



providing a high level of protection to sage-grouse, and on the other end, a relatively flexible approach allowing for more multiple-use activities. The alternative identifies population and habitat baselines to measure future trends against that may trigger changes in land management addressing sage-grouse conservation. Idaho Department of Fish and Game will begin implementing and monitoring some components of the alternative in 2013.

KLAUSMANN, JEFFREY, Intermountain Aquatics Inc, Driggs, Idaho 83422, R. Cavallaro Idaho Department of Fish and Game, Idaho Falls, Idaho 83401 and M. Lucia. Teton Regional Land Trust, Driggs, Idaho 83422. ***TETON BASIN TRUMPETER SWAN BREEDING HABITAT SUITABILITY ASSESSMENT.***

Teton Basin contains unoccupied but suitable trumpeter swan nesting habitat within the core breeding area of the Tri-state Area Flocks of the Rocky Mountain Population (RMP) of Trumpeter Swans. It is uniquely situated amid active breeding sites in Yellowstone National Park, Jackson Hole Wyoming and state and federal management areas in eastern Idaho. Establishing a new nesting flock in Teton Basin will help fulfill a major objective in the Pacific Flyway RMP Trumpeter Swan Management Plan (2008) to rebuild U.S. breeding flocks by providing adequate habitat for breeding pairs. The Pacific Flyway Council requires habitat assessments prior to approving allocation of captive reared swans for translocation. A habitat suitability assessment was designed to evaluate the suitability of Teton Basin wetlands for supporting nesting trumpeter swans and to identify locations where landowners would be willing to participate in future swan translocations. We used 2011 aerial photography and built a Geographic Information System (GIS) based platform to map all open water wetland habitat in Teton Basin. After filtering out wetlands smaller than 5 acres, we identified 17 sites for in-depth field habitat evaluation. Biologists verified data collected through aerial photograph interpretation and estimated or measured quality and quantity of swan forage, nesting cover, islands, relative water depths and water pH. Biologists also mapped potential fence line and power line hazards. We conducted landowner interviews to collect current land use information and gauge landowner willingness to support future swan releases. Biological and management data were then used to rank all wetlands in Teton Basin. We identified three wetlands as immediate release sites for captive reared swans. All sites are large, isolated and with good forage abundance; management and landowner willingness are in place to help ensure a positive outcome. Several other sites will likely qualify for future translocations with some additional work.

LENZ, ADAM*, C. Mitchell, J. Snyder and D. Delehanty. Idaho State University Biological Sciences, Pocatello, Idaho 83209. ***INCUBATION PATTERNS OF TRUMPETER SWANS AT GRAYS LAKE NWR - PRELIMINARY RESULTS.***

We used around-the-clock video monitoring to observe three Trumpeter Swan (*Cygnus buccinator*) nests within Grays Lake National Wildlife Refuge. Cameras recorded at 410k pixel resolution using 9 950-nm infrared LED lights. We recorded incubating swans 24 hr⁻¹ for the duration of the incubation period (early June to early July). Cameras were powered by a 12-volt battery and all images were recorded to a 32 gb SD card by a digital video recorder encased in a waterproof container approximately 30 m from the nest. We quantified incubation constancy, length and frequency of incubation recesses, sex of the incubating adult, and potential causes of nest disturbance. Average recess length at the 3 nests was relatively constant at ≤ 90 min for the first 31 d of incubation activity and mean incubation constancy among the nests was 89%. Incubation behavior decayed after 31 d with the onset of nest failure. Average number of recesses per day did not change, but recess time was correlated to weather. Females were the predominant incubating sex. Male incubation was observed on at least 3 occasions. Territorial intrusions by other swans were the most frequently observed cause of nest disturbance and may have played a role in nest failure for at least one pair of breeding swans.

LUCID, MICHAEL, L. Robinson, S. Cushman, L. Allen, M. Schwartz, and K. Pilgrim. Idaho Department of Fish and Game, Coeur d' Alene, Idaho 83815. ***STATUS OF FISHER IN THE NORTHERN IDAHO PANHANDLE AND ADJACENT MOUNTAIN RANGES.***

The Multi-species Baseline Initiative (MBI) is a collaborative of organizations which is conducting a comprehensive inventory for fisher (*Martes pennanti*) and other wildlife species across the Idaho Panhandle and adjacent mountain



ranges. From 2010-2012, MBI partners established 112 forest carnivore bait stations to collect photographs and DNA from 22 wildlife species including fisher in the Purcell, Selkirk, and West Cabinet Mountains. We detected fisher at one bait station in the Selkirks and 32 bait stations in the West Cabinets. We did not detect fisher in the Purcells. We used molecular techniques to genotype individual fisher from the Selkirks ($n = 1$) and West Cabinets ($n = 28$). During the winters of 2013-15 we plan to establish an additional 364 bait stations across the Idaho Panhandle and northeastern Washington.

MILLER, ROBERT*, J. D. Carlisle, N. Paprocki, G. S. Kaltenecker and J. A. Heath. Idaho Bird Observatory, Boise State University, Boise, ID 83725. ***RELATIONSHIPS BETWEEN CLIMATE AND BIRD MIGRATION SUGGEST THAT TRENDS IN PHENOLOGY AND ENERGETIC CONDITION ARE THE RESULT OF SHORT-TERM PLASTICITY NOT LONG-TERM POPULATION CHANGE IN RESPONSE TO WARMING.***

Climate change is having a dramatic effect on many migratory species. These impacts are influenced by many aspects of climate change and can differ regionally. We studied songbirds and raptors during autumn migration in the Intermountain West of North America. Utilizing 16 years of songbird banding results and raptor migration counts and captures we used quantile regression to evaluate a number of climate variables as predictors for both migratory timing and energetic condition. Climate variables represent average climatic conditions across the portions of Bird Conservation Region 10 (Northern Rockies) that lie north of Lucky Peak and west of the continental divide. Climate variables included temperature, precipitation, and previous year's precipitation. We found that most species' migratory timing is trending later and energetic condition is improving. However, the year-to-year variation in timing and condition is much more strongly associated with annual average climate patterns than long-term trends. The year-to-year variation in both timing and condition are influenced by variables which could be predicting food availability. We conclude that autumn migratory timing and condition of most species is reasonably plastic and probably influenced more by food availability than a direct response to the change in weather.

MOULTON, COLLEEN¹, J. Carlisle², and R. Cavallaro³. ¹Idaho Department of Fish and Game, P.O. Box. 25, Boise, ID 83707; ²Idaho Bird Observatory, Boise State University, Boise, ID 83725; ³Idaho Department of Fish and Game, 4279 Commerce Circle, Idaho Falls, ID 83401. ***HABITAT USE OF FORAGING WHITE-FACED IBIS IN EASTERN IDAHO.***

White-faced ibis is a species of greatest conservation need in Idaho that breeds colonially and requires expansive marsh habitat for nesting. Of six ibis colonies in Idaho, two are within 25 kilometers of each other in the Upper Snake region of the state, and together, the colonies at Market Lake and Mud Lake Wildlife Management Areas contain upwards of 30,000 breeding ibis. As this species often uses agricultural habitats for resting and foraging, and the agricultural landscape in the region is rapidly changing, we designed a study to assess the current distribution and habitat associations of foraging ibis surrounding these two colonies. In 2012, we conducted field and driving route surveys, and collected incidental observations, within 22km of both colonies between late April and mid-July. We collected 210 observations of foraging ibis in the study area. Foraging group sizes ranged from just single birds to 700 birds. We observed foraging birds predominantly in flooded agricultural fields (75%), but also in wetland habitats (11%), flooded edges of center-pivot fields (8%), sprinkler-irrigated fields (3%), and center-pivot fields (2%). Of 184 foraging observations in cultivated fields, alfalfa was the most common crop type used by observed foraging birds (38%). We also frequently observed foraging birds in barley/wheat (27%) and pasture/hay (18%). The spatial distribution of foraging observations differed between the two colonies. We recorded 80% of the foraging observations around Mud Lake within 12km of the colony. In contrast, approximately half of the foraging observations around the Market Lake colony were between 12km and 22km. We documented the majority (75%) of these observations south and southeast of the colony where flood irrigation was the predominant agricultural practice. The results from this study reveal the importance of flood-irrigated agricultural lands to white-faced ibis nesting in the Upper Snake region.