

PROPOSED RECOVERY CRITERIA FOR THE MEXICAN WOLF

*Mexican Wolf Recovery Team -- Science and Planning Subgroup*

Briefing for the Director, U.S. Fish and Wildlife Service

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**DELISTING CRITERIA**

**Criterion 1 – Population size and trend**

Option 1: A metapopulation consisting of a minimum of 3 primary core populations in the wild, each with a census population size of at least 250 individuals, and a total metapopulation size of at least 750 individuals. The population trend in each of the 3 primary core populations has a high probability (80% confidence) of being stable or increasing over 8 years, based on a statistically reliable monitoring effort.

Option 2: A metapopulation consisting of a minimum of 3 primary core populations in the wild, each with a census population size of at least 200 individuals, and a total metapopulation size of at least 750 individuals. The population trend in each of the 3 primary core populations has a high probability (80% confidence) of being stable or increasing over 8 years, based on a statistically reliable monitoring effort.

Option 3: A metapopulation consisting of a minimum of 3 primary core populations in the wild, each with a census population size of at least 200 individuals, and a total metapopulation size of at least 750 individuals. In addition, at least 1 secondary core population consisting of at least 100 individuals, for a total of at least 850 wolves in the wild. The population trend for each of the 3 primary core populations has a high probability (80% confidence) of being stable or increasing over 8 years, based on a statistically reliable monitoring effort.

**Criterion 2 –Population connectivity:**

Immigration into each of the 3 primary core populations via natural dispersal at a rate of at least 1 genetically effective migrant every generation, averaged over a period of 8 successive years, as measured by a statistically reliable monitoring effort. A genetically effective migrant is defined as a wolf that breeds in a non-natal population and produces at least 1 pup that survives to at least December 31 of the year of its birth.

**Criterion 3 – Amelioration of human-caused losses:**

The estimated annual rate of human caused losses averaged over an 8-year period is less than 20% as measured by a statistically reliable monitoring effort.

[Text for recovery justification discussion in plan: This is the greatest rate of anthropogenic mortality and removal that a Mexican wolf population could have and still be expected to have an approximately 75% or greater chance of being stable or increasing.]

**Criterion 4 – Post-delisting monitoring:**

To monitor the continued stability of the recovered Mexican wolf, a post-delisting monitoring plan has been developed and is ready for implementation within the affected states as required in section 4(g)(1) of the ESA.

**Criterion 5 - Regulatory mechanisms:**

State management plans and adequate post-delisting regulatory protection and capacity confirmed. Components of an adequate plan will include assurances that: (1) the natural dispersal rate required for delisting is not precluded by HCL; and, (2) management targets for population size are sufficiently large relative to delisting criteria and HCL rates are sufficiently low to ensure that there is no greater than a 10% chance that the Mexican wolf will fall below the recovery criteria within a 10-year period. The best available science should be used to establish the long-term population target size and acceptable rates of HCL.

## **DOWNLISTING CRITERIA**

### **Criterion 1 – Population size and trend**

Three primary core populations, each with at least 150 wolves, that have been maintained in the wild for 1 generation (4 years). Population size is expected to be increasing during this timeframe. (See Criterion 2.)

### **Criterion 2 – Amelioration of human-caused losses:**

The estimated annual rate of human caused losses averaged over a 4-year period, is less than 15% as measured by a statistically reliable monitoring effort.

[Text for recovery justification discussion in plan -This rate is the greatest rate of anthropogenic mortality and removal that a Mexican wolf population could have and still be expected to have an approximately 75% or greater chance of increasing at a rate of at least 5% annually.]