

# Population Analysis and Breeding & Transfer Plan

## **Chimpanzee** *Pan troglodytes* **Species Survival Plan®**



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# PMC

American Zoo and Aquarium Association  
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# Executive Summary

## Chimpanzee (*Pan troglodytes*) SSP

The current population size of the Chimpanzee SSP is 276 animals (101 males, 175 females) distributed among 35 AZA institutions. The AZA Ape Taxon Advisory Group in their 2007 Regional Collection Plan set a target population size of 250 individuals for this species. Based on recent changes in institutional demand, this plan set a target of 275 individuals.

The standard genetic goal for AZA managed populations is 90% gene diversity for 100 years. When gene diversity falls below 90% of that in the founding population, it is expected that reproduction will be increasingly compromised by, among other factors, lower birth weights and greater neonatal mortality. Given the current gene diversity, this population is projected to be 96% for 100 years and above 90% for over 200 years. Genetic management strategies, including equalizing founder representation and incorporating potential founders, remain central to maintaining gene diversity for the long term.

<b>DEMOGRAPHY</b>		
Current Population Size (N)	276 (101.175)	
Individuals Excluded from Analyses	140	
Target Population Size	275	
Mean Generation Time (T, in years)	22.2	
Projected Population Growth Rate (lambda)	1.00	
<b>GENETICS</b>		
	<b>Current</b>	<b>Potential</b>
Number of Founders	89	3
Founder Genome Equivalents	41.33	64.93
Founder Genomes Surviving	57.56	64.93
Gene Diversity Retained (%)	98.79	99.23
Population Mean Kinship	0.0121	--
Mean Inbreeding (F)	0.0088	--
Percent known pedigree prior to exclusions	73.5	--
Percent known pedigree after exclusions	97	--
Effective population size to census size ratio ( $N_e/N$ )	0.3138	--
Years To 90% Gene Diversity	>200	
Gene Diversity at 100 Years From Present (%)	96.17	
Gene Diversity at 200 Years From Present (%)	90	

The number of pairs recommended to breed this year is intended to produce the number of births necessary to compensate for natural attrition and maintain the current population size. As with most managed populations, breeding pairs are prioritized to maintain or increase gene diversity through considerations of mean kinship, avoidance of inbreeding, differences in sire and dam mean kinships, and the degree of uncertainty within a pedigree. In addition to these genetic criteria, the SSP also considered other factors such as group demographics and social needs and facility characteristics when making pairs and transfers. Transfers not related to establishing new breeding pairs were generally recommended to satisfy social needs or institutional requests.

**Summary Actions 2009 - 2010:** The SSP will recommend 25 females for breeding situations (with 23 males) and 9 transfers for this period. Recommendations contained in this master plan supersede those made by earlier plans.

# Table of Contents

<b>Executive Summary</b>	1
<b>I. Description of Population Status</b>	4
Demography	4
Genetics	5
Management Strategy	7
<b>II. Recommendations</b>	
Summary Recommendations	8
ASHEBORO – North Carolina Zoological Park	14
BALTIMORE – The Maryland Zoo in Baltimore	15
BROWNSVIL – Gladys Porter Zoo	16
BUSCH TAM – Busch Gardens	17
CHATTANOOG – Chattanooga Zoo at Warner Park	18
CHICAGOLP – Lincoln Park Zoo	19
DALLAS – Dallas Zoo	20
DETROIT – Detroit Zoological Institute	21
FORTWORTH – Fort Worth Zoological Park	22
HONOLULU – The Honolulu Zoo	23
HOUSTON – Houston Zoo	24
JACKSON – Jackson Zoological Park	25
JOHN BALL – John Ball Zoological Gardens	26
KANSASCTY – Kansas City Zoological Park	27
KNOXVILLE – Knoxville Zoological Gardens	28
LEON – Zoo Leon	29
LITTLEROC – Little Rock Zoological Gardens	30
LOSANGELE – Los Angeles Zoo	31
LOWRY – Tampa’s Lowry Park Zoo	32
MADISON – Henry Vilas Zoo	33
MANHATTAN – Sunset Zoo	34
METROZOO – Miami Metrozoo	35
MONTGOMRY – Montgomery Zoo	36
OAKLAND – Oakland Zoo	37
OKLAHOMA – Oklahoma City Zoological Park	38
PORTLAND – Oregon Zoo	39
PUEBLA – Africam Safari Park	40
RIO GRAND – Albuquerque Biological Park	41
ROLLING H – Rolling Hills Refuge & Wildlife Cons. Center	42
SACRAMNTO – Sacramento Zoo	43
SAN FRAN – San Francisco Zoological Gardens	44
SCOTTSBLU – Riverside Zoo	45
SEDGWICK – Sedgwick County Zoo	46
ST LOUIS – Saint Louis Zoological Park	47
TOLEDO – Toledo Zoological Gardens	48
TULSA – Tulsa Zoo and Living Museum	49
W PALM BE – Lion Country Safari, Inc.	50

III. **Appendices**

A. Summary of Assumptions	51
B. Summary of Data Exports	51
C. Individuals Excluded from Analyses	52
D. Life Tables	53
E. Ordered Mean Kinship List	56
F. Definitions	58
G. Directory or Institutional Representatives	60

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## Description of Population Status Chimpanzee (*Pan troglodytes*) SSP®

**Introduction:** The Chimpanzee SSP was formed in 1989 and completed its first master plan in 1991. The role of this SSP, as designated by the Ape Taxon Advisory Group 2007 Regional Collection Plan, is primarily as a flagship species to support conservation efforts in the wild. The species is endangered (U.S.F.W., IUCN Red List) and is listed in Appendix I of the Convention on International Trade in Endangered Species (CITES).

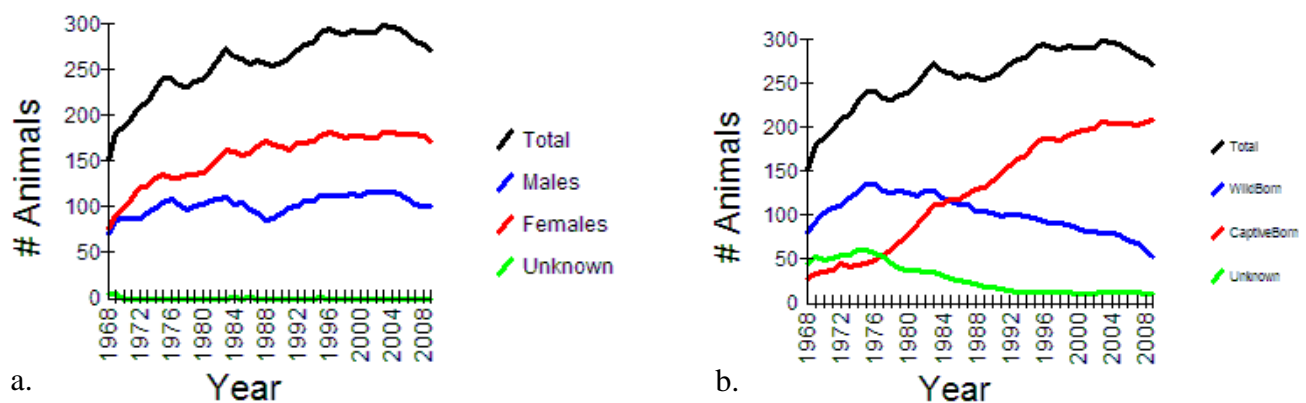
Comprehensive genetic and demographic analyses of the captive Chimpanzee SSP population were performed in July 2009, resulting in the current breeding and transfer plan. Analyses of the North American Regional Chimpanzee Studbook (current to 4 August 2009) were performed using PopLink 1.4, and PM2000 1.213 (see Appendix B for more details). Recommendations contained in this breeding and transfer plan supersede those made by any earlier plans.

**Analytical Population:** The current population size at the time of analyses is 276 (101 males, 175 females) distributed among 36 AZA institutions. However, we included in the genetic analyses only animals that can or should one day contribute genetically to the population by breeding. Excluded from the breeding population were 140 animals for reasons including sterility, age, poor health, behavior, or less than 100% known pedigree. Four animals with less than 100% known pedigrees were included based on their potential parental skills needed in the population. New pedigree information has decreased the number of animals excluded for unknown pedigree from last year. The SSP encourages institutions housing any of the individuals with some degree of unknownness in their pedigree to research & clarify their origins or ancestry in order to enable their inclusion in the genetic analyses.

All individuals excluded from the breeding population are listed in Appendix C. The managed population following these exclusions is 136 individuals.

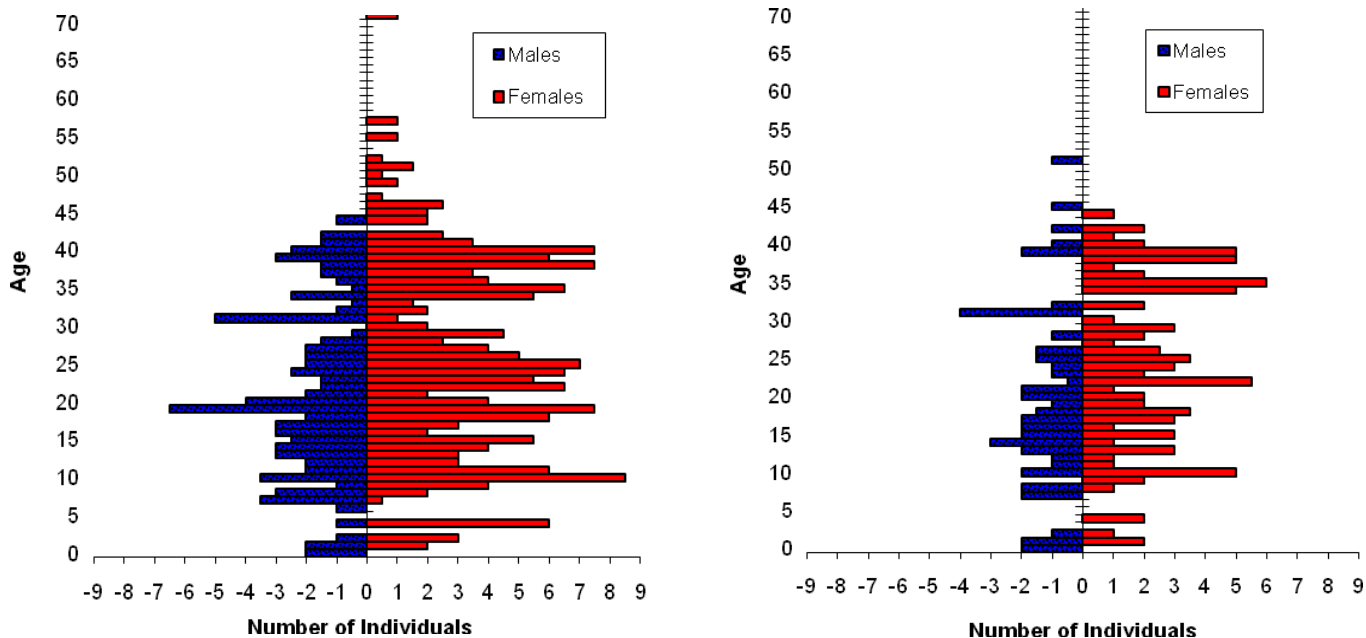
**Demography:** Chimpanzees have been in North American zoos as early as 1902 according to studbook records. The first recorded captive birth occurred in 1927, although it has only been since the late 1960s that captive born animals have been steadily increasing in numbers in the population. With the signing of the Convention on International Trade in Endangered Species, imports of chimpanzees from the wild essentially ceased and the population became more dependent on captive births for growth and maintenance.

Annual growth rates due to zoo births have varied widely ( $\lambda = 0.89 - 1.50$ ) since the population's inception. For the last 20 years, the population has maintained an average annual growth rate at or near 0% growth (lambda of 1.00). However, annual growth rates in the past few years show a slight decline of 2% (annual lambda = 0.98) due to deaths of older animals and a birth rate insufficient to compensate for these deaths.



**Figure 1a.** Census of chimpanzees in AZA institutions (1968 – July 2009) by sex.  
**Figure 1b.** Census of chimpanzees in AZA institutions (1968 – July 2009) by birth origin.  
 From North American Regional Chimpanzee Studbook current to July 2009.

The age structure of the population varies from a stable distribution due to a low number of individuals in the juvenile age classes and a female-biased sex ratio (Figure 2). This female bias is also apparent in the census graph (Figure 1a). With a long-lived species such as chimpanzees that exhibits little or no reproductive senescence, a slight departure from a stable age distribution in terms of sex ratio is not a concern. However, a small number of juvenile and a decreasing number of reproductive animals may be a concern in a social species for which group structure can complicate breeding recommendations.



**Figure 2.** Age structure of the Chimpanzee SSP before (left) and after exclusions (for sterility, unknown pedigree, etc) (right). From North American Regional Studbook, current to July 2009.

According to studbook data from 1975 to present, the age at which males and females reach sexual maturity is approximately 5 years of age. Males appear to be reproductive into their 50s and females into their 60s. First-year mortality is 30% for males and 25% for females (Appendix D). Median life expectancy is estimated as 32 years for males and females in AZA zoos (based on live births only); that is, 50% of chimpanzees die before 32 years of age and 50% die after this age. The maximum longevity observed for chimpanzees in zoos is 60 for males and 70 for females (based on some estimated birthdates of wild-born animals).

**Genetics:** The current potentially breeding portion of the chimpanzee population is descended from 89 founders with 3 additional potential founders remaining. Genetic diversity in the population (98.79%) is very high relative to the average mammal SSP (93%). Due to the large founder base of this population, gene diversity is projected to remain at or above 90% for at least 200 years and will remain above 95% for 146 years. When gene diversity falls below 90% of that in the founding population, it is expected that reproduction will be increasingly compromised by, among other factors, lower birth weights and greater neonatal mortality.

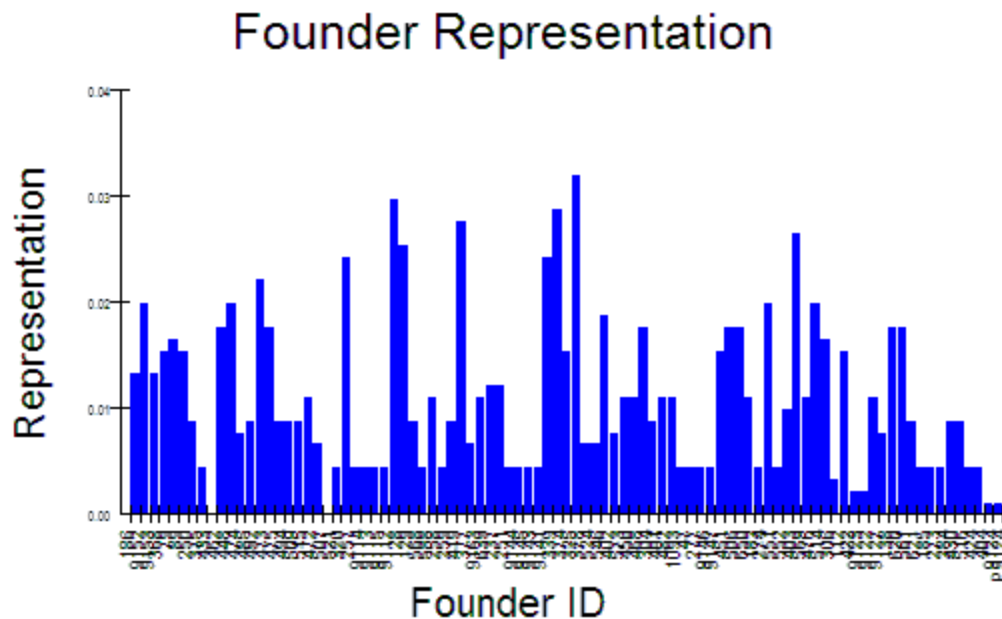
Potential gene diversity is also very high (99.23%) and could be exploited by breeding the three unrepresented founders and breeding animals with low mean kinship values in order to equalize founder representation (Figure 3).

## GENETICS SUMMARY

	2003	2004	2005	2006	2007	2008	2009*	Potential
Number of Founders	85	85	85	89	91	89	89	3 additional
Founder Genome Equivalents	36.61	36.61	37.66	39.35	41.02	41.90	41.33	64.93
Gene Diversity Retained (%)	98.63	98.62	98.67	98.73	98.78	98.81	98.79	99.23
Population Mean Kinship	0.0137	0.0138	0.0133	0.0129	0.0122	0.0119	0.0121	--
Mean Inbreeding (F)	0.0083	0.0083	0.0106	0.0093	0.0088	0.0088	0.0088	--
Percent known pedigree prior to exclusions	69.1		71.6	72.1	74.0	73.5	73.5	--
Percent known pedigree after exclusions	100	100	100	100	98.9	100	97	--
Effective population size to census size ratio ( $N_e/N$ )	0.285	0.284	0.31	0.3055	0.2710	0.246	0.3138	--
Years To 90% Gene Diversity	$\geq 250$	$\geq 250$	$\geq 200$	$>275$	$>275$	$\geq 250$	$>200$	--
Gene Diversity at 100 Years From Present (%)	$\geq 90\%$	$\geq 90\%$	$\geq 90\%$	$\geq 90\%$	$\geq 90\%$	$\geq 90\%$	96	--

Summary data between years may not be comparable due to changes in pedigree data, individuals excluded/included, and target size.

\*2009 analyses assume  $\lambda = 1.00$  and target population size  $Kt = 250$  (in previous years,  $Kt = 300$ ).



**Figure 3.** Founder representation of chimpanzees illustrating inequality of representation, or proportion of each founder's genes in the living descendant population. Additional potential founders not expected to reproduce have been excluded from the genetic analyses.

**Management Strategy:** The previous TAG target population size for the Chimpanzee SSP was set at 300, but the loss of institutions in recent years and the deaths of older animals caused the population to decrease to 270. The Ape Taxon Advisory Group (TAG) in their 2007 Regional Collection plan set a new target size of 250 for this species, but based on current changes in institutional requests a target of 275 was used for this plan. Demographic analyses indicate that approximately 8 – 9 births per year are necessary to offset deaths and maintain the current population size (0% growth or  $\lambda = 1.00$ ). To achieve these demographic and genetic goals, 25 females and 23 males were selected as recommended breeders from the known-pedigreed portion of the population. As with most managed populations, breeding pairs are prioritized to maintain or increase gene diversity through considerations of mean kinship, avoidance of inbreeding, differences in sire and dam mean kinships, and the degree of uncertainty within a pedigree. In addition to these genetic criteria and the previously mentioned demographic goals, the Chimpanzee SSP also considered a broader set of criteria when making breeding pairs (in no particular order):

- ❖ location (to avoid unnecessary transfers)
- ❖ social group
- ❖ facility capacity
- ❖ facility quality/limitations/characteristics
- ❖ institutional needs
- ❖ mother rearing
- ❖ ability to hold offspring
- ❖ disease issues
- ❖ transfers/introductions
- ❖ individual behavior
- ❖ keeping natal/compatible males together
- ❖ forming male cohorts
- ❖ probability of success of producing offspring
- ❖ age of animals
- ❖ demographic structure of institutional groups
- ❖ data quality / pedigree

Of these criteria, the SSP agreed that priority should be placed on:

- ❖ genetic & demographic considerations
- ❖ social group need
- ❖ facility characteristics, including carrying capacity and limitations

**Finally, it is important to note that currently the Chimpanzee SSP population is a closed population. No individual chimpanzee is considered “surplus” and all institutions are collectively committed to providing lifetime care for every chimpanzee. In some rare circumstances, the program may accept a chimpanzee for inclusion into the SSP population but individuals should not transfer from an SSP institution to a non-SSP institution.**

#### **Management Strategy Summary:**

- 1. Recommend 25 females for breeding situations with 23 males.**
- 2. Recommend 9 transfers, some for non-breeding purposes, and to meet institutional needs including one institution phasing out of chimps.**

## Summary Breeding and Transfer Plan 2009

**PLEASE NOTE: INSTITUTIONS HOLDING ANIMALS WITHOUT BREEDING RECOMMENDATIONS ARE RESPONSIBLE FOR ENSURING THAT PROPER CONTRACEPTIVE STRATEGIES ARE IN PLACE.**

ID	Location	Sex	Age	Disposition	Location	Breeding	With	Notes
110	W PALM BE	F	71	HOLD	W PALM BE	DO NOT BREED		Excluded
128	PORTLAND	F	57	HOLD	PORTLAND	DO NOT BREED		Excluded
142	MANHATTAN	F	55	HOLD	MANHATTAN	DO NOT BREED		Excluded
185	CHICAGOLP	s	51	HOLD	CHICAGOLP	DO NOT BREED		Excluded
186	SAN FRAN	M	51	HOLD	SAN FRAN	DO NOT BREED		
212	DALLAS	F	51	HOLD	DALLAS	DO NOT BREED		Excluded
214	SAN FRAN	s	50	HOLD	SAN FRAN	DO NOT BREED		Excluded
224	TOLEDO	M	50	HOLD	TOLEDO	DO NOT BREED		Excluded
228	TOLEDO	F	49	HOLD	TOLEDO	DO NOT BREED		Excluded
250	METROZOO	F	42	HOLD	METROZOO	DO NOT BREED		
259	BUSCH TAM	s	47	HOLD	BUSCH TAM	DO NOT BREED		Excluded
272	KANSASCTY	F	46	HOLD	KANSASCTY	DO NOT BREED		Excluded
273	KANSASCTY	F	46	HOLD	KANSASCTY	DO NOT BREED		Excluded
276	SACRAMNTO	M	46	HOLD	SACRAMNTO	DO NOT BREED		Excluded
277	W PALM BE	s	46	HOLD	W PALM BE	DO NOT BREED		Excluded
295	SACRAMNTO	F	45	HOLD	SACRAMNTO	DO NOT BREED		Excluded
304	CHICAGOLP	F	45	HOLD	CHICAGOLP	DO NOT BREED		Excluded
332	JACKSON	M	45	HOLD	JACKSON	DO NOT BREED		
341	SCOTTSBLU	M	44	HOLD	SCOTTSBLU	DO NOT BREED		Excluded
343	W PALM BE	s	39	HOLD	W PALM BE	DO NOT BREED		Excluded
368	DALLAS	F	44	HOLD	DALLAS	DO NOT BREED		
371	CHICAGOLP	F	44	HOLD	CHICAGOLP	DO NOT BREED		Excluded
375	ST LOUIS	M	42	HOLD	ST LOUIS	DO NOT BREED		
420	LOSANGELE	F	42	HOLD	LOSANGELE	DO NOT BREED		
424	W PALM BE	s	41	HOLD	W PALM BE	DO NOT BREED		Excluded
425	W PALM BE	s	42	HOLD	W PALM BE	DO NOT BREED		Excluded
427	OKLAHOMA	s	41	HOLD	OKLAHOMA	DO NOT BREED		Excluded
433	JACKSON	F	41	HOLD	JACKSON	DO NOT BREED		
439	W PALM BE	F	41	HOLD	W PALM BE	DO NOT BREED		Excluded
446	SAN FRAN	F	40	HOLD	SAN FRAN	DO NOT BREED		Excluded
447	SAN FRAN	F	40	HOLD	SAN FRAN	DO NOT BREED		Excluded
448	METROZOO	F	40	HOLD	METROZOO	DO NOT BREED		
449	ASHEBORO	s	40	HOLD	ASHEBORO	DO NOT BREED		Excluded
450	JACKSON	s	40	HOLD	JACKSON	DO NOT BREED		Excluded
456	PORTLAND	s	40	HOLD	PORTLAND	DO NOT BREED		Excluded
459	SCOTTSBLU	F	40	HOLD	SCOTTSBLU	DO NOT BREED		Excluded
462	JOHN BALL	F	40	HOLD	JOHN BALL	BREED WITH	661	
471	W PALM BE	F	40	HOLD	W PALM BE	DO NOT BREED		Excluded
472	TULSA	F	38	HOLD	TULSA	DO NOT BREED		
473	BROWNSVIL	M	39	SEND TO	DALLAS	BREED WITH	1137, 954	
474	SEDGWICK	M	40	HOLD	SEDGWICK	BREED WITH	475	
475	SEDGWICK	F	39	HOLD	SEDGWICK	BREED WITH	653, 1051, 474	

ID	Location	Sex	Age	Disposition	Location	Breeding	With	Notes
480	W PALM BE	s	39	HOLD	W PALM BE	DO NOT BREED		Excluded
492	DETROIT	F	39	HOLD	DETROIT	DO NOT BREED		
494	LITTLEROC	F	39	HOLD	LITTLEROC	BREED WITH	853, 1004, 1080	
502	JOHN BALL	s	30	HOLD	JOHN BALL	DO NOT BREED		Excluded
506	BROWNSVIL	s	37	HOLD	BROWNSVIL	DO NOT BREED		Excluded
507	ASHEBORO	F	38	HOLD	ASHEBORO	DO NOT BREED		
509	HONOLULU	F	39	HOLD	HONOLULU	DO NOT BREED		
511	SEDGWICK	F	38	HOLD	SEDGWICK	DO NOT BREED		Excluded
515	ST LOUIS	F	39	HOLD	ST LOUIS	DO NOT BREED		
516	ASHEBORO	s	38	HOLD	ASHEBORO	DO NOT BREED		Excluded
521	DETROIT	F	38	HOLD	DETROIT	DO NOT BREED		
532	KNOXVILLE	F	38	HOLD	KNOXVILLE	BREED WITH	670	
543	OKLAHOMA	M	38	HOLD	OKLAHOMA	DO NOT BREED		Excluded
545	BUSCH TAM	F	38	HOLD	BUSCH TAM	BREED WITH	781	
554	W PALM BE	F	38	HOLD	W PALM BE	DO NOT BREED		Excluded
566	OKLAHOMA	f	37	SEND TO	BUSCH TAM	DO NOT BREED		Excluded
568	TULSA	F	35	HOLD	TULSA	DO NOT BREED		
569	HONOLULU	M	37	HOLD	HONOLULU	DO NOT BREED		Excluded
571	ASHEBORO	F	36	HOLD	ASHEBORO	BREED WITH	1083	
574	ST LOUIS	F	36	HOLD	ST LOUIS	DO NOT BREED		Excluded
582	W PALM BE	s	36	HOLD	W PALM BE	DO NOT BREED		Excluded
583	PORTLAND	F	36	HOLD	PORTLAND	DO NOT BREED		
601	KNOXVILLE	F	35	HOLD	KNOXVILLE	BREED WITH	670	
603	W PALM BE	s	36	HOLD	W PALM BE	DO NOT BREED		Excluded
609	KANSASCTY	F	35	HOLD	KANSASCTY	DO NOT BREED		
610	PORTLAND	F	35	HOLD	PORTLAND	DO NOT BREED		
613	BUSCH TAM	F	35	HOLD	BUSCH TAM	BREED WITH	781	
617	BROWNSVIL	s	35	HOLD	BROWNSVIL	DO NOT BREED		Excluded
622	ASHEBORO	M	34	HOLD	ASHEBORO	DO NOT BREED		Excluded
629	BUSCH TAM	F	34	HOLD	BUSCH TAM	BREED WITH	781	
630	FORTWORTH	s	34	HOLD	FORTWORTH	DO NOT BREED		Excluded
634	CHATTANOOG	F	34	HOLD	CHATTANOOG	DO NOT BREED		
635	FORTWORTH	F	34	HOLD	FORTWORTH	DO NOT BREED		
636	JACKSON	F	34	HOLD	JACKSON	DO NOT BREED		
638	BROWNSVIL	M	33	HOLD	BROWNSVIL	DO NOT BREED		Excluded
639	KNOXVILLE	F	34	HOLD	KNOXVILLE	DO NOT BREED		
649	CHATTANOOG	s	33	HOLD	CHATTANOOG	DO NOT BREED		Excluded
653	SEDGWICK	M	32	HOLD	SEDGWICK	BREED WITH	475	
657	LOWRY	F	32	HOLD	LOWRY	DO NOT BREED		
659	JACKSON	s	31	HOLD	JACKSON	DO NOT BREED		Excluded
661	JOHN BALL	M	31	HOLD	JOHN BALL	BREED WITH	462, 819, 892	
665	MANHATTAN	M	31	HOLD	MANHATTAN	BREED WITH	995	
670	KNOXVILLE	M	31	HOLD	KNOXVILLE	BREED WITH	532, 601	
687	HONOLULU	F	30	HOLD	HONOLULU	DO NOT BREED		
702	LOSANGELE	F	30	HOLD	LOSANGELE	DO NOT BREED		Excluded
710	W PALM BE	s	29	HOLD	W PALM BE	DO NOT BREED		Excluded
715	JACKSON	F	29	HOLD	JACKSON	DO NOT BREED		

ID	Location	Sex	Age	Disposition	Location	Breeding	With	Notes
716	CHICAGOLP	F	29	HOLD	CHICAGOLP	DO NOT BREED		
720	LOWRY	F	29	HOLD	LOWRY	DO NOT BREED		
737	W PALM BE	F	28	HOLD	W PALM BE	DO NOT BREED		
748	METROZOO	F	27	HOLD	METROZOO	DO NOT BREED		Excluded
752	MONTGOMRY	s	27	HOLD	MONTGOMRY	DO NOT BREED		Excluded
759	W PALM BE	F	27	HOLD	W PALM BE	DO NOT BREED		Excluded
760	OKLAHOMA	F	27	HOLD	OKLAHOMA	BREED WITH	917	
762	W PALM BE	s	27	HOLD	W PALM BE	DO NOT BREED		Excluded
771	OAKLAND	s	26	HOLD	OAKLAND	DO NOT BREED		Excluded
774	DETROIT	F	26	HOLD	DETROIT	DO NOT BREED		Excluded
780	LOSANGELE	F	26	HOLD	LOSANGELE	BREED WITH	1086	
781	OKLAHOMA	M	26	SEND TO	BUSCH TAM	BREED WITH	545, 629, 613	
784	BROWNSVIL	s	26	HOLD	BROWNSVIL	DO NOT BREED		
785	ASHEBORO	F	26	HOLD	ASHEBORO	DO NOT BREED		
792	MONTGOMRY	F	25	HOLD	MONTGOMRY	DO NOT BREED		
804	DETROIT	M	25	HOLD	DETROIT	BREED WITH	983, 984	
808	BROWNSVIL	s	25	HOLD	BROWNSVIL	DO NOT BREED		
811	KNOXVILLE	F	25	HOLD	KNOXVILLE	DO NOT BREED		Excluded
813	CHICAGOLP	F	25	HOLD	CHICAGOLP	DO NOT BREED		Excluded
819	JOHN BALL	f	25	HOLD	JOHN BALL	BREED WITH	661	
820	SEDGWICK	s	25	HOLD	SEDGWICK	DO NOT BREED		Excluded
821	KNOXVILLE	F	25	HOLD	KNOXVILLE	DO NOT BREED		Excluded
823	SCOTTSBLU	F	25	SEND TO	ROLLING H	BREED WITH	1094, 1095	
827	OKLAHOMA	M	24	HOLD	OKLAHOMA	DO NOT BREED		
828	DALLAS	F	24	HOLD	DALLAS	DO NOT BREED		Excluded
830	W PALM BE	F	24	HOLD	W PALM BE	DO NOT BREED		Excluded
831	CHATTANOOG	F	24	HOLD	CHATTANOOG	DO NOT BREED		
834	LOSANGELE	s	24	HOLD	LOSANGELE	DO NOT BREED		Excluded
841	HONOLULU	F	24	HOLD	HONOLULU	DO NOT BREED		
847	KNOXVILLE	F	23	SEND TO	RIO GRAND	DO NOT BREED		Excluded
853	LITTLEROC	M	23	HOLD	LITTLEROC	BREED WITH	494	
857	CHATTANOOG	F	23	HOLD	CHATTANOOG	DO NOT BREED		Excluded
859	TULSA	s	23	HOLD	TULSA	DO NOT BREED		Excluded
874	LOWRY	F	24	HOLD	LOWRY	DO NOT BREED		
876	SEDGWICK	F	22	HOLD	SEDGWICK	DO NOT BREED		Excluded
878	MONTGOMRY	F	21	HOLD	MONTGOMRY	DO NOT BREED		Excluded
879	OKLAHOMA	F	23	HOLD	OKLAHOMA	BREED WITH	917	
882	MANHATTAN	F	22	HOLD	MANHATTAN	DO NOT BREED		
883	KANSASCTY	f	22	HOLD	KANSASCTY	DO NOT BREED		Excluded
885	JOHN BALL	F	22	HOLD	JOHN BALL	DO NOT BREED		
890	BROWNSVIL	s	22	HOLD	BROWNSVIL	DO NOT BREED		
891	DETROIT	f	23	HOLD	DETROIT	DO NOT BREED		
892	JOHN BALL	f	22	HOLD	JOHN BALL	BREED WITH	661	
906	LOSANGELE	F	22	HOLD	LOSANGELE	BREED WITH	1086	
909	LOSANGELE	M	21	HOLD	LOSANGELE	BREED WITH	1100	
914	DALLAS	F	22	HOLD	DALLAS	DO NOT BREED		
917	OKLAHOMA	M	21	HOLD	OKLAHOMA	BREED WITH	760, 879	
922	FORTWORTH	s	20	HOLD	FORTWORTH	DO NOT BREED		Excluded

ID	Location	Sex	Age	Disposition	Location	Breeding	With	Notes
923	DETROIT	s	20	HOLD	DETROIT	DO NOT BREED		Excluded
951	JACKSON	F	20	HOLD	JACKSON	DO NOT BREED		
954	DALLAS	F	20	HOLD	DALLAS	BREED WITH	473, 1063	
957	KANSASCTY	M	20	HOLD	KANSASCTY	DO NOT BREED		
960	HONOLULU	M	19	HOLD	HONOLULU	DO NOT BREED		Excluded
961	KANSASCTY	M	19	HOLD	KANSASCTY	DO NOT BREED		
962	DALLAS	s	20	HOLD	DALLAS	DO NOT BREED		Excluded
963	LOSANGELE	s	19	HOLD	LOSANGELE	DO NOT BREED		Excluded
964	LOSANGELE	F	19	HOLD	LOSANGELE	BREED WITH	1086	
967	KNOXVILLE	M	19	HOLD	KNOXVILLE	DO NOT BREED		Excluded
969	SACRAMNTO	M	20	HOLD	SACRAMNTO	DO NOT BREED		
970	BROWNSVIL	s	20	HOLD	BROWNSVIL	DO NOT BREED		Excluded
972	METROZOO	s	19	HOLD	METROZOO	DO NOT BREED		Excluded
973	METROZOO	s	19	HOLD	METROZOO	DO NOT BREED		Excluded
974	W PALM BE	s	19	HOLD	W PALM BE	DO NOT BREED		Excluded
975	W PALM BE	s	19	HOLD	W PALM BE	DO NOT BREED		Excluded
976	CHICAGOLP	F	19	HOLD	CHICAGOLP	DO NOT BREED		Excluded
979	CHICAGOLP	s	19	HOLD	CHICAGOLP	DO NOT BREED		Excluded
982	TULSA	F	19	HOLD	TULSA	DO NOT BREED		
983	DETROIT	F	18	HOLD	DETROIT	BREED WITH	1052, 804	
984	DETROIT	F	18	HOLD	DETROIT	BREED WITH	1052, 804	
986	FORTWORTH	s	19	HOLD	FORTWORTH	DO NOT BREED		Excluded
990	TULSA	M	18	HOLD	TULSA	DO NOT BREED		
991	SACRAMNTO	F	18	HOLD	SACRAMNTO	DO NOT BREED		
993	BUSCH TAM	s	18	HOLD	BUSCH TAM	DO NOT BREED		Excluded
995	MANHATTAN	F	17	HOLD	MANHATTAN	BREED WITH	665	
998	MADISON	F	18	HOLD	MADISON	DO NOT BREED		
1001	ST LOUIS	M	17	HOLD	ST LOUIS	DO NOT BREED		
1004	LITTLEROC	M	17	HOLD	LITTLEROC	BREED WITH	494	
1008	ST LOUIS	F	17	HOLD	ST LOUIS	DO NOT BREED		
1009	BROWNSVIL	s	18	HOLD	BROWNSVIL	DO NOT BREED		
1010	ST LOUIS	M	16	HOLD	ST LOUIS	DO NOT BREED		
1012	HONOLULU	M	16	HOLD	HONOLULU	DO NOT BREED		
1015	KANSASCTY	f	16	HOLD	KANSASCTY	DO NOT BREED		
1016	SCOTTSBLU	M	17	HOLD	SCOTTSBLU	DO NOT BREED		Excluded
1019	ASHEBORO	F	15	HOLD	ASHEBORO	BREED WITH	1083	
1022	BALTIMORE	F	37	HOLD	BALTIMORE	DO NOT BREED		
1024	BALTIMORE	F	21	HOLD	BALTIMORE	DO NOT BREED		
1025	BALTIMORE	F	19	HOLD	BALTIMORE	DO NOT BREED		Excluded
1026	BALTIMORE	F	17	HOLD	BALTIMORE	DO NOT BREED		
1027	BALTIMORE	F	14	HOLD	BALTIMORE	DO NOT BREED		Excluded
1029	CHICAGOLP	F	16	HOLD	CHICAGOLP	DO NOT BREED		Excluded
1033	W PALM BE	F	14	HOLD	W PALM BE	DO NOT BREED		Excluded
1034	W PALM BE	F	14	HOLD	W PALM BE	DO NOT BREED		Excluded
1035	HONOLULU	M	15	HOLD	HONOLULU	DO NOT BREED		
1036	HONOLULU	M	14	HOLD	HONOLULU	DO NOT BREED		
1042	OAKLAND	F	14	HOLD	OAKLAND	DO NOT BREED		
1043	OAKLAND	F	14	HOLD	OAKLAND	DO NOT BREED		
1044	KANSASCTY	F	15	HOLD	KANSASCTY	DO NOT BREED		
1046	METROZOO	s	15	HOLD	METROZOO	DO NOT BREED		Excluded

ID	Location	Sex	Age	Disposition	Location	Breeding	With	Notes
1047	DETROIT	F	15	HOLD	DETROIT	DO NOT BREED		Excluded
1048	KANSASCTY	F	13	HOLD	KANSASCTY	DO NOT BREED		
1049	KANSASCTY	F	13	HOLD	KANSASCTY	DO NOT BREED		
1050	ASHEBORO	F	13	HOLD	ASHEBORO	DO NOT BREED		
1051	SEDGWICK	M	14	HOLD	SEDGWICK	BREED WITH	475	
1052	DETROIT	M	14	HOLD	DETROIT	BREED WITH	983, 984	
1054	LOSANGELE	M	15	HOLD	LOSANGELE	BREED WITH	1100	
1055	LOSANGELE	M	13	HOLD	LOSANGELE	BREED WITH	1100	
1056	KANSASCTY	F	10	HOLD	KANSASCTY	DO NOT BREED		
1057	SEDGWICK	F	12	HOLD	SEDGWICK	DO NOT BREED		
1060	KANSASCTY	M	12	HOLD	KANSASCTY	DO NOT BREED		
1061	KANSASCTY	M	11	HOLD	KANSASCTY	DO NOT BREED		Excluded
1063	DALLAS	M	13	HOLD	DALLAS	BREED WITH	954, 1137	
1064	ST LOUIS	F	11	HOLD	ST LOUIS	DO NOT BREED		Excluded
1065	ST LOUIS	F	11	HOLD	ST LOUIS	DO NOT BREED		
1067	LOSANGELE	F	10	HOLD	LOSANGELE	DO NOT BREED		
1068	JOHN BALL	F	11	HOLD	JOHN BALL	DO NOT BREED		Excluded
1071	JACKSON	F	10	HOLD	JACKSON	DO NOT BREED		
1072	LITTLEROC	F	15	HOLD	LITTLEROC	DO NOT BREED		
1073	BALTIMORE	M	11	HOLD	BALTIMORE	DO NOT BREED		
1074	LOWRY	s	12	HOLD	LOWRY	DO NOT BREED		Excluded
1075	W PALM BE	F	12	HOLD	W PALM BE	DO NOT BREED		Excluded
1076	CHICAGOLP	s	10	HOLD	CHICAGOLP	DO NOT BREED		Excluded
1077	ASHEBORO	M	13	HOLD	ASHEBORO	DO NOT BREED		Excluded
1080	LITTLEROC	M	7	HOLD	LITTLEROC	BREED WITH	494	
1081	HONOLULU	M	10	HOLD	HONOLULU	DO NOT BREED		
1083	ASHEBORO	M	8	HOLD	ASHEBORO	BREED WITH	571, 1019	
1084	ASHEBORO	M	8	HOLD	ASHEBORO	DO NOT BREED		Excluded
1085	ST LOUIS	F	8	HOLD	ST LOUIS	DO NOT BREED		
1086	METROZOO	M	7	SEND TO	LOSANGELE	BREED WITH	1100, 780, 964, 906	
1087	MONTGOMRY	s	12	HOLD	MONTGOMRY	DO NOT BREED		Excluded
1088	MONTGOMRY	F	10	HOLD	MONTGOMRY	DO NOT BREED		Excluded
1089	SACRAMNTO	M	8	HOLD	SACRAMNTO	DO NOT BREED		
1090	OAKLAND	M	16	HOLD	OAKLAND	DO NOT BREED		Excluded
1091	OAKLAND	F	17	HOLD	OAKLAND	DO NOT BREED		Excluded
1092	SCOTTSBLU	F	10	SEND TO	ROLLING H	BREED WITH	1095, 1094	
1094	ROLLING H	M	28	HOLD	ROLLING H	BREED WITH	1092, 823	
1095	ROLLING H	M	31	HOLD	ROLLING H	BREED WITH	1092, 823	
1096	ROLLING H	s	28	HOLD	ROLLING H	DO NOT BREED		Excluded
1097	SACRAMNTO	F	9	HOLD	SACRAMNTO	DO NOT BREED		
1099	LOSANGELE	M	10	HOLD	LOSANGELE	BREED WITH	1100	
1100	LOSANGELE	F	10	HOLD	LOSANGELE	BREED WITH	1086, 1054, 1099, 1055, 909	
1102	KANSASCTY	F	9	HOLD	KANSASCTY	DO NOT BREED		
1107	CHATTANOOG	s	41	HOLD	CHATTANOOG	DO NOT BREED		Excluded

ID	Location	Sex	Age	Disposition	Location	Breeding	With	Notes
1108	MADISON	m	27	HOLD	MADISON	DO NOT BREED		Excluded
1109	MADISON	F	26	HOLD	MADISON	DO NOT BREED		Excluded
1128	W PALM BE	F	10	HOLD	W PALM BE	DO NOT BREED		Excluded
1129	CHICAGOLP	F	10	HOLD	CHICAGOLP	DO NOT BREED		Excluded
1135	RIO GRAND	F	37	HOLD	RIO GRAND	DO NOT BREED		Excluded
1136	RIO GRAND	F	33	HOLD	RIO GRAND	DO NOT BREED		Excluded
1137	RIO GRAND	F	32	SEND TO	DALLAS	BREED WITH	473, 1063	
1138	RIO GRAND	M	22	HOLD	RIO GRAND	DO NOT BREED		Excluded
1139	RIO GRAND	F	28	HOLD	RIO GRAND	DO NOT BREED		
1140	RIO GRAND	F	11	HOLD	RIO GRAND	DO NOT BREED		Excluded
1141	RIO GRAND	F	10	SEND TO	DALLAS	DO NOT BREED		Excluded
1142	RIO GRAND	M	9	HOLD	RIO GRAND	DO NOT BREED		Excluded
1143	RIO GRAND	F	9	HOLD	RIO GRAND	DO NOT BREED		Excluded
1144	RIO GRAND	F	9	HOLD	RIO GRAND	DO NOT BREED		Excluded
1145	MONTGOMRY	s	52	HOLD	MONTGOMRY	DO NOT BREED		Excluded
1146	W PALM BE	M	7	HOLD	W PALM BE	DO NOT BREED		Excluded
1148	ST LOUIS	F	8	HOLD	ST LOUIS	DO NOT BREED		Excluded
1154	BALTIMORE	F	4	HOLD	BALTIMORE	DO NOT BREED		Excluded
1155	BALTIMORE	F	4	HOLD	BALTIMORE	DO NOT BREED		
1156	W PALM BE	F	4	HOLD	W PALM BE	DO NOT BREED		Excluded
1157	W PALM BE	F	4	HOLD	W PALM BE	DO NOT BREED		Excluded
1158	BALTIMORE	F	4	HOLD	BALTIMORE	DO NOT BREED		
1163	RIO GRAND	F	2	HOLD	RIO GRAND	DO NOT BREED		Excluded
1164	TULSA	F	2	HOLD	TULSA	DO NOT BREED		
1166	ASHEBORO	M	10	HOLD	ASHEBORO	DO NOT BREED		Excluded
1169	TULSA	M	2	HOLD	TULSA	DO NOT BREED		
1170	KANSASCTY	F	2	HOLD	KANSASCTY	DO NOT BREED		Excluded
1171	KNOXVILLE	M	1	HOLD	KNOXVILLE	DO NOT BREED		
1173	DETROIT	M	1	HOLD	DETROIT	DO NOT BREED		
1174	MANHATTAN	F	1	HOLD	MANHATTAN	DO NOT BREED		
1175	OKLAHOMA	F	1	HOLD	OKLAHOMA	DO NOT BREED		
1176	LITTLEROC	s	7	HOLD	LITTLEROC	DO NOT BREED		Excluded
1177	LITTLEROC	M	6	HOLD	LITTLEROC	DO NOT BREED		Excluded
1178	JACKSON	M	0	HOLD	JACKSON	DO NOT BREED		
1180	DALLAS	M	0	HOLD	DALLAS	DO NOT BREED		
1181	PUEBLA	M	24	HOLD	PUEBLA	DO NOT BREED		Excluded
1183	PUEBLA	F	29	HOLD	PUEBLA	DO NOT BREED		Excluded
1184	PUEBLA	F	24	HOLD	PUEBLA	DO NOT BREED		Excluded
1186	PUEBLA	F	11	HOLD	PUEBLA	DO NOT BREED		Excluded
1188	PUEBLA	M	4	HOLD	PUEBLA	DO NOT BREED		Excluded
1189	PUEBLA	F	4	HOLD	PUEBLA	DO NOT BREED		Excluded
1190	LEON	M	26	HOLD	LEON	DO NOT BREED		Excluded
1191	LEON	M	24	HOLD	LEON	DO NOT BREED		Excluded
1192	LEON	F	21	HOLD	LEON	DO NOT BREED		Excluded
1193	LEON	f	29	HOLD	LEON	DO NOT BREED		Excluded

**PLEASE NOTE: INSTITUTIONS HOLDING ANIMALS WITHOUT BREEDING RECOMMENDATIONS ARE RESPONSIBLE FOR ENSURING THAT PROPER CONTRACEPTIVE STRATEGIES ARE IN PLACE.**

**ASHEBORO**

**North Carolina Zoological Park**

Asheboro, NC

Institutional contact/representative:  
Jennifer Ireland

ID	Local ID	Sex	Age	Name	Disposition	Location	Breeding	With	Notes
449	143	s	40	Terry	HOLD	ASHEBORO	DO NOT BREED		excluded
507	1201	F	38	Tammy	HOLD	ASHEBORO	DO NOT BREED		
516	162	s	38	Ruthie	HOLD	ASHEBORO	DO NOT BREED		excluded
571	155	F	36	Maggie	HOLD	ASHEBORO	BREED WITH	1083	
622	48	M	34	Hondo	HOLD	ASHEBORO	DO NOT BREED		excluded
785	407	F	26	Amy	HOLD	ASHEBORO	DO NOT BREED		
1019	1289	F	15	Maki	HOLD	ASHEBORO	BREED WITH	1083	
1050	1401	F	13	Ruby	HOLD	ASHEBORO	DO NOT BREED		
1077	1404	M	13	Jonathan	HOLD	ASHEBORO	DO NOT BREED		excluded
1083	1752	M	8	Sokoto	HOLD	ASHEBORO	BREED WITH	571, 1019	
1084	1753	M	8	Lance	HOLD	ASHEBORO	DO NOT BREED		excluded
1166	1754	M	10	Kendall	HOLD	ASHEBORO	DO NOT BREED		excluded

**Summary:**

Pre-plan: 5 males, 5 females, 2 sterile

Post-plan: 5 males, 5 females, 2 sterile

- Continue integration of social groups
- The SSP is available for guidance on introduction planning
- Facilitate breeding recommendations as noted above

**PLEASE NOTE: INSTITUTIONS HOLDING ANIMALS WITHOUT BREEDING RECOMMENDATIONS ARE RESPONSIBLE FOR ENSURING THAT PROPER CONTRACEPTIVE STRATEGIES ARE IN PLACE.**

**BALTIMORE**

**The Maryland Zoo in Baltimore**

Baltimore, MD

Institutional contact/representative:

Rebecca Gullott

ID	Local ID	Sex	Age	Name	Disposition	Location	Breeding	With	Notes
1022	95052	F	37	Joice	HOLD	BALTIMORE	DO NOT BREED		
1024	95054	F	21	Carole	HOLD	BALTIMORE	DO NOT BREED		
1025	95055	F	19	Bunny	HOLD	BALTIMORE	DO NOT BREED		Excluded
1026	95056	F	17	Renee	HOLD	BALTIMORE	DO NOT BREED		
1027	95059	F	14	Raven	HOLD	BALTIMORE	DO NOT BREED		Excluded
1073	5487	M	11	Kasoje	HOLD	BALTIMORE	DO NOT BREED		
1154	4919	F	4	Asali	HOLD	BALTIMORE	DO NOT BREED		Excluded
1155	4896	F	4	Rozi	HOLD	BALTIMORE	DO NOT BREED		
1158	4948	F	4	Jambo	HOLD	BALTIMORE	DO NOT BREED		
TBD	TBD	M	-	TBD	RECEIVE FROM	PRIVATE	DO NOT BREED		
TBD	TBD	M	-	TBD	RECEIVE FROM	PRIVATE	DO NOT BREED		

**Summary:**

Pre-plan: 1 male, 8 females

Post-plan: 3 male, 8 females

- Receive 2.0 TBD from facility outside the SSP to be integrated into current social group
- The SSP is available for guidance on introduction planning

- **PLEASE NOTE: INSTITUTIONS HOLDING ANIMALS WITHOUT BREEDING RECOMMENDATIONS ARE RESPONSIBLE FOR ENSURING THAT PROPER CONTRACEPTIVE STRATEGIES ARE IN PLACE.**

**BROWNSVIL**

**Gladys Porter Zoo**

Brownsville, TX

Institutional contact/representative:

Jerry Stones

ID	Local ID	Sex	Age	Name	Disposition	Location	Breeding	With	Notes
473	1616	M	39	Doyle	SEND TO	DALLAS	BREED WITH	1137, 954	
506	1420	s	37	Rusty	HOLD	BROWNSVIL	DO NOT BREED		Excluded
617	1421	s	35	Shaba	HOLD	BROWNSVIL	DO NOT BREED		Excluded
638	2150	M	33	Sancho	HOLD	BROWNSVIL	DO NOT BREED		Excluded
784	2043	s	26	Camille	HOLD	BROWNSVIL	DO NOT BREED		
808	2149	s	25	J.K.	HOLD	BROWNSVIL	DO NOT BREED		
890	3375	s	22	Arby	HOLD	BROWNSVIL	DO NOT BREED		
970	4306	s	20	Jaby J.b	HOLD	BROWNSVIL	DO NOT BREED		Excluded
1009	5048	s	18	Fiona	HOLD	BROWNSVIL	DO NOT BREED		

**Summary:**

Pre-plan: 2 males, 7 females

Post-plan: 1 male, 7 females

- Per 2008 plan, transfer 473 Doyle to Dallas Zoo
- Following the transfer, begin integration of social groups
- The SSP is available for guidance on introduction planning
- Facilitate breeding recommendations as noted above

**PLEASE NOTE: INSTITUTIONS HOLDING ANIMALS WITHOUT BREEDING RECOMMENDATIONS ARE RESPONSIBLE FOR ENSURING THAT PROPER CONTRACEPTIVE STRATEGIES ARE IN PLACE.**

**BUSCH TAM**

**Busch Gardens**

Tampa, FL

Institutional contact/representative:

Lisa Harris

ID	Local ID	Sex	Age	Name	Disposition	Location	Breeding	With	Notes
259	15143	s	47	Patsy	HOLD	BUSCH TAM	DO NOT BREED		Excluded
545	15147	F	38	Sally	HOLD	BUSCH TAM	BREED WITH	781	
613	15154	F	35	Samantha	HOLD	BUSCH TAM	BREED WITH	781	
629	15153	F	34	Penny	HOLD	BUSCH TAM	BREED WITH	781	
993	53982	s	18	Mtoto	HOLD	BUSCH TAM	DO NOT BREED		Excluded
566	773911	f	37	Baby Face	RECEIVE FROM	OKLAHOMA	DO NOT BREED		
781	613005	M	26	Mr. C	RECEIVE FROM	OKLAHOMA	BREED WITH	545, 629, 613	

**Summary:**

Pre-plan: 1 male, 4 females

Post-plan: 2 males, 5 females

- Receive 566 Baby Face and 781 Mr. C from Oklahoma City Zoo and integrate into social group
- The SSP is available for guidance on introduction planning
- Facilitate breeding recommendations as noted above

**PLEASE NOTE: INSTITUTIONS HOLDING ANIMALS WITHOUT BREEDING RECOMMENDATIONS ARE RESPONSIBLE FOR ENSURING THAT PROPER CONTRACEPTIVE STRATEGIES ARE IN PLACE.**

**CHATTANOOG**

**Chattanooga Zoo at Warner Park**

Chattanooga, TN

Institutional contact/representative:

Dardenelle Long

ID	Local ID	Sex	Age	Name	Disposition	Location	Breeding	With	Notes
634	997	F	34	Josie	HOLD	CHATTANOOG	DO NOT BREED		
649	998	s	33	Goliath	HOLD	CHATTANOOG	DO NOT BREED		Excluded
831	999	F	24	Randi	HOLD	CHATTANOOG	DO NOT BREED		
857	1000	F	23	Ann	HOLD	CHATTANOOG	DO NOT BREED		Excluded
1107	1001	s	41	Hank	HOLD	CHATTANOOG	DO NOT BREED		Excluded

**Summary:**

Pre-plan: 2 males, 3 females

Post-plan: 2 males, 3 females

- Female 999 Randi is genetically valuable and will be considered for possible future breeding situations.
- Socialization of 1107 Hank remains a priority issue and Chattanooga should continue to work with the SSP to find solutions and strategies.
- The SSP is available for guidance on introduction planning

- **PLEASE NOTE: INSTITUTIONS HOLDING ANIMALS WITHOUT BREEDING RECOMMENDATIONS ARE RESPONSIBLE FOR ENSURING THAT PROPER CONTRACEPTIVE STRATEGIES ARE IN PLACE.**

**CHICAGOLP**

**Lincoln Park Zoological Gardens**

Chicago, IL

Institutional contact/representative:

Maureen Leahy

ID	Local ID	Sex	Age	Name	Disposition	Location	Breeding	With	Notes
185	314	s	51	Keo	HOLD	CHICAGOLP	DO NOT BREED		Excluded
304	1935	F	45	Vicky	HOLD	CHICAGOLP	DO NOT BREED		Excluded
371	464	F	44	June	HOLD	CHICAGOLP	DO NOT BREED		Excluded
716	6239	F	29	Kibali	HOLD	CHICAGOLP	DO NOT BREED		
813	21172	F	25	Cashew	HOLD	CHICAGOLP	DO NOT BREED		Excluded
976	21174	F	19	Kathy	HOLD	CHICAGOLP	DO NOT BREED		Excluded
979	21169	s	19	Hanky	HOLD	CHICAGOLP	DO NOT BREED		Excluded
1029	21175	F	16	Nana	HOLD	CHICAGOLP	DO NOT BREED		Excluded
1076	21171	s	10	Optimus	HOLD	CHICAGOLP	DO NOT BREED		Excluded
1129	21173	F	10	Chuckie	HOLD	CHICAGOLP	DO NOT BREED		Excluded

**Summary:**

Pre-plan: 3 males, 7 females (2 groups)

Post-plan: 3 males, 7 females (2 groups)

- Maintain two non-breeding groups
- The SSP will continue to consider options for adding individuals depending on group membership changes over the next few years.

**PLEASE NOTE: INSTITUTIONS HOLDING ANIMALS WITHOUT BREEDING RECOMMENDATIONS ARE RESPONSIBLE FOR ENSURING THAT PROPER CONTRACEPTIVE STRATEGIES ARE IN PLACE.**

**DALLAS**

**Dallas Zoo**

Dallas, TX

Institutional contact/representative:

Todd Bowsher

ID	Local ID	Sex	Age	Name	Disposition	Location	Breeding	With	Notes
212	1034	F	51	Bon Bon	HOLD	DALLAS	DO NOT BREED		Excluded
828	854223	F	24	Koko	HOLD	DALLAS	DO NOT BREED		Excluded
962	959805	s	20	Mookie	HOLD	DALLAS	DO NOT BREED		Excluded
473	1616	M	39	Doyle	RECEIVE FROM	BROWNSVIL	BREED WITH	1137, 954	
368	1101	F	44	Missy	HOLD	DALLAS	DO NOT BREED		
914	06G948	F	22	Ramona	HOLD	DALLAS	DO NOT BREED		
954	959806	F	20	Victoria	HOLD	DALLAS	BREED WITH	473, 1063	
1063	97B518	M	13	K.c. Elmo	HOLD	DALLAS	BREED WITH	954, 1137	
1180	UNK	M	0	Kona	HOLD	DALLAS	DO NOT BREED		
1137	M02026	F	32	Gari	RECEIVE FROM	RIO GRAND	BREED WITH	473, 1063	
1141	M02030	F	10	Gerri	RECEIVE FROM	RIO GRAND	DO NOT BREED		

**Summary:**

Pre-plan: 3 males, 5 females

Post-plan: 4 males, 7 females

- Receive 1137 Gari and 1141 Gerri from Albuquerque Zoo
- Receive 473 Doyle from Gladys Porter Zoo
- Integrate new arrivals into social group
- Facilitate breeding recommendations as noted above
- The SSP is available for guidance on introduction planning

**PLEASE NOTE: INSTITUTIONS HOLDING ANIMALS WITHOUT BREEDING RECOMMENDATIONS ARE RESPONSIBLE FOR ENSURING THAT PROPER CONTRACEPTIVE STRATEGIES ARE IN PLACE.**

**DETROIT**

**Detroit Zoological Institute**

Royal Oak, MI

Institutional contact/representative:

Scott Carter

ID	Local ID	Sex	Age	Name	Disposition	Location	Breeding	With	Notes
492	2897	F	39	Trixi	HOLD	DETROIT	DO NOT BREED		
521	1847	F	38	Bubbles	HOLD	DETROIT	DO NOT BREED		
774	2621	F	26	Abby	HOLD	DETROIT	DO NOT BREED		Excluded
804	11081	M	25	Bahati	HOLD	DETROIT	BREED WITH	983, 984	
891	2849	f	23	Akati	HOLD	DETROIT	DO NOT BREED		
923	11833	s	20	Kiri	HOLD	DETROIT	DO NOT BREED		Excluded
983	3411	F	18	Nyani	HOLD	DETROIT	BREED WITH	1052, 804	
984	3412	F	18	Tanya	HOLD	DETROIT	BREED WITH	1052, 804	
1047	4154	F	15	Chiana	HOLD	DETROIT	DO NOT BREED		Excluded
1052	11105	M	14	Imara	HOLD	DETROIT	BREED WITH	983, 984	
1173	12168	M	1	Ajua	HOLD	DETROIT	DO NOT BREED		

**Summary:**

Pre-plan: 4 males, 7 females

Post-plan: 4 males, 7 females

- Continue socialization process with the goal of a single group
- Facilitate breeding recommendations as noted above
- The SSP is available for guidance on introduction planning

**PLEASE NOTE: INSTITUTIONS HOLDING ANIMALS WITHOUT BREEDING RECOMMENDATIONS ARE RESPONSIBLE FOR ENSURING THAT PROPER CONTRACEPTIVE STRATEGIES ARE IN PLACE.**

**FORTWORTH**

**Fort Worth Zoological Park**

Ft Worth, TX

Institutional contact/representative:

Kurt Giesler

ID	Local ID	Sex	Age	Name	Disposition	Location	Breeding	With	Notes
630	282	s	34	Martin	HOLD	FORTWORTH	DO NOT BREED		Excluded
635	283	F	34	Margaret	HOLD	FORTWORTH	DO NOT BREED		
922	730	s	20	Kirk	HOLD	FORTWORTH	DO NOT BREED		Excluded
986	750	s	19	Nick	HOLD	FORTWORTH	DO NOT BREED		Excluded

**Summary:**

Pre-plan: 3 males, 1 female

Post-plan: 3 males, 1 female

- Maintain a non-breeding group of 3.1

**PLEASE NOTE: INSTITUTIONS HOLDING ANIMALS WITHOUT BREEDING RECOMMENDATIONS ARE RESPONSIBLE FOR ENSURING THAT PROPER CONTRACEPTIVE STRATEGIES ARE IN PLACE.**

**HONOLULU**

**Honolulu Zoo**

Honolulu, HI

Institutional contact/representative:

Richard Ball

ID	Local ID	Sex	Age	Name	Disposition	Location	Breeding	With	Notes
569	940023	M	37	Roscoe	HOLD	HONOLULU	DO NOT BREED		Excluded
960	940026	M	19	Kibale	HOLD	HONOLULU	DO NOT BREED		Excluded
509	940027	F	39	Boo	HOLD	HONOLULU	DO NOT BREED		
687	940025	F	30	Kumi	HOLD	HONOLULU	DO NOT BREED		
841	940028	F	24	Tatu	HOLD	HONOLULU	DO NOT BREED		
1012	940029	M	16	Konakona	HOLD	HONOLULU	DO NOT BREED		
1035	940404	M	15	Kealoha	HOLD	HONOLULU	DO NOT BREED		
1036	950217	M	14	Nalu	HOLD	HONOLULU	DO NOT BREED		
1081	990224	M	10	Pu'lwa	HOLD	HONOLULU	DO NOT BREED		

**Summary:**

Pre-plan: 6 males, 3 females

Post-plan: 6 males, 3 females

- Maintain a non-breeding group of 6.3

**HOUSTON**

**Houston Zoo**

Houston, TX

Institutional contact/representative:  
Hollie Collahan

ID	Local ID	Sex	Age	Name	Disposition	Location	Breeding	With	Notes
TBD	TBD	M	-	TBD	RECEIVE FROM	PRIVATE	DO NOT BREED		
TBD	TBD	M	-	TBD	RECEIVE FROM	PRIVATE	DO NOT BREED		
TBD	TBD	M	-	TBD	RECEIVE FROM	PRIVATE	DO NOT BREED		
TBD	TBD	M	-	TBD	RECEIVE FROM	PRIVATE	DO NOT BREED		
TBD	TBD	M	-	TBD	RECEIVE FROM	PRIVATE	DO NOT BREED		
TBD	TBD	F	-	TBD	RECEIVE FROM	PRIVATE	DO NOT BREED		
TBD	TBD	F	-	TBD	RECEIVE FROM	PRIVATE	DO NOT BREED		
TBD	TBD	F	-	TBD	RECEIVE FROM	PRIVATE	DO NOT BREED		
TBD	TBD	F	-	TBD	RECEIVE FROM	PRIVATE	DO NOT BREED		
TBD	TBD	F	-	TBD	RECEIVE FROM	PRIVATE	DO NOT BREED		

**Summary:**

Pre-plan: 0 males, 0 females

Post-plan: 5 males, 5 females

- Receive 5.5 TBD from facility outside the SSP to be integrated into current social group

- **PLEASE NOTE: INSTITUTIONS HOLDING ANIMALS WITHOUT BREEDING RECOMMENDATIONS ARE RESPONSIBLE FOR ENSURING THAT PROPER CONTRACEPTIVE STRATEGIES ARE IN PLACE.**

**JACKSON**

**Jackson Zoological Park**

Jackson, MS

Institutional contact/representative:

Willie Bennett

ID	Local ID	Sex	Age	Name	Disposition	Location	Breeding	With	Notes
450	000266	s	40	Jeanette	HOLD	JACKSON	DO NOT BREED		Excluded
659	000630	s	31	Jackson	HOLD	JACKSON	DO NOT BREED		Excluded
332	001767	M	45	Jo Jo	HOLD	JACKSON	DO NOT BREED		
433	000193	F	41	Judy	HOLD	JACKSON	DO NOT BREED		
636	001768	F	34	Belle	HOLD	JACKSON	DO NOT BREED		
715	000815	F	29	Missy	HOLD	JACKSON	DO NOT BREED		
951	002017	F	20	Maybelle	HOLD	JACKSON	DO NOT BREED		
1071	991001	F	10	Binti	HOLD	JACKSON	DO NOT BREED		
1178	200829	M	0	Mojo	HOLD	JACKSON	DO NOT BREED		

**Summary:**

Pre-plan: 3 males, 6 females

Post-plan: 3 males, 6 females

- Maintain non-breeding situation as you monitor health and development of 1178 Mojo

**PLEASE NOTE: INSTITUTIONS HOLDING ANIMALS WITHOUT BREEDING RECOMMENDATIONS ARE RESPONSIBLE FOR ENSURING THAT PROPER CONTRACEPTIVE STRATEGIES ARE IN PLACE.**

**JOHN BALL**

**John Ball Zoological Garden**

Grand Rapids, MI

Institutional contact/representative:

Barb Snyder

ID	Local ID	Sex	Age	Name	Disposition	Location	Breeding	With	Notes
462	302525	F	40	Peggy	HOLD	JOHN BALL	BREED WITH	661	
502	302522	s	30	Donnie	HOLD	JOHN BALL	DO NOT BREED		Excluded
661	UNK	M	31	Sammy	HOLD	JOHN BALL	BREED WITH	462, 819, 892	
819	302526	f	25	Sanga	HOLD	JOHN BALL	BREED WITH	661	
885	UNK	F	22	Jody	HOLD	JOHN BALL	DO NOT BREED		Excluded
892	302524	f	22	Susan	HOLD	JOHN BALL	BREED WITH	661	
1068	302527	F	11	Kiambi	HOLD	JOHN BALL	DO NOT BREED		Excluded

**Summary:**

Pre-plan: 2 males, 5 females

Post-plan: 2 males, 5 females

- Facilitate breeding recommendations as noted above

**PLEASE NOTE: INSTITUTIONS HOLDING ANIMALS WITHOUT BREEDING RECOMMENDATIONS ARE RESPONSIBLE FOR ENSURING THAT PROPER CONTRACEPTIVE STRATEGIES ARE IN PLACE.**

**KANSASCTY**

**Kansas City Zoo**

Kansas City, MO

Institutional contact/representative:

Liz Harmon

ID	Local ID	Sex	Age	Name	Disposition	Location	Breeding	With	Notes
272	299	F	46	Patty	HOLD	KANSASCTY	DO NOT BREED		Excluded
273	298	F	46	Blackie	HOLD	KANSASCTY	DO NOT BREED		Excluded
609	M03049	F	35	Rachel	HOLD	KANSASCTY	DO NOT BREED		
883	102154	f	22	Lucy	HOLD	KANSASCTY	DO NOT BREED		
957	102704	M	20	Joshua	HOLD	KANSASCTY	DO NOT BREED		
961	102363	M	19	Bondo	HOLD	KANSASCTY	DO NOT BREED		
1015	102486	f	16	Amber	HOLD	KANSASCTY	DO NOT BREED		
1044	102532	F	15	Kioja	HOLD	KANSASCTY	DO NOT BREED		
1048	M03050	F	13	Teeoni	HOLD	KANSASCTY	DO NOT BREED		
1049	M03051	F	13	Teetoo	HOLD	KANSASCTY	DO NOT BREED		
1056	99M010	F	10	Molly	HOLD	KANSASCTY	DO NOT BREED		
1060	M03043	M	12	Dekese	HOLD	KANSASCTY	DO NOT BREED		
1061	M03042	M	11	Nusu	HOLD	KANSASCTY	DO NOT BREED		Excluded
1102	M00030	F	9	Halla	HOLD	KANSASCTY	DO NOT BREED		
1170		F	2	Lela	HOLD	KANSASCTY	DO NOT BREED		Excluded

**Summary:**

Pre-plan: 4 males, 11 females

Post-plan: 4 males, 11 females

- Maintain birth control at this time
- Work with the SSP to maintain socialization for 1060 and 1061

**PLEASE NOTE: INSTITUTIONS HOLDING ANIMALS WITHOUT BREEDING RECOMMENDATIONS ARE RESPONSIBLE FOR ENSURING THAT PROPER CONTRACEPTIVE STRATEGIES ARE IN PLACE.**

**KNOXVILLE**

**Knoxville Zoological Gardens**

Knoxville, TN

Institutional contact/representative:

Lisa New

ID	Local ID	Sex	Age	Name	Disposition	Location	Breeding	With	Notes
532	93	F	38	Debbie K3	HOLD	KNOXVILLE	BREED WITH	670	
601	3693	F	35	Jackie	HOLD	KNOXVILLE	BREED WITH	670	
639	3190	F	34	Daisy	HOLD	KNOXVILLE	DO NOT BREED		
670	3284	M	31	Jimbo	HOLD	KNOXVILLE	BREED WITH	532, 601	
811	3694	F	25	Bo	HOLD	KNOXVILLE	DO NOT BREED		Excluded
821	3695	F	25	Binti	HOLD	KNOXVILLE	DO NOT BREED		Excluded
847	1050	F	23	Julie	SEND TO	RIO GRAND	DO NOT BREED		Excluded
967	1448	M	19	Mwelu	HOLD	KNOXVILLE	DO NOT BREED		Excluded
1171	3754	M	1	George	HOLD	KNOXVILLE	DO NOT BREED		

**Summary:**

Pre-plan: 3 males, 6 females

Post-plan: 3 males, 5 females

- Transfer 847 Julie to Albuquerque Zoo
- Continue integration of social groups
- The SSP is available for guidance on introduction planning
- Facilitate breeding recommendations as noted above

- **PLEASE NOTE: INSTITUTIONS HOLDING ANIMALS WITHOUT BREEDING RECOMMENDATIONS ARE RESPONSIBLE FOR ENSURING THAT PROPER CONTRACEPTIVE STRATEGIES ARE IN PLACE.**

**LEON**

**Patronato del Parque Zoologico de Leon**

Guanajuato, Mexico

Institutional contact/representative:

ID	Local ID	Sex	Age	Name	Disposition	Location	Breeding	With	Notes
1190	MAM050	M	26		HOLD	LEON	DO NOT BREED		Excluded
1191	MAM051	M	24		HOLD	LEON	DO NOT BREED		Excluded
1192	MAM052	F	21		HOLD	LEON	DO NOT BREED		Excluded
1193	MAM053	f	29		HOLD	LEON	DO NOT BREED		Excluded

**Summary:**

Pre-plan: 2 males, 2 females

Post-plan: 2 males, 2 females

- Maintain non-breeding group of 2.2

**PLEASE NOTE: INSTITUTIONS HOLDING ANIMALS WITHOUT BREEDING RECOMMENDATIONS ARE RESPONSIBLE FOR ENSURING THAT PROPER CONTRACEPTIVE STRATEGIES ARE IN PLACE.**

**LITTLEROC**

**Little Rock Zoological Gardens**

Little Rock, AR

Institutional contact/representative:

Sydney Tanner

ID	Local ID	Sex	Age	Name	Disposition	Location	Breeding	With	Notes
494	3311	F	39	Judy	HOLD	LITTLEROC	BREED WITH	853, 1004, 1080	
853	6707	M	23	Bahati	HOLD	LITTLEROC	BREED WITH	494	
1004	6708	M	17	Kijana	HOLD	LITTLEROC	BREED WITH	494	
1072	4570	F	15	Mahale	HOLD	LITTLEROC	DO NOT BREED		Pregnant
1080	6709	M	7	Chance	HOLD	LITTLEROC	BREED WITH	494	
1176		s	7	Mikey	HOLD	LITTLEROC	DO NOT BREED		Excluded
1177		M	6	Louie	HOLD	LITTLEROC	DO NOT BREED		Excluded

**Summary:**

Pre-plan: 4 males, 3 females

Post-plan: 4 males, 3 females

- Continue integration process for 1176 Mikey and 1177 Louie
- The SSP is available for guidance on introduction planning
- Facilitate breeding recommendations as noted above
- Monitor 1072 Mahale's pregnancy

**PLEASE NOTE: INSTITUTIONS HOLDING ANIMALS WITHOUT BREEDING RECOMMENDATIONS ARE RESPONSIBLE FOR ENSURING THAT PROPER CONTRACEPTIVE STRATEGIES ARE IN PLACE.**

**LOSANGELE**

**Los Angeles Zoo & Botanical Gardens**

Los Angeles, CA

Institutional contact/representative:

Jennie McNary

ID	Local ID	Sex	Age	Name	Disposition	Location	Breeding	With	Notes
420	03180	F	42	Pandora	HOLD	LOSANGELE	DO NOT BREED		
702	09920	F	30	Nan	HOLD	LOSANGELE	DO NOT BREED		Excluded
780	001440	F	26	Regina	HOLD	LOSANGELE	BREED WITH	1086	
834	002202	s	24	Joanna	HOLD	LOSANGELE	DO NOT BREED		Excluded
906	002546	F	22	Gracie	HOLD	LOSANGELE	BREED WITH	1086	
909	003080	M	21	Shaun	HOLD	LOSANGELE	BREED WITH	1100	
963	003592	s	19	Gerrard	HOLD	LOSANGELE	DO NOT BREED		Excluded
964	003668	F	19	Yoshiko	HOLD	LOSANGELE	BREED WITH	1086	
1054	004621	M	15	Glenn	HOLD	LOSANGELE	BREED WITH	1100	
1055	004987	M	13	Ripley	HOLD	LOSANGELE	BREED WITH	1100	
1067	990029	F	10	Jean	HOLD	LOSANGELE	DO NOT BREED		
1099	990046	M	10	Jake	HOLD	LOSANGELE	BREED WITH	1100	
1100	990112	F	10	Zoe	HOLD	LOSANGELE	BREED WITH	1086, 1054, 1099, 1055, 909	
1086	Y2M034	M	7	Ben	RECEIVE FROM	METROZOO	BREED WITH	1100, 780, 964, 906	

**Summary:**

Pre-plan: 5 males, 8 females

Post-plan: 6 males, 8 females

- Receive 1086 Ben from Miami Metrozoo
- Facilitate breeding recommendations as noted above

**PLEASE NOTE: INSTITUTIONS HOLDING ANIMALS WITHOUT BREEDING  
RECOMMENDATIONS ARE RESPONSIBLE FOR ENSURING THAT PROPER CONTRACEPTIVE  
STRATEGIES ARE IN PLACE.**

**LOWRY**

**Tampa's Lowry Park Zoo**

Tampa, FL

Institutional contact/representative:

Lee Ann Rottman

ID	Local ID	Sex	Age	Name	Disposition	Location	Breeding	With	Notes
657	100082	F	32	Jamie	HOLD	LOWRY	DO NOT BREED		
720	100101	F	29	Rukiya	HOLD	LOWRY	DO NOT BREED		
874	100197	F	24	Twiggy	HOLD	LOWRY	DO NOT BREED		
1074	100968	s	12	Alex	HOLD	LOWRY	DO NOT BREED		Excluded

**Summary:**

Pre-plan: 1 males, 3 females

Post-plan: 1 males, 3 females

- Work with the SSP to identify potential additions to this group

**PLEASE NOTE: INSTITUTIONS HOLDING ANIMALS WITHOUT BREEDING  
RECOMMENDATIONS ARE RESPONSIBLE FOR ENSURING THAT PROPER CONTRACEPTIVE  
STRATEGIES ARE IN PLACE.**

**MADISON**

**Henry Vilas Zoo**

Madison, WI

Institutional contact/representative:

Jeff Stafford

ID	Local ID	Sex	Age	Name	Disposition	Location	Breeding	With	Notes
998	1790	F	18	Magadi	HOLD	MADISON	DO NOT BREED		Excluded
1108	1784	m	27	Casey	HOLD	MADISON	DO NOT BREED		Excluded
1109	1785	F	26	Cooky	HOLD	MADISON	DO NOT BREED		Excluded

**Summary:**

Pre-plan: 1 male, 2 females

Post-plan: 1 male, 2 females

- Maintain non-breeding group of 1.2

**PLEASE NOTE: INSTITUTIONS HOLDING ANIMALS WITHOUT BREEDING RECOMMENDATIONS ARE RESPONSIBLE FOR ENSURING THAT PROPER CONTRACEPTIVE STRATEGIES ARE IN PLACE.**

**MANHATTAN**

**Sunset Zoo**

Manhattan, KS

Institutional contact/representative:

Regan Slonecker

ID	Local ID	Sex	Age	Name	Disposition	Location	Breeding	With	Notes
142	002474	F	55	Susie	HOLD	MANHATTAN	DO NOT BREED		Excluded
665	90001	M	31	Julian	HOLD	MANHATTAN	BREED WITH	995	
882	980002	F	22	Hazina	HOLD	MANHATTAN	DO NOT BREED		
995	200405	F	17	Hususa	HOLD	MANHATTAN	BREED WITH	665	
1174	200811	F	1	Nia	HOLD	MANHATTAN	DO NOT BREED		

**Summary:**

Pre-plan: 1 male, 4 females

Post-plan: 1 male, 4 females

- Facilitate breeding recommendations as noted above
- Monitor growth and development of 1174 Nia

**PLEASE NOTE: INSTITUTIONS HOLDING ANIMALS WITHOUT BREEDING RECOMMENDATIONS ARE RESPONSIBLE FOR ENSURING THAT PROPER CONTRACEPTIVE STRATEGIES ARE IN PLACE.**

**METROZOO**

**Miami Metrozoo**

Miami, FL

Institutional contact/representative:  
Conrad Schmidt

ID	Local ID	Sex	Age	Name	Disposition	Location	Breeding	With	Notes
748	M00032	F	27	Binti	HOLD	METROZOO	DO NOT BREED		Excluded
972	M01240	s	19	Bocco	HOLD	METROZOO	DO NOT BREED		Excluded
973	M01345	s	19	Niger	HOLD	METROZOO	DO NOT BREED		Excluded
1046	M01740	s	15	Hondo	HOLD	METROZOO	DO NOT BREED		Excluded
250	M00018	F	42	Bubbles	HOLD	METROZOO	DO NOT BREED		
448	931	F	40	Samantha	HOLD	METROZOO	DO NOT BREED		
1086	Y2M034	M	7	Ben	SEND TO	LOSANGELE	BREED WITH	1100, 780, 964, 906	

**Summary:**

Pre-plan: 4 male, 3 females

Post-plan: 3 males, 3 females

- Transfer 1086 Ben to Los Angeles Zoo
- Maintain a non-breeding group of 3.3

**PLEASE NOTE: INSTITUTIONS HOLDING ANIMALS WITHOUT BREEDING RECOMMENDATIONS ARE RESPONSIBLE FOR ENSURING THAT PROPER CONTRACEPTIVE STRATEGIES ARE IN PLACE.**

**MONTGOMRY**

**Montgomery Zoo**

Montgomery, AL

Institutional contact/representative:

Ken Naugher

ID	Local ID	Sex	Age	Name	Disposition	Location	Breeding	With	Notes
752	1418	s	27	Chester	HOLD	MONTGOMRY	DO NOT BREED		Excluded
792	1390	F	25	Lihso	HOLD	MONTGOMRY	DO NOT BREED		
878	1999	F	21	Sesa	HOLD	MONTGOMRY	DO NOT BREED		Excluded
1087	2290	s	12	John Paul	HOLD	MONTGOMRY	DO NOT BREED		Excluded
1088	2648	F	10	Betty Lou	HOLD	MONTGOMRY	DO NOT BREED		Excluded
1145	1723	s	52	Snika	HOLD	MONTGOMRY	DO NOT BREED		Excluded

**Summary:**

Pre-plan: 2 males, 4 females

Post-plan: 2 males, 4 females

- Maintain non-breeding group of 2.4

**PLEASE NOTE: INSTITUTIONS HOLDING ANIMALS WITHOUT BREEDING RECOMMENDATIONS ARE RESPONSIBLE FOR ENSURING THAT PROPER CONTRACEPTIVE STRATEGIES ARE IN PLACE.**

**OAKLAND**

**Oakland Zoo**

Oakland, CA

Institutional contact/representative:

Dannielle Stith

ID	Local ID	Sex	Age	Name	Disposition	Location	Breeding	With	Notes
1042	1032	F	14	Amira	HOLD	OAKLAND	DO NOT BREED		
771	578	s	26	Abigail	HOLD	OAKLAND	DO NOT BREED		Excluded
1043	1036	F	14	Caramia	HOLD	OAKLAND	DO NOT BREED		Excluded
1090	1090	M	16	Moses	HOLD	OAKLAND	DO NOT BREED		Excluded
1091	1089	F	17	Andi	HOLD	OAKLAND	DO NOT BREED		Excluded
TBD	TBD	M	-	TBD	RECEIVE FROM	PRIVATE	DO NOT BREED		
TBD	TBD	M	-	TBD	RECEIVE FROM	PRIVATE	DO NOT BREED		

**Summary:**

Pre-plan: 1 male, 4 females

Post-plan: 1 male, 4 females

- Receive 2.0 TBD from facility outside the SSP to be integrated into current social group
- The SSP is available for guidance on introduction planning

- **PLEASE NOTE: INSTITUTIONS HOLDING ANIMALS WITHOUT BREEDING RECOMMENDATIONS ARE RESPONSIBLE FOR ENSURING THAT PROPER CONTRACEPTIVE STRATEGIES ARE IN PLACE.**

**OKLAHOMA**

**Oklahoma City Zoological Park**

Oklahoma City, OK

Institutional contact/representative:

Jennifer Davis

ID	Local ID	Sex	Age	Name	Disposition	Location	Breeding	With	Notes
427	773709	s	41	Cindy	HOLD	OKLAHOMA	DO NOT BREED		Excluded
543	773810	M	38	Jackson	HOLD	OKLAHOMA	DO NOT BREED		Excluded
566	773911	f	37	Baby Face	SEND TO	BUSCH TAM	DO NOT BREED		Excluded
760	612003	F	27	Abby	HOLD	OKLAHOMA	BREED WITH	917	
781	613005	M	26	Mr. C	SEND TO	BUSCH TAM	BREED WITH	545, 629, 613	
827	613106	M	24	Qadeer	HOLD	OKLAHOMA	DO NOT BREED		
879	612104	F	23	Kito	HOLD	OKLAHOMA	BREED WITH	917	
917	770007	M	21	Mwami	HOLD	OKLAHOMA	BREED WITH	760, 879	
1175	774112	F	1	Zoe	HOLD	OKLAHOMA	DO NOT BREED		

**Summary:**

Pre-plan: 4 males, 5 females

Post-plan: 3 males, 4 females

- Transfer 781 Mr. C and 566 Baby Face to Busch Gardens
- Facilitate breeding recommendations as noted above
- Continue socialization of 1175 Zoe into social group

**PLEASE NOTE: INSTITUTIONS HOLDING ANIMALS WITHOUT BREEDING RECOMMENDATIONS ARE RESPONSIBLE FOR ENSURING THAT PROPER CONTRACEPTIVE STRATEGIES ARE IN PLACE.**

**PORTLAND**

**Oregon Zoo**

Portland, OR

Institutional contact/representative:

Dave Thomas

ID	Local ID	Sex	Age	Name	Disposition	Location	Breeding	With	Notes
128	0835	F	57	Coco	HOLD	PORTLAND	DO NOT BREED		Excluded
456	1221	s	40	Chloe	HOLD	PORTLAND	DO NOT BREED		Excluded
583	1143	F	36	Delilah	HOLD	PORTLAND	DO NOT BREED		
610	1219	F	35	Leah	HOLD	PORTLAND	DO NOT BREED		

**Summary:**

Pre-plan: 0 male, 4 females

Post-plan: 0 male, 4 females

- Maintain group of 0.4
- Work with the SSP to identify males to add to the group in the near future

**PLEASE NOTE: INSTITUTIONS HOLDING ANIMALS WITHOUT BREEDING  
RECOMMENDATIONS ARE RESPONSIBLE FOR ENSURING THAT PROPER CONTRACEPTIVE  
STRATEGIES ARE IN PLACE.**

**PUEBLA**

**Africam Safari Park**

Puebla, Mexico

Institutional contact/representative:

ID	Local ID	Sex	Age	Name	Disposition	Location	Breeding	With	Notes
1181	1461	M	24	Raffles	HOLD	PUEBLA	DO NOT BREED		Excluded
1183	1464	F	29	Susy	HOLD	PUEBLA	DO NOT BREED		Excluded
1184	1465	F	24	Brita	HOLD	PUEBLA	DO NOT BREED		Excluded
1186	3137	F	11	Nyasha	HOLD	PUEBLA	DO NOT BREED		Excluded
1188	5615	M	4		HOLD	PUEBLA	DO NOT BREED		Excluded
1189	5618	F	4		HOLD	PUEBLA	DO NOT BREED		Excluded

**Summary:**

Pre-plan: 2 males, 4 females

Post-plan: 2 males, 4 females

- Maintain non-breeding group of 2.4

**PLEASE NOTE: INSTITUTIONS HOLDING ANIMALS WITHOUT BREEDING RECOMMENDATIONS ARE RESPONSIBLE FOR ENSURING THAT PROPER CONTRACEPTIVE STRATEGIES ARE IN PLACE.**

**RIO GRAND**

**Albuquerque Biological Park**  
 Albuquerque, NM  
 Institutional contact/representative:  
 Lynn Tupa

ID	Local ID	Sex	Age	Name	Disposition	Location	Breeding	With	Notes
847	1050	F	23	Julie	RECEIVE FROM	KNOXVILLE	DO NOT BREED		Excluded
1135	M02024	F	37	Bernice	HOLD	RIO GRAND	DO NOT BREED		Excluded
1136	M02025	F	33	Elaine	HOLD	RIO GRAND	DO NOT BREED		Excluded
1137	M02026	F	32	Gari	SEND TO	DALLAS	BREED WITH	473 OR 1063	
1138	M02027	M	22	Alf	HOLD	RIO GRAND	DO NOT BREED		Excluded
1139	M02028	F	28	Tracey	HOLD	RIO GRAND	DO NOT BREED		
1140	M02029	F	11	Leia	HOLD	RIO GRAND	DO NOT BREED		Excluded
1141	M02030	F	10	Gerri	SEND TO	DALLAS	DO NOT BREED		Excluded
1142	M02031	M	9	Thunder	HOLD	RIO GRAND	DO NOT BREED		Excluded
1143	M02032	F	9	Rainey	HOLD	RIO GRAND	DO NOT BREED		Excluded
1144	M02033	F	9	Babbett	HOLD	RIO GRAND	DO NOT BREED		Excluded
1163	M07003	F	2	Kianga	HOLD	RIO GRAND	DO NOT BREED		Excluded

**Summary:**

Pre-plan: 2 males, 9 females  
 Post-plan: 2 males, 8 females

- Transfer 1137 Gari and 1141 Gerri to Dallas Zoo
- Receive 847 Julie from Knoxville Zoo
- Integrate new chimpanzees into social group
- The SSP is available for guidance on introduction planning

- **PLEASE NOTE: INSTITUTIONS HOLDING ANIMALS WITHOUT BREEDING RECOMMENDATIONS ARE RESPONSIBLE FOR ENSURING THAT PROPER CONTRACEPTIVE STRATEGIES ARE IN PLACE.**

**ROLLING H**

**Rolling Hills Wildlife Adventure**

Salina, KS

Institutional contact/representative:

Sandy Walker

ID	Local ID	Sex	Age	Name	Disposition	Location	Breeding	With	Notes
1094	08B97	M	28	Tohlo	HOLD	ROLLING H	BREED WITH	1092, 823	
1095	08C97	M	31	Shudak	HOLD	ROLLING H	BREED WITH	1092, 823	
1096	08D97	s	28	Auli	HOLD	ROLLING H	DO NOT BREED		Excluded
823	725	F	25	Baby Jane	RECEIVE FROM	SCOTTSBLU	BREED WITH	1094, 1095	
1092	1208	F	10	Millie	RECEIVE FROM	SCOTTSBLU	BREED WITH	1095, 1094	

**Summary:**

Pre-plan: 3 males, 0 females

Post-plan: 3 males, 2 females

- Receive 823 Baby Jane and 1092 Millie from Riverside Zoo
- The SSP is available for guidance on introduction planning
- Facilitate breeding recommendations as noted above

**PLEASE NOTE: INSTITUTIONS HOLDING ANIMALS WITHOUT BREEDING RECOMMENDATIONS ARE RESPONSIBLE FOR ENSURING THAT PROPER CONTRACEPTIVE STRATEGIES ARE IN PLACE.**

**SACRAMNTO**

**Sacramento Zoo**

Sacramento, CA

Institutional contact/representative:

Leslie Field

ID	Local ID	Sex	Age	Name	Disposition	Location	Breeding	With	Notes
276	100082	M	46	Joey	HOLD	SACRAMNTO	DO NOT BREED		Excluded
295	100737	F	45	Josie	HOLD	SACRAMNTO	DO NOT BREED		Excluded
969	101004	M	20	Pablo	HOLD	SACRAMNTO	DO NOT BREED		
991	100997	F	18	Amelia	HOLD	SACRAMNTO	DO NOT BREED		
1089	101119	M	8	Dougie	HOLD	SACRAMNTO	DO NOT BREED		
1097	101028	F	9	Maria	HOLD	SACRAMNTO	DO NOT BREED		

**Summary:**

Pre-plan: 3 males, 3 females

Post-plan: 3 males, 3 females

- Maintain a non-breeding group of 3.3

- **PLEASE NOTE: INSTITUTIONS HOLDING ANIMALS WITHOUT BREEDING RECOMMENDATIONS ARE RESPONSIBLE FOR ENSURING THAT PROPER CONTRACEPTIVE STRATEGIES ARE IN PLACE.**

**SAN FRAN**

**San Francisco Zoological Gardens**

San Francisco, CA

Institutional contact/representative:

Rachel Simpson

ID	Local ID	Sex	Age	Name	Disposition	Location	Breeding	With	Notes
186	16816	M	51	Cobby	HOLD	SAN FRAN	DO NOT BREED		
214	1679	s	50	Tallulah	HOLD	SAN FRAN	DO NOT BREED		Excluded
446	1708	F	40	Maggie	HOLD	SAN FRAN	DO NOT BREED		Excluded
447	1707	F	40	Minnie	HOLD	SAN FRAN	DO NOT BREED		Excluded

**Summary:**

Pre-plan: 1 male, 3 females

Post-plan: 1 male, 3 females

- Maintain a non-breeding group of 1.3

**PLEASE NOTE: INSTITUTIONS HOLDING ANIMALS WITHOUT BREEDING RECOMMENDATIONS ARE RESPONSIBLE FOR ENSURING THAT PROPER CONTRACEPTIVE STRATEGIES ARE IN PLACE.**

**SCOTTSBLU**

**Riverside Zoo**

Scottsbluff, NE

Institutional contact/representative:

Neci Anderson

ID	Local ID	Sex	Age	Name	Disposition	Location	Breeding	With	Notes
341	485	M	44	Jack	HOLD	SCOTTSBLU	DO NOT BREED		Excluded
459	738	F	40	Sarah	HOLD	SCOTTSBLU	DO NOT BREED		Excluded
823	725	F	25	Baby Jane	SEND TO	ROLLING H	BREED WITH	1094, 1095	
1016	677	M	17	Scooter	HOLD	SCOTTSBLU	DO NOT BREED		Excluded
1092	1208	F	10	Millie	SEND TO	ROLLING H	BREED WITH	1095, 1094	

**Summary:**

Pre-plan: 2 males, 3 females

Post-plan: 2 males, 1 female

- Transfer 823 Baby Jane and 1092 Millie to Rolling Hills
- Maintain a non-breeding group of 2.1

- **PLEASE NOTE: INSTITUTIONS HOLDING ANIMALS WITHOUT BREEDING RECOMMENDATIONS ARE RESPONSIBLE FOR ENSURING THAT PROPER CONTRACEPTIVE STRATEGIES ARE IN PLACE.**

**SEDGWICK**

**Sedgwick County Zoo**

Wichita, KS

Institutional contact/representative:

Mike Quick

ID	Local ID	Sex	Age	Name	Disposition	Location	Breeding	With	Notes
474	SM63	M	40	Marbles	HOLD	SEDGWICK	BREED WITH	475	
475	SM57	F	39	Audra	HOLD	SEDGWICK	BREED WITH	653, 1051, 474	
653	916	M	32	Gomez	HOLD	SEDGWICK	BREED WITH	475	
1051	7237	M	14	Moshi	HOLD	SEDGWICK	BREED WITH	475	
1057	7824	F	12	Sukari	HOLD	SEDGWICK	DO NOT BREED		
511	8774	F	38	Tammy	HOLD	SEDGWICK	DO NOT BREED		Excluded
820	1828	s	25	Mwana	HOLD	SEDGWICK	DO NOT BREED		Excluded
876	899	F	22	Bea	HOLD	SEDGWICK	DO NOT BREED		Excluded

**Summary:**

Pre-plan: 4 males, 3 females

Post-plan: 4 males, 3 females

- Facilitate breeding recommendations as noted above

**PLEASE NOTE: INSTITUTIONS HOLDING ANIMALS WITHOUT BREEDING RECOMMENDATIONS ARE RESPONSIBLE FOR ENSURING THAT PROPER CONTRACEPTIVE STRATEGIES ARE IN PLACE.**

**ST LOUIS**

**Saint Louis Zoological Park**

St. Louis, MO

Institutional contact/representative:

Ingrid Porton

ID	Local ID	Sex	Age	Name	Disposition	Location	Breeding	With	Notes
375	940105	M	42	Smoke	HOLD	ST LOUIS	DO NOT BREED		
515	62937	F	39	Rosebud	HOLD	ST LOUIS	DO NOT BREED		
574	874915	F	36	Beauty	HOLD	ST LOUIS	DO NOT BREED		Excluded
1001	940302	M	17	Jimiyu	HOLD	ST LOUIS	DO NOT BREED		
1008	941706	F	17	Mlinzi	HOLD	ST LOUIS	DO NOT BREED		
1010	930544	M	16	Hugo	HOLD	ST LOUIS	DO NOT BREED		
1064	980753	F	11	Holly	HOLD	ST LOUIS	DO NOT BREED		Excluded
1065	980754	F	11	Bakhari	HOLD	ST LOUIS	DO NOT BREED		
1085	62938	F	8	Utamu	HOLD	ST LOUIS	DO NOT BREED		
1148		F	8	Tammy	HOLD	ST LOUIS	DO NOT BREED		Excluded

**Summary:**

Pre-plan: 3 males, 7 females

Post-plan: 3 males, 7 females

- Maintain a non-breeding group of 3.7

- **PLEASE NOTE: INSTITUTIONS HOLDING ANIMALS WITHOUT BREEDING RECOMMENDATIONS ARE RESPONSIBLE FOR ENSURING THAT PROPER CONTRACEPTIVE STRATEGIES ARE IN PLACE.**

**TOLEDO**

**Toledo Zoological Gardens**

Toledo, OH

Institutional contact/representative:

Glenous Favata

ID	Local ID	Sex	Age	Name	Disposition	Location	Breeding	With	Notes
224	63	M	50	Harvey	HOLD	TOLEDO	DO NOT BREED		Excluded
228	64	F	49	Fifi	HOLD	TOLEDO	DO NOT BREED		Excluded

**Summary:**

Pre-plan: 1 male, 1 female

Post-plan: 1 male, 1 female

- Maintain a non-breeding group of 1.1
- Work with the SSP to develop an exit strategy in the case of a death leaving the institution with a single chimpanzee

**PLEASE NOTE: INSTITUTIONS HOLDING ANIMALS WITHOUT BREEDING  
RECOMMENDATIONS ARE RESPONSIBLE FOR ENSURING THAT PROPER CONTRACEPTIVE  
STRATEGIES ARE IN PLACE.**

**TULSA**

**Tulsa Zoo & Living Museum**

Tulsa, OK

Institutional contact/representative:

Pat Murphy

ID	Local ID	Sex	Age	Name	Disposition	Location	Breeding	With	Notes
472	1839	F	38	Suzy	HOLD	TULSA	DO NOT BREED		
568	2461	F	35	Jodi	HOLD	TULSA	DO NOT BREED		
982	10066	F	19	Hope	HOLD	TULSA	DO NOT BREED		
990	10257	M	18	Alvin	HOLD	TULSA	DO NOT BREED		
1164	15327	F	2	Vindi	HOLD	TULSA	DO NOT BREED		
1169	15407	M	2	Bernsen	HOLD	TULSA	DO NOT BREED		
859	8074	s	23	Morris	HOLD	TULSA	DO NOT BREED		Excluded

**Summary:**

Pre-plan: 3 males, 4 females

Post-plan: 3 males, 4 females

- Maintain a non-breeding group of 3.4

**PLEASE NOTE: INSTITUTIONS HOLDING ANIMALS WITHOUT BREEDING RECOMMENDATIONS ARE RESPONSIBLE FOR ENSURING THAT PROPER CONTRACEPTIVE STRATEGIES ARE IN PLACE.**

**W PALM BE**

**Lion Country Safari Inc - Florida**

Loxahatchee, FL

Institutional contact/representative:

Terry Wolf

ID	Local ID	Sex	Age	Name	Disposition	Location	Breeding	With	Notes
110	350	F	71	Little Mama	HOLD	W PALM BE	DO NOT BREED		Excluded
277	351	s	46	Whitely	HOLD	W PALM BE	DO NOT BREED		Excluded
343	357	s	39	Bashful	HOLD	W PALM BE	DO NOT BREED		Excluded
424	50	s	41	Doll	HOLD	W PALM BE	DO NOT BREED		Excluded
425	60	s	42	Swing	HOLD	W PALM BE	DO NOT BREED		Excluded
439	354	F	41	Melody	HOLD	W PALM BE	DO NOT BREED		Excluded
471	364	F	40	Cindy	HOLD	W PALM BE	DO NOT BREED		Excluded
480	49	s	39	Cooper	HOLD	W PALM BE	DO NOT BREED		Excluded
554	375	F	38	Gin	HOLD	W PALM BE	DO NOT BREED		Excluded
582	360	s	36	Higgy	HOLD	W PALM BE	DO NOT BREED		Excluded
603	361	s	36	Peter	HOLD	W PALM BE	DO NOT BREED		Excluded
710	376	s	29	Elgin	HOLD	W PALM BE	DO NOT BREED		Excluded
737	371	F	28	Luna	HOLD	W PALM BE	DO NOT BREED		
759	382	F	27	Sabrina	HOLD	W PALM BE	DO NOT BREED		Excluded
762	377	s	27	Ian	HOLD	W PALM BE	DO NOT BREED		Excluded
830	390	F	24	Tonic	HOLD	W PALM BE	DO NOT BREED		Excluded
974	2000	s	19	Figment	HOLD	W PALM BE	DO NOT BREED		Excluded
975	1098	s	19	Dandy	HOLD	W PALM BE	DO NOT BREED		Excluded
1033	950252	F	14	Orbit	HOLD	W PALM BE	DO NOT BREED		Excluded
1034	950254	F	14	Janice	HOLD	W PALM BE	DO NOT BREED		Excluded
1075	970063	F	12	Juniper	HOLD	W PALM BE	DO NOT BREED		Excluded
1128	990139	F	10	Irene	HOLD	W PALM BE	DO NOT BREED		Excluded
1146	D003	M	7	Bamboo	HOLD	W PALM BE	DO NOT BREED		Excluded
1156	F069	F	4	Olive	HOLD	W PALM BE	DO NOT BREED		Excluded
1157	F077	F	4	Noel	HOLD	W PALM BE	DO NOT BREED		Excluded

**Summary:**

Pre-plan: 9 males, 16 females

Post-plan: 9 males, 16 females

- Maintain multiple non-breeding groups

## **Appendix A**

### **Summary of Assumptions**

No assumptions were developed to resolve questions of unknown pedigrees.

## **Appendix B**

### **Summary of Data Exports**

Project: CHIMP09b  
Report compiled under Population Management 2000, version 1.213  
1:11:41 PM, 7/23/2009  
Comments: post-meeting analysis

Date to be used for calculations: 7/23/2009

Studbook information:

Data exported on: 7/23/2009  
Data compiled by: Steve Ross  
Contact info: Steve Ross ross@lpzoo.org  
Data current thru: 6/30/2009  
Scope of data: NORTH AMERICAN REGIONAL

Demographic data from: C:\Program Files\PopLink 1.4\PopLink Databases\Chimp809\mChimp809.prn and  
C:\Program Files\PopLink 1.4\PopLink Databases\Chimp809\fChimp809.prn

Please note that the following numbers are calculated slightly differently than SPARKS.

For each offspring, each parent gets 0.5 of the birth attributed to him/her.

There are 434 total births in the demographic window.

420 births are attributed to known parents with a known age.

0 births are attributed to known parents with an unknown age.

14 births are attributed to unknown parents.

This means that 3% of the total births are attributed to unknown parents or parents with unknown ages.

These births were proportionally factored into the fecundity.

Demographic filter conditions:

Association = AZA.fed During 1/1/1975 - 7/23/2009 Status = Living

Genetic data from: C:\Program Files\PopLink 1.4\PopLink Databases\Chimp809\Chimp809.ped

Genetic filter conditions: Association = AZA.fed As of 7/23/2009 Status = Living

Note: 1.1 (485, 588) animals died during comment period and were removed from the analysis.

## Appendix C

### Individuals Excluded from the Analytical Population

Some animals excluded in previous years have been included in the analyses as a result of new pedigree information. The SSP encourages institutions housing individuals with unknownness in their pedigree to research the animals' pedigrees in order to clarify their origins and enable their inclusion in the genetic analyses and the breeding population.

ID	Location	Sex	Age	Reason for Exclusion
110	W PALM BE	F	71	Reproductive History/Age
128	PORTLAND	F	57	Reproductive History; age
142	MANHATTAN	F	55	0%known pedigree
185	CHICAGOLP	M	51	Sterile
212	DALLAS	F	51	0%known pedigree
214	SAN FRAN	F	50	Sterile
224	TOLEDO	M	50	behavioral exclusion; Reproductive History
228	TOLEDO	F	49	behavioral exclusion; Reproductive History
259	BUSCH TAM	F	47	Sterile
272	KANSASCTY	F	46	behavioral
273	KANSASCTY	F	46	health
276	SACRAMNTO	M	46	behavioral exclusion
277	W PALM BE	M	46	Sterile
295	SACRAMNTO	F	45	behavioral exclusion; 0% known pedigree
304	CHICAGOLP	F	45	Reproductive History
341	SCOTTSBLU	M	44	behavioral exclusion; Reproductive History
343	W PALM BE	M	39	Sterile
371	CHICAGOLP	F	44	50%known pedigree; health
424	W PALM BE	F	41	Sterile
425	W PALM BE	F	42	Sterile
427	OKLAHOMA	F	41	sterile
439	W PALM BE	F	41	50%known pedigree
446	SAN FRAN	F	40	behavioral exclusion; Reproductive History
447	SAN FRAN	F	40	behavioral exclusion; Reproductive History
449	ASHEBORO	F	40	sterile; 0% known pedigree
450	JACKSON	F	40	Sterile
456	PORTLAND	F	40	Sterile; 0%known pedigree
459	SCOTTSBLU	F	40	behavioral exclusion
471	W PALM BE	F	40	0%known pedigree
480	W PALM BE	M	39	Sterile
502	JOHN BALL	M	31	Sterile; 0% known pedigree
506	BROWNSVIL	F	37	sterile
511	SEDGWICK	F	38	0 %known pedigree
516	ASHEBORO	F	38	sterile
543	OKLAHOMA	M	38	behavioral exclusion

ID	Location	Sex	Age	Reason for Exclusion
960	HONOLULU	M	19	Sterile
962	DALLAS	M	20	50%known pedigree; vasectomized
963	LOSANGELE	M	19	Sterile
967	KNOXVILLE	M	19	behavioral exclusion
970	BROWNSVILL	F	20	Sterile
972	METROZOO	M	19	Sterile
973	METROZOO	M	19	Sterile
974	W PALM BE	M	19	Sterile
975	W PALM BE	F	19	Sterile
976	CHICAGOLP	F	19	50%known pedigree
979	CHICAGOLP	M	19	Sterile; 0%known pedigree
986	FORTWORTH	M	19	Sterile;
993	BUSCH TAM	M	18	Sterile
998	MADISON	F	18	behavioral exclusion
1016	SCOTTSBLU	M	17	50%known pedigree
1025	BALTIMORE	F	19	75% known pedigree
1027	BALTIMORE	F	14	50% known pedigree
1029	CHICAGOLP	F	16	0%known pedigree
1033	W PALM BE	F	14	50%known pedigree
1034	W PALM BE	F	14	0%known pedigree
1043	OAKLAND	F	14	blind
1046	METROZOO	M	15	Sterile; 75%known pedigree
1047	DETROIT	F	15	75%known pedigree
1061	KANSASCTY	M	11	75%known pedigree
1064	ST LOUIS	F	11	50%known pedigree
1068	JOHN BALL	F	11	50% known pedigree
1074	LOWRY	M	12	0%known pedigree
1075	W PALM BE	F	12	0%known pedigree
1076	CHICAGOLP	M	10	0%known pedigree; sterile
1077	ASHEBORO	M	13	50%known pedigree
1084	ASHEBORO	M	8	75% known pedigree
1087	MONTGOMRY	M	12	Sterile
1088	MONTGOMRY	F	10	75%known pedigree
1090	OAKLAND	M	16	0%known pedigree
1091	OAKLAND	F	17	0%known pedigree

ID	Location	Sex	Age	Reason for Exclusion
554	W PALM BE	F	38	0%known pedigree
566	OKLAHOMA	F	37	0%known pedigree; sterile
569	HONOLULU	M	37	Sterile
574	ST LOUIS	F	36	behavioral exclusion; Reproductive History
582	W PALM BE	M	36	Sterile; 0%known pedigree
603	W PALM BE	M	36	Sterile; 0%known pedigree sterile; 0% known pedigree, behavioral nonbreeder
617	BROWNSVIL	F	34	behavioral
622	ASHEBORO	M	34	behavioral
630	FORTWORTH	M	34	Sterile
638	BROWNSVIL	M	33	0% known pedigree; behavioral exclusion
649	CHATTANOOG	M	33	50%known pedigree
659	JACKSON	M	31	Sterile
702	LOSANGELE	F	30	health
710	W PALM BE	M	29	Sterile
748	METROZOO	F	27	50%known pedigree
752	MONTGOMRY	M	27	Sterile
759	W PALM BE	F	27	75%known pedigree
762	W PALM BE	M	27	Sterile
771	OAKLAND	F	26	sterile
774	DETROIT	F	26	50%known pedigree
811	KNOXVILL	F	25	behavioral
813	CHICAGOLP	F	25	50%known pedigree
820	SEDGWICK	M	25	sterile
821	KNOXVILL	F	25	behavioral
828	DALLAS	F	24	50%known pedigree
830	W PALM BE	F	24	0%known pedigree
834	LOSANGELE	F	24	sterile
847	KNOXVILLE	F	23	50% known pedigree
857	CHATTANOOG	F	23	50% known pedigree
859	TULSA	M	23	Reproductive History
876	SEDGWICK	F	22	50% known pedigree
878	MONTGOMRY	F	21	50%known pedigree
885	JOHN BALL	F	22	Health
922	FORTWORTH	M	20	Sterile; 75%known pedigree
923	DETROIT	M	20	sterile

ID	Location	Sex	Age	Reason for Exclusion
1096	ROLLING H	M	28	Sterile
1107	CHATTANOOG	M	41	Sterile
1108	MADISON	M	27	50%known pedigree
1109	MADISON	F	26	0%known pedigree
1128	W PALM BE	F	10	0%known pedigree
1129	CHICAGOLP	F	10	25%known pedigree
1135	RIO GRAND	F	37	0%known pedigree
1136	RIO GRAND	F	33	50%known pedigree
1138	RIO GRAND	M	22	0%known pedigree
1140	RIO GRAND	F	11	0%known pedigree
1141	RIO GRAND	F	10	50%known pedigree
1142	RIO GRAND	M	9	0%known pedigree
1143	RIO GRAND	F	9	0%known pedigree
1144	RIO GRAND	F	9	0%known pedigree
1145	MONTGOMRY	F	52	Sterile; 0%known pedigree
1146	W PALM BE	M	7	25%known pedigree
1148	ST LOUIS	F	8	0%known pedigree
1154	BALTIMORE	F	4	50% known pedigree
1156	W PALM BE	F	4	0%known pedigree
1157	W PALM BE	F	4	0%known pedigree
1163	RIO GRAND	F	2	0%known pedigree
1166	ASHEBORO	M	10	0% known pedigree
1170	KANSASCTY	F	2	75%known pedigree
1176	LITTLE ROC	M	7	0% known pedigree
1177	LITTLE ROC	M	6	0% known pedigree
1181	PUEBLA	M	24	0% known pedigree
1183	PUEBLA	F	29	0% known pedigree
1184	PUEBLA	F	24	0% known pedigree
1186	PUEBLA	F	11	0% known pedigree
1188	PUEBLA	M	4	50% known pedigree
1189	PUEBLA	F	4	0% known pedigree
1190	LEON	M	26	0% known pedigree
1191	LEON	M	24	0% known pedigree
1192	LEON	F	21	0% known pedigree
1193	LEON	f	29	0% known pedigree

## Appendix D Life Tables

### Males

Age (x)	Qx	Px	lx	Mx	Vx	Ex	Risk (Qx)	Risk (Mx)
0	0.300	0.700	1.000	0.000	1.176	25.789	202.100	145.800
1	0.020	0.980	0.700	0.000	1.456	30.405	137.900	135.200
2	0.020	0.980	0.686	0.000	1.499	30.005	132.300	131.800
3	0.010	0.990	0.672	0.000	1.535	29.448	138.800	137.400
4	0.010	0.990	0.666	0.000	1.564	28.735	137.300	137.000
5	0.010	0.990	0.659	0.000	1.594	28.015	145.200	144.800
6	0.010	0.990	0.652	0.010	1.624	27.288	142.000	141.200
7	0.040	0.960	0.646	0.070	1.670	26.960	139.000	134.800
8	0.040	0.960	0.620	0.070	1.681	27.042	133.700	129.700
9	0.020	0.980	0.595	0.100	1.676	26.853	127.200	125.600
10	0.020	0.980	0.583	0.110	1.622	26.381	123.800	123.300
11	0.010	0.990	0.572	0.100	1.549	25.768	116.800	116.100
12	0.030	0.970	0.566	0.120	1.491	25.273	117.400	116.800
13	0.010	0.990	0.549	0.100	1.412	24.772	115.500	114.600
14	0.000	1.000	0.543	0.100	1.330	23.892	109.400	109.400
15	0.060	0.940	0.543	0.120	1.279	23.600	107.600	103.200
16	0.000	1.000	0.511	0.080	1.207	23.321	102.400	102.400
17	0.040	0.960	0.511	0.130	1.160	22.777	104.200	103.000
18	0.010	0.990	0.490	0.110	1.066	22.342	95.900	95.700
19	0.000	1.000	0.485	0.100	0.969	21.450	87.000	87.000
20	0.040	0.960	0.485	0.110	0.895	20.867	85.500	83.600
21	0.020	0.980	0.466	0.090	0.817	20.486	80.300	79.100
22	0.010	0.990	0.457	0.050	0.744	19.784	77.200	76.700
23	0.030	0.970	0.452	0.150	0.714	19.166	75.200	74.500
24	0.040	0.960	0.439	0.050	0.590	18.824	71.300	69.900
25	0.020	0.980	0.421	0.070	0.562	18.379	66.100	65.700
26	0.030	0.970	0.413	0.060	0.509	17.823	66.300	65.100
27	0.020	0.980	0.400	0.040	0.464	17.256	62.400	61.800
28	0.070	0.930	0.392	0.030	0.448	17.018	59.400	56.800
29	0.020	0.980	0.365	0.050	0.442	16.788	54.100	53.500
30	0.000	1.000	0.357	0.030	0.400	15.949	50.700	50.700
31	0.040	0.960	0.357	0.030	0.381	15.254	47.100	46.600
32	0.070	0.930	0.343	0.100	0.374	15.079	44.000	42.000
33	0.030	0.970	0.319	0.030	0.291	14.831	39.500	39.100
34	0.030	0.970	0.310	0.030	0.272	14.259	36.200	36.000
35	0.060	0.940	0.300	0.000	0.255	13.881	35.000	33.700
36	0.000	1.000	0.282	0.030	0.266	13.292	31.900	31.900
37	0.100	0.900	0.282	0.020	0.250	12.939	30.800	29.000
38	0.000	1.000	0.254	0.020	0.245	12.602	27.000	27.000
39	0.040	0.960	0.254	0.020	0.232	11.839	23.000	22.100
40	0.000	1.000	0.244	0.000	0.218	11.065	21.000	21.000
41	0.100	0.900	0.244	0.030	0.232	10.594	19.700	18.700
42	0.060	0.940	0.220	0.000	0.221	10.441	17.000	16.200
43	0.060	0.940	0.206	0.070	0.238	10.043	16.000	15.200
44	0.070	0.930	0.194	0.040	0.181	9.670	13.900	13.900
45	0.080	0.920	0.180	0.040	0.154	9.371	13.000	12.600
46	0.000	1.000	0.166	0.000	0.120	8.735	10.100	10.100
47	0.000	1.000	0.166	0.060	0.121	7.735	9.100	9.100
48	0.110	0.890	0.166	0.000	0.065	7.127	9.000	8.700
49	0.000	1.000	0.148	0.000	0.069	6.506	8.000	8.000
50	0.000	1.000	0.148	0.070	0.070	5.506	7.100	7.100
51	0.200	0.800	0.148	0.000	0.000	5.007	5.100	4.100
52	0.000	1.000	0.118	0.000	0.000	4.508	4.000	4.000
53	0.250	0.750	0.118	0.000	0.000	4.009	4.000	3.200
54	0.000	1.000	0.089	0.000	0.000	3.510	3.000	3.000
55	0.330	0.670	0.089	0.000	0.000	3.006	3.000	2.700
56	0.500	0.500	0.059	0.000	0.000	3.333	2.000	1.900
57	0.000	1.000	0.030	0.000	0.000	3.500	1.000	1.000
58	0.000	1.000	0.030	0.000	0.000	2.500	1.000	1.000
59	0.000	1.000	0.030	0.000	0.000	1.500	1.000	1.000
60	1.000	0.000	0.030	0.000	0.000	1.000	1.000	1.000
61	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

r = 0.088, lambda = 1.0088, T = 18.56, N = 95.00

**Females**

Age (x)	Qx	Px	lx	Mx	Vx	Ex	Risk (Qx)	Risk (Mx)
0	0.250	0.750	1.000	0.000	1.143	32.319	226.500	178.400
1	0.060	0.940	0.750	0.000	1.372	37.669	177.600	170.300
2	0.010	0.990	0.705	0.000	1.421	38.030	170.200	169.000
3	0.010	0.990	0.698	0.000	1.433	37.404	172.500	171.400
4	0.000	1.000	0.691	0.000	1.438	36.588	169.400	169.400
5	0.020	0.980	0.691	0.010	1.450	35.947	176.900	174.200
6	0.010	0.990	0.677	0.010	1.460	35.481	181.200	180.000
7	0.010	0.990	0.670	0.020	1.462	34.829	185.000	184.200
8	0.020	0.980	0.664	0.050	1.462	34.344	190.300	188.400
9	0.010	0.990	0.650	0.050	1.431	33.853	185.000	184.100
10	0.020	0.980	0.644	0.080	1.400	33.353	186.900	185.400
11	0.020	0.980	0.631	0.070	1.344	33.013	188.800	186.800
12	0.010	0.990	0.618	0.060	1.292	32.502	190.300	190.000
13	0.010	0.990	0.612	0.060	1.242	31.820	187.300	186.300
14	0.020	0.980	0.606	0.060	1.198	31.289	177.100	175.200
15	0.020	0.980	0.594	0.070	1.160	30.907	170.300	169.500
16	0.020	0.980	0.582	0.070	1.110	30.517	164.800	163.200
17	0.010	0.990	0.570	0.050	1.054	29.968	158.900	157.700
18	0.010	0.990	0.565	0.050	1.013	29.261	156.800	156.500
19	0.010	0.990	0.559	0.040	0.971	28.546	151.800	151.100
20	0.000	1.000	0.554	0.040	0.934	27.685	149.200	149.200
21	0.010	0.990	0.554	0.040	0.897	26.820	149.000	147.900
22	0.020	0.980	0.548	0.070	0.869	26.212	139.500	138.100
23	0.020	0.980	0.537	0.050	0.814	25.727	131.400	129.700
24	0.020	0.980	0.526	0.040	0.778	25.231	124.300	123.200
25	0.020	0.980	0.516	0.060	0.752	24.726	116.100	115.200
26	0.010	0.990	0.505	0.050	0.701	24.088	111.200	111.100
27	0.030	0.970	0.500	0.020	0.664	23.558	106.600	104.500
28	0.010	0.990	0.485	0.040	0.656	23.022	100.300	99.500
29	0.010	0.990	0.481	0.020	0.621	22.245	96.600	95.900
30	0.000	1.000	0.476	0.040	0.603	21.352	95.000	95.000
31	0.020	0.980	0.476	0.030	0.568	20.557	94.200	93.300
32	0.040	0.960	0.466	0.040	0.554	20.160	89.300	87.400
33	0.020	0.980	0.448	0.020	0.529	19.757	84.400	83.100
34	0.010	0.990	0.439	0.050	0.516	19.044	78.000	77.300
35	0.010	0.990	0.434	0.030	0.470	18.226	70.900	70.700
36	0.010	0.990	0.430	0.020	0.443	17.400	67.300	67.000
37	0.060	0.940	0.426	0.020	0.438	16.992	63.600	60.800
38	0.020	0.980	0.400	0.040	0.435	16.670	52.900	52.600
39	0.000	1.000	0.392	0.000	0.398	15.829	46.000	46.000
40	0.050	0.950	0.392	0.010	0.408	15.210	37.500	36.100
41	0.030	0.970	0.372	0.030	0.414	14.806	30.100	29.600
42	0.080	0.920	0.361	0.000	0.405	14.603	26.400	25.900
43	0.000	1.000	0.332	0.020	0.422	14.195	23.700	23.700
44	0.000	1.000	0.332	0.000	0.402	13.195	21.100	21.100
45	0.050	0.950	0.332	0.000	0.411	12.507	19.100	19.000
46	0.120	0.880	0.316	0.000	0.448	12.564	16.600	16.000
47	0.140	0.860	0.278	0.040	0.514	13.282	14.100	12.700
48	0.080	0.920	0.239	0.000	0.533	13.836	12.000	11.500
49	0.100	0.900	0.220	0.000	0.585	14.099	10.100	9.500
50	0.130	0.870	0.198	0.070	0.659	14.787	7.800	7.400
51	0.170	0.830	0.172	0.000	0.691	16.194	6.000	5.200
52	0.000	1.000	0.143	0.000	0.761	16.750	4.100	4.100
53	0.000	1.000	0.143	0.000	0.759	15.750	4.000	4.000
54	0.000	1.000	0.143	0.000	0.758	14.750	4.000	4.000
55	0.000	1.000	0.143	0.000	0.757	13.750	3.100	3.100
56	0.000	1.000	0.143	0.000	0.756	12.750	3.000	3.000
57	0.000	1.000	0.143	0.000	0.754	11.750	2.100	2.100
58	0.000	1.000	0.143	0.000	0.753	10.750	2.000	2.000
59	0.000	1.000	0.143	0.250	0.750	9.750	2.000	2.000
60	0.000	1.000	0.143	0.000	0.501	8.750	2.000	2.000
61	0.000	1.000	0.143	0.250	0.500	7.750	2.000	2.000
62	0.000	1.000	0.143	0.250	0.250	6.750	2.000	2.000
63	0.000	1.000	0.143	0.000	0.000	5.750	2.000	2.000
64	0.500	0.500	0.143	0.000	0.000	6.333	2.000	1.500
65	0.000	1.000	0.071	0.000	0.000	8.000	1.000	1.000
66	0.000	1.000	0.071	0.000	0.000	7.000	1.000	1.000
67	0.000	1.000	0.071	0.000	0.000	6.000	1.000	1.000
68	0.000	1.000	0.071	0.000	0.000	5.000	1.000	1.000
69	0.000	1.000	0.071	0.000	0.000	4.000	1.000	1.000
70	0.000	1.000	0.071	0.000	0.000	3.000	1.000	1.000
71	0.000	1.000	0.071	0.000	0.000	2.000	0.100	0.100
72	1.000	0.000	0.071	0.000	0.000	1.000	0.000	0.000

$r = -0.0016$   
 $\lambda = 0.9984$   
 $T = 25.91$   
 $N = 174$   
 $N(\text{at } 20 \text{ yrs}) = 168.49$

## Appendix E

### Ordered Mean Kinship

Note: This list is current to July 2009 and values are subject to change with any birth, death, import, export, inclusion, or exclusion.  
Population MK as of July 2009 = 0.0121

Males					Females				
ID	MK	% Known	Age	Location	ID	MK	% Known	Age	Location
186	0.000	100	51	SAN FRAN	462	0.000	100	40	JOHN BALL
375	0.004	100	42	ST LOUIS	521	0.000	100	38	DETROIT
1095	0.004	100	31	ROLLING H	433	0.002	100	41	JACKSON
670	0.007	100	31	KNOXVILLE	507	0.003	100	38	ASHEBORO
804	0.008	100	25	DETROIT	492	0.004	100	39	DETROIT
1094	0.008	100	28	ROLLING H	494	0.004	100	39	LITTLEROC
1171	0.008	100	1	KNOXVILLE	509	0.004	100	39	HONOLULU
1063	0.009	100	13	DALLAS	515	0.004	100	39	ST LOUIS
1073	0.009	100	11	BALTIMORE	568	0.004	100	35	TULSA
474	0.010	100	40	SEDGWICK	737	0.004	100	28	W PALM BE
917	0.010	100	21	OKLAHOMA	1100	0.004	100	10	LOSANGELE
473	0.011	100	39	BROWNSVIL	1137	0.004	100	32	RIO GRAND
1004	0.011	100	17	LITTLEROC	1139	0.004	100	28	RIO GRAND
1010	0.011	100	16	ST LOUIS	472	0.006	100	38	TULSA
1036	0.011	100	14	HONOLULU	639	0.006	100	34	KNOXVILLE
1060	0.011	100	12	KANSASCTY	1024	0.006	100	21	BALTIMORE
1086	0.011	100	7	METROZOO	368	0.007	100	44	DALLAS
1089	0.011	100	8	SACRAMNTO	720	0.007	100	29	LOWRY
1169	0.011	100	2	TULSA	823	0.007	100	25	SCOTTSBLU
653	0.012	100	32	SEDGWICK	1042	0.007	100	14	OAKLAND
853	0.012	100	23	LITTLEROC	250	0.008	100	42	METROZOO
990	0.012	100	18	TULSA	785	0.008	100	26	ASHEBORO
1001	0.012	100	17	ST LOUIS	1019	0.008	100	15	ASHEBORO
1051	0.012	100	14	SEDGWICK	448	0.009	100	40	METROZOO
1080	0.012	100	7	LITTLEROC	475	0.009	100	39	SEDGWICK
1083	0.012	100	8	ASHEBORO	545	0.009	100	38	BUSCH TAM
957	0.013	100	20	KANSASCTY	629	0.009	100	34	BUSCH TAM
1012	0.013	100	16	HONOLULU	792	0.009	100	25	MONTGOMRY
1052	0.013	100	14	DETROIT	819	0.009	100	25	JOHN BALL
781	0.014	100	26	OKLAHOMA	831	0.009	100	24	CHATTANO
827	0.014	100	24	OKLAHOMA	983	0.009	100	18	DETROIT
1035	0.014	100	15	HONOLULU	984	0.009	100	18	DETROIT
1180	0.014	100	0	DALLAS	1022	0.009	100	37	BALTIMORE
332	0.015	100	45	JACKSON	1026	0.009	100	17	BALTIMORE
661	0.015	100	31	JOHN BALL	1050	0.009	100	13	ASHEBORO
665	0.015	100	31	MANHATTAN	1065	0.009	100	11	ST LOUIS
961	0.015	100	19	KANSASCTY	1072	0.009	100	15	LITTLEROC
1178	0.015	100	0	JACKSON	1155	0.009	100	4	BALTIMORE
1081	0.016	100	10	HONOLULU	636	0.010	100	34	JACKSON
1173	0.016	100	1	DETROIT	687	0.010	100	30	HONOLULU
969	0.017	100	20	SACRAMNTO	892	0.010	100	22	JOHN BALL
1054	0.017	100	15	LOSANGELE	982	0.010	100	19	TULSA
909	0.019	100	21	LOSANGELE	1044	0.010	100	15	KANSASCTY
1055	0.02	100	13	LOSANGELE	1085	0.010	100	8	ST LOUIS
1099	0.02	100	10	LOSANGELE	1164	0.010	100	2	TULSA
					635	0.011	100	34	FORTWORTH
					657	0.011	100	32	LOWRY
					715	0.011	100	29	JACKSON
					760	0.011	50	27	OKLAHOMA
					995	0.011	100	17	MANHATTAN

Males					Females				
ID	MK	% Known	Age	Location	ID	MK	% Known	Age	Location
					1008	0.011	100	17	ST LOUIS
					1158	0.011	100	4	BALTIMORE
					613	0.012	100	35	BUSCH TAM
					879	0.012	100	23	OKLAHOMA
					991	0.012	100	18	SACRAMNTO
					1057	0.012	100	12	SEDGWICK
					1071	0.012	100	10	JACKSON
					1092	0.012	100	10	SCOTTSBLU
					1175	0.012	100	1	OKLAHOMA
					882	0.013	100	22	MANHATTAN
					1048	0.013	100	13	KANSASCTY
					1049	0.013	100	13	KANSASCTY
					874	0.014	100	24	LOWRY
					914	0.014	100	22	DALLAS
					716	0.015	100	29	CHICAGOLP
					841	0.015	100	24	HONOLULU
					891	0.015	100	23	DETROIT
					951	0.015	100	20	JACKSON
					1015	0.015	100	16	KANSASCTY
					1102	0.015	100	9	KANSASCTY
					420	0.016	100	42	LOSANGELE
					583	0.016	100	36	PORTLAND
					610	0.016	100	35	PORTLAND
					634	0.016	100	34	CHATTANOOG
					780	0.016	100	26	LOSANGELE
					1174	0.016	100	1	MANHATTAN
					883	0.017	100	22	KANSASCTY
					1056	0.017	100	10	KANSASCTY
					1097	0.017	100	9	SACRAMNTO
					609	0.018	100	35	KANSASCTY
					954	0.018	100	20	DALLAS
					964	0.02	100	19	LOSANGELE
					906	0.021	100	22	LOSANGELE
					1067	0.022	100	10	LOSANGELE
					532	0.500	0	38	KNOXVILLE
					571	0.500	0	36	ASHEBORO
					601	0.500	0	35	KNOXVILLE

# Appendix F Definitions

## Management Terms

**SSP Master Plan** – A document that provides complete breeding and transfer recommendations for a Species Survival Plan (SSP®) population. The document is based on genetic and demographic analyses with consideration of behavioral, social, and institutional wants and needs. A draft of the Master Plan must be published in the Members Only section of the AZA Web site for a 30-day comment period. After the Coordinator incorporates/responds to institutional comments, a final version of the Master Plan must be published in the Members Only section of the AZA Web site. SSP Participation by AZA institutions is required.

**Full Participation** – AZA policy stating that all AZA accredited institutions and certified related facilities having an SSP animal in their collection are required to participate in the SSP partnership process and abide by the recommendations of the SSP.

**Population Management Plan (PMP)**– A document that provides complete breeding and transfer recommendations for a PMP population. The document is based on genetic and demographic analyses with consideration of behavioral, social, and institutional wants and needs. A draft of the PMP must be published in the Members Only section of the AZA Web site for a 30-day comment period. After the PMP Manager incorporates/responds to institutional comments, a final version of the PMP must be published in the Members Only section of the AZA Web site. PMP Participation by AZA institutions is voluntary.

## Demographic Terms

**Age Distribution** – A two-way classification showing the numbers or percentages of individuals in various age and sex classes.

**Ex, Life Expectancy** – Average years of further life for an animal in age class x.

**Lambda ( $\lambda$ ) or Population Growth Rate** – The proportional change in population size from one year to the next. Lambda can be based on life-table calculations (the expected lambda) or from observed changes in population size from year to year. A lambda of 1.11 means a 11% per year increase; lambda of .97 means a 3% decline in size per year.

**lx, Age-Specific Survivorship** – The probability that a new individual (e.g., age 0) is alive at the *beginning* of age x. Alternatively, the proportion of individuals which survive from birth to the beginning of a specific age class.

**Mx, Fecundity** – The average number of same-sexed young born to animals in that age class. Because SPARKS is typically using relatively small sample sizes, SPARKS calculates Mx as 1/2 the average number of young born to animals in that age class. This provides a somewhat less "noisy" estimate of Mx, though it does not allow for unusual sex ratios. The fecundity rates provide information on the age of first, last, and maximum reproduction.

**Px, Age-Specific Survival** – The probability that an individual of age x survives one time period; is conditional on an individual being alive at the beginning of the time period. Alternatively, the proportion of individuals which survive from the beginning of one age class to the next.

**Qx, Mortality** – Probability that an individual of age x dies during time period.  $Qx = 1 - Px$

**Risk (Qx or Mx)** – The number of individuals that have lived during an age class. The number at risk is used to calculate Mx and Qx by dividing the number of births and deaths that occurred during an age class by the number of animals at risk of dying and reproducing during that age class.

The proportion of individuals that die during an age class. It is calculated from the number of animals that die during an age class divided by the number of animals that were alive at the beginning of the age class (i.e. "at risk").

**Vx, Reproductive Value** – The expected number of offspring produced this year and in future years by an animal of age x.

## Genetic Terms

**Allele Retention** – The probability that a gene present in a founder individual exists in the living, descendant population.

**Current Gene Diversity (GD)** -- The proportional gene diversity (as a proportion of the source population) is the probability that two alleles from the same locus sampled at random from the population will not be identical by descent. Gene diversity is calculated from allele frequencies, and is the heterozygosity expected in progeny produced by random mating, and if the population were in Hardy-Weinberg equilibrium.

**Effective Population Size (Inbreeding  $N_e$ )** -- The size of a randomly mating population of constant size with equal sex ratio and a Poisson distribution of family sizes that would (a) result in the same mean rate of inbreeding as that observed in the population, or (b) would result in the same rate of random change in gene frequencies (genetic drift) as observed in the population. These two definitions are identical only if the population is demographically stable (because the rate of inbreeding depends on the distribution of alleles in the parental generation, whereas the rate of gene frequency drift is measured in the current generation).

**FOKE, First Order Kin Equivalents** – The number of first-order kin (siblings or offspring) that would contain the number of copies of an individual's alleles (identical by descent) as are present in the captive-born population. Thus an offspring or sib contributes 1 to FOKE; each grand-offspring contributes 1/2 to FOKE; each cousin contributes 1/4 to FOKE.  $FOKE = 4 * N * MK$ , in which N is the number of living animals in the captive population.

**Founder** – An individual obtained from a source population (often the wild) that has no known relationship to any individuals in the derived population (except for its own descendants).

**Founder Contribution** -- Number of copies of a founder's genome that are present in the living descendants. Each offspring contributes 0.5, each grand-offspring contributes 0.25, etc.

**Founder Genome Equivalents (FGE)** – The number wild-caught individuals (founders) that would produce the same amount of gene diversity as does the population under study. The gene diversity of a population is  $1 - 1 / (2 * FGE)$ .

**Founder Genome Surviving** – The sum of allelic retentions of the individual founders (i.e., the product of the mean allelic retention and the number of founders).

**Founder Representation** -- Proportion of the genes in the living, descendant population that are derived from that founder. I.e., proportional Founder Contribution.

**GU, Genome Uniqueness** – Probability that an allele sampled at random from an individual is not present, identical by descent, in any other living individual in the population. GU-all is the genome uniqueness relative to the entire population. GU-Desc is the genome uniqueness relative to the living non-founder, descendants.

**Inbreeding Coefficient (F)** -- Probability that the two alleles at a genetic locus are identical by descent from an ancestor common to both parents. The mean inbreeding coefficient of a population will be the proportional decrease in observed heterozygosity relative to the expected heterozygosity of the founder population.

**Kinship Value (KV)** – The weighted mean kinship of an animal, with the weights being the reproductive values of each of the kin. The mean kinship value of a population predicts the loss of gene diversity expected in the subsequent generation if all animals were to mate randomly and all were to produce the numbers of offspring expected for animals of their age.

**Mean Generation Time (T)** – The average time elapsing from reproduction in one generation to the time the next generation reproduces. Also, the average age at which a female (or male) produces offspring. It is not the age of first reproduction. Males and females often have different generation times.

**Mean Kinship (MK)** – The mean kinship coefficient between an animal and all animals (including itself) in the living, captive-born population. The mean kinship of a population is equal to the proportional loss of gene diversity of the descendant (captive-born) population relative to the founders and is also the mean inbreeding coefficient of progeny produced by random mating. Mean kinship is also the reciprocal of two times the founder genome equivalents:  $MK = 1 / (2 * FGE)$ .  $MK = 1 - GD$ .

**Percent Known** – Percent of an animal's genome that is traceable to known Founders. Thus, if an animal has an UNK sire, the % Known = 50. If it has an UNK grandparent, % Known = 75.

**Prob Lost** – Probability that a random allele from the individual will be lost from the population in the next generation, because neither this individual nor any of its relatives pass on the allele to an offspring. Assumes that each individual will produce a number of future offspring equal to its reproductive value,  $V_x$ .

## Appendix G

### Directory of Institutional Representatives

Contact Name	Institution	Email	Phone
Jennifer Ireland	ASHEBORO - North Carolina Zoological Park, Asheboro, NC	jennifer.ireland@nczoo.org	336-879-7670
Rebecca Gullott	BALTIMORE - The Maryland Zoo in Baltimore, Baltimore, MD	rebecca.gullott@marylandzoo.org	443-552-3352
Jerry Stones	BROWNSVIL - Gladys Porter Zoo, Brownsville, TX	jstones@gpz.org	956-546-7187
Lisa Harris	BUSCH TAM - Busch Gardens, Tampa, FL	Lisa.Harris@anheuser-busch.com	813-987-5558
Dardenelle Long	CHATTANOOG - Chattanooga Zoo at Warner Park, Chattanooga, TN	dlongwpz@aol.com	423-697-1319
Maureen Leahy	CHICAGOLP - Lincoln Park Zoological Gardens, Chicago, IL	mleahy@lpzoo.org	312-742-7690
Todd Bowsher	DALLAS - Dallas Zoo, Dallas, TX	Todd.bowsher@dallascityhall.com	214-671-0432
Scott Carter	DETROIT - Detroit Zoological Institute, Royal Oak, MI	scarter@dzs.org	248-398-0903 x3160
Kurt Geisler	FORTWORTH - Fort Worth Zoological Park, Ft Worth, TX	KGiesler@fortworthzoo.org	817-759-7500
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