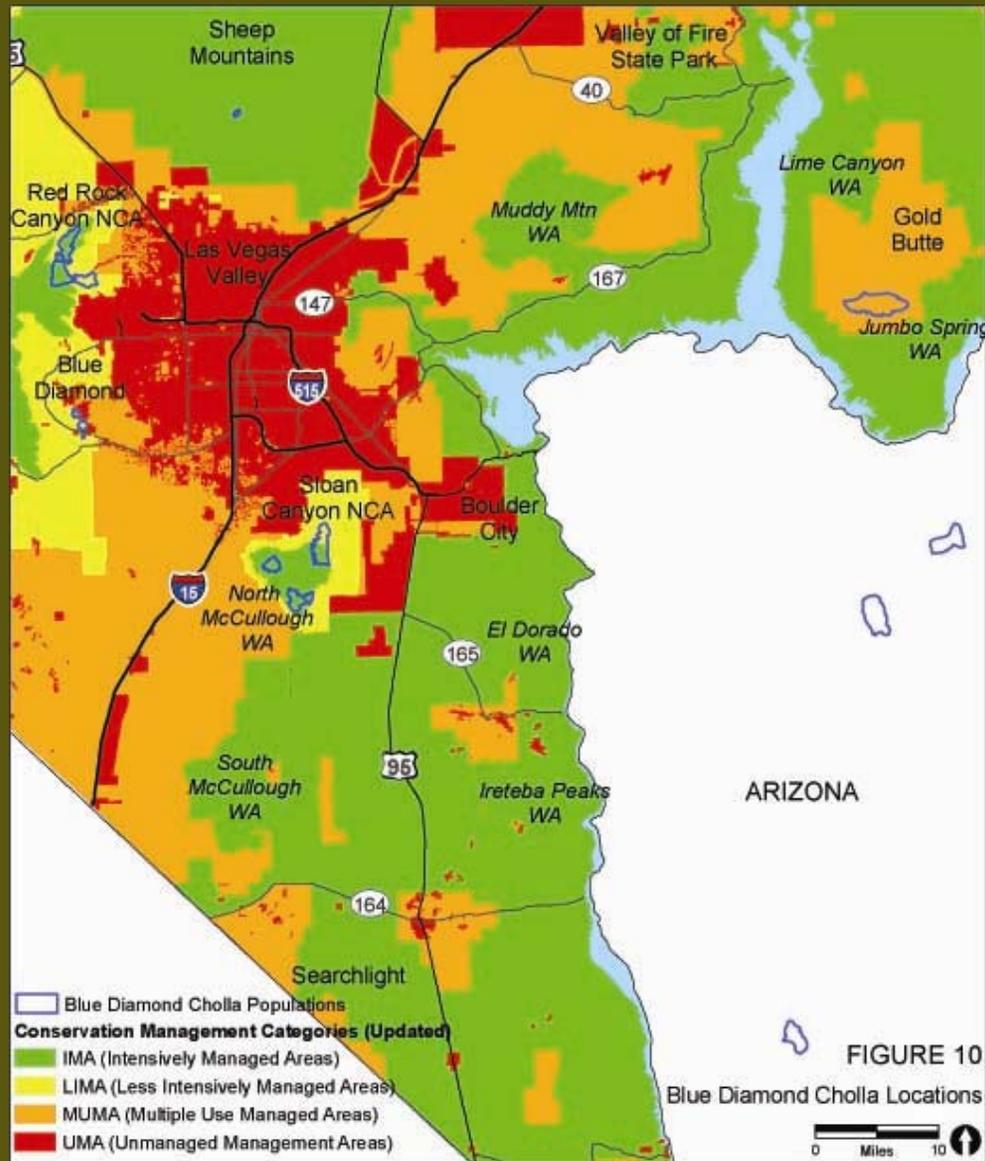
- IMA (Intensively Managed Areas)
- LIMA (Less Intensively Managed Areas)
- MUMA (Multiple Use Managed Areas)
- UMA (Unmanaged Management Areas)

FIGURE 9

Alkali Mariposa Lily Locations

Change by Covered Species

- Blue Diamond Cholla
 - Previously only one population of Blue Diamond cholla was known to occur only within the Blue Diamond Hills.
 - More populations now documented in other areas.
 - Recent location data in Clark County showed no change in the level of conservation: majority (67 percent) in IMAs and LIMAS; < 1 percent in UMAs and 32 percent in MUMAs.



Species with Small Decreases in Conservation Management

- Desert tortoise
- Banded gecko
- Desert iguana
- Large-spotted leopard lizard
- Great Basin collared lizard
- California (common) kingsnake
- Glossy snake
- Western long-nosed snake
- Western leaf-nosed snake
- Sonoran lyre snake
- Sidewinder
- Speckled rattlesnake
- Mojave green rattlesnake
- Sticky ringstem

Species endemic only to the Spring Mountains

- Palmer's chipmunk
- Dark blue butterfly
- Spring Mountains icarioides blue
- Mt. Charleston blue butterfly
- Spring Mountains acastus checkerspot
- Morand's checkerspot butterfly
- Carole's silverspot butterfly
- Spring Mountains comma skipper
- Rough angelica
- Charleston pussytoes
- Rosy king sandwort
- Clokey milkvetch
- Spring Mountains milkvetch
- Clokey thistle
- Jaeger whitlowgrass
- Charleston draba
- Clokey greasebush
- Hidden ivesia
- Charleston beardtongue
- Clokey catchfly
- Charleston tansy
- Charleston kittentails

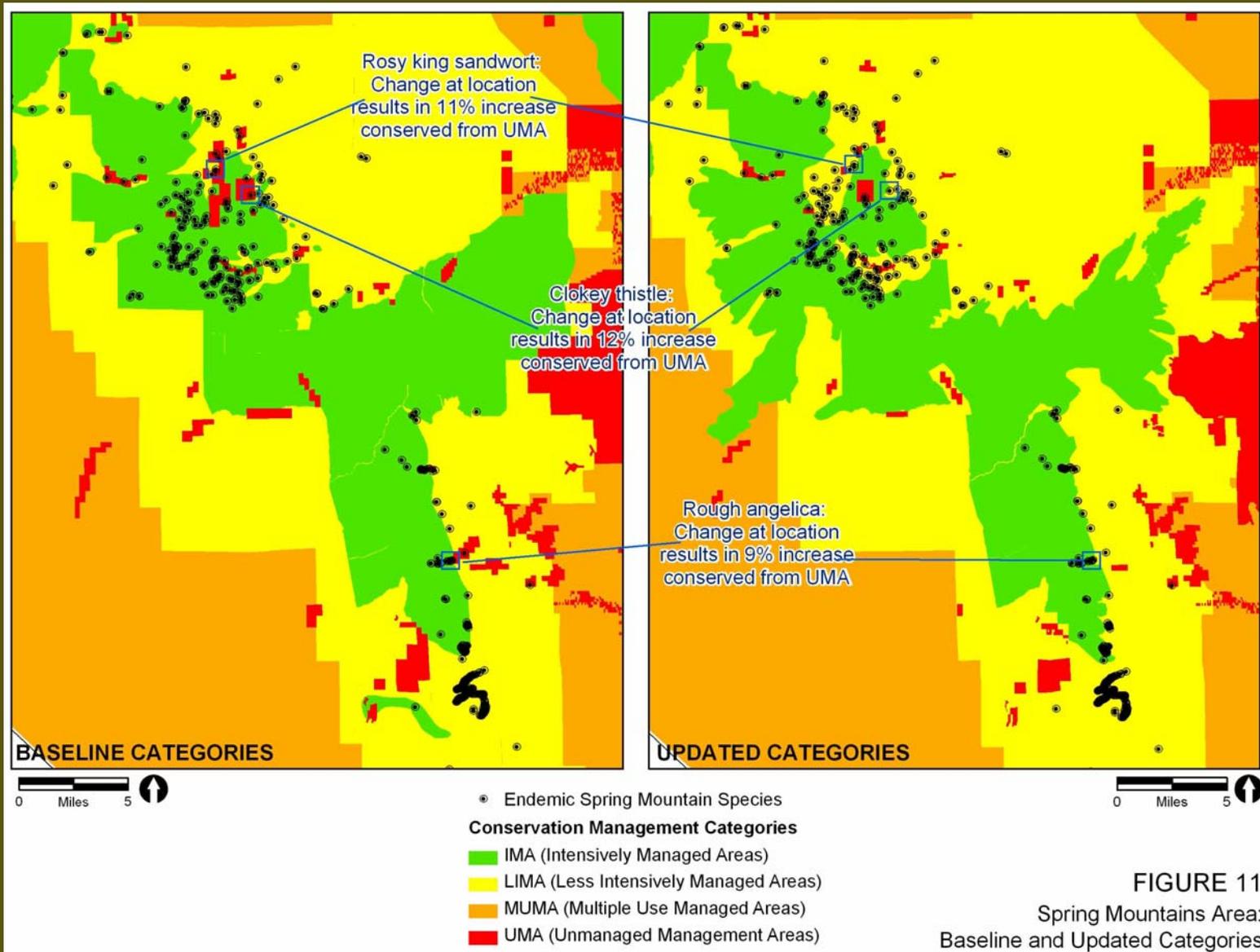


FIGURE 11
Spring Mountains Area:
Baseline and Updated Categories

Conclusions

- Conservation Category Changes
 - decrease in IMA of 119,000 acres (-4.5 % change or 2.4 % of the County),
 - increase in LIMA of 53,000 acres (+13.9 % change or 1.0 % of the County),
 - increase in UMA of 42,000 acres (+8.1 % change or 0.8 % of the County),

Conclusions

- Ecosystem and Vegetation Community Changes
 - 6 percent decrease in conservation management of lowland riparian vegetation
 - small (4.6 percent) decrease in conservation management of desert aquatic ecosystem
 - Potential direct impacts to lowland riparian vegetation (change to UMA)
 - Potential direct impacts to catclaw and mesquite vegetation types (change to UMA)

Conclusions

- Covered Species Changes
 - 6 percent decrease in conservation management of the proportion of cited locations of alkali mariposa lily in IMA and LIMA (MSHCP data);
 - 24 percent decrease in conservation management of the proportion of cited locations of white-margined beardtongue;

Conclusions

- Covered Species Changes (continued)
 - 6 percent decrease in conservation management of potential habitat for the yellow-billed cuckoo, southwestern willow flycatcher, summer tanager, and Arizona bell's vireo;
 - 5 percent decrease in conservation management of potential habitat for the blue grosbeak;
 - majority of documented locations for Blue Diamond cholla are conserved (IMA and LIMA); only one percent are within UMA, however the 32 percent within MUMA have the potential for indirect impacts.

Recommendations

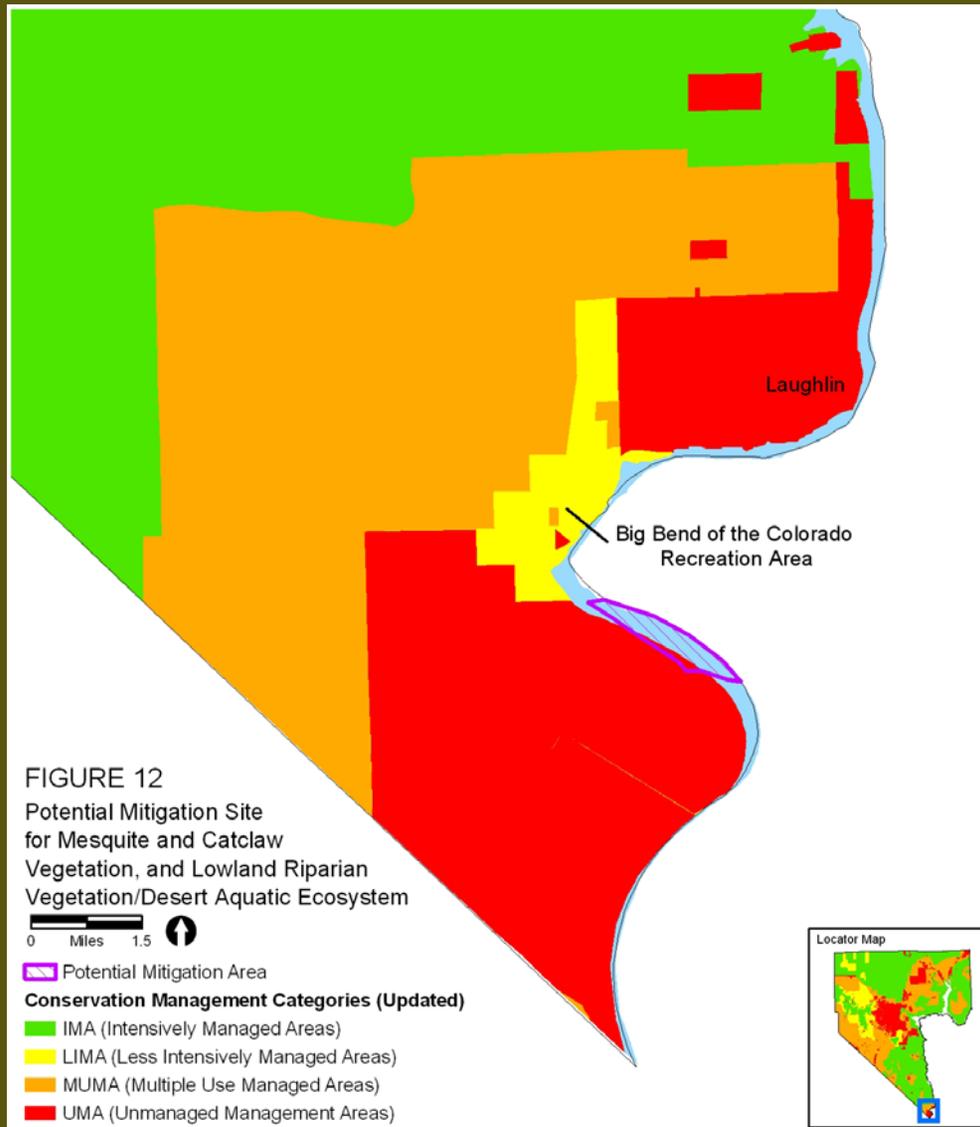
- To address the decrease in IMA of 119,000 acres (-4.5 percent):
 - evaluate the impacts of management actions in LIMAs with consideration of large IMA losses for vegetation and ecosystem types.
 - Require species specific assessment of actions proposed within LIMAs and MUMAs for species with small decreases in potential habitat within IMAs and LIMAs.

Recommendations (continued)

- To address decrease in conservation management for lowland riparian vegetation, potential direct impacts to lowland riparian; and potential direct impacts to desert aquatic ecosystem:
 - explore and undertake measures to acquire or restore habitat of equivalent value to that lost:
 - vegetation mapping to identify quantity and quality of vegetation.
 - restoration along a potential mitigation site near Big Bend.
 - restoration along the Virgin River and/or Muddy River.
 - increased efforts for conservation or restoration within MUMAs.
 - assessment and consideration of the impacts of actions proposed in or adjacent to lowland riparian vegetation/desert aquatic ecosystem within LIMAs and MUMAs.

Recommendations (continued)

- To address potential direct impacts to catclaw and mesquite vegetation (-5 and -6 percent, respectively):
 - explore and undertake measures to acquire or restore habitat of equivalent value to that lost:
 - vegetation mapping to identify quantity and quality of vegetation.
 - restoration along a potential mitigation site near Big Bend.
 - restoration in MUMA or UMA areas.



Recommendations (continued)

- Alkali mariposa lily
 - develop specific management recommendations for the species in IMAs and LIMAs.
 - Evaluate the potential for salvage, seed collection, propagation or other means to conserve plant material from populations in UMAs for incorporation in ecosystem restoration.
 - Mitigation of impacts using salvage and propagation should only be implemented after demonstration of effectiveness for this species.

Recommendations (continued)

- White-margined beardtongue
 - conduct a review of the distribution and status of the species within IMAs, LIMAs, and MUMAs and develop specific management recommendations for the species in IMAs, LIMAs, and particularly in MUMAs.
 - Evaluate the potential for salvage, seed collection, propagation, or other means to conserve plant material from populations in UMAs for incorporation in ecosystem restoration.
 - Mitigation of impacts using salvage and propagation should only be implemented after demonstration of effectiveness for this species.

Recommendations (continued)

- Yellow-billed cuckoo, southwestern willow flycatcher, summer tanager, blue grosbeak, and Arizona bell's vireo
 - Specific measures for lowland riparian vegetation and desert aquatic ecosystem should be undertaken with consideration of these species.
 - Vegetation mapping and monitoring of the success of restored habitat areas should include surveys for these species and a comparison between areas lost to UMA and areas restored for the habitat of these species.

Recommendations (continued)

- Blue Diamond cholla
 - Develop a specific conservation and management plan for the species within IMAs, LIMAs, and particularly in MUMAs.
 - The plan shall identify existing or likely threats, such as fire.
 - Specifically, some of the populations (especially in Gold Butte) are within or very close to the fires that occurred in 2005. Fires spread by the presence of invasive grasses may be an increasing threat.
 - If the potential to purchase the James Hardie Gypsum Mine becomes an option again in the future, acquisition for conservation should be revisited.

Recommendations (continued)

- Continue to develop adaptive management practices: Adaptive management has particular benefits for MUMA lands
 - lands that could be disposed of, or become UMA should be reviewed as in item BLM(111) of appendix C in the MSHCP
 - MUMA lands should be monitored for uses that conflict with conservation goals

Discussion