

Bird Habitat Monitoring and Modeling Projects

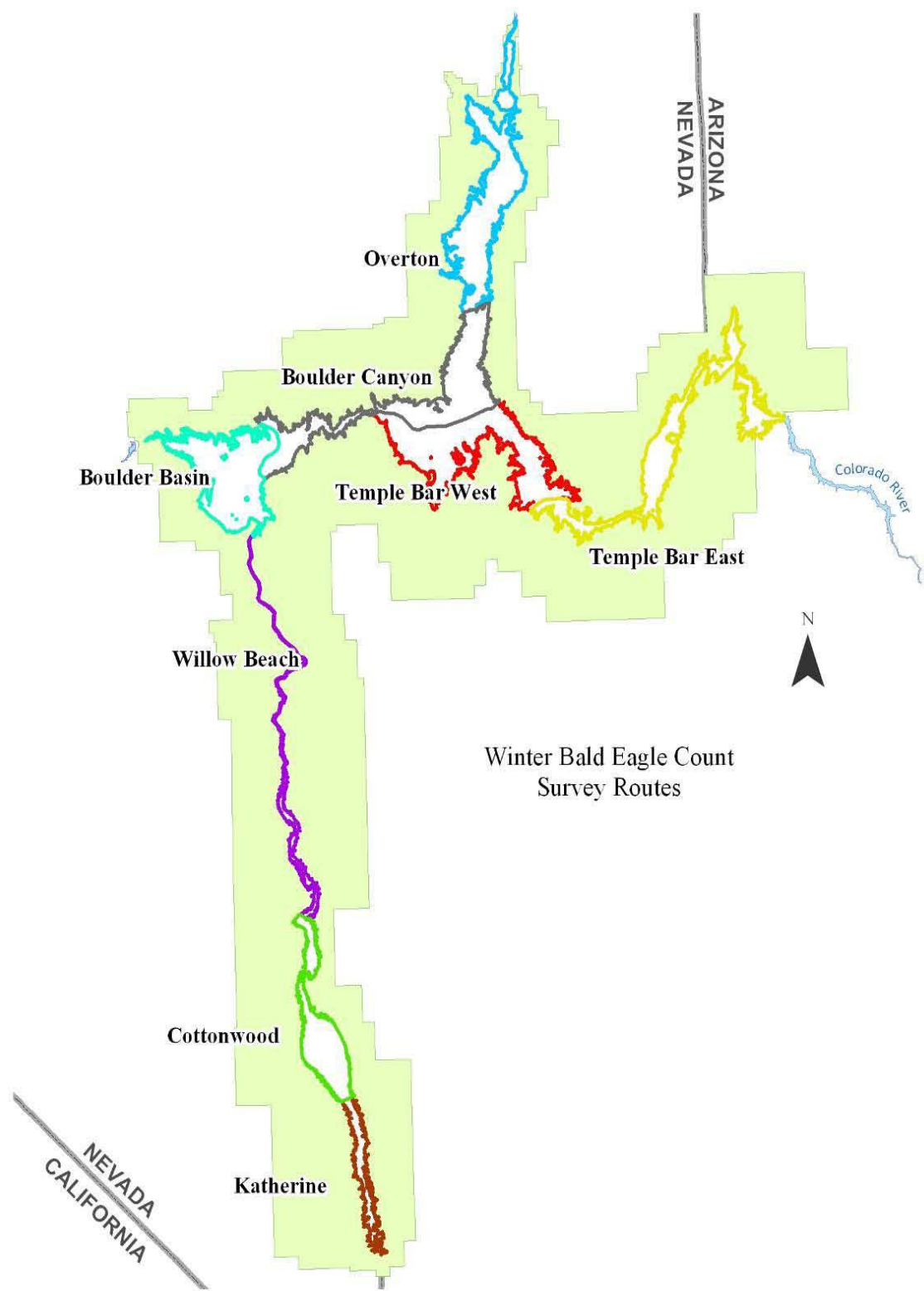
Funding for these projects was provided by the Southern Nevada Public Lands Management Act

Bald Eagle Monitoring and Modeling Clark County (Lake Mead National Recreation Area)

Goals:
Help coordinate and conduct annual winter counts of the bald eagles in the Lake Mead National Recreational Area (LMNRA) in January 2008 and January 2009.

Produce habitat suitability models (also known as a species distribution model) for the bald eagle in Clark County.

Monitoring (project 2005-NPS-540)



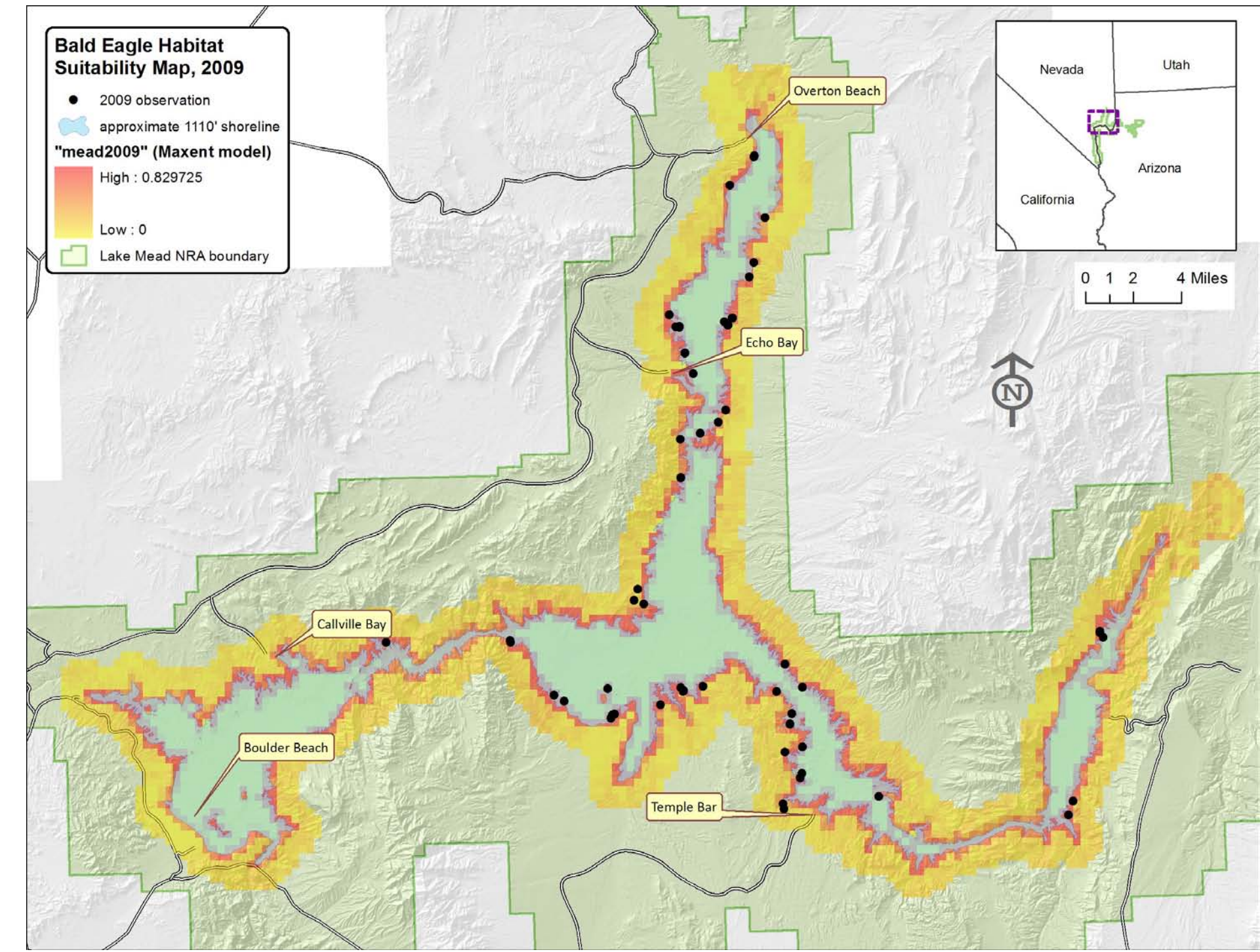
Bald Eagle (*Haliaeetus leucocephalus*)

Eight established bald eagle survey routes within LMNRA were monitored.

The official count for 2008 was 116 bald eagles (49 adults and 66 immature) which was the largest number of bald eagles counted to date. The official count for 2009 was 108 bald eagles (49 adults and 59 immature).

Modeling (project 2005-NPS-609A)

Suitability maps for the LMNRA were produced from models generated using a maximum entropy approach in Maxent.



Six Covered/ Three Evaluation Bird Species Monitoring and Modeling

Goal:
To monitor the status and model suitable habitats of nine (9) covered and evaluation bird species within Clark County:

- | | |
|---------------------------------|--------------------------------------|
| <u>Six (6) covered species:</u> | <u>Three (3) evaluation species:</u> |
| Arizona Bell's Vireo | Bendire's Thrasher |
| Blue Grosbeak | Le Conte's Thrasher |
| Phainopepla | Gray Vireo |
| Summer Tanager | |
| Southwest Willow Flycatcher | |
| Vermillion Flycatcher | |



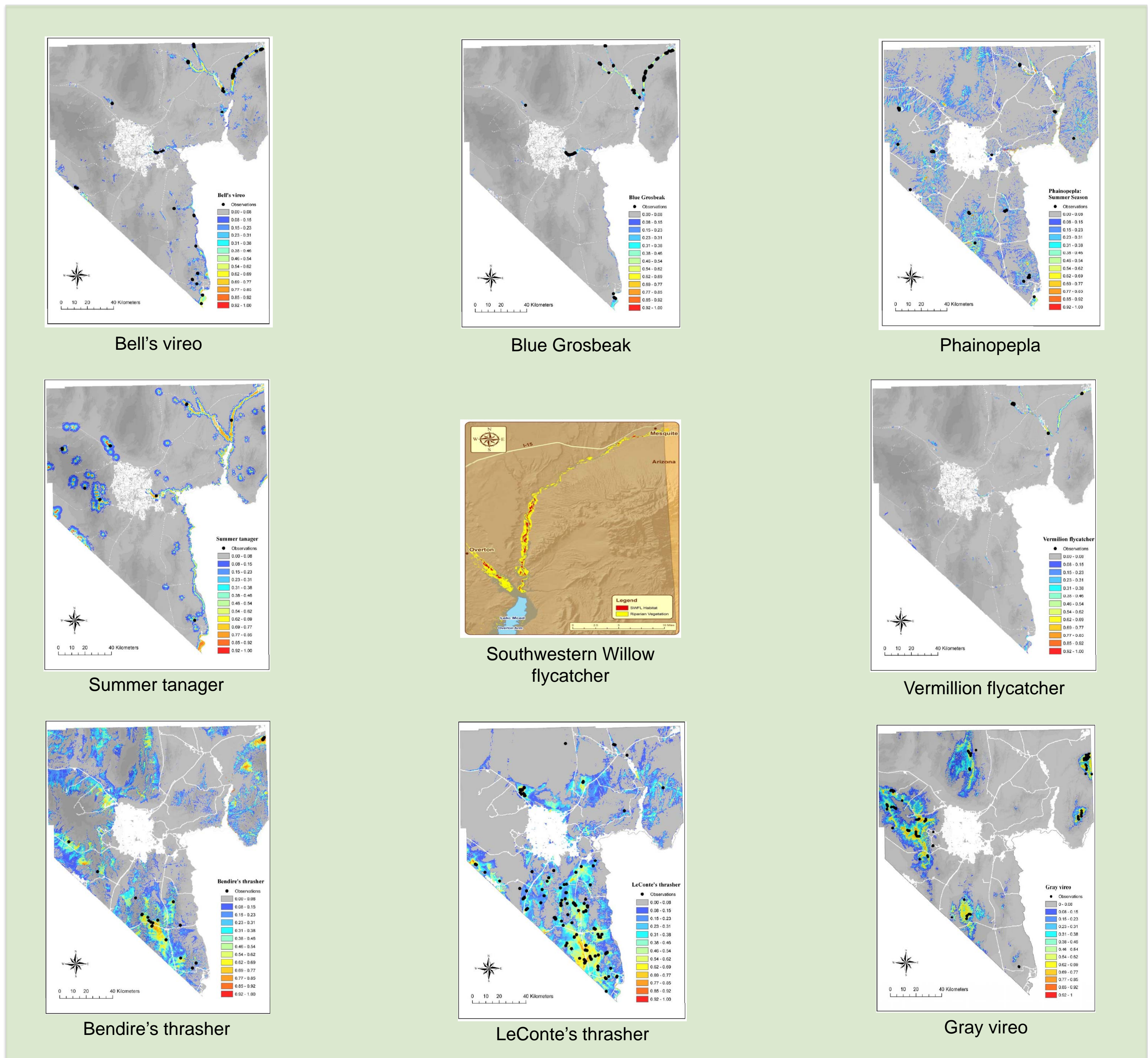
Le Conte's thrasher (*Toxostoma lecontei*)

Monitoring (project 2005-NPS-542)

Intensive area surveys aimed at habitats thought to be occupied by the targeted species were monitored, and targeted surveys and assessments of historical locations for these species within Clark County were conducted. Data from the surveys were used in the modeling efforts for each of the nine species.

Modeling (project 2005-NPS-609A)

Conceptual models depicting habitat features and stressors for each species were developed. Habitat suitability models and maps (presented below) were then developed for each species to predict species distributions within the county using available (or easily derived) spatial variables and GIS technology.



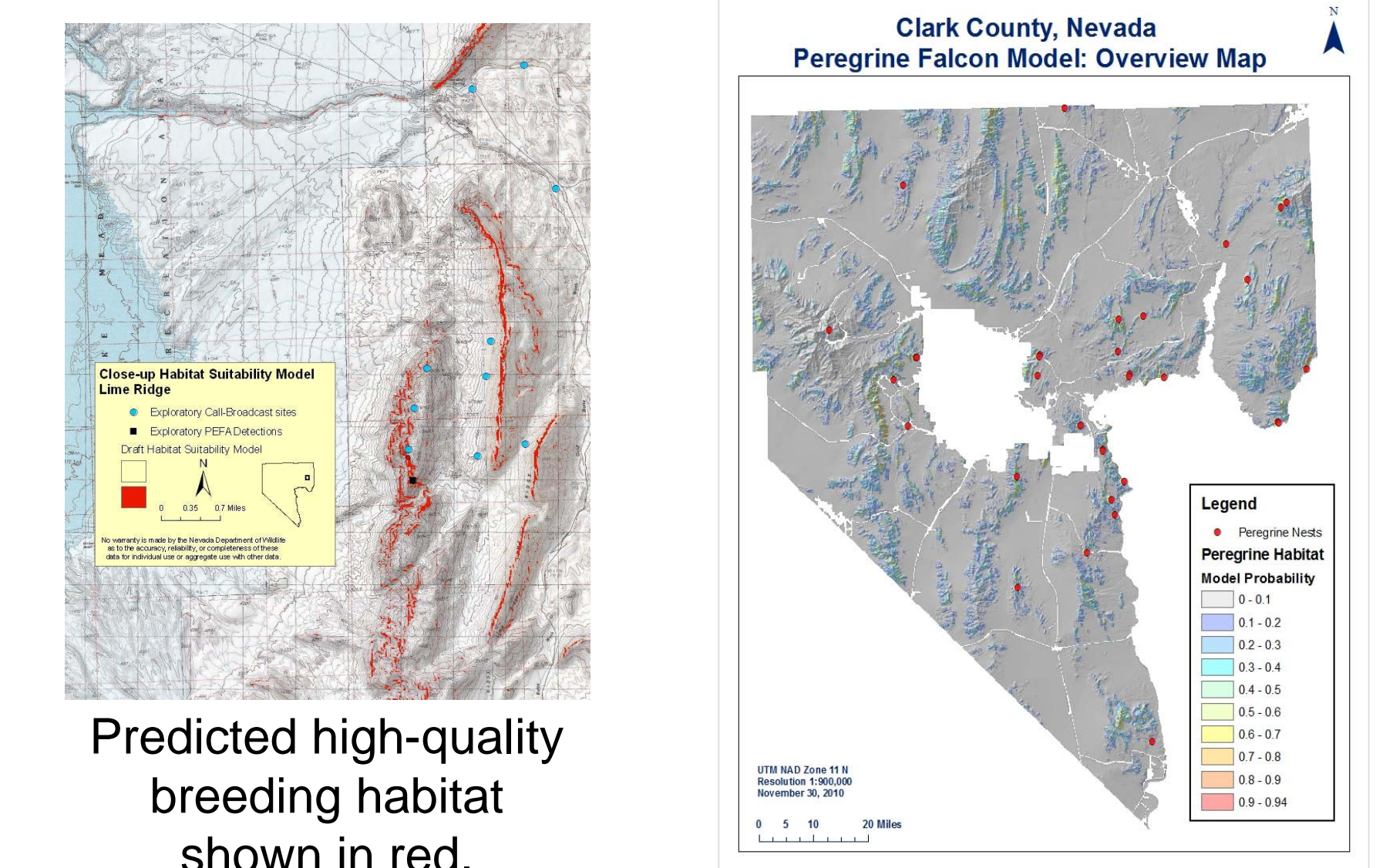
For further information

Please contact dcp@ClarkCountyNV.gov for more information or go to <http://www.clarkcountynv.gov/depts/dcp/Pages/default.aspx>

Peregrine Falcon Monitoring and Modeling in Clark County and the Lake Mead National Recreation Area

Goal:
The primary goal of this project was to collect data in 2009 and 2010 on known nesting territories in order to better elucidate the current status of peregrines in Clark County.

Monitoring (projects 2005-NDOW-549 and 2005-NPS-475)



Predicted high-quality breeding habitat shown in red.

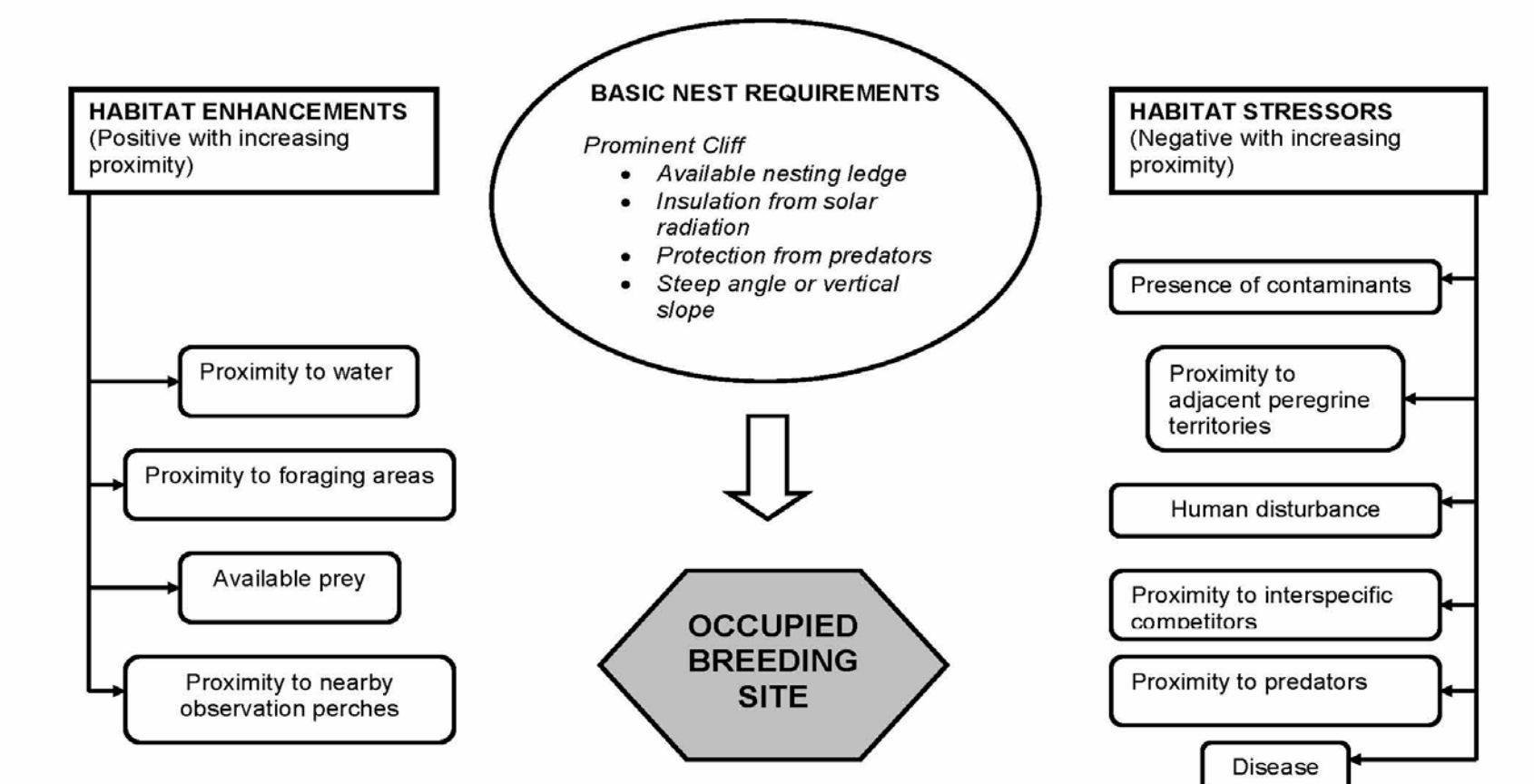
Known peregrine falcon breeding territories were monitored in 2009 and 2010 for occupancy, success and productivity.

Exploratory surveys were conducted in 2010 using a recently developed call-broadcast survey technique in order to locate and document new territories.

Thirty-five breeding territories have been identified in the LMNRA and an additional 18 in the remainder of Clark County.

Modeling (projects 2005-NDOW-609A and 2005-NPS-609C)

Habitat model and associated maps were specifically developed to direct recent surveys for undocumented peregrine territories.



Conceptual model illustrating breeding requirements and potential impacts of proximal variables on peregrine falcon breeding sites.



Peregrine Falcon (*Falco peregrinus*)