



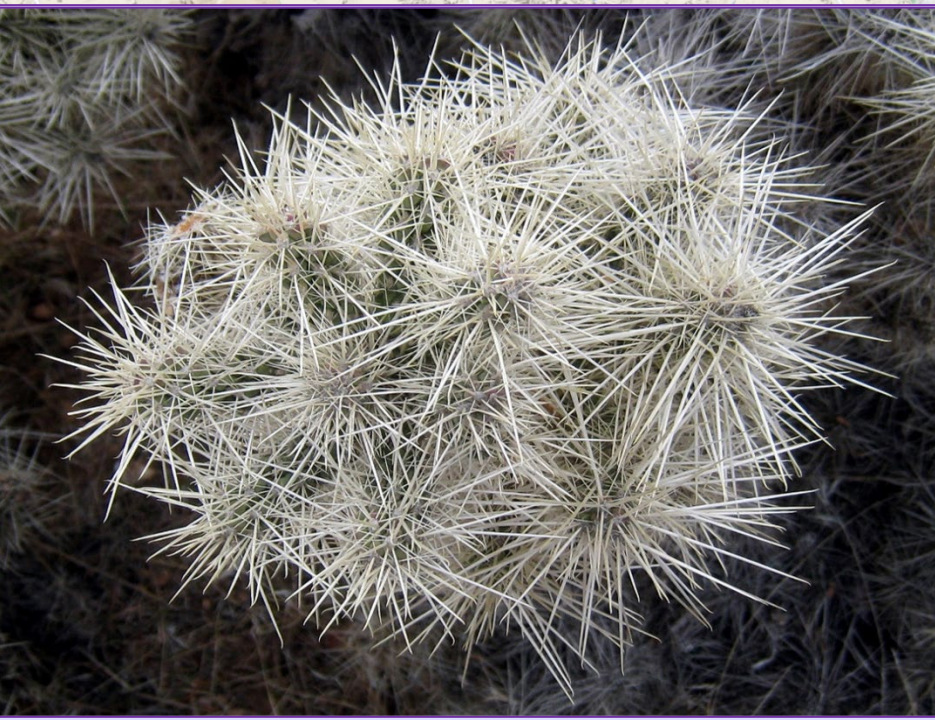
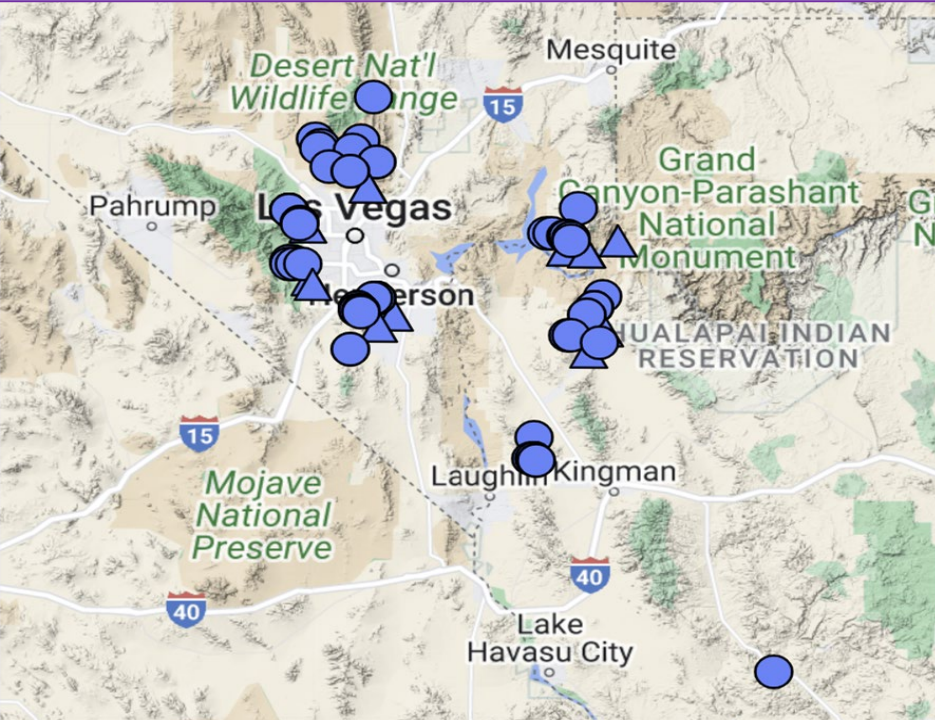
Clark County Blue Diamond Cholla Surveys

2022 – 2023

Ironwood Consulting, Inc.

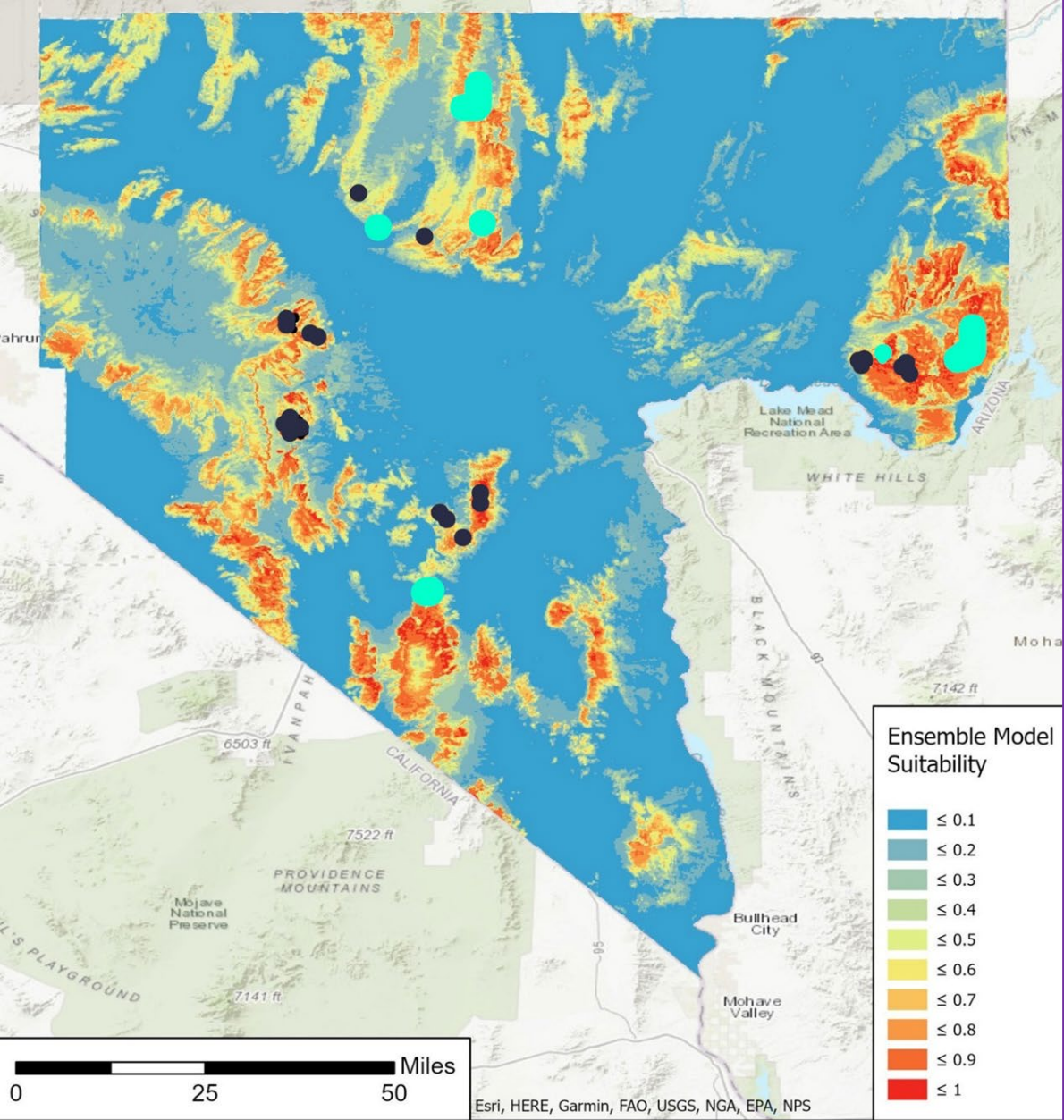


Critically Endangered Target Taxon: *Cylindropuntia multiqeniculata*



Project Objectives

- Expand the known occurrence datasets for Blue Diamond cholla in Clark County
- Ground-truth Blue Diamond cholla habitat suitability models
- Secure information about Blue Diamond cholla presence in areas at risk for development or disturbance by human activities.



Ironwood Consulting

2020-2023 CYMU Occurrences

● NNHP CYMU Occurrences

Cylindropuntia Multigeniculata
(CYMU)
Habitat Suitability

Clark County Rare Plants Survey



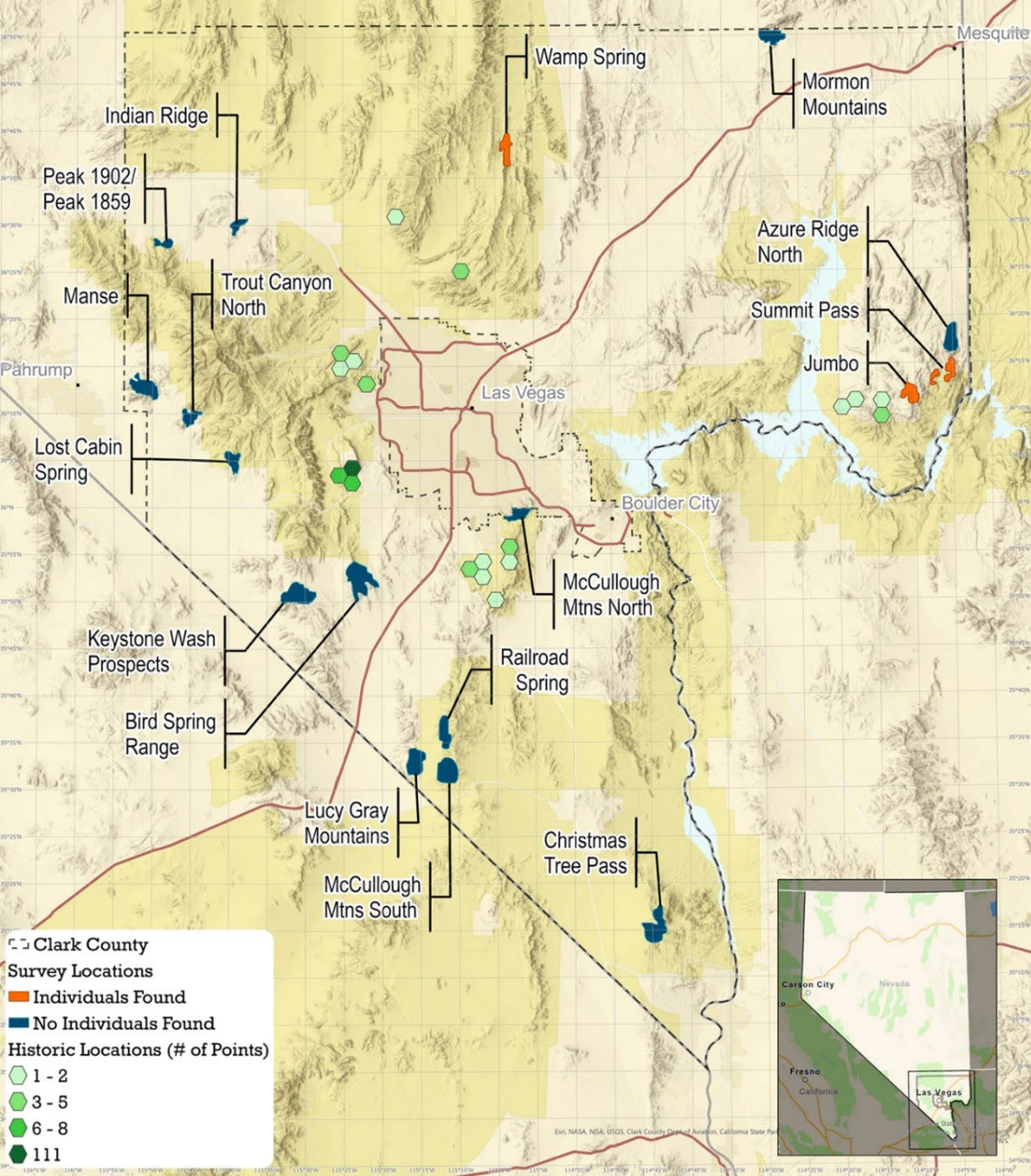
Blue Diamond cholla Survey Sites 2022-2023

17 prioritized survey sites:

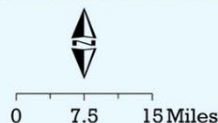
- Habitat modeled as marginal, suitable, or optimal
- Habitat located within 2.5 miles of mapped roads
- Habitat located more than 0.5 mi from any previously recorded Blue Diamond cholla occurrence

2022: 5 sites

2023: 12 sites

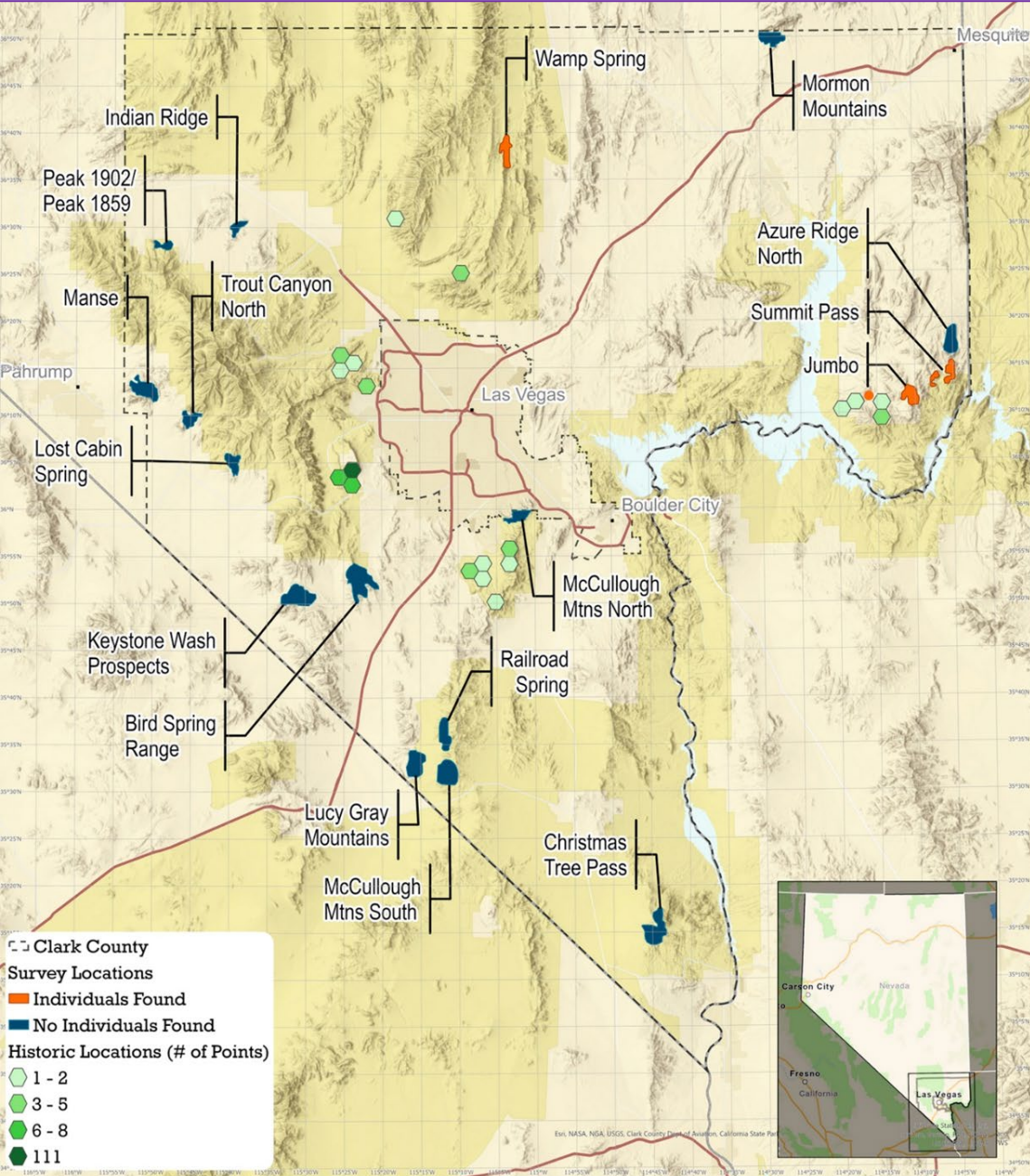


**Clark County Blue Diamond cholla
surveys 2022-2023**



Blue Diamond cholla Survey 2022-2023 Results

- 17 sites surveyed
- 67,377 acres surveyed
 - 2022: 22,894 acres; no individuals found
 - 2023: 44,483 acres; many individuals found



Clark County Blue Diamond cholla
surveys 2022-2023

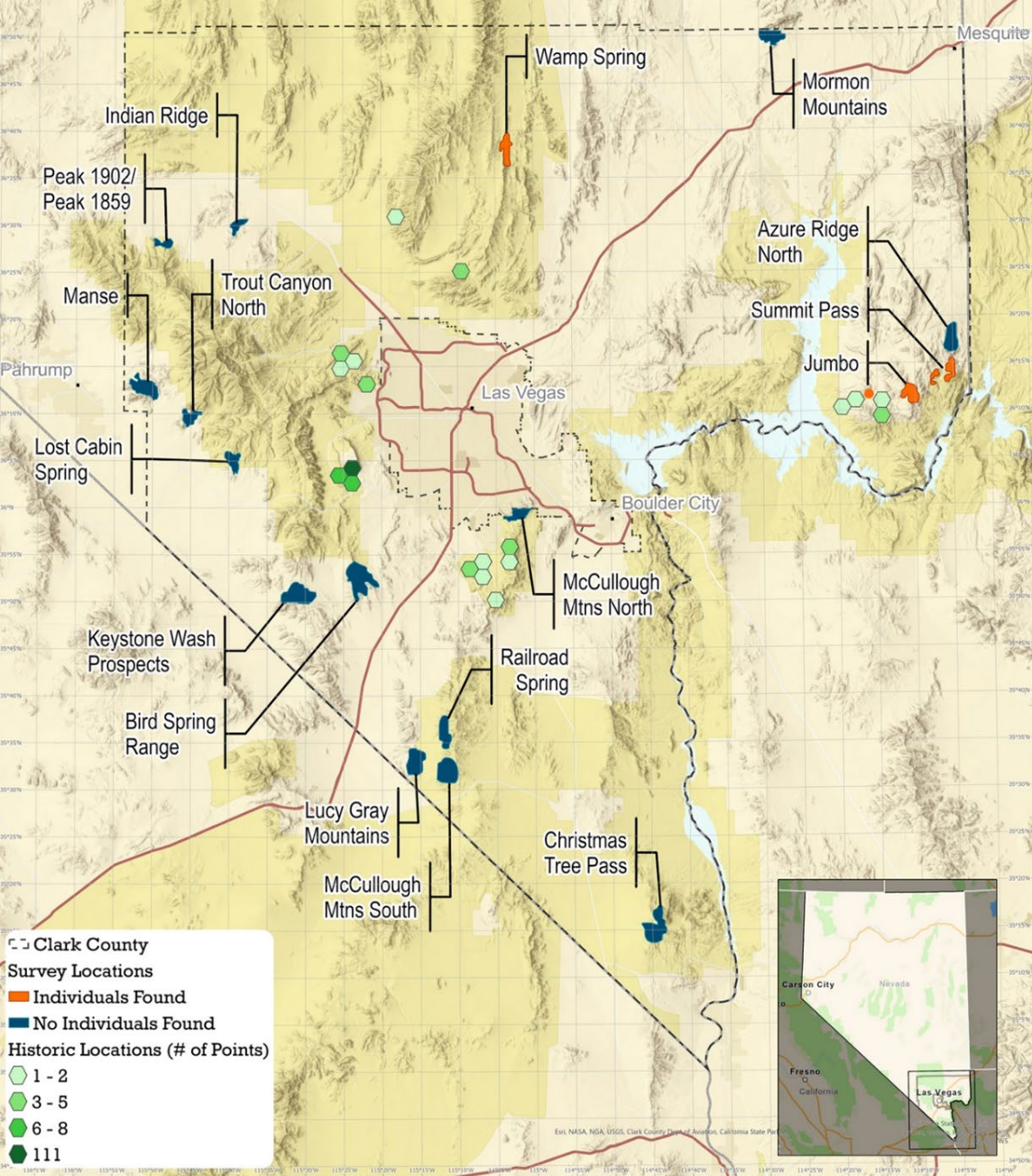


Blue Diamond cholla Survey 2022-2023 Results

Summary

- 5 new EOs – expanded range to north and east
- 5,150+ acres occupied
- 52,000+ individuals – nearly double previous estimates

<u>Land Manager</u>	<u>Occupied Area</u>	<u>Individuals</u>
BLM/NPS	83%	93%
USFWS	17%	7%



Clark County Blue Diamond cholla surveys 2022-2023



Blue Diamond cholla Survey 2022-2023 Results

Summit Pass Survey Area (Gold Butte NM)

- Largest known occurrence
- > 3,488 occupied acres
- > 48,000+ individuals estimated





Blue Diamond cholla Survey 2022-2023 Results

New EO Habitat Ratings

- Good: 1
- Good-Fair: 1
- Fair: 3

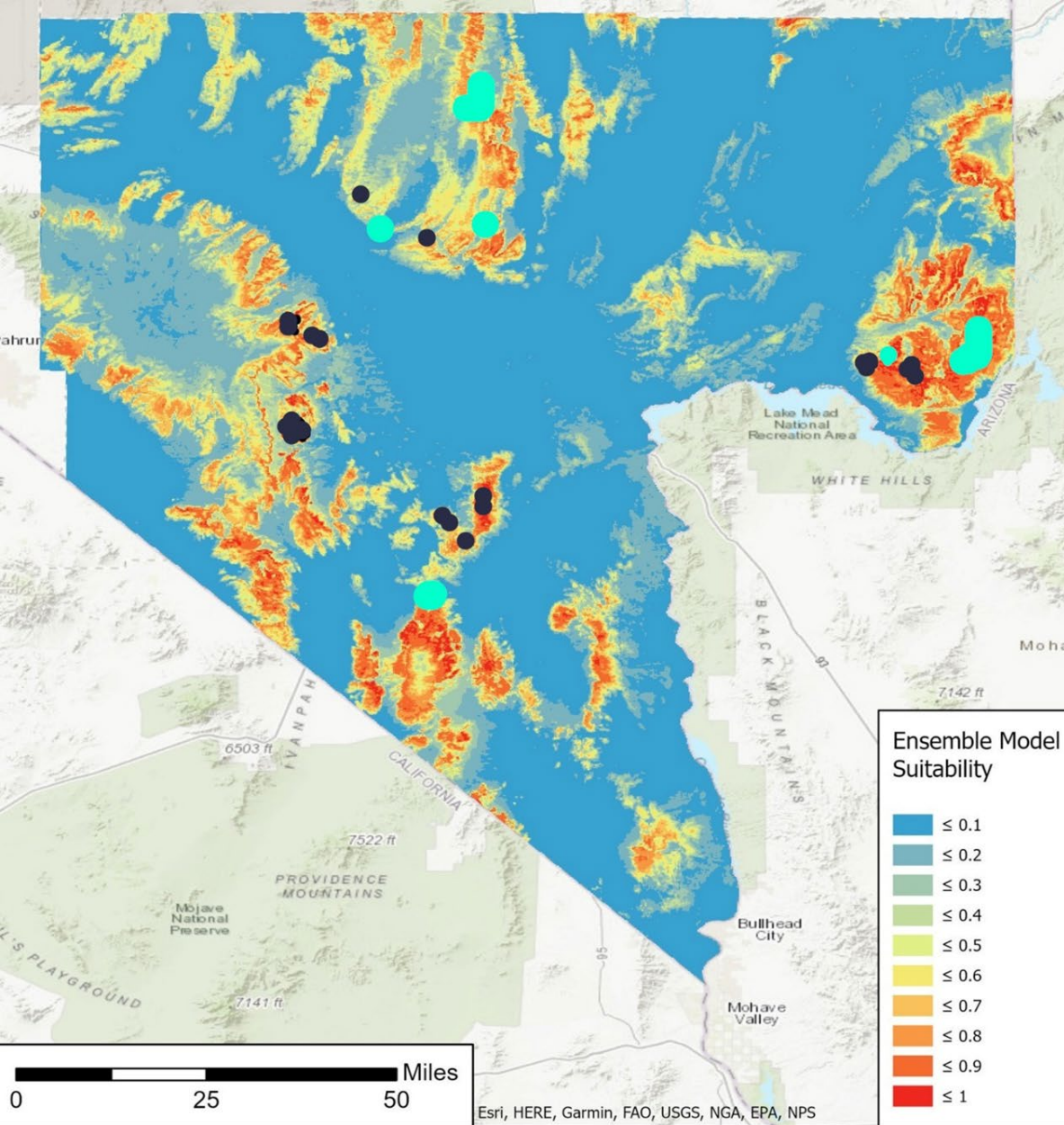
Observed Threats

- Wildfire
- Invasive annuals
- Drought

Conclusion

S

- Expanded the known occurrence datasets for Blue Diamond cholla in Clark County: five new EOs
- Ground-truthed Blue Diamond cholla habitat suitability models
- Secured information about Blue Diamond cholla presence in areas at risk for development or disturbance by human activities.



Ironwood
Consulting

● 2020-2023 CYMU Occurrences

● NNHP CYMU Occurrences

Cylindropuntia Multigeniculata
(CYMU)
Habitat Suitability

Clark County Rare Plants Survey





Discussion

Threats to Blue Diamond cholla increasing with human population, drought, invasives, and fire.

Potential support for current populations:

- Fire suppression in known occupied areas
- Signage re: weeds, fire, sparks, etc.
- Cultivation
- Long term seed storage

Suggested Research -- Impacts of fire and invasives

- Paired monitoring plots
 - Adjacent occupied burned/unburned areas
 - Desert NWR, Gold Butte NM
- Potential data
 - Numbers of individuals
 - Age structure
 - Recruitment
 - Native/invasive cover
 - Etc.



Recommendations

- Perform additional surveys in Lincoln County, Nevada and western Arizona
- Research impacts of wildfires and invasive plants



Questions?

