Project Title: Colorado Wildlife Action Plan Climate Change Vulnerability Assessment

Headline Title (2-5 words): WSFR Supports Colorado Vulnerability Assessment

Brief Summary (Abstract): Colorado's current Wildlife Action Plan, approved in 2006, does not explicitly address climate change. State Wildlife Grant funds delivered through the Wildlife and Sport Fish Restoration Program's new "State Wildlife Action Plan Enhancement" subprogram will enable the Colorado Department of Parks and Wildlife to assemble a broad team of state, federal, non-profit and university climate scientists who will contribute to the new plan. Using current datasets available from these partners, Colorado will produce the most robust vulnerability assessment possible, for at least nine major habitats and their associated species.

Project Location: State of Colorado

Partners: Colorado Parks and Wildlife, Colorado State University, University of Colorado, North Central Climate Science Center, U.S. Forest Service, U.S. Bureau of Land Management, The Nature Conservancy, Southern Rockies and Great Plains Landscape Conservation Cooperatives

Background: The State Wildlife Action Plans (SWAPs) were developed and approved by the Wildlife and Sport First Restoration Program (WSFR) prior to 2006. They provided the first nationwide blueprint for species conservation, and established state fish and wildlife agencies' eligibility for State Wildlife Grant Program funds, which are administered by WSFR. Since then, significant progress has been made in climate change science, resulting in increased availability of vulnerability assessment data and methods for development of wildlife climate adaptation strategies. Anticipating the pending requirement for update and revision of the State Wildlife Action Plans in October, 2015, WSFR created the competitive SWAP Enhancement subprogram using State Wildlife Grant Program funds. These funds were first offered in Fiscal Year 2013. The first awards made through the subprogram are now being used by states to improve and enhance their SWAPs by incorporating the best-available climate science and datasets, and for other improvements. WSFR is offering the SWAP Enhancement subprogram again in FY2014.

Project Goals: 1. Collect and analyze the most current, relevant and appropriate datasets available, including future climate projections. 2. Make the best use of quantitative and qualitative methods, using expert professional judgment, to produce the best vulnerability assessment possible for nine major habitats and associated species. 3. Coordinate and cooperate with recent, ongoing, and planned vulnerability assessments managed by multiple partners. 4. Incorporate the new data into the Colorado Wildlife Action Plan for use in prioritizing and guiding species and habitat management actions.

Strategy Goals Implemented: Goal 2, Strategy 2.1, Action 2.1.3 Identify species and habitats particularly vulnerable to transition under climate change. Goal 2, Strategy 2.2, Action 2.2.1 Use vulnerability assessments to design and implement management actions at species to ecosystem scales.

Climate Impacts Addressed: Climate change impacts on species and habitats

Status of Project Implementation (Timeline, Milestones, Next Steps): To date, the partners have: Selected the list of habitats to be analyzed quantitatively/spatially (Lodgepole pine forest, Oak and mixed mountain shrub, Pinyon-Juniper, Ponderosa pine forest, Sagebrush shrubland, Sandy grasslands & shrublands, Shortgrass prairie, Spruce-Fir forest, Tundra meadow & shrub); Conducted a 2-day "Resources for Advanced Modeling" workshop with partners; and Defined project methodology (Develop climatologically based potential habitat maps for each of the nine habitats, Application of top climate predictors to future climate projections). **Next steps include:** Based on analysis described under Step 1, the top set of climate parameters that appear to drive habitat presence/persistence will reviewed by regional habitat coordinators to determine whether the predictors and response curves seem appropriate based on their experience, and whether the model is missing a critical climate predictor. Partners will then revise predictors / models to incorporate feedback, as appropriate. Partners will review final models for accuracy and proceed with Step 2 described above. Colorado Parks and Wildlife plans to convene a follow-up workshop in June 2014 to review and finalize results. Partners expect to have identified wildlife species to be analyzed for climate change vulnerability by June, and to have draft results of species assessments ready for review by mid-summer.

Project Outcomes: When completed, this project will deliver: 1. Vulnerability assessments with maps, tables, and narrative interpretation; 2. Spatial data layers of analysis at a statewide scale, with Federal Geographic Data Committee-compliant metadata; 3. Documentation of methods and results suitable for inclusion in the revised SWAP; 4. Recommendations for relevant components of the SWAP revision, including updated lists of Species of Greatest Conservation Need, habitat conservation priorities, and prioritized threats and conservation actions.

Funding Sources: State Wildlife Grant (SWG) funds (75%) and Colorado Parks and Wildlife funding (25%)

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