



United States Department of the Interior

U.S. FISH AND WILDLIFE SERVICE

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To: WCEP and LA DWF
From: Wade Harrell and Lea Craig-Moore (acting for Mark Bidwell), co-chairs,
International WC Recovery Team
Subject: WHCR egg allocation for 2016
Date: 4 April 2016

The International Whooping Crane Recovery Team (IRT) has considered the egg allocation requests from Louisiana Department of Wildlife & Fisheries for the LA non-migratory population (LNMP) and from the Whooping Crane Eastern Partnership for the eastern migratory population (EMP); their requests are attached.

Over the next 5 years (2016-2021), the IRT recommends an annual goal of providing 20-40 isolation-reared chicks for release into the LNMP and 10-15 Parent Reared chicks for release into the Eastern Migratory Population EMP. If this recommendation is met, key issues in whooping crane reintroduction will be realized, including:

- 1) Both the LNMP and EMP should reach and maintain their numeric goal of 100-120 individuals and 25-30 nesting pairs.
- 2) Early indications of the success or failure in using parent-rearing and reduced rearing and release artificiality to enhance wild recruitment in the EMP (Wisconsin Rectangle) should be apparent.
- 3) Wild recruitment or lack thereof, in LNMP will be apparent.

The resolution of these key issues will assist the IRT and partners in determining the usefulness of reintroductions as a recovery tool for whooping cranes.

The actual number of chicks for release into the EMP will be dependent upon the number of fertile eggs harvested from wild, EMP nests. Likewise, the number of chicks for release into the LNMP will be dependent upon the number of fertile eggs produced by the captive breeding flock. All fertile eggs will be pooled and will be assigned to EMP or LNMP depending upon rearing technique, timing of hatch, genetics and other logistical factors in coordination with the Whooping Crane Species Survival Program (SSP) and captive facilities. Any surplus eggs harvested from the EMP (i.e. more than what is needed to produce 10-15 PR chicks for release into the EMP) will be allocated to the LNMP.

In years of low captive production and low numbers of eggs brought in from the wild (i.e. minimum annual allocation request unmet), the IRT requests that the Captive Breeding Centers work to minimize the impacts of Parent Rearing on production. This is to minimize the impacts

on the number of fertile eggs produced by the captive population and chicks for release in LNMP.

Table 1 provides information on annual fertile egg production (2011-2015) and 2016 estimates of fertile egg and chick production from the Captive Breeding Centers and the EMP (CBC/EMP). We provide below an approved recommendation for distribution of chicks to reintroduction efforts in 2016 and some additional background information for clarification.

Table 1. Captive Breeding Centers and EMP Fertile Egg Production 2011 to 2015 and 2016 Estimates of Fertile Eggs.

Year	PWRC	ICF	CZ	ACRES	SAZ	CBC Total	EMP	Egg Total	Chicks Released	CBC Genetic Holdbacks	Total
2016 est.	13	9-15	5	0	0	27-33	18-35	45-68	~27-40 est.		(59%)
2015	16	15	9	0	0	40	15	55	29	2	31 (56%)
2014	13	23	4	0	0	40	8	48	25	0	25 (52%)
2013	5	23	7	2	1	38	21	59	31	2	33 (55%)
2012	12	17	7	0	1	37	4	41	26	2	28 (68%)
2011	16	17	3	6	0	42	20	62	34	4	38 (61%)

Recommendation: We make the following recommendation for allocation of chicks in 2016. Numbers in the Table 2 below represent chicks released calculated using a 59% survival from fertile egg to chicks released (and genetic hold backs) that were produced by the CBC/EMP in the past five years (see Table 1).

Table 2. Recommendation of Chick Allocation in 2016.

PROJECT	2016 Recommendation	2015 Recommendation	2015 Released
LNMP	20+*	15	11
EMP	10+ PR*	15	14
Genetic Holdback	--	--	2 held back
TOTAL	30	30	

*Note that 2016 recommendation is based on the lower end of the range of the production estimate for 2016. Higher captive production and increased EMP nest abandonment would increase this total.

Notes for reintroduction team leads:

1. The recommended allocation is a guideline based on information available now; numbers may change given actual production and logistical considerations during the season.
2. The allocation is of chicks to be released (CR) in the EMP is based on a conservative estimate of fertile eggs likely to be produced by the captive breeding centers and brought into the captive centers from the EMP using a 59% survival rate (2011-2015) of fertile egg to being released into the wild. This calculation combines the factors that we used in previous years,

hatching success and chick survival, to determine the number of chicks to be allocated for release.

3. This year's requests (EMP 10-12 CR, LA 30-32 CR) total 40-44 CR exceed a conservative estimate of supply (27-42 CR), although is achievable with wild eggs harvested in addition to captive production depending on nest abandonment and harvest management in the EMP. The IRT recommends that WCEP develop a nest management and harvest protocol plan for future years that will allow for a robust number of chicks for release and maximize the chance for fledging chicks in the wild.

4. We applied the following principles to allocation:

- Used a conservative estimate of CR, with a plan for dealing with more than expected.
- EMP allocation will consist of parent-reared chicks released in the Eastern Rectangle of Wisconsin and outside of Necedah NWR. WCEP will determine the final plan for release method, with a focus on reducing artificiality and maintaining the partnership.
- Final number of EMP chicks parent-reared and released will be based upon total number of fertile eggs collected from wild nests in the EMP. For example, if 18 eggs are collected from EMP nests, 10 parent-reared chicks will be available for release in the Eastern Rectangle (18 fertile eggs X 0.59 survival rate = 10 chicks for release).
- Egg swaps between captive facilities and wild-harvested eggs will occur based on genetic and logistical needs as determined by the WHCR SSP and captive facilities. However, final allocation of CR for EMP will be based on # of wild harvested eggs (see prior bullet point).
- Any fertile eggs/chicks that become available beyond the stated chick allocation for EMP (10-12) will be isolation reared for release in LNMP.

5. Requests for genetic hold-backs from the Captive Breeding Centers will be prioritized given the importance of maintaining a viable captive population for species recovery purposes.