# POPULATION SURVEY OF THE INTERIOR LEAST TERN ON THE MISSISSIPPI RIVER FROM CAPE GIRARDEAU, MISSOURI TO BATON ROUGE, LOUISIANA

2008

By

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On and between July 26 and August 1, 2008, Kenneth H. Jones, Associate Professor of Biology at Dyersburg State Community College, under contract with Choctaw Transportation Company, conducted a survey of interior Least Tern (Sternula antillarum athalassos) nesting colonies along the Mississippi River. This annual survey is performed for the Memphis District Army Corps of Engineers and assists the U.S. Fish and Wildlife Service with its census in determining population size and distribution of the Interior Least Tern. This survey was the 24th consecutive annual count since the surveys were initiated in 1985 by the Army Corps of Engineers. The survey area extended 777 miles from Cape Girardeau, Missouri (Upper River Mile 53) to Baton Rouge, Louisiana (River Mile 230) (Figure 1). In prior years three types of surveys were performed: towboat, aerial and small boat (Table 4, Figure 2). The towboat surveys were discontinued in 1995 as were the aerial surveys in 1997 when it became obvious that of the three, the small boat survey yielded the highest and most accurate counts. Past years' surveys terminated about 7 miles downstream of Vicksburg, Mississippi because early aerial surveys in 1986 indicated a scarcity of sandbars and relatively few terns downstream of Vicksburg. Beginning in 2004 the survey was extended to Baton Rouge, Louisiana in order to more thoroughly access the entire range of the Least Tern population on the Lower Mississippi River.

From 1985 through 1996, Least Tern surveys were conducted by John Rumancik, fishery and wildlife biologist from the Memphis District Army Corps of Engineers. Since 1997 the surveys have all been conducted by Kenneth Jones, Associate Professor of Biology, Dyersburg State Community College. Observers and crew members of this year's survey included John Rumancik, biologist with the Memphis District Corps of Engineers. Experienced counters from past surveys helping on this year's count included Mark Campen, Dennis and Regina Davin, Zack Fowlkes, Ken and Wanda Jones, and Chris Maloney.

This year's survey yielded a total count of 12,183 Least Terns and 59 nesting colonies, fewer colonies than last year's survey, which was 96, but much higher total numbers. Fifty-four colonies were identified based on the presence of eggs and/or chicks (Tables 1 and 2). Eight colonies were identified based on the presence of a large number of nest scrapes, adult behavior and other indicators of likely reproductive effort such as wetting breast feathers, sitting inland, carrying fish or intense mobbing of intruders. The largest colony was located at St. Frances Bend (RM 672.5) with 520 adult terns counted. Other large colonies included Kentucky Point Dikes Upper (RM 884) with 509 birds, Basket Bar Dikes Upper (RM 698.5) with 380, and Below Prentiss Dikes (RM 578.0) with 289 Least Terns. The smallest colonies were at Ashport

Goldust Dikes Lower (RM 787.0), Kangaroo Point Dikes Lower (RM 647.5), and Jackson Point (RM 329.0) with just 22, 42 and 46 birds.

Numbers of adult and juvenile Least Terns were recorded on data sheets developed by the Corps and based on the Cornell University Bird Registry Form. One data sheet was used for each observation with the following noted: date, time, river mile, latitude/longitude (decimal degrees determined from GPS), number of adult terns, presence of juveniles, chicks and eggs, number of nests observed and eggs or chicks in each, locations of sandbars, substrate, distance from vegetation and type, weather conditions, nearest river gage readings, and other notes on bird behavior, signs of predation or other disturbance. Nest counts were determined both by direct observation of scrapes containing eggs (empty scrapes were not counted) or observations of terns setting inland during waterline drift counts. On the data sheets egg counts are listed with number of nests followed with parentheses showing number of eggs (e.g. 1(1) 2(2) 3(3) would mean 1 nest with 1 egg, 2 nests with 2 eggs and 3 nests with 3 eggs). Foraged fingerling fish dropped within the colony were identified and/or collected. Colony locations were marked on 1998 Flood Control and Navigation Maps of the Mississippi River, 61<sup>st</sup> edition, USACE. Data sheets and colony locations are found in Appendix A.

The average number of adult terns per colony was 102, with colony sizes ranging from as little as 13 adults to as many as 633. The numbers of eggs per nest ranged from 1 to 3 and many nests were associated with debris wrack lines or in close proximity to small, random pieces of drift. Many adults were observed utilizing other habitats often miles away from the nearest colony locations. These habitats included both still and running water of all depths in the channel, behind dikes, in back chutes, tributary mouths, and fast current against revetted banks on the outside of river bends.

The boat survey was initiated July 26, 2008, with the river stage at Memphis, Tennessee at 10.3 and just starting to rise after a previous fall of 15 feet from a rare, summer, high-water crest of 25.2 feet, Memphis gauge, June 15 (Table 3). For the upper reaches of the survey the river was on a slow rise, but at Helena and points downstream it was on a slow fall at the time of the survey. Within 10 days however a 6 foot rise inundated those colonies located on low elevation bars. The survey proceeded downstream during daylight hours from Cape Girardeau, Mo., to Baton Rouge, La., at an average pace of 111 miles per day.

Upon spotting a likely colony site, the boat would head for the greatest concentration of terns, then approach the bar as close as shallow water levels would allow, cut power, and motor slowly with the current along the perimeter of the bar. Two or more observers would count birds using 7x35 or 8x40 binoculars. One observer counted terns resting along the waterline, while another observer counted birds in the air or sitting inland, presumably on nests. Usually after this preliminary count, and depending upon the sand bar configuration, the boat would go back and beach near the greatest concentration of terns and one or more observers would then walk toward the perceived center of the colony to find evidence of nesting activity, while others would fan out in different directions to traverse more of the colony area. This technique, counting as the boat proceeds downstream (hereafter referred to as a "perimeter count"), usually produced higher counts than just walking on the sand bar to the colony's center to induce mobbing (hereafter referred to as a "flush count"). It was particularly effective at colonies where terns

were dispersed for several miles along the waterline and the sand bar was low enough that the observers could see across it. However, at many sites, especially those with back chutes with shores not visible from the boat on the channel side, it should be construed that many terns were not seen and the counts were conservative. All individual counts were recorded privately so as not to influence other crew members' observations, then compared and counts discussed. All individual observer counts were recorded on data sheets. The highest number was discarded and the middle number was recorded as the total count, unless two or more observers had identical high counts. In most cases all observers were within 10% or less of the recorded count.

The presence of eggs or chicks was considered confirmation of nesting activity. Intense mobbing, wetting of breast feathers, and the presence of fresh scrapes were also considered to indicate an active nest colony at the 8 sites where no eggs or chicks were observed. Once a colony was located, several counts were made, both by observers stationed at the boat and those penetrating the colony. Seventeen colonies were found to contain fledged juveniles. Not all colonies were walked by members of the survey party, especially if the colony was widely dispersed and easily observed from the boat. In those instances, even though no eggs were observed, terms seen sitting higher up on the sand bar, away from the waterline, were counted as indicative of number of nests. This assumption produced the larger nest count totals up to 87, as shown in Table 1.

As with previous surveys, observations within the colony were performed as quickly as possible (< 15 minutes) to minimize the disturbance time and limit the exposure of any chicks and eggs to the intense summer heat. Though mobbing behavior was often intense upon the observers first entering the colony, it ceased almost immediately as soon as the observers retreated. The highest counts usually occurred during the initial waterline count or upon the first few minutes of mobbing when most, if not all, of the adults in the colony would join in to dissuade the intrusion. Nesting adults, nest scrapes, and numbers of nests with eggs and chicks were recorded as well as other features of the habitat. Twelve thousand one hundred eighty-three (12,183) Least Terns were recorded at 113 locations (Table 1, Figure 1). Of these, 59 sites were identified as nesting colonies with 10,050 adults, 39 sites as resting bars only with 1,945 adults, and 15 observations were of 188 birds that could not be associated with colonies, either flying over feeding areas or in transit along the river.

As with previous years, the typical tern nest colony was located on an unattached (surrounded by water) sand and/or gravel bar usually associated with a dike field. Those colonies that were attached were located on very large, remote point bars, ½ to 1 mile in width, and often 2 to 4 miles in length. Isolation and remoteness appeared to be the main selection criteria. The larger colonies were hundreds of acres in size, while some of the smallest were just a few acres or less.

The locations of the colonies as indicated on the 1998 Navigation Maps (Appendix A-I) should be viewed as only approximations based on river mile markers visible from or nearby the sites. Since many sand and gravel bars do move or change shape often, such features on the maps do not necessarily correspond to the actual conditions at the time of the survey (hence the occasional colony indicated in open water). For exact colony locations the GPS latitude/longitude coordinates (decimal degrees) are the most accurate and should be referenced

as occurring at the water's edge on the channel side of the colony (except when specified otherwise on the data sheets). Most colonies were located on the high centers or distributed evenly across the bars showing no preference for river vs. chute sides, though there were some exceptions.

The colonies' proximities to the nearest water (least distance from any nest with eggs to the waterline) varied from 10 to 800 feet and averaged ~233 feet. Though some colonies were densely populated, with scrapes occurring within a few feet of each other, many more colonies were extremely dispersed with nests occurring hundreds of feet apart and the colony extending as far as a mile or more across the larger sandbars. Major vegetation was absent or far removed (>300 feet) from 52 colony sites, but 10 did have sparse stands of sapling Cottonwoods (*Populus deltoids*) and/or Black Willows (*Salix nigra*) within 300 feet of active nests. The other colonies with vegetation had only very sparse, recently emerged grasses, sedges and forbs in small patches within the colony. Most open water within 2 miles of active colonies appeared to be utilized by foraging terns. These sites included swift current on revetted outside bends, slack water between dikes, chutes, mouths of tributaries and even mid-channel currents.

Recent evidence of predation on terns, their eggs or chicks was noted at 3 colony sites, 2 by coyotes (or dogs) and the other by an avian predator. The presence of coyote, and/or dog tracks was noted at 9 sites and still suggests that coyotes and/or feral/pet dogs are one of the more common predation threats to nesting Least Terns along the Lower Mississippi River. Of 96 colonies, only 3 had track evidence of recent intrusion by humans on foot, by boats and ATVs. In 1 colony there were day campers present at the time of the survey date, but with most limiting their activities to the water line.

Besides Coyotes (*Canis latrans*) other potential predators, or their sign, seen near colonies during this year's survey included American Crow (*Corvus brachyrhynchos*), Bald Eagle (*Haliaeetus leucocephalus*), Egrets (*Casmerodius*, *Egretta*, *Bubulcus*), Great Blue Heron (*Ardea herodius*), Mississippi Kite (*Ictinia mississippiensis*), Red-shouldered Hawk (*Buteo lineatus*), Red-tailed Hawk (*Buteo jamaicensis*), and Turkey Vulture (*Cathartes aura*).

Other bird species observed on the sand bars or in close proximity to Least Tern colonies included Anhinga (Anhinga anhinga), Belted Kingfisher (Megaceryle alcyon), Black-necked Stilts (Himantopus mexicanus), Black Tern (Chlidonias niger), Canada Goose (Branta canadensis), Caspian Tern (Sternula caspia), Cattle Egret (Bubulcus ibis), Common Grackle (Quiscalus quiscula), Double-Crested Cormorant (Phalocrorax auritus), Fish Crow (Corvus ossifragus), Forster's Tern (Sternula forsteri), Great Blue Heron (Ardea herodias), Great Egret (Casmerodius albus), Indigo Buntings (Passerina cyanea), Killdeer (Charadrius vociferous), Little Blue Heron (Egretta caerulea), Mallard Duck (Anas platyrhynchos), Prothonotary Warbler (Protonotaria citrea), Purple Martin (Progne subis), Red-winged Blackbird (Agelaius phoeniceus), Rough-winged Swallow (Stelgidopteryx serripennis), Sandpipers (Calidris sp.) Snowy egret (Egretta thula), Tree Swallow (Tachycineta bicolor), White Ibis (Eudocius albus), and White Pelican (Pelecanus erythrorhyncos).

Fingerling-size fish of Freshwater Drum (*Aplodinotus grunniens*) shad (*Dorosoma*), Silver Carp (*Hypophthalmichthys molitrix*), Smallmouth Buffalo (*Ictiobus bubalus*), White Bass

(*Morone chrysops*), and other fish species were found in colonies and are presumed to have been dropped by foraging adults.

This year's survey was the sixth to cover the additional 200 river miles below Vicksburg, Mississippi and yielded a total count that was up from the 2007 count by roughly 24%. One reason for this record high count could be due to the survey's taking place so late in the breeding season that considerable numbers of juveniles were included in the adult counts. Also, the number of available colony sites were down compared to previous years due to this year's higher than normal summer river stages which made unavailable those sand bars with lower elevations.

Table 1: Least Tern Survey - July 26 - August 1, 2008 - Mississippi River Cape Girardeau, Missouri, to Baton Rouge, Louisiana

River					Least		
Mile	Mississippi River Location	State	Lat. N	Long. W	Terns		Nests
RIVER MILE:	SITE NAME:	State	Latitude:	Longitude:	Adults:		Nests:
UR 50.0	Marquette Island	IL	37.2734	89.5246	21		0
UR 30.8	Bumgard Island	IL	37.0416	89.3757	102	*	23
UR 3.0	Greenfield Bend	IL			1		0
946.0	Island #1 Dikes	KY	36.8882	89.1163	302	c*	15
931.5	Wolf Island Bar	KY	36.6995	89.1498	177	c*	7
924.8	Beckwith Bend	KY			4		0
908.0	Kelly landing	KY	36.5396	89.4005	7		0
895	Hotchkiss Bend Dikes	MO			1		0
884	Kentucky Point Dikes Upper	KY	36.51784	89.5498	509	c*	87
883.2	Kentucky Point Dikes Lower	KY	36.5076	89.5433	52	c*	26
877	877 Marr Towhead		36.4236	89.5393	18		0
872.5	72.5 Stewart Towhead Dikes Upper		36.35763	89.51528	176	c*	12
870.5	70.5 Stewart Towhead Dikes Lower		36.34634	89.52654	60	c*	6
864.5	Below Cherokee Dikes		36.3316	89.6174	224	c*	8
854	Chute of Island 14	MO	36.2491	89.5712	202	c*	18
846.3	Opp. Caruthersville Dikes	TN	36.19892	89.64358	25		0
837	Island #18 Towhead Dikes	TN	36.10308	89.63945	188	c*	9
830	Island #20 Dikes	TN	36.0372	89.6944	131	c*	12
827.0	Head of Island #21 Dikes	TN			29		0
825.6	Island #21	TN	35.9629	89.7103	51	c*	6
819.0	Wrights Point Dikes	AR	35.9094	89.6346	96	c*	1
811.5	Below Tamm Bend Dikes Upper	TN	35.9069	89.7452	39		0
807.3	Nebraska Point Dikes	TN	35.86	89.7606	337	c*	20
793	Ashport Goldust Dikes Upper	AR	35.7464	89.8288	157	c*	18
792.3	Ashport Goldust Dikes Lower	AR	35.7451	89.8424	22	c*	5
787.0	Keyes Point Dikes	TN	35.71275	89.9372	85	*	0
781.5	Below Plum Point Dikes	TN	35.6527	89.8951	109	c*	7
778	Sunrise Towhead Chute	TN			120		0
771	Randolph Dikes	TN	35.5259	89.8987	478	c*	20
766.5	Below Richardson Landing Dikes Upper	TN			1		0
763	Below Richardson Landing Dikes Lower	TN	35.506	90.0076	54	c*	4
760.5	Cedar Point	TN	35.4355	90.0018	140	c*	4
757.5	Densford Dikes	TN			18		

SUBTOTAL 3,936

Table 1 continued: Least Tern Survey - July 26 - August 1, 2008 - Mississippi River Cape Girardeau, MO, to Baton Rouge, LA

River					Least		
Mile	Mississippi River Location	State	Lat. N	Long. W	Terns		Nests
RIVER MILE:	SITE NAME:	State	Latitude:	Longitude:	Adults:		Nests:
755.0	Densford Bar	TN	35.3902	90.0703	75	c*	8
743.7	Above Loosahatchie Dikes	TN	35.2515	90.09205	38		
740.5	Sycamore Chute Dikes	AR	35.20767	90.07191	32		0
733.0	Engineer Bar Dikes	AR	35.12323	90.10361	18		0
729.5	Vice Presidents Island #46	TN	35.1264	90.1594	25		0
725.0	Dismal Point Dikes	AR	35.0691	90.1838	18		0
716	Cow Island Bend Upper	MS	35.0074	90.2937	91	c*	14
714.5	Cow Island Bend Lower	MS			7		
706.5	Norfolk Star Revetment	MS	34.8981	90.2575	108	c*	1
705	Seyppel Dikes	AR	34.8911	90.2717	245	c*	18
703	Pickett Dikes	AR	34.8757	90.305	107	c*	3
700.5	Porter Lake Dikes	AR			16		0
698.5	Basket Bar Dikes Upper	AR	34.8391	90.3786	380	c*	10
697	7 Basket Bar Dikes Lower				20		0
693.5	Commerce Dikes	MS	34.8145	90.4572	109	*	1
687.0	Mhoon Bend	AR	34.73875	90.45414	226	*	7
680.0	Bordeaux Point Dikes	MS	34.73383	90.56013	155	c*	8
676.5	Below Walnut Bend Dikes	AR	34.6753	90.5742	104	c*	2
672.5	St. Francis Bend	MS	34.6241	90.5832	520	c*	110
667.5	Prairie Point Dikes	AR	34.5625	90.5536	144		0
661.5	Helena Reach	MS	34.51256	90.58333	47		0
656	Montezuma Towhead Dikes	AR	34.4097	90.5917	47		0
651.2	Friars Point Dikes	MS	34.3757	90.6618	91	c*	6
648.5	Kangaroo Point Dikes Upper	AR	34.3671	90.7004	23		0
647.5	Kangaroo Point Dikes Lower	AR	34.3677	90.7163	42	c*	3
643.4	Old Town Bend	MS	34.3428	90.7632	47		0
640.5	Island #62 Dikes Upper	AR	34.3084	90.7389	28		0
637	Island #62 Dikes Lower	AR			5		0
629.5	Island #64 Dikes	AR	34.2178	90.8495	196	c*	25
625.0	Sunflower Cut-Off	AR	34.1728	90.8991	238	c*	10
623.0	Below Ludlow Dikes	AR	34.1613	90.9277	22		0
620.0	Island #67 Dikes Upper	MS	34.126	90.9528	180	c*	18
619	Island #67 Dikes Lower	MS	34.1109	90.9436	160	c*	11
616.0	Below Knowlton Dikes Upper	AR	34.0811	90.9081	69		0

SUBTOTAL 3,633

Table 1 continued: Least Tern Survey - July 26 - August 1, 2008 - Mississippi River Cape Girardeau, MO, to Baton Rouge, LA

River					Least		
Mile	Mississippi River Location	State	Lat. N	Long. W	Terns		Nests
RIVER MILE:	SITE NAME:	State	Latitude:	Longitude:	Adults:		Nests:
612	Below Knowlton Dikes Lower	AR	34.029	90.8975	49	c*	18
608.0	Island #70 Dikes Upper	MS	34.0227	90.9657	82		0
606.2	Island #70 Dikes Lower	MS	34.0153	90.9897	27		0
603.0	Henrico Dikes	MS	33.9945	91.0418	98		0
599.5	Smith Point Dikes	MS	33.9572	91.0799	210	c*	11
589.5	Terrene Dikes	MS	33.8415	91.0632	167	c*	7
583.5	Malone Field Dikes	AR	33.7491	91.0499	206	c*	10
578.0	Below Prentiss Dikes	MS	33.7539	91.1285	289	*	0
573.5	Caulk Neck Cut-Off	AR	33.7115	91.1652	89	c*	0
568.6	Catfish Point Dikes	MS	33.6592	91.2003	171	c*	10
563	Choctaw Bar Island	AR	33.6339	91.1573	151	c*	0
559	Choctaw Bar Island	AR	33.5836	91.167	166	c*	0
554.5	554.5 Huntington Point				3		0
541	Leland Neck Dikes		33.397	91.1087	133	c*	0
539.0	Tarpley Cut-Off Dikes	AR			1		0
534.0	Island 84 Dikes	MS			270	c*	40
528.3	Refuge Dikes	MS	33.26653	91.12264	65	c*	4
526.5	Aconia Chute Dikes	AR			26		0
518	Island #86 Dikes	AR	33.1291	91.10169	147	c*	7
514.0	Leota Dikes	MS	33.09132	91.16353	166		0
508.5	Cracraft Lower Dikes Upper	AR	33.02516	91.15446	60		0
507.5	Cracraft Lower Dikes Lower	AR			19		0
503.5	Corregidor Dikes	MS	32.95736	91.14347	243	c*	35
499	Wilson Point Dikes	LA	32.9435	91.0833	149		0
495.4	Cottonwood Landing	LA			52		0
491.5	Baleshed Landing Dikes	MS	32.8417	91.1278	83	*	0
482.5	Ajax Bar Dikes Upper	MS	32.73746	91.11895	151	c*	12
480.8	Ajax Bar Dikes Lower	MS	32.73697	91.10903	95	c*	3
475	Point Lookout Dike	LA	32.71685	91.05885	75		0
470	Arcadia Point Dikes	MS	32.65489	91.1406	61		0
461	Willow Cutoff Dikes	LA	32.5361	91.1006	84	*	10
447	Marshall Cutoff Dikes	LA	32.40516	901.00311	63		0

SUBTOTAL 3,651

Table 1 continued: Least Tern Survey - July 26 - August 1, 2008 - Mississippi River Cape Girardeau, MO, to Baton Rouge, LA

River	Cape Grardeau, ivi				Least		
Mile	Mississippi River Location	State	Lat. N	Long. W	Terns		Nests
RIVER MILE:	SITE NAME:	State	Latitude:	Longitude:	Adults:		Nests:
437	Vicksburg Harbor	MS			18		0
425.5	Letourneau Landing	MS			20		0
418.5	Newton Bend Dikes	LA	32.1367	91.0100	52	c*	8
413.5	Togo Island Dikes	LA			1		0
410	Yucatan Dikes		32.07094	91.07669	150	c*	19
403	Coffee Point Dikes	LA			1		0
392.2	Bondurant Towhead Dikes	LA			225	c*	5
384.2	Spithead Towhead Dikes	MS	31.83712	91.34592	98	c*	19
378.5	Waterproof Dikes	LA	31.7604	91.3708	43		0
357	Carthage Point Dikes	MS	31.5163	91.49665	111		0
352	Opposite Warnicott Landing Dikes	MS	31.419	91.4927	53		0
346.5	Opposite Esperance Point Dikes	LA	31.3937	91.4675	27		0
329	Jackson Point	MS	31.2408	91.6484	46	*	0
322.0	Homochito Cuttoff	LA	31.1742	91.5947	3		0
305.0	Shreves Bar Upper	LA	30.9960	91.6441	14		0
304	Shreves Bar Lower	LA	30.9916	91.6507	57	c*	5
300.5	Hog Point Dikes	LA	30.9358	91.64578	75		0

SUBTOTAL	994
TOTAL INDIVIDUALS	12 102
TOTAL INDIVIDUALS TOTAL SITES	12,183 117
TOTAL COLONIES	59

c Confirmed chicks or eggs

<sup>\*</sup> Nest colony determined by bird behavior (sitting inland, breasting, carrying fish, etc.)

Table 2: Summary of 2008 Least Tern Survey on the Lower Mississippi River

River Reach	Number of Terns (July 26-August 1, 2008)					
Cape Girardeau, MO, to Cairo, IL URM 50 – RM 954	124					
Cairo, IL, to Osceola, AR RM 954 – RM 790	2,807					
Osceola, AR, to Helena, AR RM 790 – RM 670	3,300					
Helena, AR, to Greenville, MS RM 670 – RM 530	3,419					
Greenville, MS, to Vicksburg, MS RM 530 – RM 430	1,557					
Vicksburg, MS, to Baton Rouge, LA RM 430 - RM 230	976					
TOTAL	12,183					
River Reach	Number of Colonies					
Cape Girardeau, MO, to Cairo, IL URM 50 – RM 954	1					
Cairo, IL, to Osceola, AR RM 954 – RM 790	14					
Osceola, AR, to Helena, AR RM 790 – RM 670	16					
Helena, AR, to Greenville, MS RM 670 – RM 530	15					
Greenville, MS, to Vicksburg, MS RM 530 – RM 430	7					
Vicksburg, MS, to Baton Rouge, LA RM 430 - RM 230	6					

TOTAL

59

Table 3: Gage Readings – Lower Mississippi River Least Tern Surveys – July, August 2008

\*low stage prior to rise ^cresting stage Shaded numbers indicate local stages at time of survey.

Date	Cairo	New Madrid	Caruthersville	Memphis	Helena	Arkansas City	Greenville	Vicksburg	Natchez
July									
14	34.5	24.4	25.3	21.0	29.8	30.5	42.6	38.6	45.5
15	33.0	23.5	24.7	20.5	29.0	29.8	42.1	38.4	45.5
16	31.5	22.2	23.7	19.7	28.2	28.9	41.2	38.0	45.3
17	30.6	20.9	22.5	18.5	27.2	28.1	40.3	37.5	45.1
18	29.8	20.2	21.8	17.3	25.8	27.3	39.6	36.8	44.8
19	28.6	19.3	21.1	16.9	24.5	26.2	38.4	36.1	44.4
20	27.8	18.3	20.2	MSG	23.4	25.2	37.4	35.2	43.8
21	27.1	17.4	19.4	14.4	22.2	24.2	36.4	34.1	43.1
22	26.2	17.0	19.0	13.5	21.1	22.8	35.0	33.0	42.3
23	24.1 *	15.6	18.1	12.9	20.2	21.7	33.7	31.5	41.2
24	24.5	14.6 *	16.9 *	11.8	19.3	20.8	32.6	30.2	40.0
25	25.0	15.0	16.9 *	10.6	18.0	20.0	31.7	28.7	38.8
26	25.0	15.3	17.2	10.3 *	17.0	19.2	30.8	27.5	37.4
27	25.1	15.3	17.3	10.4	16.8 *	18.3	29.9	26.3	36.1
28	25.4	15.5	17.4	10.6	16.8 *	17.6	29.1	25.1	34.6
29	26.3	16.1	17.8	10.7	16.9	17.2	28.6	24.1	33.2
30	27.3	17.0	18.5	11.1	17.1	16.8	28.1	23.1	32.1
31	28.6	18.2	19.5	11.9	17.5	16.7 *	27.8 *	22.5	31.2
August									
1	29.8	19.3	20.4	13.1	18.6	17.0	28.0	22.2 *	30.5
2	30.3	20.0	21.2	14.1	19.8	17.6	28.5	22.3	30.2 *
3	30.6	20.4	21.6	15.1	20.9	18.4	29.3	22.8	30.2 *
4	30.7	20.6	21.8	15.6	21.8	19.0	29.9	23.4	30.6
5	30.8 ^	20.7 ^	22.0 ^	15.8	22.4	19.7	30.7	24.1	31.1
6	30.2	20.5	21.9	16.1 ^	22.7	20.3	31.3	24.8	31.7
7	28.6	19.5	21.3	16.0	22.9 ^	20.4	31.6	25.5	32.3
8	26.9	17.8	20.1	15.5	22.8	20.7	MSG	26.0	33.4
9	24.4	16.0	18.6	14.1	21.9	20.8 ^	32.0 ^	26.3	34.4
10	22.5	13.9	16.8	12.5	20.5	20.4	31.8	26.5 ^	33.6
11	20.8	12.1	15.1	10.5	18.7	19.6	31.2	26.4	33.9
12	20.5	10.8	13.8	8.7	16.7	18.6	30.3	26.1	34.1
13	19.7	10.3	13.1	7.1	15.1	17.4	28.9	25.8	34.3 ^
14	17.9	8.9	12.4	6.0	13.6	16.4	27.8	24.8	33.6
15	17.4	7.6	11.0	5.1	12.4	15.5	26.9	23.5	32.4
16	16.3	6.8	10.2	3.9	11.5	14.9	26.1	22.3	31.3

17	14.2	3.8	6.3	-1.3	5.8	15.9	27.7	23.8	33.4
18	13.8	3.5	6.1	-1.6	5.0	15.3	27.2	23.4	33.0
19	13.6	9.5	11.5	-2.2	3.3	14.5	26.5	22.9	32.6

Table 4: Summary of Least Tern Surveys – 1985 – 2008 Lower Mississippi River

Year Aerial	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Individuals	187	1,332	1,125	1.018	2,503	4,182	3,358	2,311	4,589	3,303	3,759
Sites	12	37	49	56	58	56	67	80	66	66	63
Colonies	3	16	24	31	46	36	56	61	46	40	51
Towboat											
Individuals	577	595	575	1,235	508	357	1,154	1,216	2,031	965	489
Sites	35	39	45	71	25	31	39	47	48	39	25
Colonies	15	16	21	33	9	3	29	34	21	30	1
Small Boat											
Individuals	0	2,188	2,206	2,356	2,005	5,038	4,297	3,653	0	6,776	6,971
Sites	0	41	50	72	64	38	66	81	0	78	70
Colonies	0	28	46	60	42	32	57	74	0	69	62

Year	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Aerial											
Individuals	3,677	2,129	0	0	0	0	0	0	0	0	0
Sites	81	81	0	0	0	0	0	0	0	0	0
Colonies	20	23	0	0	0	0	0	0	0	0	0
Small Boat											
Individuals	3,067	3,428	5,538	6,159	5,920	6,361	5,802	8,082	11,239	10,960	8,171
Sites	47	79	91	134	124	141	100	115	114	118	144

Year Small Boat	2007	2008	
Individuals	9,814	12,183	
Sites	121	113	
Colonies	96	59	

Colonies

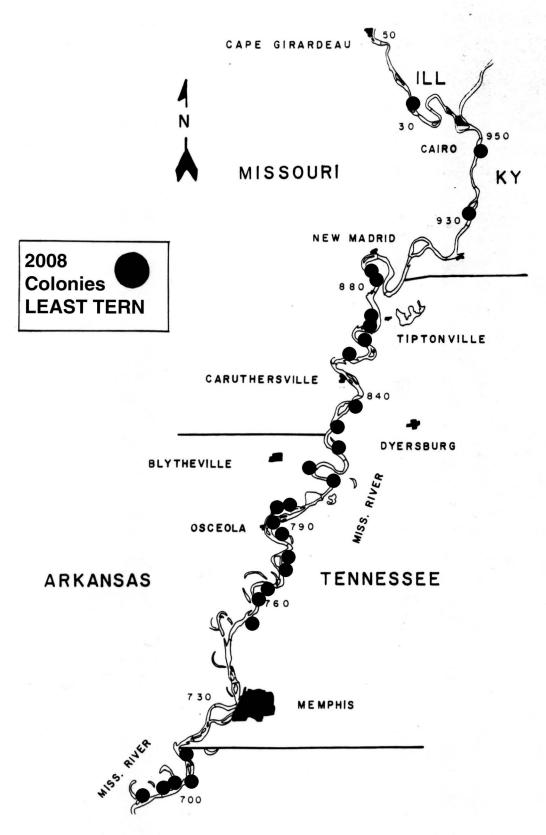


Fig 1.: Least Tern Survey – 2008 – Area Map of Nest Colonies on Mississippi River – Cape Girardeau, MO to Baton Rouge, LA

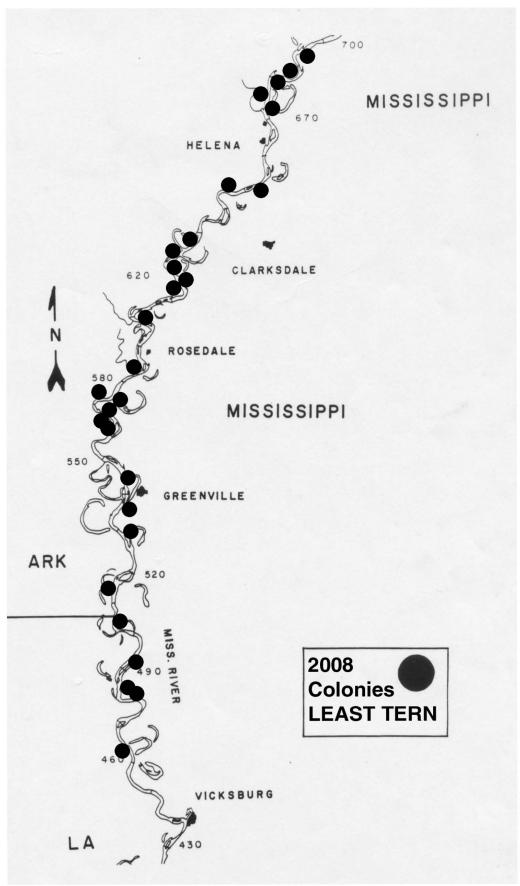


Fig 1. Continued: Area Map of Nest Colonies

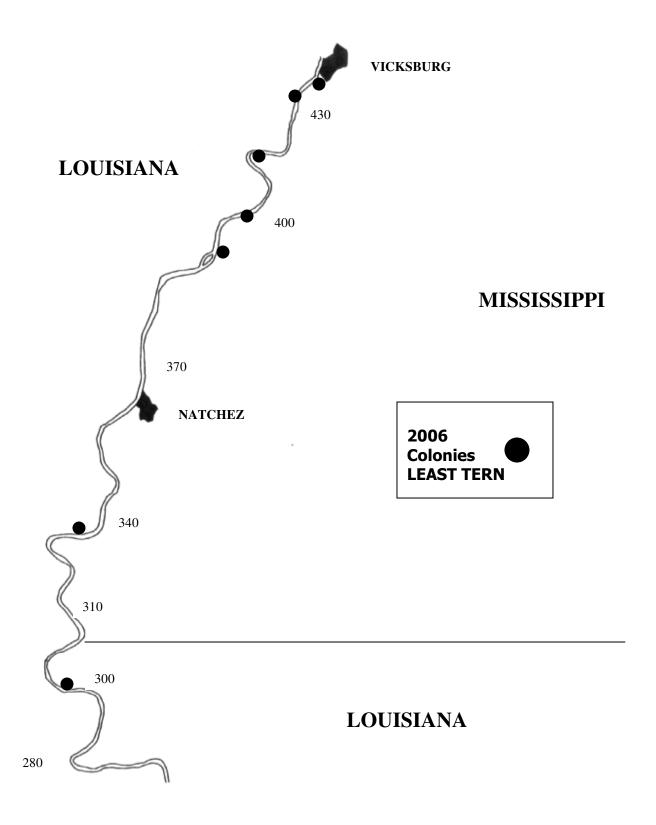
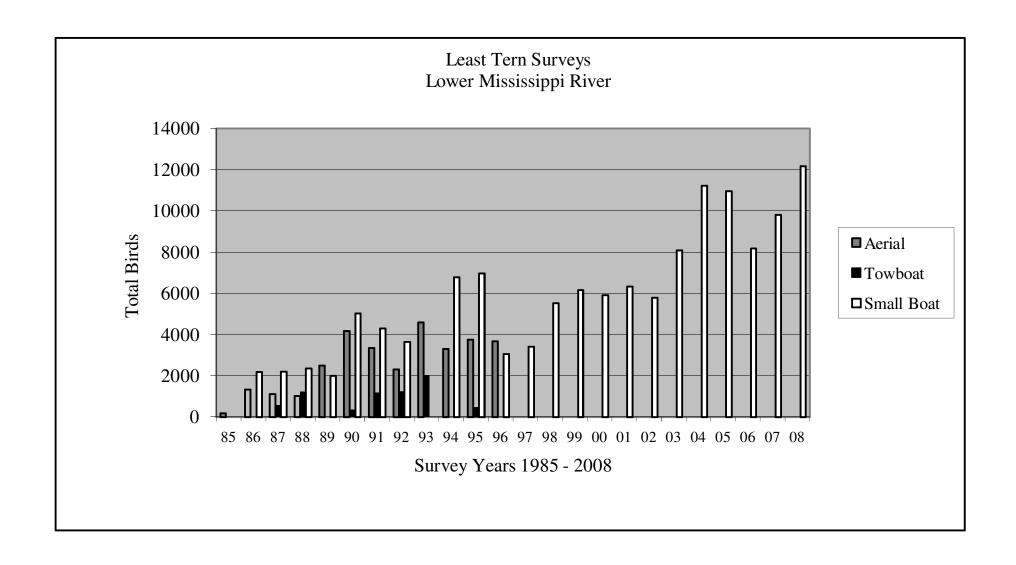


Figure 1 Continued: Area Map of Nest Colonies



# Population Survey of the Interior Least Tern On the Mississippi River from Cape Girardeau, Missouri to Baton Rouge, Louisiana

2008

## APPENDIX A

## APPENDIX A – I

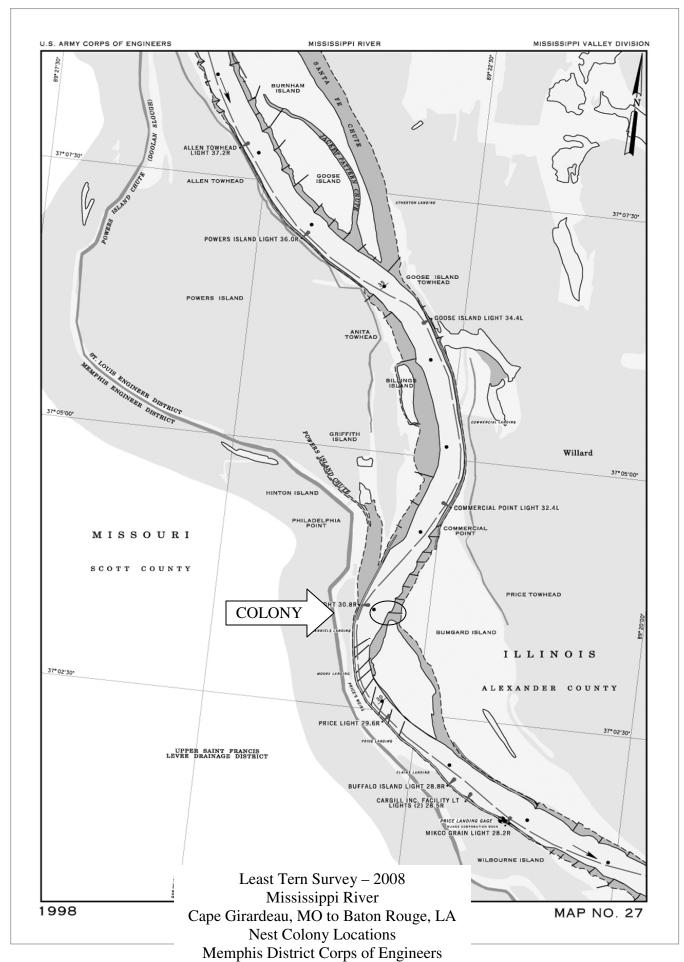
## **LEAST TERN SURVEY - 2008**

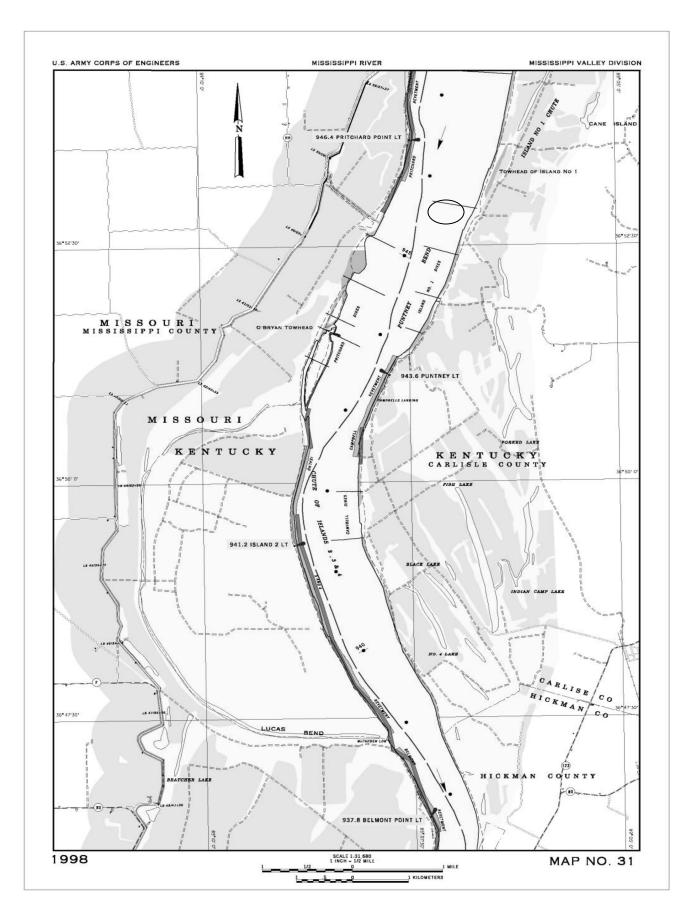
Mississippi River Cape Girardeau, MO to Baton Rouge, LA

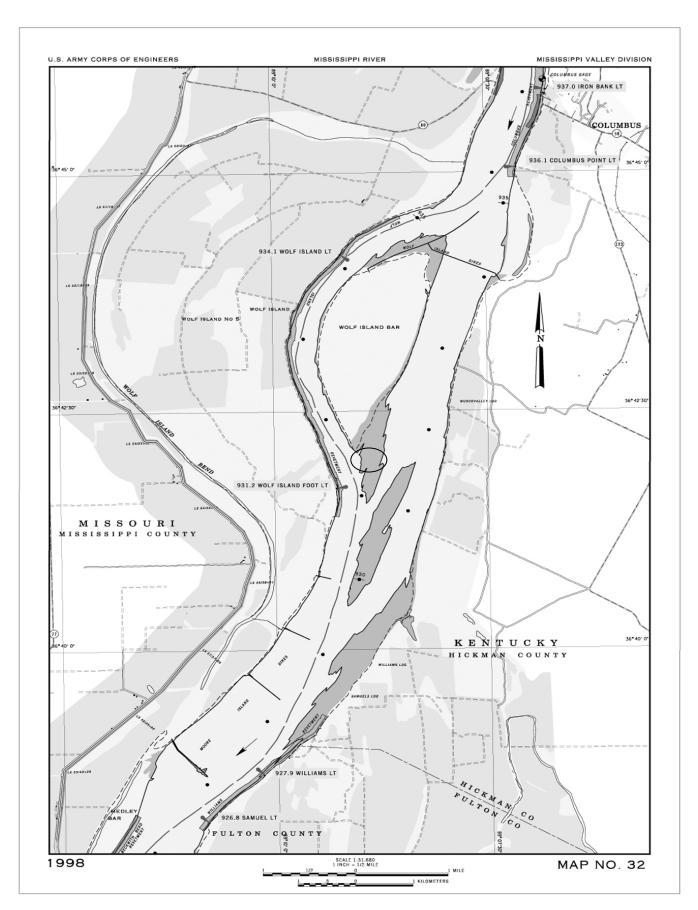
**NEST COLONY LOCATIONS** 

**Memphis District, Corps of Engineers** 

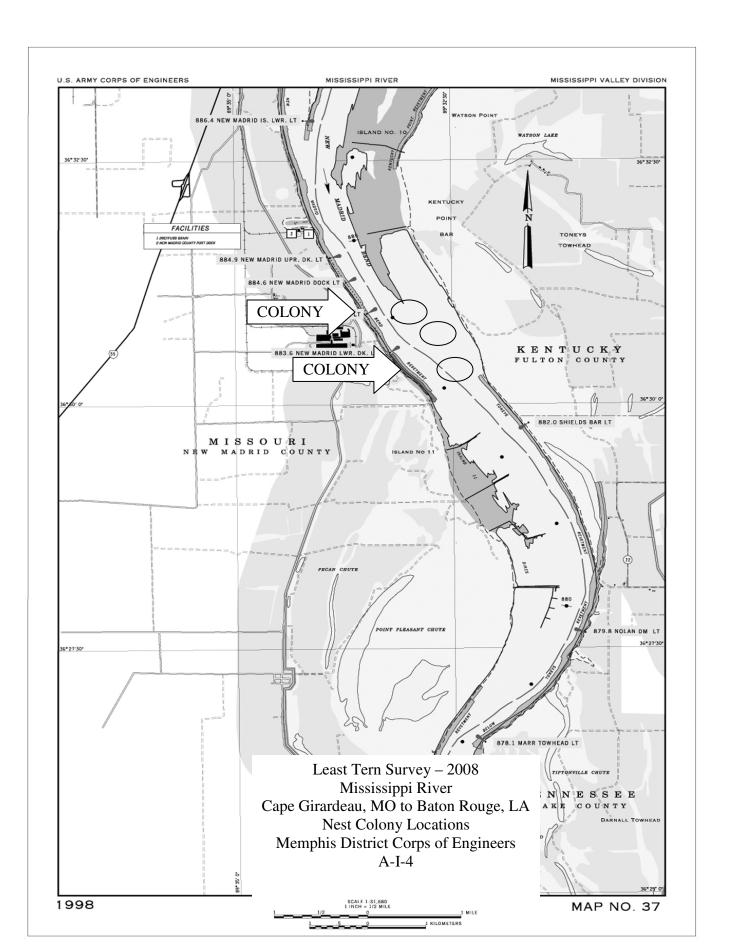
Maps

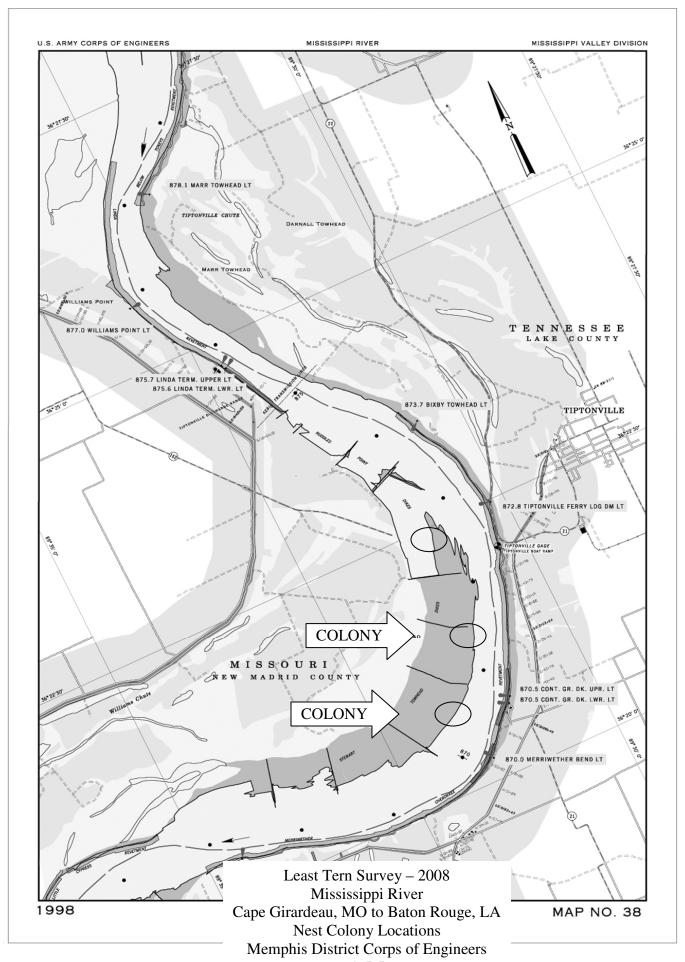


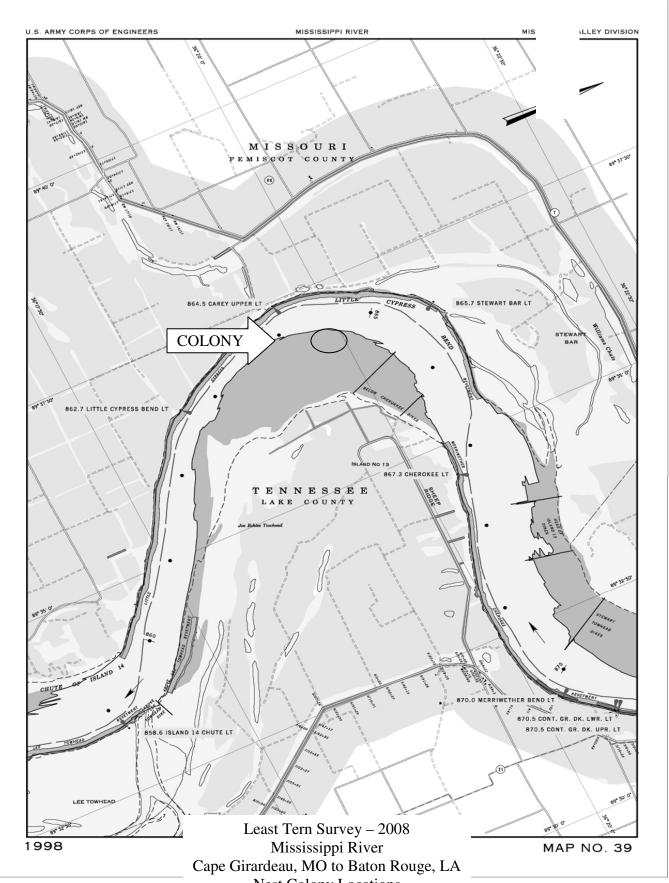


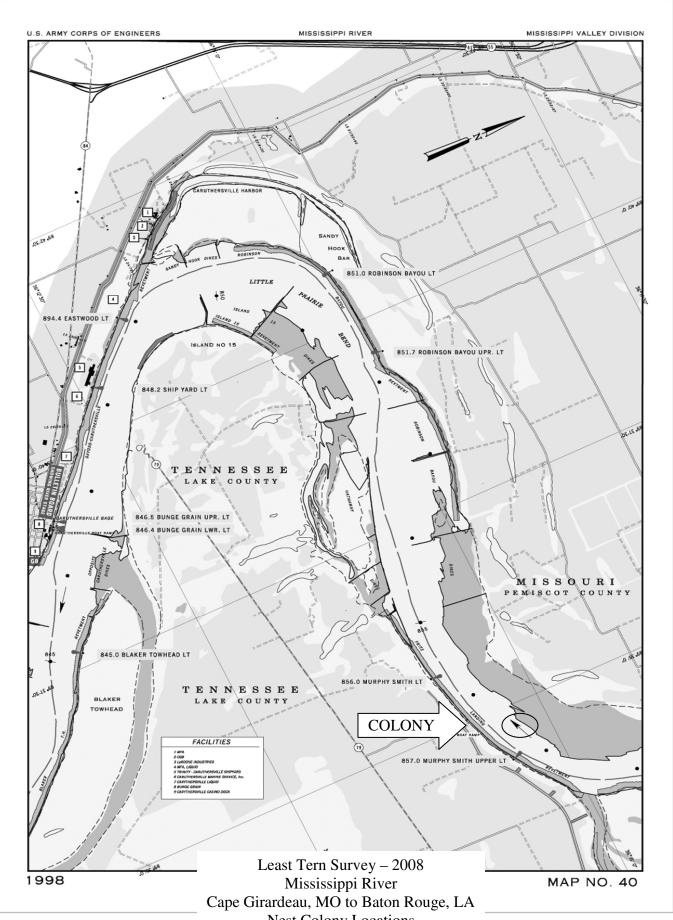


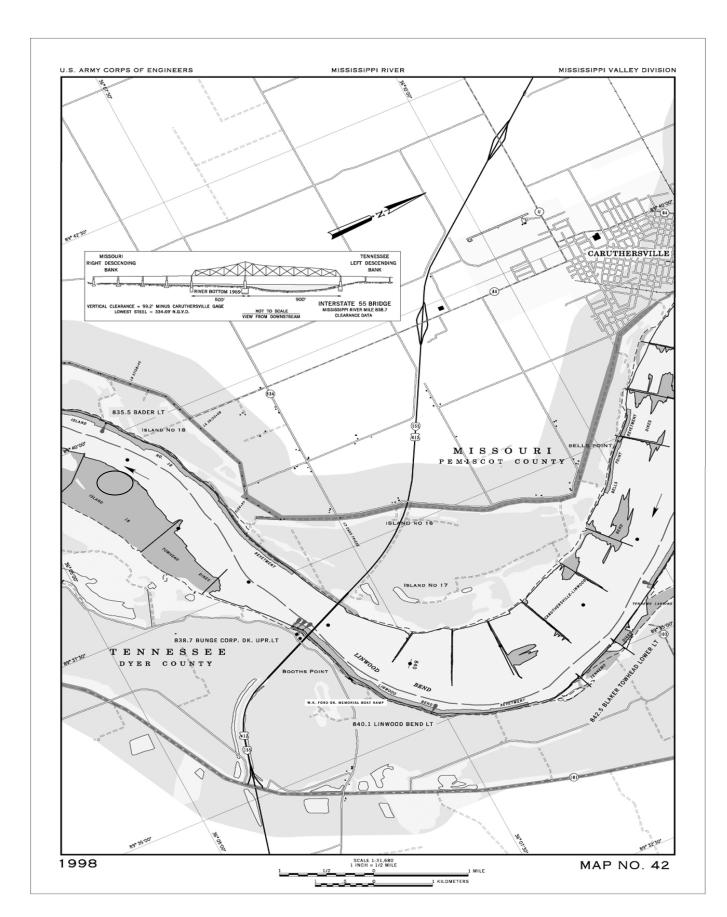
Memphis District Corps of Engineers A-I-3



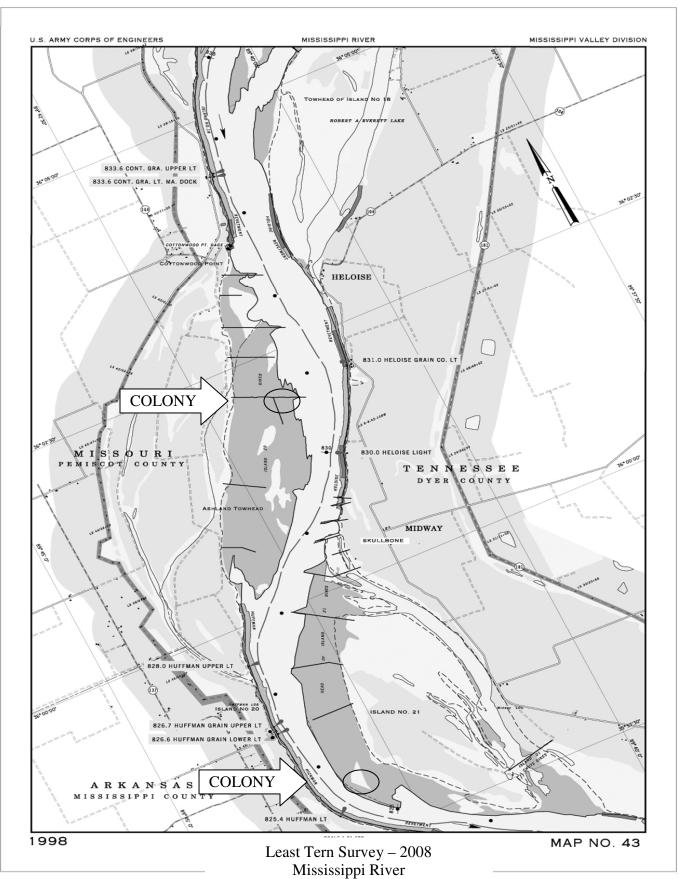




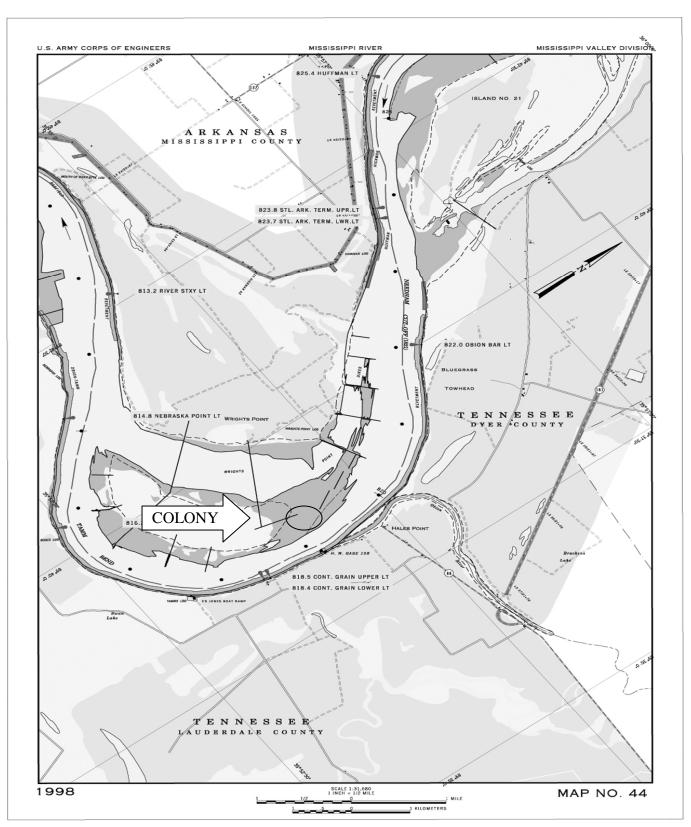




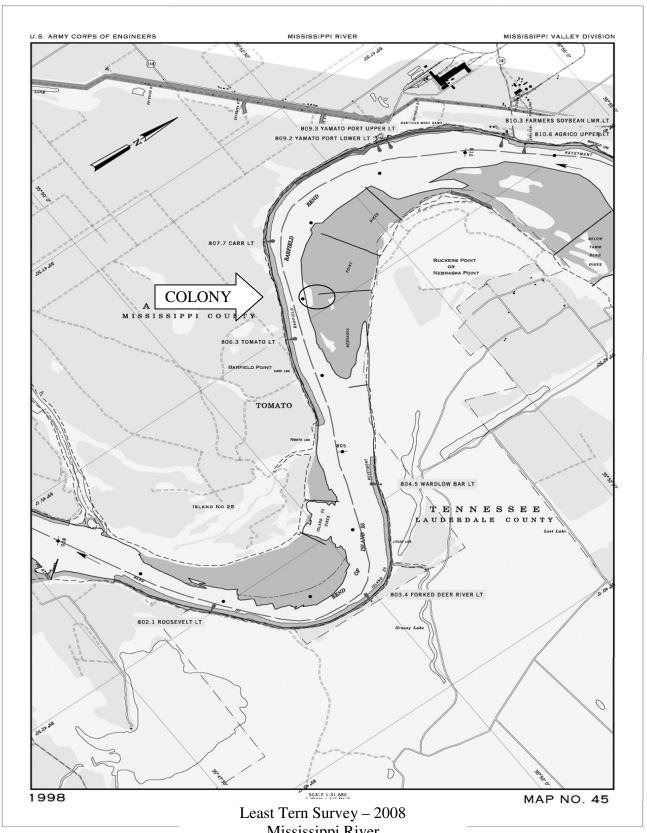
Memphis District Corps of Engineers A-I-8



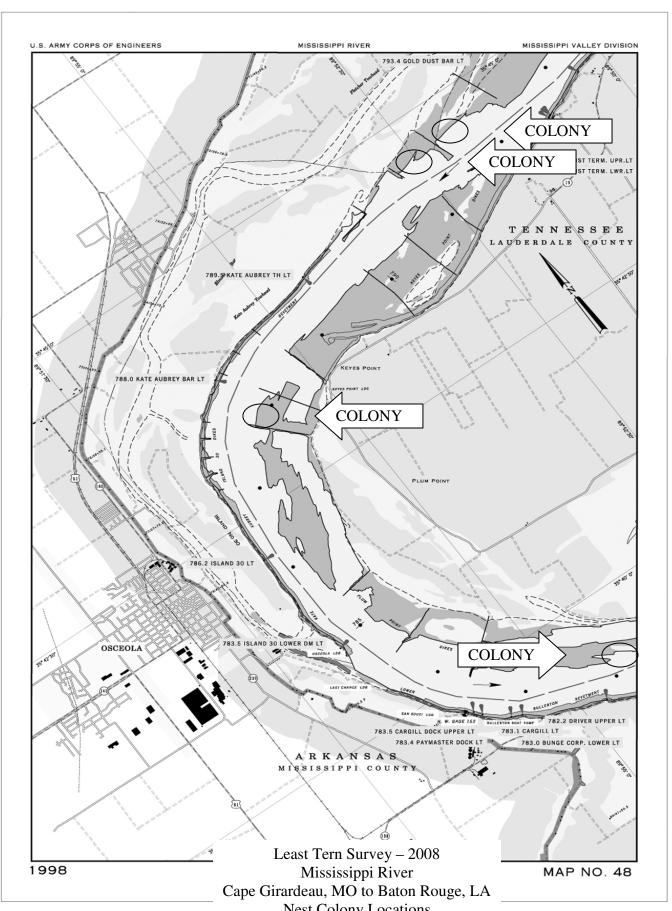
Cape Girardeau, MO to Baton Rouge, LA
Nest Colony Locations
Memphis District Corps of Engineers
A-I-9

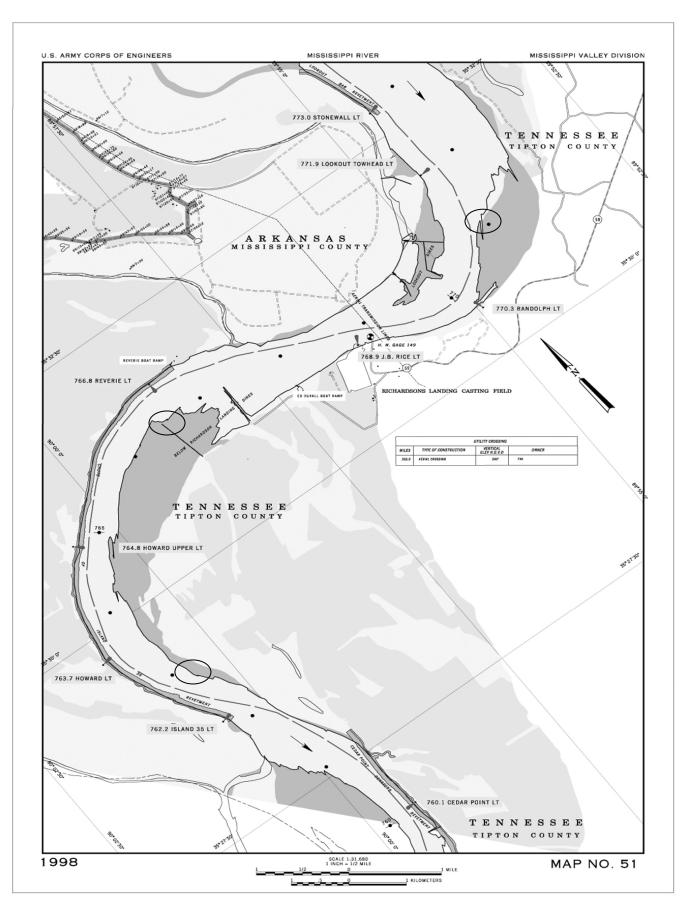


Least Tern Survey – 2008 Mississippi River Cape Girardeau, MO to Baton Rouge, LA Nest Colony Locations Memphis District Corps of Engineers A-I-10

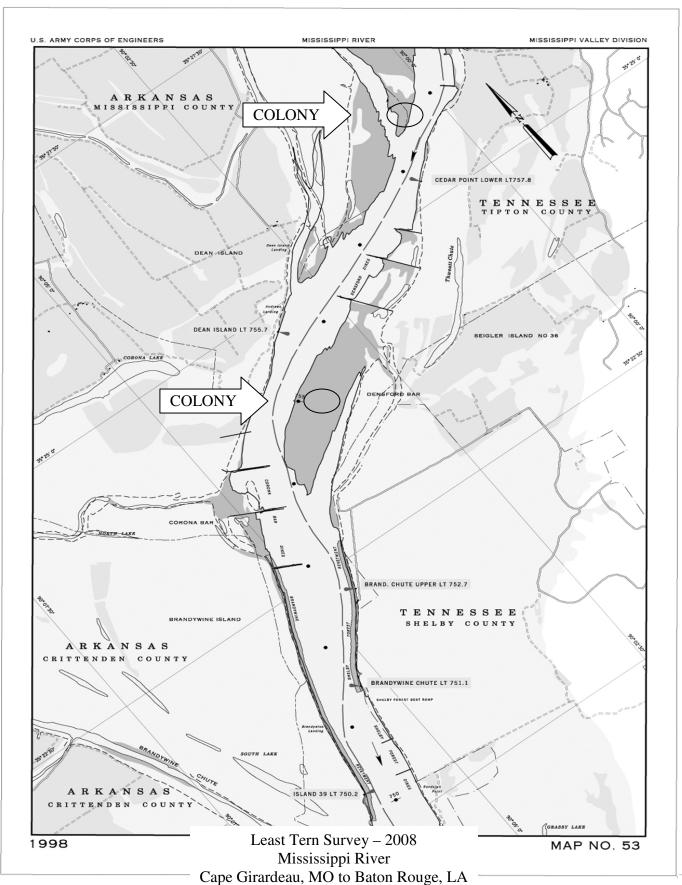


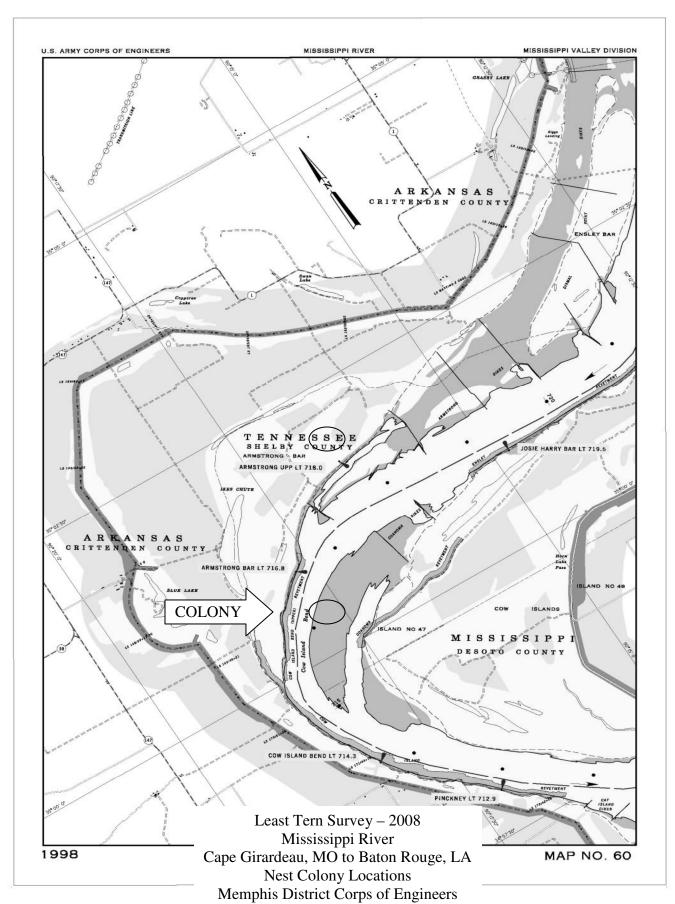
Mississippi River
Cape Girardeau, MO to Baton Rouge, LA
Nest Colony Locations
Memphis District Corps of Engineers
A-I-11

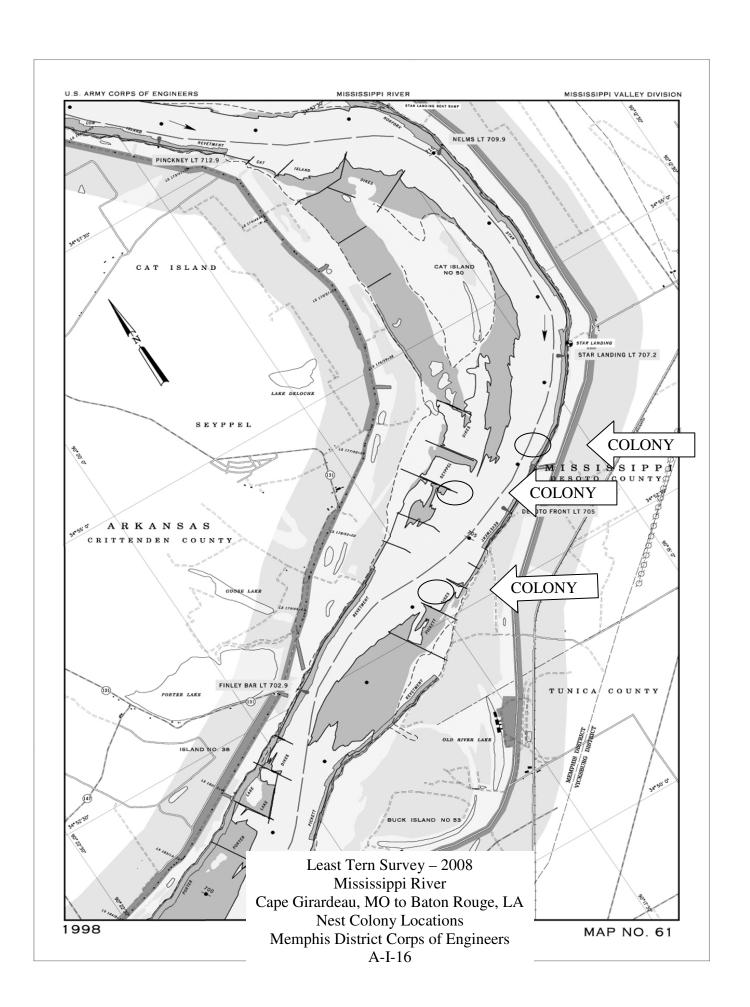


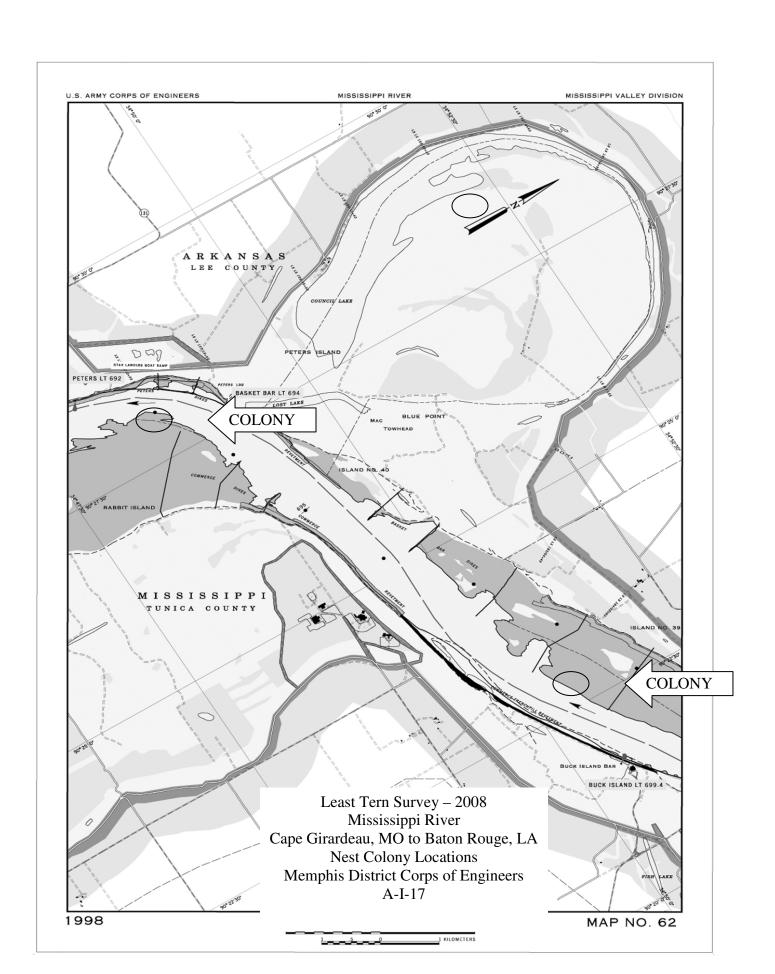


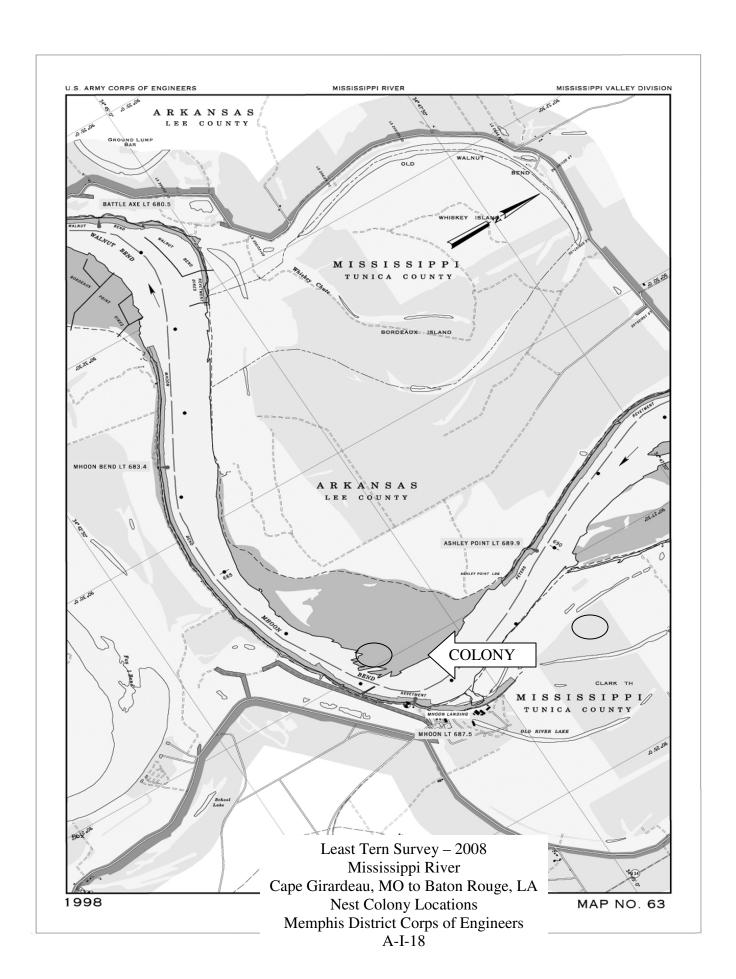
Nest Colony Locations Memphis District Corps of Engineers A-I-13

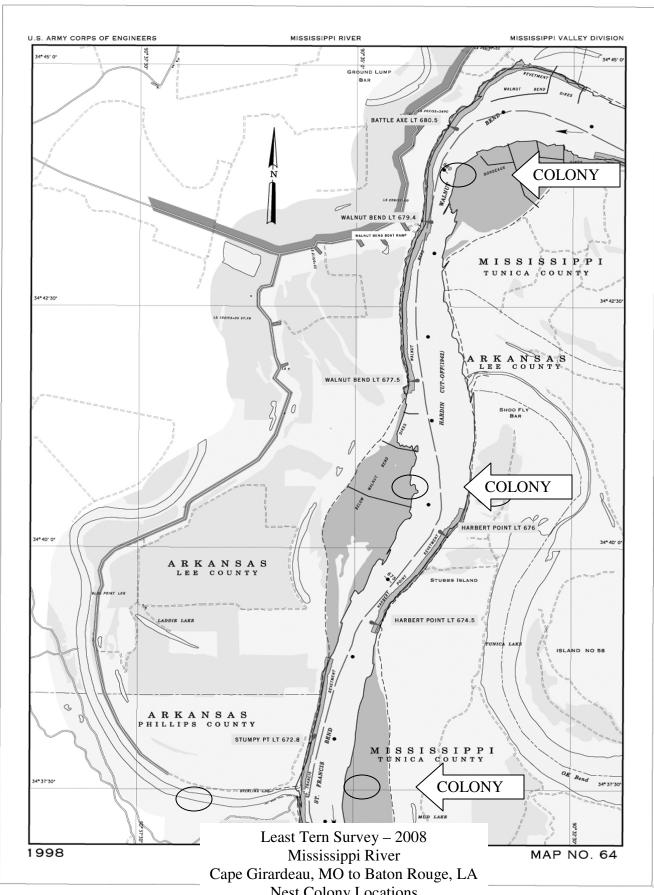


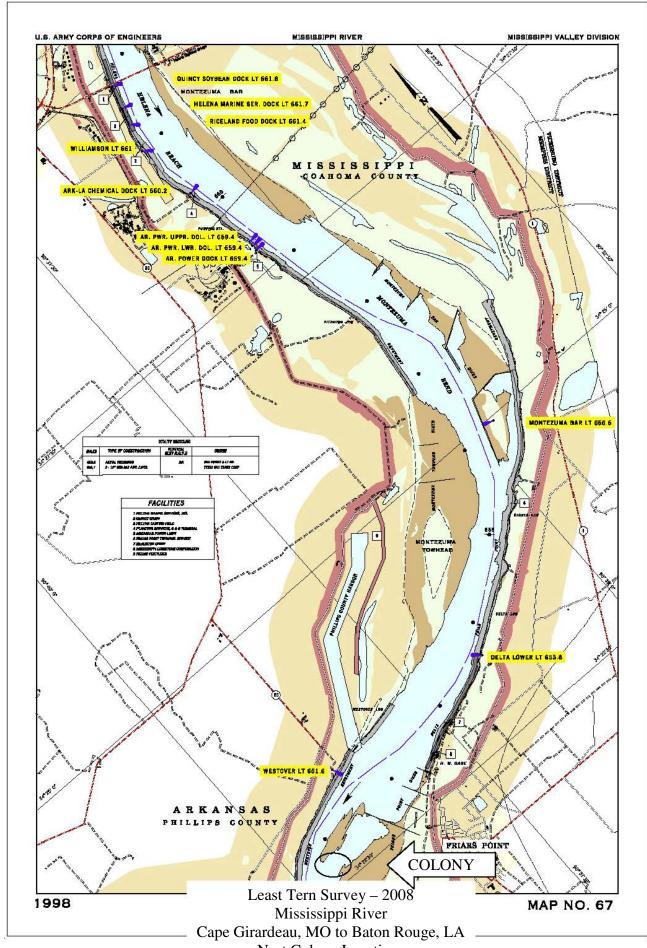


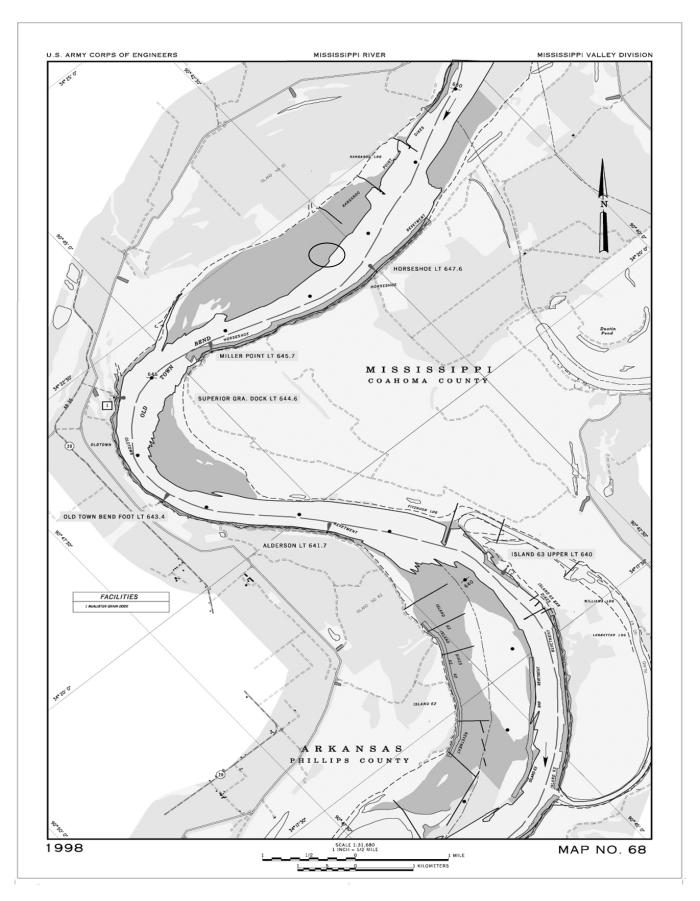




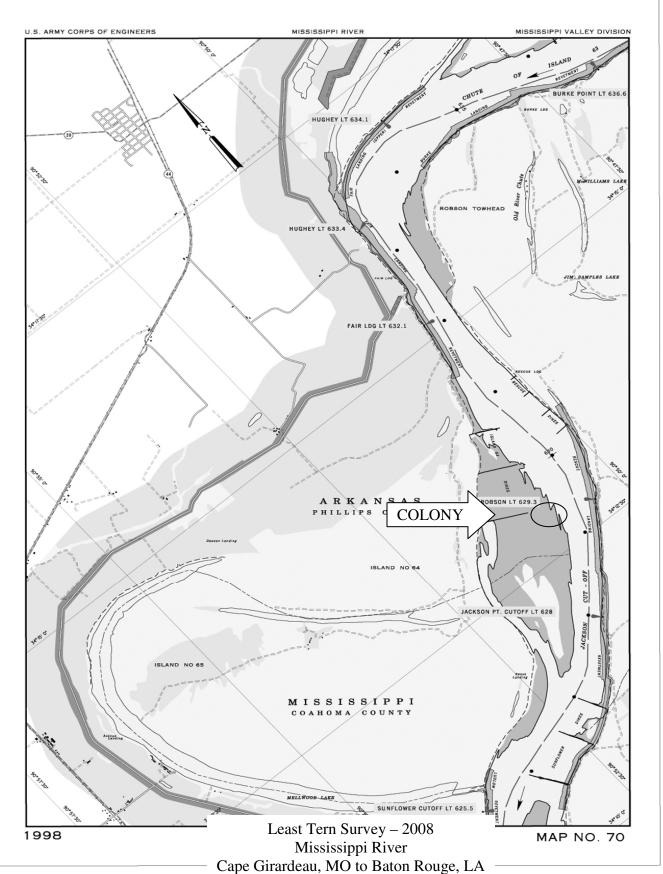


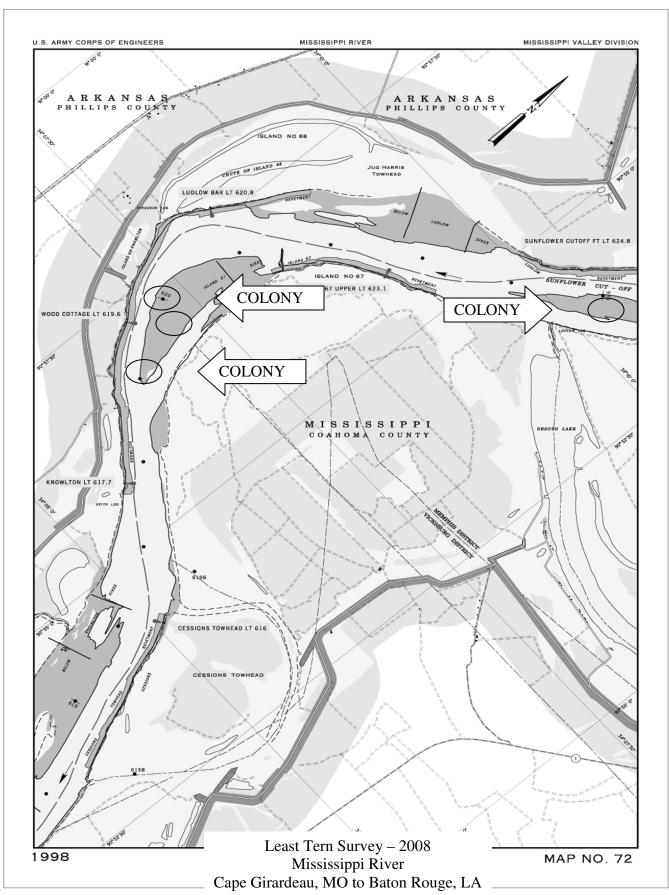


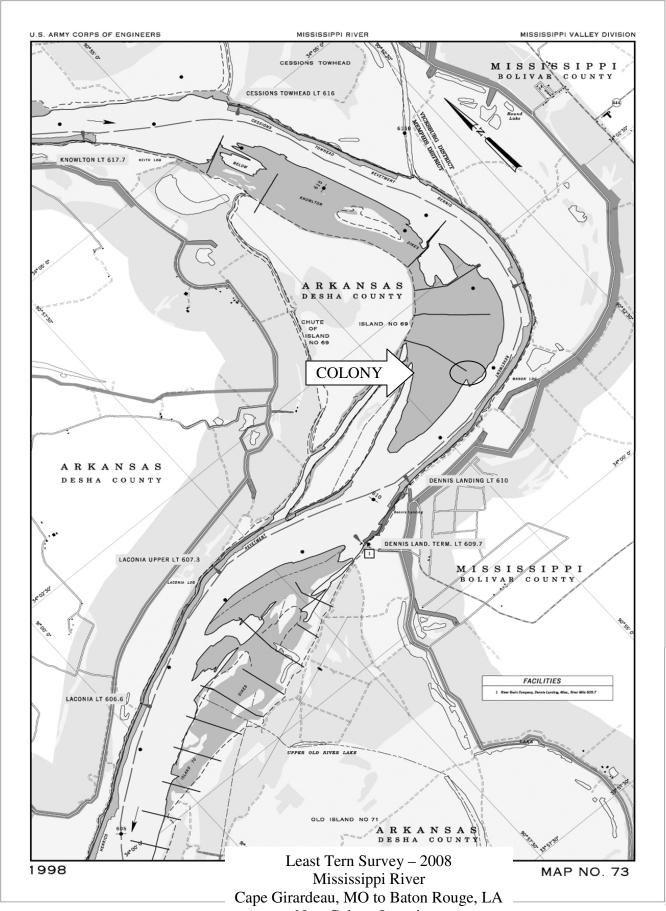


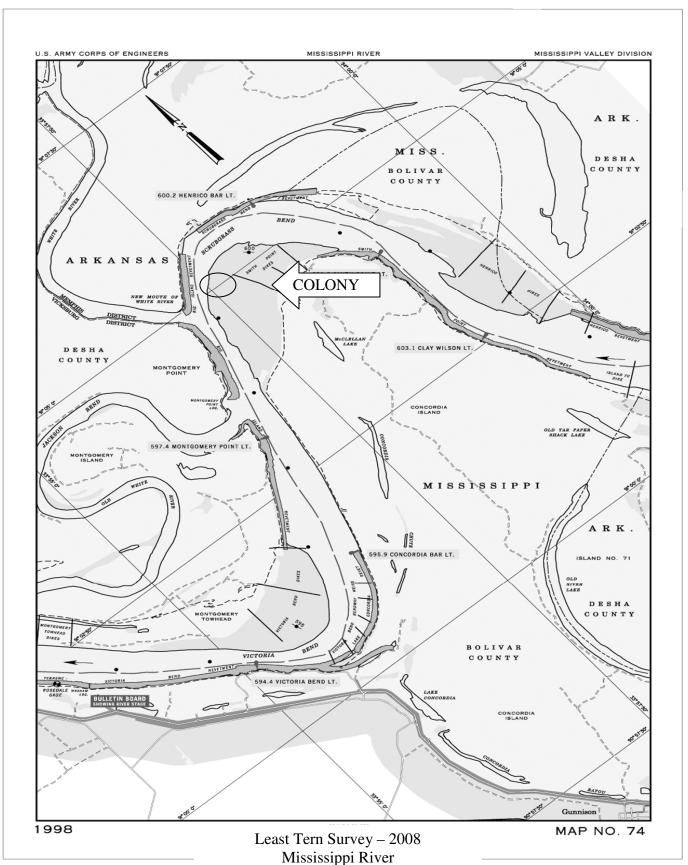


Nest Colony Locations Memphis District Corps of Engineers A-I-21

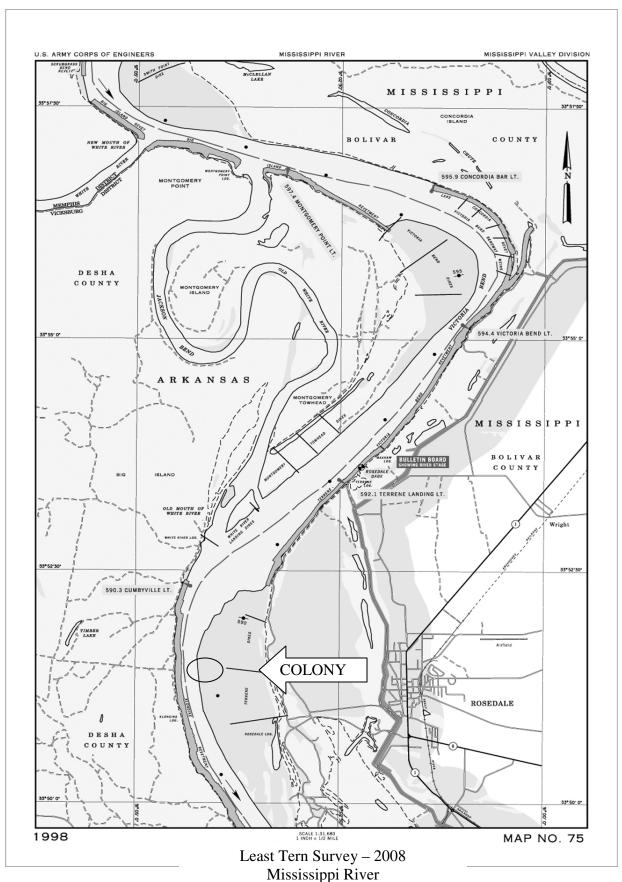




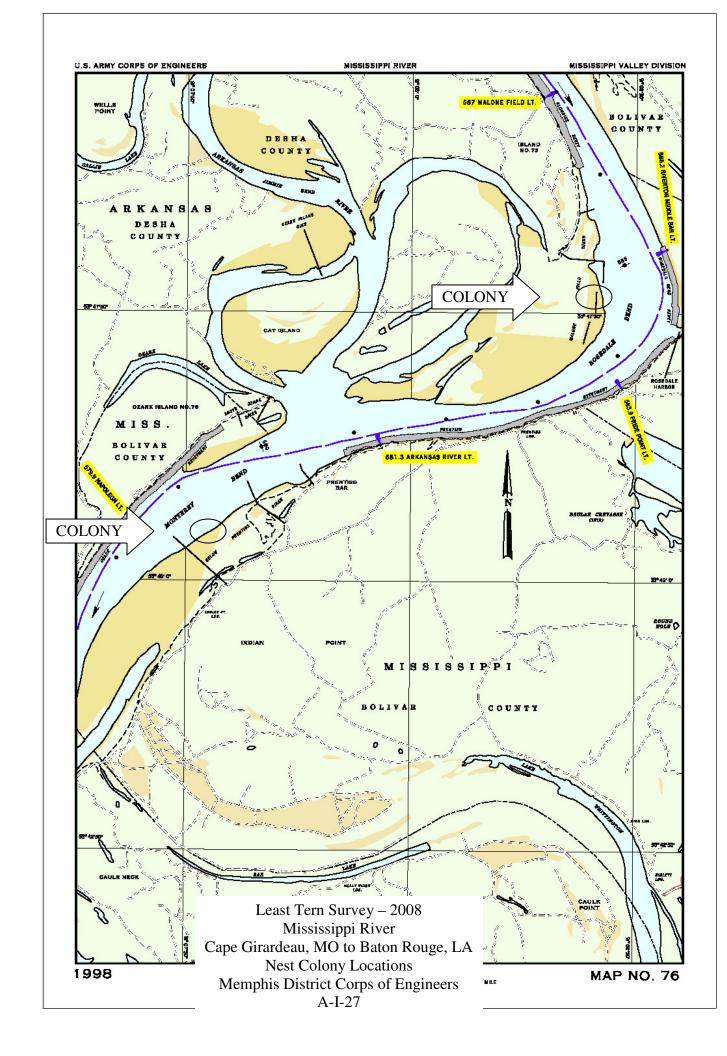


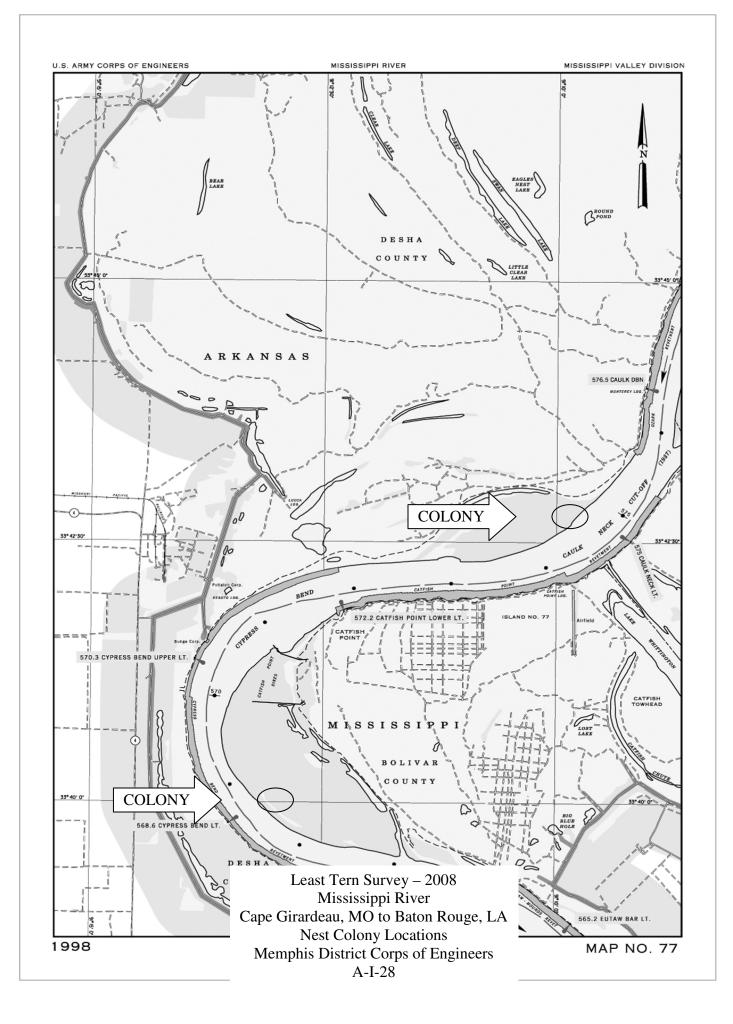


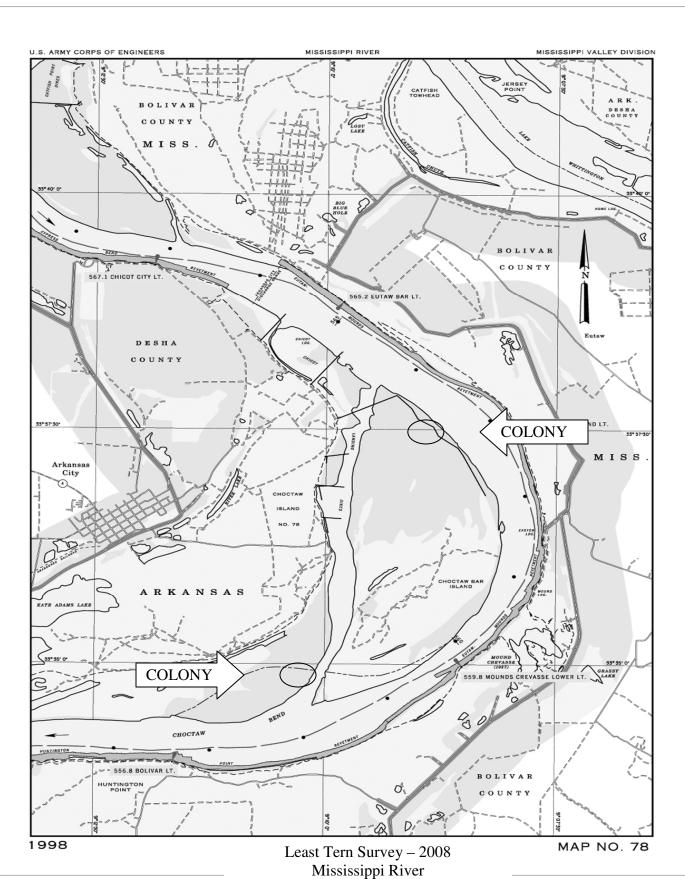
Cape Girardeau, MO to Baton Rouge, LA
Nest Colony Locations
Memphis District Corps of Engineers
A-I-25



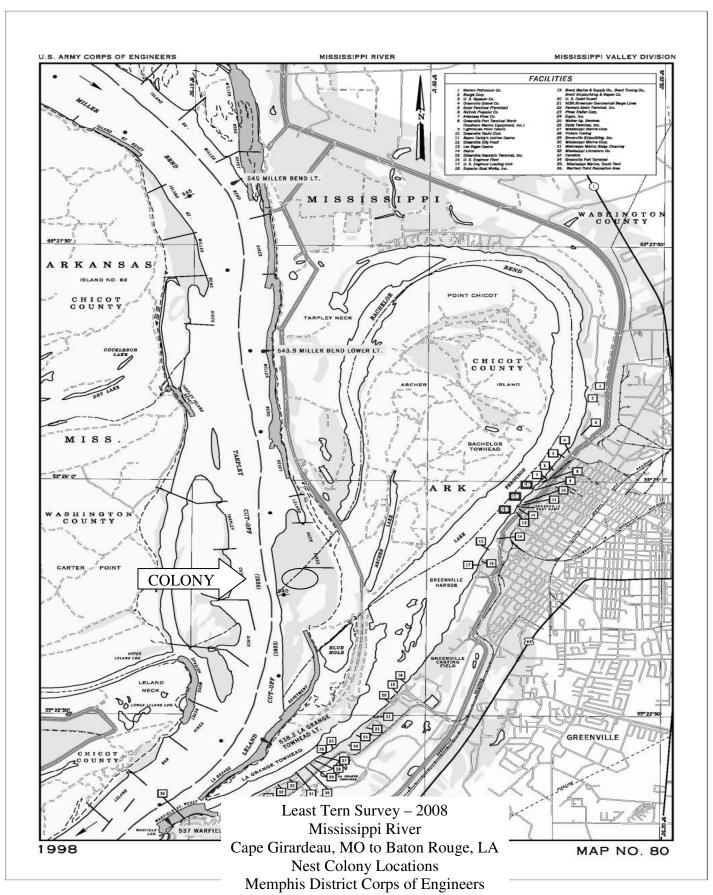
Cape Girardeau, MO to Baton Rouge, LA
Nest Colony Locations
Memphis District Corps of Engineers
A-I-26

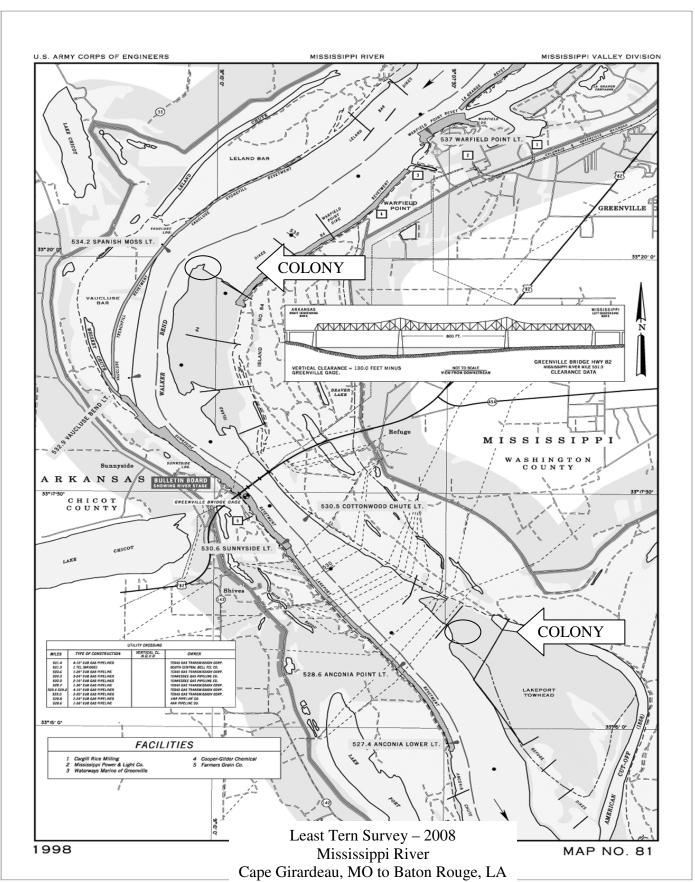


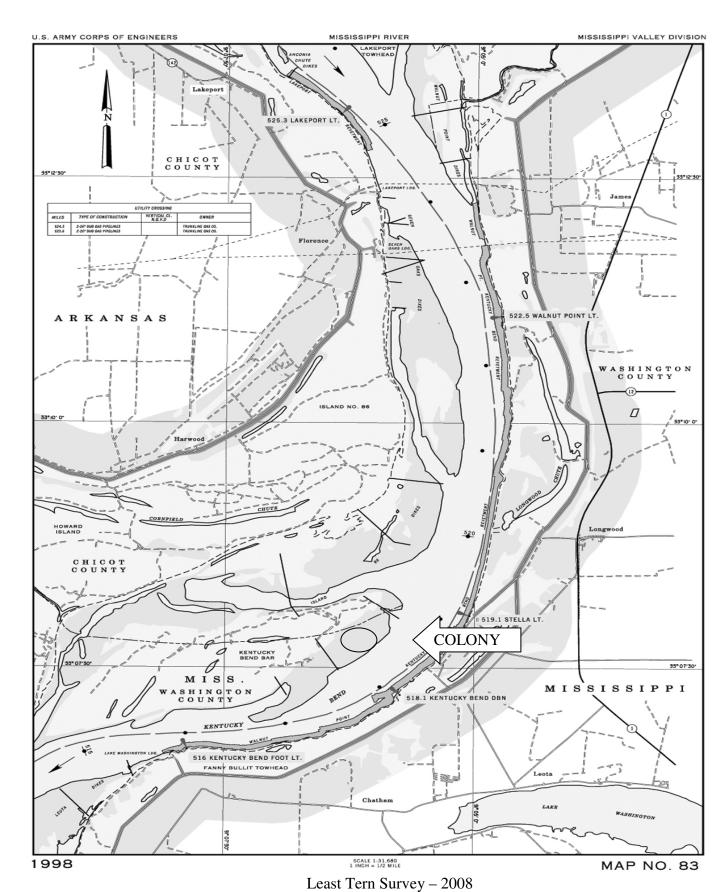




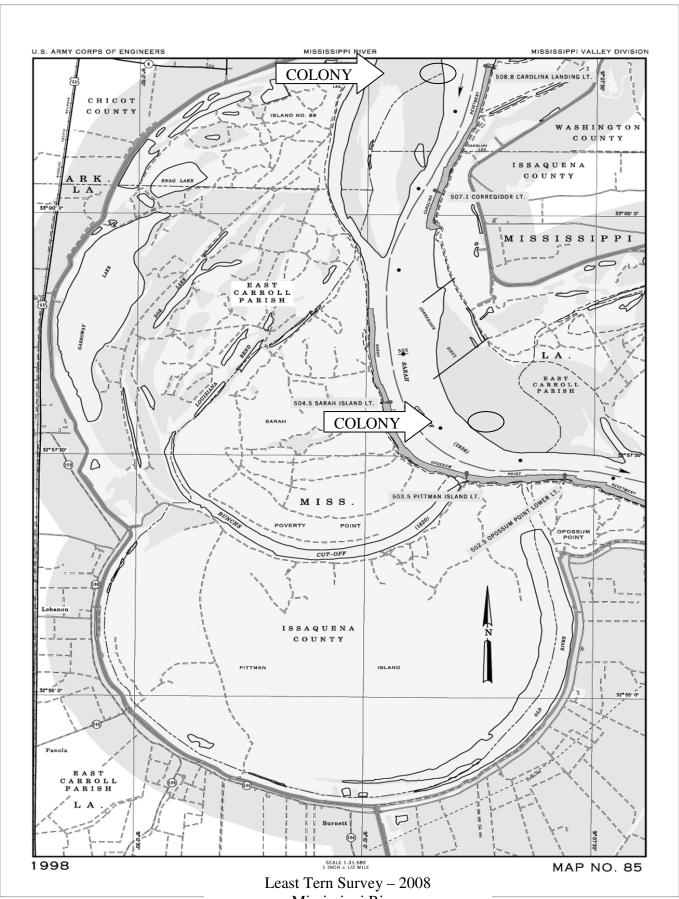
Cape Girardeau, MO to Baton Rouge, LA
Nest Colony Locations
Memphis District Corps of Engineers
A-I-29



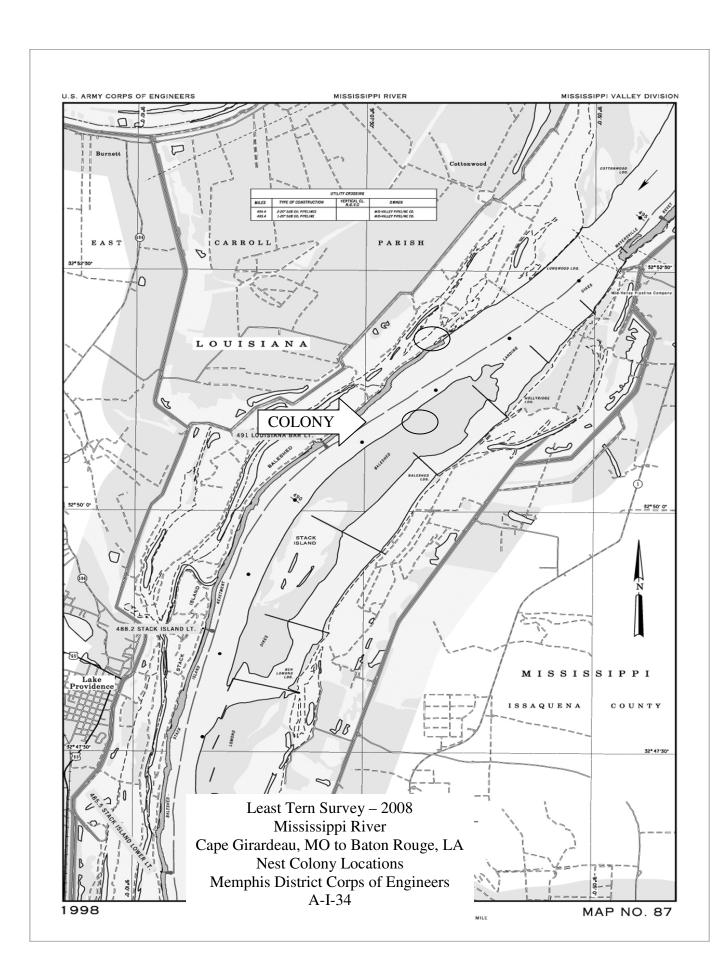


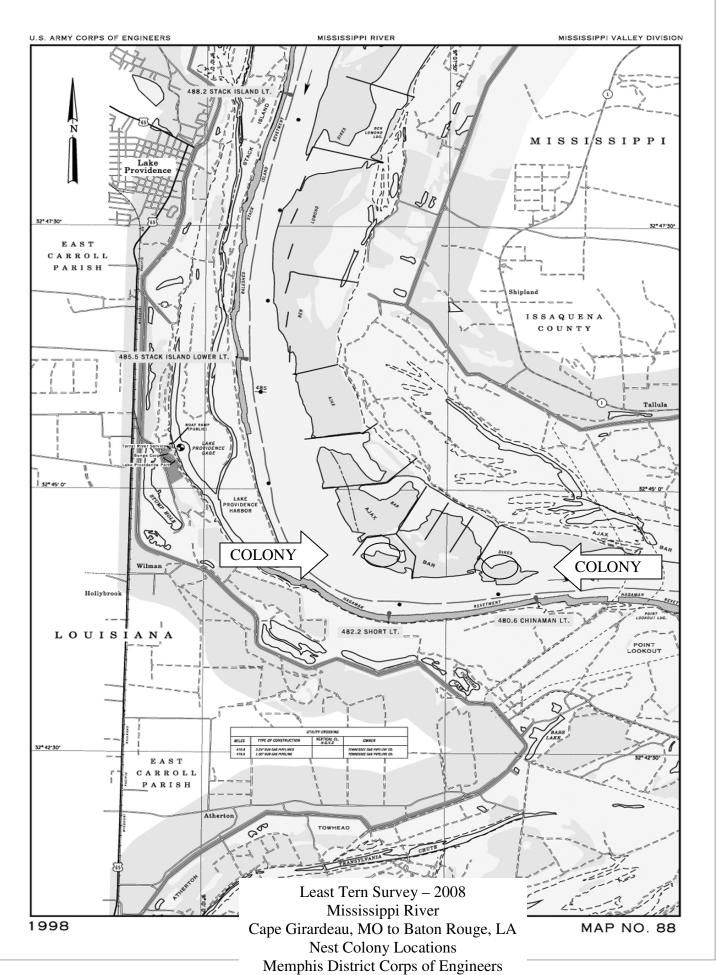


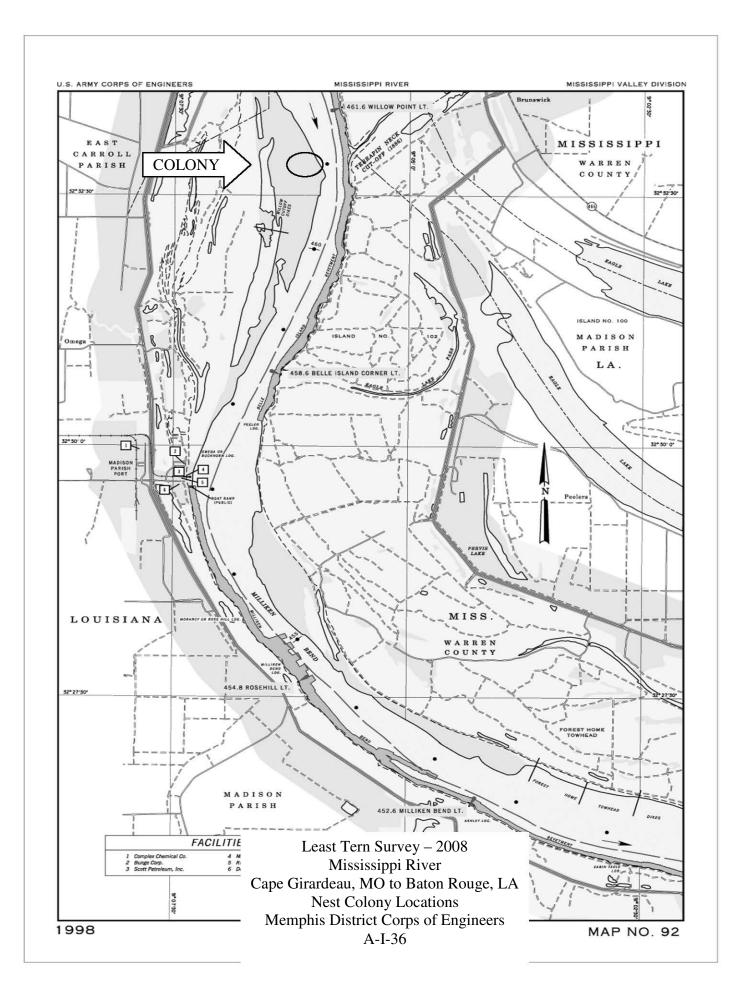
Mississippi River
Cape Girardeau, MO to Baton Rouge, LA
Nest Colony Locations
Memphis District Corps of Engineers
A-I-32

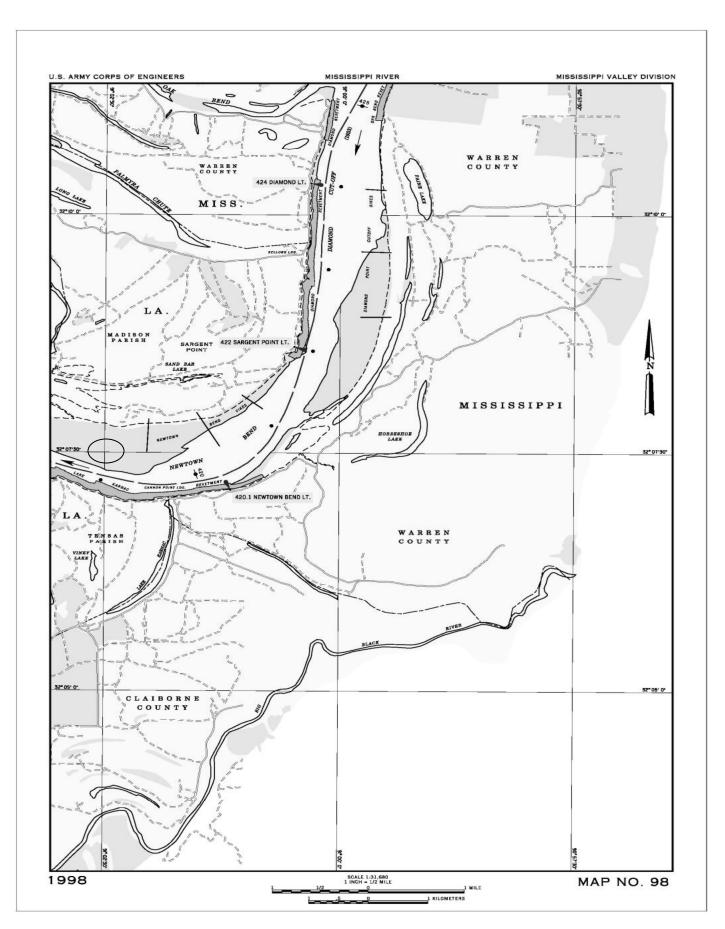


Mississippi River
Cape Girardeau, MO to Baton Rouge, LA
Nest Colony Locations
Memphis District Corps of Engineers
A-I-33

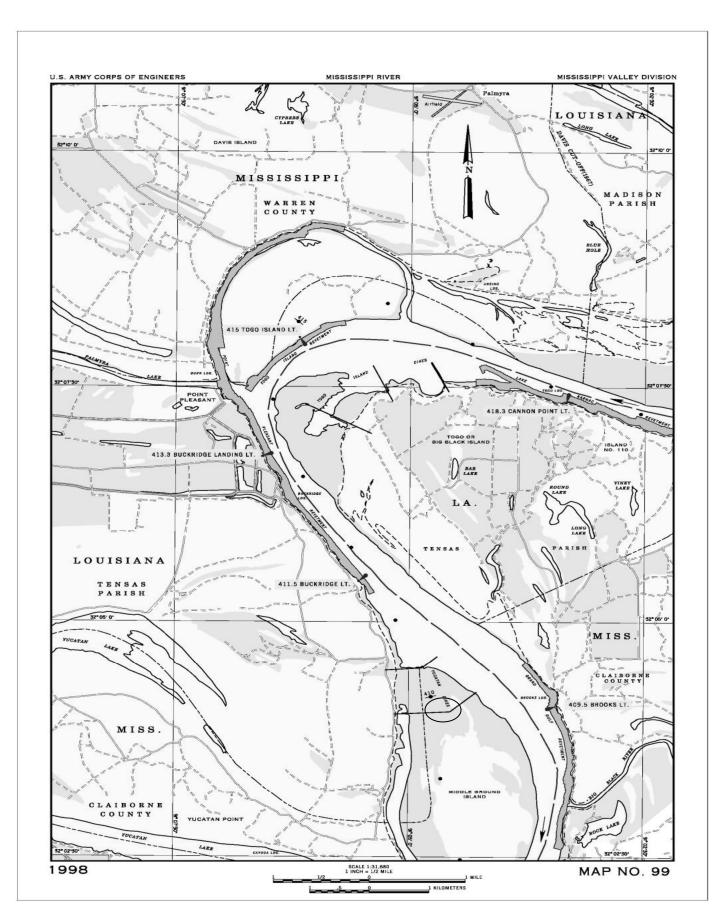




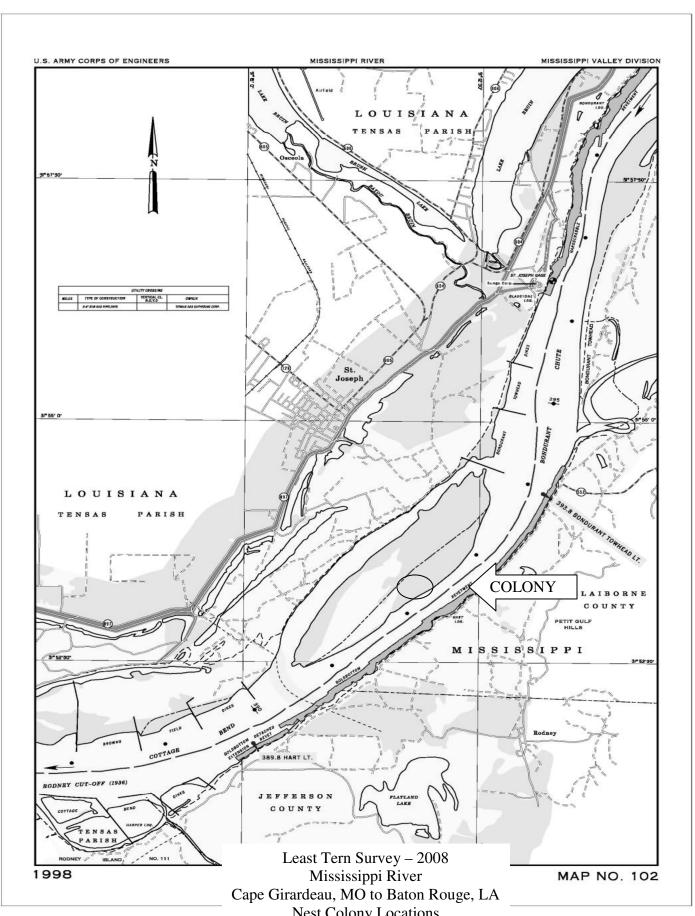


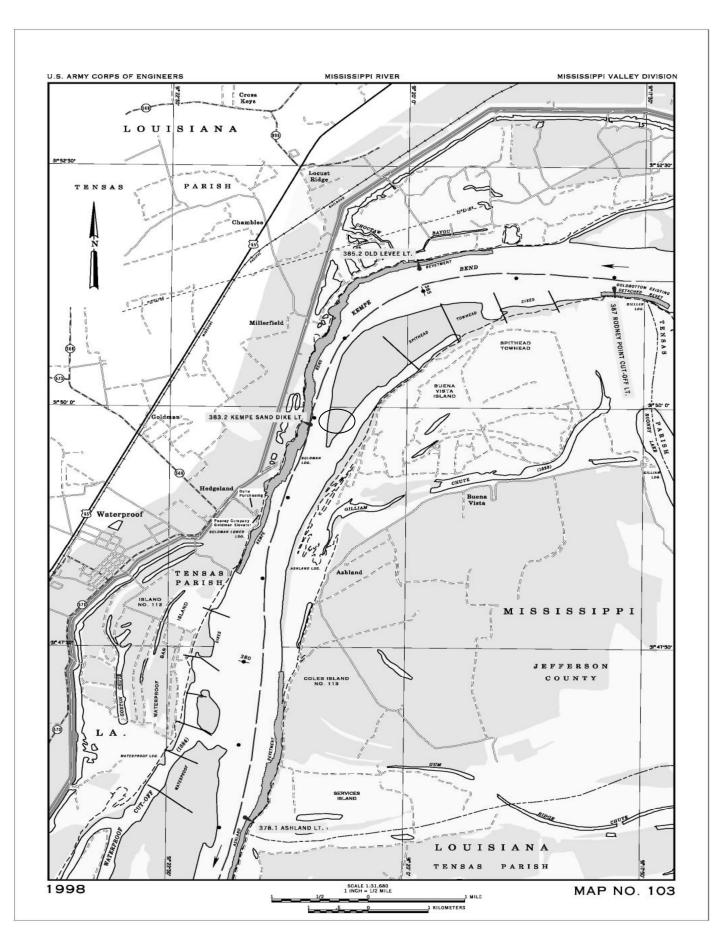


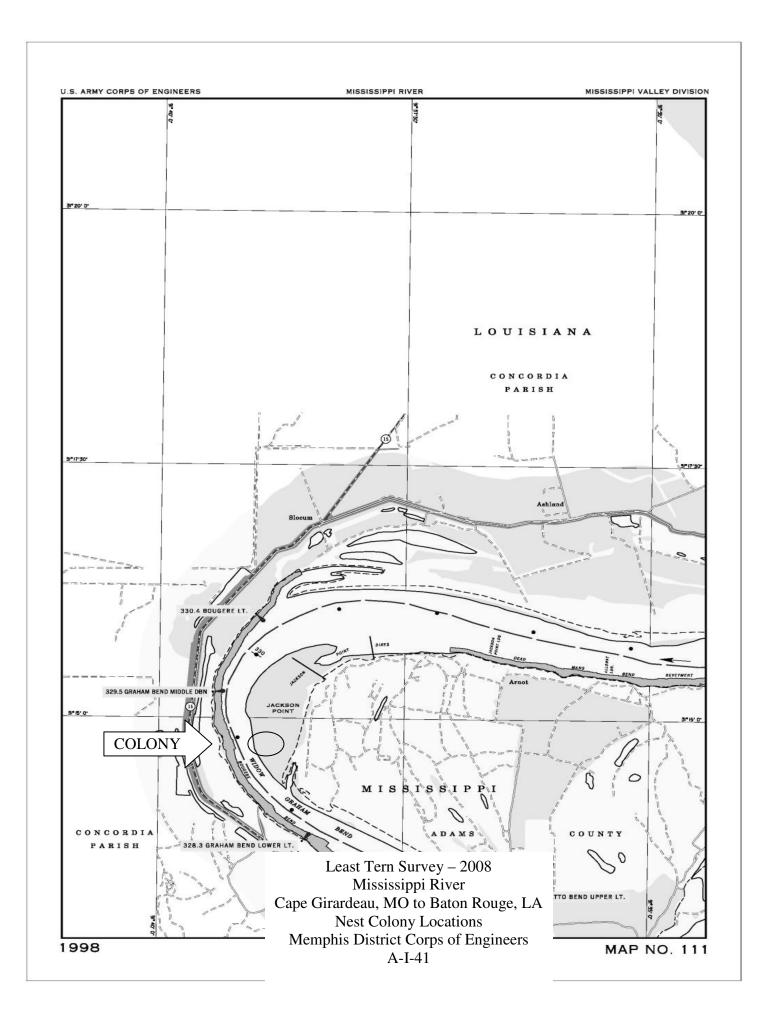
Memphis District Corps of Engineers A-I-37

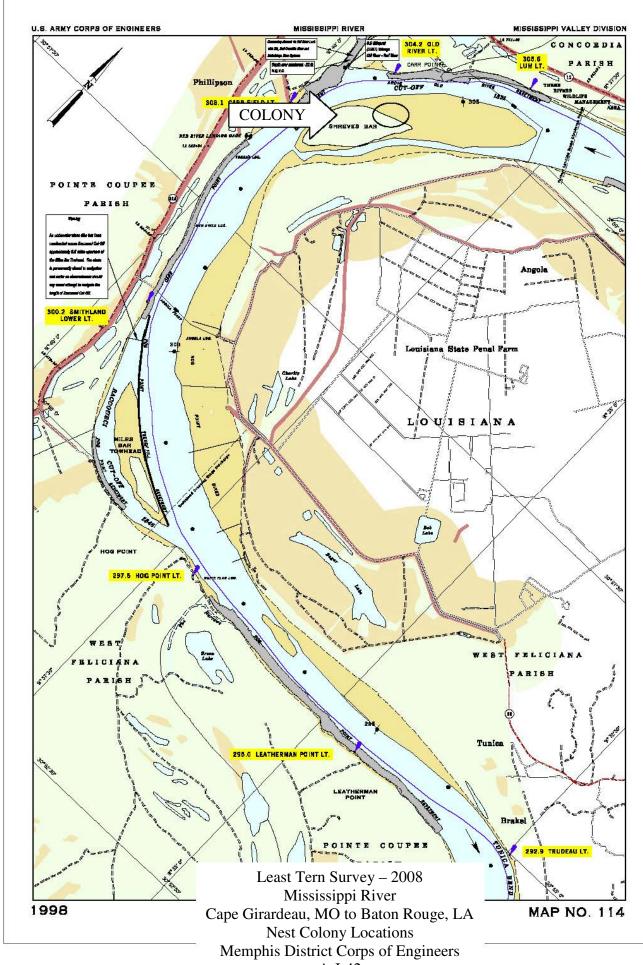


Cape Girardeau, MO to Baton Rouge, LA
Nest Colony Locations
Memphis District Corps of Engineers
A-I-38









#### Appendix A – II

#### **LEAST TERN SURVEY - 2008**

Mississippi River Cape Girardeau, MO to Baton Rouge, LA

SMALL BOAT SURVEY July 26 – August 1, 2008

**Memphis District, Corps of Engineers** 

**Data Sheets** 

			FLY	<b>/</b>	BOAT	<b>✓</b>
SPECIES: Interior Least Tern	(Sternula antillaru	m athalassos)				
DATE: 7/26/2008 T	IME OF DAY:	8:10	RIVER MILE _	U	IR 50.0	
LOCALITY: Alexander  County/Paris		SITE NAME:	Marq	uette Isl	land	
Gounty/1 and	orac Otate		NUMBERS SIG	HTED:		
	37.2734 e: 89.5246		Adults: Juveniles: Eggs:			
Approximate Distance to Wate	r:	Feet	Nests:		0	
			Chicks:		No	
MID-CHANNEL SANDBAR	On F	→ N	SUBSTRATE: Sand: Gravel: Debris:  VEGETATION: Type: Will Distance:  FIELD CONDIT Temperatu Rain: No Wind: C	150 TION: ure:	80 <sup>O</sup> F	
OTHER NOTES:			% Cloud:	50%		
Left Bank. Small, low attached	d sand bar.					
ODOEDVEDO.	D Dovin For	dkoo K longo W. I	once Dumonelle		ILL side	!
OBSERVERS:		rlkes, K. Jones, W. J	ones, Rumancik			
RIVER GAGE READING:	•	Girardeau	=	28.7		
	(Gage	Location)		(Eleva	ation)	

			FL'	Y 🗌	BOAT	<b>✓</b>
SPECIES: Interior Least Tern	(Sternula antillarur	n athalassos)				
DATE: 7/26/2008 T	IME OF DAY:	8:47	RIVER MILE	ι	JR 30.8	
LOCALITY: Alexander	ILL	_ SITE NAME:	Bum	gard Isl	and	
County/Paris	h State		NUMBERS SIG	HTED:		
WHERE SITED: Latitude:	37 0416		Adults:			
	± 89.3757		Juveniles:			
-			Eggs:			
Approximate Distance to Wate	r: <u>500</u>	<u>Feet</u>	Nests:		23	
			Chicks:		No	
IN FLIGHT Over Sandbar ✓		Nest Area	SUBSTRATE:			
Over Water 🗸	// On Re	esting Area	Sand:	<b>✓</b>		
Calm Water		/i	Gravel:	<b>✓</b>		
Land Side 🔲		$\sim$	Debris:			
Center Channel Side	MID-CHANNEI	<u>.</u> .	VEGETATION	:		
Ranic	d Currents ✓	→	Type:			
MID-CHANNEL SANDBAR	River Side [	%	Distance:		Feet	
SIDE CHANNE	L SANDBAR Center Land Side		FIELD CONDIT	ΓΙΟΝ:		
River Side 🗔	Calm Water	~ :1	Temperati	ure:	82 <sup>0</sup> F	
77777	777		Rain: No	ı		
		<del></del>	Wind: c	alm		
			% Cloud:	70%		
OTHER NOTES:						
Left Bank. Low, flat, wet sand courting, carrying fish, resting to Carp. Two Great Blue Herons.	ooth sides, 23 sitting 1 Red-Tailed Hawk	inland on scrapes. (	Coyote tracks an	nd finger	ling Silve	
Rough Wing Swallows & Mour	ning Doves.				ILL side	)
OBSERVERS:	R. Davin, Fowl	kes, K. Jones, W. J	ones, Rumancik			
RIVER GAGE READING:	Cape G	Girardeau		28.	7 R	
	(Gage I	_ocation)	_	(Eleva	ation)	

FLY ☐ BOAT 🗹

SPECIES: Inte	erior Least Tern	(Sternula antillaru	ım athalassos)		
DATE: 7/2	26/2008	TIME OF DAY:	10:11	RIVER MILE	UR 3.0
LOCALITY: _	Alexande	r ILL	SITE NAME:	Greenfi	eld Bend
	County/Par	ish State		NUMBERS SIGH	TED:
					1
WHERE SITE	D: Latitude				
	Longitud	de:	=		
Approximate	Distance to Wat	er:	Feet	Nests:	
					No
<u>IN FLIGHT</u>	Over Sandbar	ON GROUND O	n Nest Area	SUBSTRATE:	
4//_	Over Water	] , On F	Resting Area	Sand:	]
Calr	m Water 🗌	<del></del>	Z /	Gravel:	]
	<u></u> _	<b>5</b> .	$\sim$	Debris:	]
	nd Side 🔲 Center 💭		7		
	<i>I</i> —	MID-CHANNE	<u> </u>	VEGETATION:	
	Rai	oid Currents	7	Type:	
MID-CHANNEL	SANDBAR	River Side		Distance:	Feet
سر ا	SIDE CHAN	NEL SANDBAR Center	□∵.>	FIELD CONDITIC	N:
River	Side 🔲	Land Side	~ · · · · ·		: 82 °F
┝╱╌┾╌	<del></del>	Calm Water	<u>,                                     </u>		
l ′ ′ .	/ / /			Rain: No	
		, ,	<del>ل-1-</del>	Wind: <u>Calr</u>	n
				% Cloud: <u>8</u>	0%
OTHER NOTE	S·				
		t, 1 Great Blue Heron	and 23 Canada Gee	ese on bar	
	2	., 2 2 2 2 2 2			
					11.1
OBSERVERS:		R. Davin, Fow	vlkes, K. Jones, W. J	ones, Rumancik	ILL
RIVER GAGE			Cairo		25.0 R
		(Gage	Location)	=(	Elevation)

			FLY	BOAT	<b>✓</b>
SPECIES: Interior Least Terr	(Sternula antillarui	m athalassos)			
DATE: 7/26/2008	TIME OF DAY:	10:44	RIVER MILE _	946.0	
LOCALITY: Carlisle	e KY	_ SITE NAME:	Island	d #1 Dikes	
County/Pa	arish State		NUMBERS SIGI	HTED:	
MUIEDE OITED.	00,000			302	
WHERE SITED: Latitud			•	1	
Longiti	ude: <u>89.1163</u>		_	0	
Approximate Distance to Wa	ater: <u>10</u>	Feet	Nests:	15	
			Chicks:	Yes	
IN FLIGHT Over Sandbar	ON GROUND Or	ı Nest Area 🔽	SUBSTRATE:		
Over Water	<b>✓</b> / / On R	esting Area 🗌	Sand:	<b>✓</b>	
Calm Water		47.1	Gravel:	<b>✓</b>	
Land Side	<u>``</u>		Debris:		
Center Channel Side	MID-CHANNE		VEGETATION:		
		→	Type:		
MID-CHANNEL SANDBAR	apid Currents 🔽  River Side		Distance:	Feet	
SIDE CHAN	NNEL SANDBAR Center L	<del>_</del>	FIELD CONDITI	ION:	
River Side 🗆	Calm Water	~ :1	Temperatu	re: 82 ° F	
7777	<del> </del>		Rain: No		
	1 . 7	<del></del>	Wind: <u>ca</u>	lm	
			% Cloud:	90%	
OTHER NOTES:					
Left Bank. Low, flat, unattage only with 15 observed sitting Herons and 1 Black Tern.					
				KY side	
OBSERVERS:	R. Davin, Fowl	kes, K. Jones, W. Jo	ones, Rumancik	IXI SIUC	
RIVER GAGE READING:	·	airo		25.0 R	
		Location)	=	(Elevation)	

			FLY	□ BOAT ✓
SPECIES: Interior Least Terr	(Sternula antillarui	n athalassos)		
DATE: 7/26/2008	TIME OF DAY:	11:36	RIVER MILE _	931.5
LOCALITY: Hickma	n KY	_ SITE NAME:	Wolf	Island Bar
County/Pa	arish State		NUMBERS SIG	HTED:
WHERE SITED: Latitud	e: <u>36.6995</u>			177
Longito	ude: <u>89.1498</u>			1(1) 1(3)
Approximate Distance to Wa	ater: <u>300</u>	Feet		7
			Chicks:	No
IN FLIGHT Over Sandbar	— <u>GIV GITOONB</u> OI	Nest Area	SUBSTRATE:	
Over Water	•/_/_/_/	esting Area		$\checkmark$
Calm Water ✓		$\langle \langle \rangle  $	Gravel:	
Land Side 🗹		~	Debris:	
Center ☐ Channel Side 🗹	MID-CHANNE	<u> </u>	VEGETATION:	
R	apid Currents	→	Type:	
MID-CHANNEL SANDBAR	River Side		Distance:	Feet
SIDE CHAI	NNEL SANDBAR Center [		FIELD CONDIT	ION:
River Side □	Calm Water		Temperatu	re: <u>86 <sup>0</sup> F</u>
7777	+7+7+		Rain: No	
	///	7-7-7	Wind: N	3-5 mph
			% Cloud:	100%
OTHER NOTES:				
Left Bank. Large, mid-chan				
nests. Fishing, breasting, c Eagles, 4 Caspian Terns, 1	Great Blue Heron, 1 Fi	sh Crow in vicinity.	s or disturbance r	loted. Two Baid
				KY side
OBSERVERS:	R. Davin, Fow	kes, K. Jones, W. Jo	ones, Rumancik	
RIVER GAGE READING:	C	airo	=	25.0 R
	(Gage	Location)		(Elevation)

FLY ☐ BOAT 🗹

SPECIES: Interior Leas	st Tern <i>(Sternula an</i>	tillarum at	halassos)		
DATE: 7/26/2008	TIME OF DAY	:1	2:34	RIVER MILE _	924.8
OCALITY:	Fulton	KY	SITE NAME:	Beck	with Bend
Cou	nty/Parish S	State		NUMBERS SIG	HTED:
					4
WHERE SITED: L					4
L	Longitude:			_	
Approximate Distance	to Water:	Fe	<u>et</u>	Nests:	
			<del></del>		No
<u>IN FLIGHT</u> Over San	dbar ON GROUN	<u>ID</u> On Nes	t Area 🗌	SUBSTRATE:	
V / / Over W	/ater ✓	On Resting	g Area 🗌	0 1	
Calm Water			/	Gravel:	
	<b>∼</b> >		$\langle \langle     \rangle$	Debris:	
Land Side Center			$\neg$		
Channel Side		CHANNEL		VEGETATION:	
	Rapid Currents		→	Туре:	
MID-CHANNEL SANDBAI	بہلجار <del>''</del>	rer Side 🗌	_	Distance:	Feet
SIDI	E CHANNEL SANDBAR C			FIELD CONDIT	ION:
River Side 🗔		nd Side - □:_ n Water 🗹	~.:l	Temperatu	ıre: 86 <sup>0</sup> F
<del>-/</del>		water 🗸		Rain: No	
	1 / / 7	~~~~`	٠	nam. <u>No</u>	
		7	<u> </u>	Wind: N	5 mph
				% Cloud:	100%
OTHER NOTES:					
Left Bank. Left Bank.	Four fishing in back cl	hute.			
	, <u>, , , , , , , , , , , , , , , , , , </u>				
					KY side
DBSERVERS:	R. Davi	n, Fowlkes,	, K. Jones, W. J	ones, Rumancik	
RIVER GAGE READING	G:	Cairo			25.0 R
	-	(Gage Loca	ation)	<b>=</b>	(Elevation)

FLY

BOAT 🗸

SPECIES: Interior Least Tern (Sternula antillarum athalassos) DATE: 7/26/2008 TIME OF DAY: 13:58 RIVER MILE 908.0 LOCALITY: \_\_\_\_ Fulton KY SITE NAME: Kelly Landing County/Parish State NUMBERS SIGHTED: 7 Adults: WHERE SITED: Latitude: 36.5396 Juveniles: Longitude: 89.4005 Eggs: Approximate Distance to Water: Feet 0 Nests: No Chicks: Over Sandbar IN FLIGHT ON GROUND On Nest Area SUBSTRATE: Over Water On Resting Area Sand: Calm Water Gravel: **~** Debris: Land Side . Center **VEGETATION:** MID-CHANNEL Channel Side Type: Rapid Currents MID-CHANNEL SANDBAR Distance: Feet River Side SIDE CHANNEL SANDBAR Center FIELD CONDITION: Land Side -River Side 🗸 Temperature: 88 <sup>O</sup>F Calm Water Rain: No Wind: N 5 mph % Cloud: 80% OTHER NOTES: Left Bank. Solid gravel resting bar attached to left bank. One hundred tree swallows observed 3 miles upstream Island #8. KY side OBSERVERS: R. Davin, Fowlkes, K. Jones, W. Jones, Rumancik RIVER GAGE READING: Cairo 25.0 R (Gage Location) (Elevation)

FLY

BOAT 🗸

SPECIES: Interior Least Tern (Sternula antillarum athalassos) DATE: 7/26/2008 TIME OF DAY: 14:20 RIVER MILE 895.0 LOCALITY: New Madrid MO SITE NAME: Hotchkiss Bend Dikes County/Parish State NUMBERS SIGHTED: 1 Adults: WHERE SITED: Latitude: Juveniles: Longitude: Eggs: Approximate Distance to Water: Feet 0 Nests: No Chicks: Over Sandbar IN FLIGHT ON GROUND On Nest Area SUBSTRATE: Over Water • On Resting Area Sand: Calm Water Gravel: Debris: Land Side . Center **VEGETATION:** Channel Side MID-CHANNEL Type: Rapid Currents 🗸 MID-CHANNEL SANDBAR Distance: Feet River Side SIDE CHANNEL SANDBAR Center FIELD CONDITION: Land Side -River Side [ Temperature: 87 °F Calm Water Rain: No Wind: N 5 mph % Cloud: 60% OTHER NOTES: One tern fishing between dikes. MO side OBSERVERS: R. Davin, Fowlkes, K. Jones, W. Jones, Rumancik RIVER GAGE READING: New Madrid 15.3 S (Gage Location) (Elevation)

FLY  $\square$ BOAT 🗸 SPECIES: Interior Least Tern (Sternula antillarum athalassos) DATE: 7/26/2008 TIME OF DAY: 14:55 RIVER MILE 884.0 LOCALITY: Fulton KY SITE NAME: Kentucky Point Dikes Upper County/Parish State NUMBERS SIGHTED: Adults: 509 WHERE SITED: Latitude: 36.51475 Juveniles: Longitude: 89.5498 4(1) 6(2) Eggs: Approximate Distance to Water: 100 Feet 87 Nests: Chicks: No Over Sandbar IN FLIGHT ON GROUND On Nest Area 🗸 SUBSTRATE: On Resting Area Over Water • Sand: Calm Water Gravel: Debris: Land Side . Center . **VEGETATION:** MID-CHANNEL ✓ Channel Side Type: Rapid Currents **MID-CHANNEL SANDBAR** Distance: Feet River Side SIDE CHANNEL SANDBAR Center FIELD CONDITION: Land Side -River Side [ Temperature: \_\_\_ 88 <sup>O</sup>F Calm Water Rain: No Wind: N 5mph % Cloud: 50% OTHER NOTES: Left Bank. Low, flat-topped sand bar, unattached. Birds breasting and mobbing, early stages of nesting. Signs of avian predation. Three carp, one Threadfin Shad. One Great Blue Heron and six boats with daycampers at waterline KY side OBSERVERS: R. Davin, Fowlkes, K. Jones, W. Jones, Rumancik RIVER GAGE READING: New Madrid 15.3 S (Gage Location)

(Elevation)

SPECIES: Interior Least Tern (Sternula antillarum athalassos)  DATE: 7/26/2008 TIME OF DAY: 15:19 RIVER MILE 883.2  LOCALITY: Fulton KY SITE NAME: Kentucky Point Dikes Lower  County/Parish State  NUMBERS SIGHTED:  Adults: 52  Juveniles: Longitude: 89.5433  Approximate Distance to Water: 400 Feet  Note: 15:19 RIVER MILE 883.2  Kentucky Point Dikes Lower  Adults: 52  Juveniles: Eggs: 7(1) 15(2) 4(3)
LOCALITY: Fulton KY SITE NAME: Kentucky Point Dikes Lower  County/Parish State  NUMBERS SIGHTED:  Here SITED: Latitude: 36.5076  Longitude: 89.5433  Approximate Distance to Water: 400 Feet
County/Parish State  NUMBERS SIGHTED:  WHERE SITED: Latitude: 36.5076  Longitude: 89.5433  Approximate Distance to Water: 400 Feet
NUMBERS SIGHTED:         WHERE SITED:       Latitude:       36.5076       Adults:       52         Longitude:       89.5433       Eggs:       7(1) 15(2) 4(3)
Longitude: 36.5076  Longitude: 89.5433  Approximate Distance to Water: 400 Feet
Approximate Distance to Water: 400 Feet
Approximate distance to water. 400 Feet Nests: 26
IN FLIGHT Over Sandbar ✓ ON GROUND On Next Area
Over Water On Resting Area Substrate:  Substrate:  Sand:
Calm Water Gravel: Debris: Debris:
Center VEGETATION: Channel Side MID-CHANNEL Type:
MID-CHANNEL SANDBAR  Rapid Currents   Distance: Feet
SIDE CHANNEL SANDBAR Center  Land Side  FIELD CONDITION:
Calm Water Rain: No
Wind: N 5 mph
% Cloud: <u>30%</u>
OTHER NOTES:  Left Bank. Just downstream from previous colony, low unattached sandbar. No sign of disturbance.
KY side
OBSERVERS: R. Davin, Fowlkes, K. Jones, W. Jones, Rumancik
RIVER GAGE READING: New Madrid = 15.3 S (Elevation)

			FLY	BOAT	<b>✓</b>
SPECIES: Interior Least Te	ern <i>(Sternula antillaru</i>	ım athalassos)			
DATE: 7/26/2008	TIME OF DAY:	15:44	RIVER MILE _	877.0	
LOCALITY: Lak	xe TN	SITE NAME:	Marr	Towhead	
County/	Parish State		NUMBERS SIG	UTED:	
				18	
WHERE SITED: Latit	-	_		10	
Long	gitude: <u>89.5393</u>	-	Eggs:		
Approximate Distance to	Nater:	Feet		0	
				No	
IN FLIGHT Over Sandbar	ON GROUND C	on Nest Area			
Over Water	·	Resting Area	SUBSTRATE:		
Calm Water	~~{	./ , ]	0 1	✓	
Cain Water		$\sim$ / $\parallel$	Gravel: Debris:	<b>V</b>	
Land Side	<del>د</del> نز	$\sim$	Deblis.		
Center Channel Side	MID-CHANNI	<sub>=</sub>	VEGETATION:		
	·		Туре:		
MID-CHANNEL SANDBAR	Rapid Currents		Distance:	Feet	
/	River Side	□;/_			
ロー・ブー・トト	ANNEL SANDBAR Center Land Side		FIELD CONDITI	_	
River Side 🗸	Calm Water		Temperatu	re: 89 <sup>0</sup> F	
7777	4747		Rain: No		
	///7	<del></del>	Wind: N	5 mph	
			% Cloud:	15%	
OTHER NOTES:					
Left Bank. Small, low, un	attached (100 x 40 ft ) riv	verside har with hirds	resting at waterli	ne Day camper	'S
1 mile downstream.		Torondo Dar Willi Dirdo	Tooling at Waterin	no : Bay campor	
				TN side	
OBSERVERS:	R. Davin, Fow	vlkes, K. Jones, W. J	ones, Rumancik		
RIVER GAGE READING:	Caru	thersville	=	17.2 R	
	(Gage	Location)		(Elevation)	

			FL	Y □ BOAT 🕨
SPECIES: Interior Least Tern (	Sternula antillaru	m athalassos)		
DATE: 7/26/2008 TIM	ME OF DAY:	16:04	RIVER MILE	871.5
LOCALITY: New Madrid		_ SITE NAME:	Stewart Tov	vhead Dikes Upper
County/Parish	State		NUMBERS SIG	GHTED:
WHERE SITED: Latitude:	36 35763		Adults:	176
	89.51528		Juveniles:	
_		F	Eggs:	
Approximate Distance to Water:	100	<u>Feet</u>	Nests:	12
			Chicks:	No
IN FLIGHT Over Sandbar ✓		n Nest Area	SUBSTRATE:	
Over Water 🗸	On R	esting Area	Sand:	$\checkmark$
Calm Water		/i	Gravel:	$\checkmark$
Land Side ☐ Center ☐		$\sim$	Debris:	✓
Channel Side	MID-CHANNE	<u>L</u>	VEGETATION:	:
Rapid (	Currents 🗸	→	Type:	
MID-CHANNEL SANDBAR	River Side	I	Distance:	Feet
SIDE CHANNEL	SANDBAR Center Land Side		FIELD CONDIT	ΓΙΟΝ:
River Side	Calm Water		Temperati	ure: 92 <sup>0</sup> F
77777	77		Rain: No	
	′ ′ ′ 7	7-7-7	Wind: N	l 5 mph
			% Cloud:	10%
OTHER NOTES:				
Right Bank. Flat, gravel and sar	nd bar with most bi	rds resting at waterli	ne. some fishind	ı both sides. Four
Black Terns, 3 Great Blue Heror				
000504500	D. Deide Fr		-nee D	MO side
OBSERVERS:		lkes, K. Jones, W. J	ones, Rumancik	
RIVER GAGE READING:		hersville	=	17.2 R
	(Gage	Location)		(Elevation)

				FLY	□ BOAT ✓
SPECIES: Ir	nterior Least Terr	(Sternula antillaru	ım athalassos)		
DATE: 7	7/26/2008	TIME OF DAY:	16:18	RIVER MILE _	870.5
LOCALITY:		drid MO	SITE NAME:	Stewart Tow	head Dikes Lower
	County/Pa	rish State		NUMBERS SIG	HTED:
WHERE SITI	ED: Latitud	e: 36.34634		Adults:	60
		ude: 89.52654	_	Juveniles:	
Approximat	e Distance to W	ater: 100	Feet	Eggs:	
<b>Дррголіпа</b>	e Distance to W	nter. 100	1 eet		6
	Over Sandbar			Chicks:	No
<u>IN FLIGHT</u>	Over Water	ON GROOME	n Nest Area 🗸 Resting Area	SUBSTRATE:	
$\prec \prec$	_ <u>_</u>	-4	/ / /		$\checkmark$
	alm Water 🗌	_ <b></b>	$\sim$ /I $\sim$	Gravel:	
1.5	and Side 🔲	<u> </u>	$\sim$	Debris:	$\checkmark$
Chi	Center	MID-CHANNE		VEGETATION:	
	-		-	Туре:	
MID-CHANN	EL SANDBAR	apid Currents  River Side		Distance:	Feet
ا	SIDE CHAN	NEL SANDBAR Center Land Side		FIELD CONDIT	ION:
Rive	er Side 🔲	Calm Water		Temperatu	re: 92 <sup>0</sup> F
77	777	7		Rain: No	
		///7	<del></del>	Wind: N	5 mph
				% Cloud:	10%
OTHER NOT	ES:				
	. Downstream o	colony measured in p	orevious data sheet w	ith nests on high	er center. No signs
					MO side
OBSERVERS	S:	R. Davin, Fow	vlkes, K. Jones, W. J	ones, Rumancik	
RIVER GAGE	E READING:		thersville		17.2 R
		(Gage	Location)		(Elevation)

			FLY	′ □ BOAT 🗹
SPECIES: Interior Least	Tern <i>(<b>Sternula antillaru</b></i>	m athalassos)		
DATE: 7/26/2008	TIME OF DAY:	16:30	RIVER MILE _	864.5
LOCALITY:L	ake TN	SITE NAME:	Below C	herokee Dikes
WHERE SITED: Lat	ngitude: 89.6174  D Water: 500  ar ✓ ON GROUND O	Feet  n Nest Area   Resting Area	Juveniles: Eggs: Nests: Chicks: SUBSTRATE:	HTED:
Land Side	Rapid Currents River Side  CHANNEL SANDBAR Center  Land Side  Calm Water	<ul><li>✓</li><li>✓</li><li>✓</li><li>✓</li></ul>	VEGETATION: Type: Distance: FIELD CONDIT	Feet ION: are: 92
	very large, broad, gently s te (dog?) and people track			
OBSERVERS:	R. Davin, Fow	rlkes, K. Jones, W. J	ones, Rumancik	0.00
RIVER GAGE READING:		thersville Location)	=	17.2 R (Elevation)

			FLY	Y 🗌	BOAT	<b>✓</b>
SPECIES: Interior Least Tern (\$	Sternula antillaru	m athalassos)				
DATE: 7/26/2008 TIM	IE OF DAY:	17:01	RIVER MILE _		856.5	
LOCALITY: Pemiscot	MO	SITE NAME:	Chute	of Island	d #14	
County/Parish	State		NUMBERS SIG	HTED:		
WHERE SITED: Latitude:	36 2491		Adults:		202	
	89.5712	-	Juveniles:			
			Eggs:			
Approximate Distance to Water:	300	<u>reet</u>	Nests:		18	
			Chicks:		No	
IN FLIGHT Over Sandbar ✓		n Nest Area	SUBSTRATE:			
Over Water 🗸		Resting Area	Sand:	<b>✓</b>		
Calm Water		$\langle \langle \rangle /   \rangle$	Gravel:			
Land Side 🔲		$\sim$	Debris:			
Center . Center . Channel Side	MID-CHANNE	:	VEGETATION:	<u>.</u>		
		- →	Type:			
MID-CHANNEL SANDBAR	currents 🗸	_	Distance:		Feet	
SIDE CHANNEL	River Side SANDBAR Center	- I				
River Side	Land Side	الأرسنت	FIELD CONDIT		00 0 -	
<b>├</b> ────────────────────────────────────	Calm Water	୍ ~ଧା	Temperati	ıre:	90 F	
[	7		Rain: No			
	/ / / >	<del></del>	Wind: N	5 mph		
			% Cloud:	10%		
OTHER NOTES:						
Right Bank. Unattached, mediur	n-size sand bar, r	no tracks or other dis	turbance. Most l	birds res	sting at	
waterline but 18 sitting inland on						
	D. Deville Co	ا ۱۸۷ - ۱۸۰۰ ا	anaa Duuraani''		MO side	е
OBSERVERS:		ılkes, K. Jones, W. J	ones, Rumancik			
RIVER GAGE READING:		thersville	=	17.2		
	(Gage	Location)		(Eleva	ition)	

			FLY [	□ BOAT ✓
SPECIES: Interior Least Tern (	Sternula antillaru	m athalassos)		
DATE: 7/26/2008 TII	ME OF DAY:	17:30	RIVER MILE	846.3
LOCALITY: Lake	TN	_ SITE NAME:	Opp. Caruthe	ersville Dikes
County/Parish	State		NUMBERS SIGHT	ED:
WHERE OITER A 1 17 1	00.40000			25
WHERE SITED: Latitude:			_	-
Longitude:	89.64358		Eggs:	
Approximate Distance to Water:		Feet		0
			Chicks:	No
<u>IN FLIGHT</u> Over Sandbar <b>✓</b>	ON GROUND O	n Nest Area	SUBSTRATE:	
✓ / Over Water ✓	On R	esting Area 🔽	Sand:	
Calm Water		Z /	Gravel:	
Land Side 🔲		$\sim$	Debris:	
Center . Center . Channel Side .	MID-CHANNE		VEGETATION:	
		- →	Type: Willow	s/Cottonwoods
MID-CHANNEL SANDBAR	Currents  River Side	<b>≥</b>	Distance:	Feet
SIDE CHANNEL	SANDBAR Center Land Side		FIELD CONDITION	N:
River Side	Calm Water	~ :1	Temperature:	90 <sup>O</sup> F
77777	777		Rain: No	
	′ ′ ′ /	<del></del>	Wind: N5	mph
			% Cloud: 10	) %
OTHER NOTES:			_	
Left Bank. Very small (2-3 acre	s) attached har to F	Blaker Towhead with	hirds at waterline o	unly No signs of
disturbance.		siantor rounioad unit	ondo at waterinio o	y. 140 o.g.10 o.
				TN side
OBSERVERS:	R. Davin, Fow	lkes, K. Jones, W. J	ones, Rumancik	
RIVER GAGE READING:	Carut	hersville	=	17.2 R
	(Gage	Location)	(1	Elevation)

FLY BOAT 🗸 SPECIES: Interior Least Tern (Sternula antillarum athalassos) DATE: 7/26/2008 TIME OF DAY: 17:55 RIVER MILE 836.0 LOCALITY: Dyer TN SITE NAME: Island #18 Towhead Dikes County/Parish State NUMBERS SIGHTED: Adults: 188 WHERE SITED: Latitude: 36.10308 Juveniles: Longitude: 89.63945 Eggs: Approximate Distance to Water: 180 Feet 9 Nests: Chicks: Yes Over Sandbar IN FLIGHT ON GROUND On Nest Area 🗸 SUBSTRATE: Over Water • On Resting Area Sand: Calm Water Gravel: Debris: Land Side . Center **VEGETATION:** MID-CHANNEL 🗸 Channel Side Type: Rapid Currents 🗸 **MID-CHANNEL SANDBAR** Distance: Feet River Side 🗸 SIDE CHANNEL SANDBAR Center FIELD CONDITION: Land Side -Temperature: \_\_ 90 <sup>0</sup> F River Side [ Calm Water 🗸 Rain: No Wind: calm % Cloud: 10% OTHER NOTES: Left Bank. Long, narrow (200ft.) attached sand bar to Towhead of Island #18. Colony on upstream point. No tracks or disturbance noted. Two fledglings and 3 Black Terns observed. TN side OBSERVERS: R. Davin, Fowlkes, K. Jones, W. Jones, Rumancik RIVER GAGE READING: 17.2 R Caruthersville (Gage Location)

(Elevation)

			FLY	∕ □ BOA1	Γ
SPECIES: Interior Least Tern (Ste	ernula antillarun	n athalassos)			
DATE: 7/27/2008 TIME	OF DAY:	9:54	RIVER MILE _	830.0	
LOCALITY: Dyer	TN	SITE NAME:	Island	d #20 Dikes	
County/Parish	State		NUMBERS SIG	HTED:	
WHERE SITED: Latitude:	36 0372		Adults:	131	
Longitude:	_		Juveniles:		
			Eggs:	1(1) 10(2) 1	1(3)
Approximate Distance to Water:	50	<u>Feet</u>	Nests:	12	
			Chicks:	No	
		Nest Area 🗸	SUBSTRATE:		
Over Water	/ / On Re	sting Area 🗌	Sand:	<b>✓</b>	
Calm Water			Gravel:	<b>✓</b>	
Land Side ☐ Center ☐		$\sim$	Debris:		
Center Channel Side	MID-CHANNEL		VEGETATION:		
Panid Cur	ronts 🗾	→	Туре:		
MID-CHANNEL SANDBAR	River Side		Distance:	Feet	
SIDE CHANNEL SA	NDBAR Center L		FIELD CONDIT	ION:	
River Side	Calm Water [		Temperatu	ıre: <u>84</u> <sup>0</sup> F	<u> </u>
1 7 7 7 7 t	77		Rain: No		
<b> </b>	. / /-	<del>/ / /</del>	Wind: N	E 5 mph	
			% Cloud:	90%	
OTHER NOTES:					
Right Bank. Small, undulating, dike disturbance. One Bald Eagle, Spo					ed at
Everett Lake.					
ODCEDVEDC.	Royd Foulks	s, K. Jones, W. Jor	noe Pumanaile	MO sid	de
OBSERVERS:	•	•	ico, muillaticik		
RIVER GAGE READING:		ersville	=	17.3 R	
	(Gage L	ocation)		(Elevation)	

FLY ☐ BOAT 🗹

SPECIES:	Interior Least T	ern <i>(Sternula antill</i>	arum athalassos)		
DATE:	7/27/2008	TIME OF DAY: _	10:14	RIVER MILE	827.0
LOCALITY:	Dy	er Tî	N SITE NAME:	Head of Island	I #21 Dikes
County/Parish		Parish Sta	te	NUMBERS SIGHTE	·D.
				Adults:	
WHERE SI	TED: Latit			<del></del>	23
	Long	gitude:		Eggs:	
Approxima	ate Distance to	Water:	Feet		0
				Chicks:	
<u>IN FLIGH</u>	IT Over Sandbar	ON GROUND	On Nest Area	SUBSTRATE:	-
4//	Over Water		On Resting Area 🗸	Sand:	
~	Calm Water		<del></del>	Gravel:	
ہہـ ا	سميـــــ	<u> </u>	~~/	Debris:	
<i>[200</i> ]	Land Side		٦		
و ببره	Channel Side	→ MID-CHA  MID-C	NNEL	VEGETATION:	
		Rapid Currents	7	Type:	
MID-CHAN	INEL SANDBAR	River	Side 🗹	Distance:	Feet
/	SIDE CH	HANNEL SANDBAR Cent	er 🔲 Side - 🔲	FIELD CONDITION	:
, Ri	ver Side 🔲	Calm W		Temperature:	83 <sup>0</sup> F
77	<del></del>	<del>}</del>		Rain: No	
		/ / /	7-7-7-	Wind: <u>NE 5 r</u>	nph
				% Cloud: 90%	, 0
OTHER NO					
Left Bank	. Attached sand	d bar to Island #21. R	esting bar only.		
					TN side
OBSERVE	RS:	Boyd, Fo	owlkes, K. Jones, W. Jo	nes, Rumancik	114 3146
RIVER GAG	GE READING:	C	aruthersville	1	7.3 R
		(Ga	age Location)	– (El	evation)

SPECIES: Interior Least Tern (	Sternula antillarum a	nthalassos)	FLY	□ BOAT ▼
DATE: 7/27/2008 TI		·	RIVER MILE	825.6
DATE 1/21/2000 11	WIE OF BAT.	10.00		020.0
LOCALITY: Dyer	TN	SITE NAME:	Isl	and #21
County/Parish  WHERE SITED: Latitude:     Longitude:  Approximate Distance to Water  IN FLIGHT Over Sandbar  Over Water  Calm Water  Land Side  Center  Channel Side  MID-CHANNEL SANDBAR  Rapid	State  35.9629  89.7103  150 Fi  ON GROUND On Ne On Restin	eet est Area 🔽 ng Area	NUMBERS SIGNAdults: Juveniles: Eggs: Nests: Chicks: SUBSTRATE: Sand: Gravel: Debris:  VEGETATION: Type: Will Distance:  FIELD CONDIT Temperatu Rain: No Wind: N % Cloud:	######################################
				TN side
OBSERVERS:	Boyd, Fowlkes,	K. Jones, W. Jor	nes, Rumancik	
RIVER GAGE READING:	Caruther			17.3 R
	(Gage Loc	cation)		(Elevation)

			FLY	□ BOAT	<b>✓</b>
SPECIES: Interior Least Tern	(Sternula antillaru	m athalassos)			
DATE: 7/27/2008	TIME OF DAY:	11:23	RIVER MILE _	819.0	
LOCALITY: Mississip	oi AR	SITE NAME:	Wrights	s Point Dikes	
County/Par	sh State		NUMBERS SIG	UTED:	
				96	
WHERE SITED: Latitude					
Longitud	le: 89.6346			1(3)	
Approximate Distance to Wat	er: 100	Feet		1	
				No	
<u>IN FLIGHT</u> Over Sandbar ✔	ON GROONE OF	n Nest Area 🗸	SUBSTRATE:		
Over Water 🗸	/ / On R	esting Area	Sand:	<b>✓</b>	
Calm Water	<del></del>	4/.1	Gravel:	<b>✓</b>	
Land Side 🔲	2		Debris:		
Center Channel Side	MID-CHANNE		VEGETATION:		
		- →	Type:		
MID-CHANNEL SANDBAR Rap	oid Currents  River Side		Distance:	Feet	
SIDE CHANN	IEL SANDBAR Center Land Side	<b>☑</b>	FIELD CONDIT	ION:	
River Side 🔲	Calm Water	<u> </u>	Temperatu	re: <u>86 <sup>0</sup> F</u>	
7777	7+7+7-		Rain: No		
	/ / / 7		Wind: N	E 5 mph	
			% Cloud:	100%	
OTHER NOTES:					
Right Bank. Large sand bar a		pt. of wooded island	. Coyote tracks a	and signs of egg	
predation. Fishermen in boat	at the waterline.				
				AR side	
OBSERVERS:	Boyd, Fowlk	es, K. Jones, W. Jor	nes, Rumancik		
RIVER GAGE READING: _	Carut	hersville		17.3 R	
	(Gage	Location)		(Elevation)	

			FLY	′ 🗌	BOAT	<b>✓</b>
SPECIES: Interior Least Tern (Ste	rnula antillarun	athalassos)				
DATE: 7/27/2008 TIME	OF DAY:	11:35	RIVER MILE _	81	1.5	
LOCALITY: Lauderdale	TN	SITE NAME:	Below Ta	mm Bend	Dikes	
County/Parish	State		NUMBERS SIG	HTED:		
WHERE SITED: Latitude:	35 90696		Adults:		39	
Longitude:			Juveniles:			
			Eggs:			
Approximate Distance to Water:		Feet	Nests:		0	
			Chicks:		No	
		Nest Area	SUBSTRATE:			
Over Water 🗸	On Re	sting Area 🗸	Sand:	<b>✓</b>		
Calm Water		$\langle \sqrt{\ }   1 \rangle$	Gravel:	<b>✓</b>		
Land Side 🔲		$\sim$	Debris:			
Center . Channel Side	MID-CHANNEL		VEGETATION:			
Rapid Curre	ante 🗆	→	Type:			
MID-CHANNEL SANDBAR	River Side 🔽		Distance:	F	-eet	
SIDE CHANNEL SAN	NDBAR Center Land Side ✓		FIELD CONDIT	ION:		
River Side	Calm Water		Temperatu	ıre: <u>8</u> 6	<sup>0</sup> F	
77777			Rain: No			
<u> </u>	. / /~	<del></del>	Wind: N	E 5 mph		
			% Cloud:	100%		
OTHER NOTES:						
Left Bank. Large, attached sand banoted.	r. Birds resting	at water line or fish	ing mid-channel.	No distu	rbance	
				7	TN side	)
OBSERVERS:	Boyd, Fowlke	s, K. Jones, W. Jor	nes, Rumancik			
RIVER GAGE READING:	Caruth	ersville		17.3 F	3	
	(Gage L	ocation)		(Elevation	on)	

FLY ☐ BOAT 🗹

SPECIES: Interior Least Tern (S	ternula antillaru	m athalassos)		
DATE: 7/27/2008 TIM	E OF DAY:	11:44	RIVER MILE _	807.3
LOCALITY: <u>Lauderdale</u> County/Parish		SITE NAME:	Nebrasi NUMBERS SIG	
WHERE SITED: Latitude: _ Longitude: _ Approximate Distance to Water:	89.7606	Feet	Juveniles: Eggs:	337 6(1) 4(2) 3(3) 20
MID-CHANNEL SANDBAR	On F	→ →	Chicks: SUBSTRATE: Sand: Gravel: Debris: VEGETATION: Type: Cot Distance: FIELD CONDIT	No N
OTHER NOTES:  Left Bank. High (15 ft.) long, brown revetment. No signs of disturbant.	ad bar of soft san ce.	d. Birds fishing back	chute and oppo	site bank  TN side
OBSERVERS:	Boyd, Fowlk	es, K. Jones, W. Jor	nes, Rumancik	114 5100
RIVER GAGE READING:		thersville Location)	=	17.3 R (Elevation)

			FLY [	BOAT 🕟
SPECIES: Interior Least Tern	(Sternula antillaru	ım athalassos)		
DATE: 7/27/2008 TI	ME OF DAY:	12:42	RIVER MILE	792.0
LOCALITY: Mississippi		SITE NAME:	Ashport Goldus	t Dikes Upper
County/Parish	n State		NUMBERS SIGHTE	≣D:
MUIEDE OITED.	05.7400		Adults:	
WHERE SITED: Latitude:		=		
Longitude	89.8288	=	Eggs:	
Approximate Distance to Water	: 100	Feet	Nests:	18
			Chicks:	No
<u>IN FLIGHT</u> Over Sandbar <b>√</b>	ON GROUND C	n Nest Area 🗸	SUBSTRATE:	
Over Water 🔽	On F	Resting Area	Sand:	
Calm Water 🗌		Z /	Gravel:	
Land Side ☐		$\sim$	Debris:	
Center Channel Side	MID-CHANNI	=	VEGETATION:	
-		<sup>™</sup> →	Type:	
MID-CHANNEL SANDBAR	Currents River Side		Distance:	Feet
SIDE CHANNE	SANDBAR Center Land Side		FIELD CONDITION	l:
River Side 🔲	Calm Water		Temperature:	88 <sup>0</sup> F
<del>7 7 7 7 7 1</del> 7 1 7 1 7 1 7 1 7 1 7 1 7 1	7		Rain: No	
	1 . ( )	<del></del>	Wind: NE 5r	mph
			% Cloud: 100	0%
OTHER NOTES:				
Right Bank. Large, long, clean,	harely emergent	flat sand har hetweer	n dikes No signs of	disturhance
Tilgrit Barik. Large, long, oldan,	barely emergent,	nat sand sar setween	Taikes. 140 signs of	distarbarroc
				AR side
OBSERVERS:	Boyd, Fowl	kes, K. Jones, W. Jor	nes, Rumancik	7 ti t 3ldC
RIVER GAGE READING:		thersville		17.3 R
	(Gage	Location)	= (E	levation)

			FLY	′ □ BOAT 🗹
SPECIES: Interior Least Tern (S	ternula antillaru	m athalassos)		
DATE: 7/27/2008 TIM	E OF DAY:	13:05	RIVER MILE _	791.3
LOCALITY: Mississippi		SITE NAME:	Ashport Go	ldust Dikes Lower
County/Parish	State		NUMBERS SIG	HTED:
WHERE SITED: Latitude:	35.7451		Adults:	22
_	89.8424		Juveniles:	
Approximate Distance to Water:		Foot	Eggs:	
Approximate distance to water.		reet	Nests:	5
			Chicks:	No
<u>IN FLIGHT</u> Over Sandbar <b>✓</b> Over Water <b>✓</b>		n Nest Area 🗸 esting Area 🗌	SUBSTRATE:	
Market 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		esting Area	Sand:	<b>✓</b>
Calm Water 🗌		$\langle \langle \rangle /   \rangle$		✓
Land Side		$\sim$	Debris:	
Channel Side	MID-CHANNE		VEGETATION:	
		* *	Туре:	
MID-CHANNEL SANDBAR Rapid Co	urrents 🗹 Ļ	_	Distance:	Feet
SIDE CHANNELS	River Side  SANDBAR Center	- L		
River Side	Land Side	<b>▼</b>	FIELD CONDIT	
	Calm Water	<u> </u>	Temperatu	ıre: 81 <sup>0</sup> F
<i>                                    </i>	77		Rain: No	
	/ / / ¬	<del></del>	Wind: W	15-25
			% Cloud:	100%
OTHER NOTES:				
Left Bank. Flat, medium height, r	mid-channel sand	har Human and do	ng tracks	
	The origination barra	barr Tramarrana ac	g naono.	
ODSEDVEDS:	Royd Foulk	es, K. Jones, W. Jor	nee Rumanaik	AR side
OBSERVERS:	-		ico, i willaticik	
RIVER GAGE READING:		hersville Location)	=	17.3 R (Elevation)
	(Gage			(LIEVALIOI <i>I)</i>

			FLY	′ □ BOAT	<b>✓</b>
SPECIES: Interior Least Tern (St	ternula antillarun	n athalassos)			
DATE: 7/27/2008 TIME	E OF DAY:	13:39	RIVER MILE _	787.8	
LOCALITY: Lauderdale	TN	_ SITE NAME:	Keyes	Point Dikes	
County/Parish	State		NUMBERS SIG	HTED:	
MUIEDE CITED.	05 71075			85	
WHERE SITED: Latitude:	_				
Longitude:	89.9372		Eggs:		
Approximate Distance to Water:	-	Feet	Nests:	0	
			Chicks:	No	
	ON GROUND On	Nest Area ✓	SUBSTRATE:		
Over Water 🗸	On Re	esting Area	Sand:	<b>✓</b>	
Calm Water			Gravel:		
Land Side 🔲			Debris:		
Center Channel Side	MID-CHANNEL		VEGETATION:		
		→	Type:		
MID-CHANNEL SANDBAR	rrents 🗸	- I	Distance:	Feet	
SIDE CHANNEL S	ANDBAR Center Land Side	<u>. · · }                                </u>	FIELD CONDIT	ION:	
River Side _	Calm Water		Temperatu	ıre: <u>80 <sup>0</sup> F</u>	
77777	77		Rain: Yes	3	
	/ / /-	<del>ادر</del> ر	Wind: W	10 mph	
			% Cloud:	100%	
OTHER NOTES:					
Left Bank. Small (1/2 acre), barel				ony likely flooded	
due to recent river rise. No tracks	or signs of distur	bance. Two Black	rems observed.		
				TN side	
OBSERVERS:	Boyd, Fowlke	es, K. Jones, W. Jor	nes, Rumancik		
RIVER GAGE READING:	Caruth	ersville		17.3 R	
	(Gage I	ocation)	_	(Elevation)	

				FLY	/ □ BOAT 🗹
SPECIES: Interi	ior Least Tern	(Sternula antillaru	ım athalassos)		
DATE: 7/27	7/2008	TIME OF DAY:	13:54	RIVER MILE _	781.5
LOCALITY:	Lauderda County/Pai	le TN rish State	SITE NAME:	Below Pl	um Point Dikes
	County/Fai	isii State		NUMBERS SIG	GHTED:
WHERE SITED:	l atitude	e: 35.6527		Adults:	109
WHERE SHED.		de: 89.8951	_	Juveniles:	
	_	·	_	Eggs:	5(2) 2(3)
Approximate D	istance to Wa	ter: <u>50</u>	Feet	Nests:	7
			1	Chicks:	No
IN FLIGHT (	Over Sandbar	<u>on ancone</u>	n Nest Area 🗸	SUBSTRATE:	
411	Over Water	On F	Resting Area	Sand:	<b>✓</b>
Calm	Water	·		Gravel:	
	I Side 🔲	<b>5</b>		Debris:	
1 L	enter	MID-CHANNI		VEGETATION:	
			→	Type: Cot	tonwood/willows
MID-CHANNEL S	SANDBAR	pid Currents 🔽 River Side		Distance:	100 Feet
	SIDE CHAN	NEL SANDBAR Center Land Side		FIELD CONDIT	TION:
River Si	de 🔲	Calm Water	~ · · · ·	Temperati	ure: 81 <sup>0</sup> F
777	<del>/ / / /</del>	777		Rain: No	
		/ / / 7	<del></del>	Wind: W	/ 10 mph
				% Cloud:	100%
OTHER NOTES					
Left Bank. Sm	nall (2 acre), hi	gh, clean, unattachec wnstream. No distrub		bar, probably du	ie to newly
					TN side
OBSERVERS:		Boyd, Fowl	kes, K. Jones, W. Jor	nes, Rumancik	
RIVER GAGE R	EADING:	Caru	thersville		17.3 R
		(Gage	Location)		(Elevation)

FLY ☐ BOAT 🗹

SPECIES:	Interior Least Te	ern <i>(Sternula antilla</i>	rum athalassos)		
DATE:	7/27/2008	TIME OF DAY:	14:20	RIVER MILE	778.0
LOCALITY	: Laudei	rdale TN Parish State		Sunrise Tow	head Chute
	County/i	ansii State	•	NUMBERS SIGHT	ED:
WHERE SI	TED: Latitu	ude:		Adults:	120
		itude:		Juveniles:	
<b>A</b>				Eggs:	
Approxim	ate Distance to V	Vater:	<u>Feet</u>	Nests:	0
				Chicks:	No
<u>IN FLIG</u> E	<del></del>	<u>ON GROOND</u>	On Nest Area	SUBSTRATE:	
$\angle \sqrt{2}$	Over Water	✓ / / or	Resting Area	Sand:	
	Calm Water	<u> </u>	<b>≺</b> / .ll	Gravel:	
7	Land Side $\square$	<u>&gt;</u>		Debris:	
	Center 🔲	- AMB CHAN		VEGETATION:	
	Channel Side	MID-CHANI	<u>~~  </u>	Type:	
MID-CHAN	NNEL SANDBAR	Rapid Currents River Sic		Distance:	
1	SIDE CH	ANNEL SANDBAR Center Land Sid		FIELD CONDITION	l:
	iver Side 🔲	Calm Wat	~ · · · · ·	Temperature:	81 <sup>O</sup> F
[77		47474		Rain: No	
		/ / /~	7-7-7	Wind: calm	
<u> </u>				% Cloud: 10	0%
OTHER NO		ing along 3 mile stretcl	h above Randolph Dik	es.	
OBSERVE	RS:	Boyd, Fow	rlkes, K. Jones, W. Jor	nes, Rumancik	
RIVER GAG	GE READING:	N	1emphis		10.4 R
		(Gag	e Location)	=(E	Elevation)

				FLY	′ □ BOAT 🗹
SPECIES:	Interior Least Te	ern <i>(Sternula antillaru</i>	ım athalassos)		
DATE:	7/27/2008	TIME OF DAY:	14:40	RIVER MILE _	771.0
LOCALITY	∕:Tipto	on TN	SITE NAME:	Ranc	dolph Dikes
	County/	Parish State			
				NUMBERS SIG	
WHERE S	SITED: Latitu	ude: <u>35.5259</u>	_		478
	Long	itude: <u>89.8987</u>	_		4(0) 0(0)
Approxin	nate Distance to V	Water: 50	Feet		1(2) 2(3)
1-1-					20
	0 0 "			Chicks:	No
<u>IN FLIG</u>		<u>on anomb</u>	On Nest Area	SUBSTRATE:	
$\angle$	Over Water	On I	Resting Area	Sand:	<b>✓</b>
	Calm Water 🗸		<b>∠</b> / .∥	Gravel:	<b>✓</b>
1	Land Side 🗹	$\geq$		Debris:	
	Center 🗹 Channel Side 🗹	MID-CHANN		VEGETATION:	
~		A MID-OTATIVE	<sup>≒</sup> →	Type: <u>Gra</u>	SS
MID-CHA	NNEL SANDBAR	Rapid Currents	_	Distance:	50 Feet
/	" ~ C	River Side		Distance.	
ر اا	SIDE CH	ANNEL SANDBAR Center Land Side	¦.∵` <b>`</b>	FIELD CONDIT	ION:
_/:	River Side 🗌	Calm Water		Temperatu	ıre: <u>82 <sup>0</sup> F</u>
7	<del>////</del> /	+7+7+-		Rain: No	
		///7		Wind: ca	alm
				% Cloud:	100%
OTHER N	OTES:				
_		oil bor 15 ft in clayetion	with ground and mus	datana agaratian	a alana trailar dika
		ooil bar 15 ft. in elevation ans and dogs camping		usione accretions	s along trailer dike.
					TN side
OBSERVE	ERS:	Boyd, Fowl	kes, K. Jones, W. Jor	nes, Rumancik	
RIVER GA	GE READING:	Me	emphis		10.4 R
		(Gage	Location)	_	(Elevation)

FLY

BOAT 🗸

SPECIES: Interior Least Tern (Sternula antillarum athalassos) DATE: 7/27/2008 TIME OF DAY: 15:01 RIVER MILE 766.5 LOCALITY: \_\_\_\_\_ Tipton \_\_\_\_ TN\_\_\_ SITE NAME: Relow Richardson Landing Dikes Uppe County/Parish State NUMBERS SIGHTED: Adults: 1 WHERE SITED: Latitude: Juveniles: Longitude: Eggs: Approximate Distance to Water: Feet 0 Nests: Chicks: No Over Sandbar IN FLIGHT ON GROUND On Nest Area SUBSTRATE: Over Water • On Resting Area Sand: Calm Water Gravel: Debris: Land Side Center **VEGETATION:** Channel Side MID-CHANNEL ✓ Type: Rapid Currents MID-CHANNEL SANDBAR Distance: Feet River Side SIDE CHANNEL SANDBAR Center FIELD CONDITION: Land Side River Side [ Temperature: 81 °F Calm Water Rain: No Wind: calm % Cloud: 100% OTHER NOTES: One tern in transit mid-channel. TN side Boyd, Fowlkes, K. Jones, W. Jones, Rumancik OBSERVERS: RIVER GAGE READING: Memphis 10.4 R (Gage Location) (Elevation)

			FLY	/ 🗌 E	BOAT	<b>✓</b>
SPECIES: Interior Least Tern (S	ternula antillaru	m athalassos)				
DATE: 7/27/2008 TIM	E OF DAY:	15:08	RIVER MILE _	760	3.0	
LOCALITY: Tipton		SITE NAME:	selow Richardso	on Landing	Dikes	Lowe
County/Parish	State		NUMBERS SIG	HTED:		
WHERE SITED: Latitude:	35.506		Adults:		54	
	90.0076		Juveniles:			
Approximate Distance to Water:	50	Feet	Eggs:			
Approximate distance to water.		<u> </u>	Nests:			
IN FLIGHT Over Sandbar			Chicks:		10	
IN FLIGHT Over Sandbar ✓ Over Water ✓		n Nest Area 🗸 esting Area 🗌	SUBSTRATE:			
		esting Area	Sand:	<b>✓</b>		
Calm Water 🗌		$\leq$ / $\parallel$	Gravel:	<b>✓</b>		
Land Side $\square$		$\sim$	Debris:			
Center Channel Side	MID-CHANNE		VEGETATION:			
			Type:			
MID-CHANNEL SANDBAR Rapid Co	rrents		Distance:	F	eet	
SIDE CHANNEL S	ANDBAR Center	<b>*</b>	FIELD CONDIT	ΓΙΩΝΙ·		
River Side _	Land Side			ure: <u>81</u>	° F	
77777	7		Rain: No			
			Wind: c	alm		
			% Cloud:	100%		
OTHER NOTES:						
Left Bank. Small, clean, untattch	ed, flat point bar.	No signs of disturba	ance.			
		<u> </u>				
					'NI alala	
OBSERVERS:	Boyd, Fowlk	es, K. Jones, W. Jor	nes, Rumancik		N side	
RIVER GAGE READING:	-	mphis		10.4 R		
		Location)	=	(Elevatio		

DATE: 7/27/2008 TIME OF DAY: 15:35 RIVER MILE 760.5  LOCALITY: Tipton TN SITE NAME: Cedar Point  County/Parish State  NUMBERS SIGHTED:  Adults: 140  Juveniles: Longitude: 90.0018  Approximate Distance to Water: 500 Feet  NELIGHT Over Sandbar On Resting Area Or Resting Area Or Channel Side Or Center Or Channel Side Or Center Or Channel Side Or Chann				FLY	Y □ BOAT 🗹
LOCALITY:	SPECIES: Interior Least Tern	(Sternula antillarur	n athalassos)		
County/Parish State  NUMBERS SIGHTED:  Adults: 140  Juveniles:	DATE: 7/27/2008 TI	ME OF DAY:	15:35	RIVER MILE	760.5
NUMBERS SIGHTED:  Adults: 140  Juveniles:	LOCALITY: Tipton	TN	_ SITE NAME:	Се	edar Point
Approximate Distance to Water:    Solidar   So	County/Parisl	n State		NUMBERS SIG	GHTED:
Approximate Distance to Water: 500 Feet	WHERE SITED: Latitude:	35 4355		Adults:	140
Approximate Distance to Water: 500 Feet Nests: 4  Chicks: Yes  SUBSTRATE:  Sand: Gravel: Debris: VEGETATION:  Type: Willows  Distance: 100 Feet  Side CHANNEL SANDBAR Center Calm Water Cal				Juveniles:	
Ness: 4 Chicks: Yes  INFLIGHT Over Sandbar On GROUND On Nest Area On Resting A	_			Eggs:	2(2) 2(3)
SUBSTRATE:    Over Water   On Resting Area   Substrate:   Calm Water   On Resting Area   Gravel:   Debris:   Debris:   On Resting Area   On Resting Area   Sand:   On Resting Area   On Resting	Approximate Distance to Water	500	<u>Feet</u>	Nests:	4
Over Water On Resting Area Gravel:  Calm Water Debris:  Center Debris:  Center Debris:  Center Debris:  No Wild: Calm Water Debris:  Side CHANNEL SANDBAR Center Debris:  FIELD CONDITION:  Temperature:  Rain:  No  Wind:  Calm Water Mind:  Rapid Currents Perimeter count yields 4 nests, but many chicks observed up to 1 wk. old. No signs of disturbance. One Small Mouth Buffalo fingerling.  AR side  OBSERVERS:  Boyd, Fowlkes, K. Jones, W. Jones, Rumancik				Chicks:	Yes
Calm Water Gravel: Debris: Debris: Debris: Willows    Center	<u></u>			SUBSTRATE:	
Debris: Debris	Over Water	/ On Re	esting Area	Sand:	$\checkmark$
Center   VEGETATION: Type: Willows  Distance: 100 Feet    No   No	Calm Water		$\langle \langle \rangle /   \rangle$	Gravel:	$\checkmark$
Center   VEGETATION: Channel Side   MID-CHANNEL   Type: Willows    MID-CHANNEL SANDBAR   Rapid Currents   Distance: 100   Feet	Land Side 🗹		$\sim$	Debris:	$\checkmark$
Type: Willows  Distance: 100 Feet  River Side   FIELD CONDITION:  Temperature: 81 ° F  Rain: No  Wind: calm  % Cloud: 100%  OTHER NOTES:  Right Bank. Long, broad, large, attached at least to wooded island with large back chute. Perimeter count yields 4 nests, but many chicks observed up to 1 wk. old. No signs of disturbance. One Small Mouth Buffalo fingerling.  AR side  OBSERVERS: Boyd, Fowlkes, K. Jones, W. Jones, Rumancik	Center .	MID CHANNE		VEGETATION:	<u>:</u>
Distance: 100 Feet    River Side	/		<sup>≒</sup>	Type: Wil	lows
River Side	MID-CHANNEL SANDBAR Rapid	Currents 🗸		Distance:	100 Feet
River Side		1 ' !	∃;∕ ∥		
Rain: No Wind: calm % Cloud: 100%  OTHER NOTES:  Right Bank. Long, broad, large, attached at least to wooded island with large back chute. Perimeter count yields 4 nests, but many chicks observed up to 1 wk. old. No signs of disturbance. One Small Mouth Buffalo fingerling.  AR side  OBSERVERS:  Boyd, Fowlkes, K. Jones, W. Jones, Rumancik		L SANDBAR Center L	<u> </u>		
Wind: calm % Cloud: 100%  OTHER NOTES:  Right Bank. Long, broad, large, attached at least to wooded island with large back chute. Perimeter count yields 4 nests, but many chicks observed up to 1 wk. old. No signs of disturbance. One Small Mouth Buffalo fingerling.  AR side  OBSERVERS:  Boyd, Fowlkes, K. Jones, W. Jones, Rumancik	River Side	Calm Water		Temperati	ure: 81 F
Wind: calm % Cloud: 100%  OTHER NOTES:  Right Bank. Long, broad, large, attached at least to wooded island with large back chute. Perimeter count yields 4 nests, but many chicks observed up to 1 wk. old. No signs of disturbance. One Small Mouth Buffalo fingerling.  AR side  OBSERVERS:  Boyd, Fowlkes, K. Jones, W. Jones, Rumancik		7		Rain: No	
OTHER NOTES:  Right Bank. Long, broad, large, attached at least to wooded island with large back chute. Perimeter count yields 4 nests, but many chicks observed up to 1 wk. old. No signs of disturbance. One Small Mouth Buffalo fingerling.  AR side  OBSERVERS:  Boyd, Fowlkes, K. Jones, W. Jones, Rumancik		///	7-7-1	Wind: c	alm
Right Bank. Long, broad, large, attached at least to wooded island with large back chute. Perimeter count yields 4 nests, but many chicks observed up to 1 wk. old. No signs of disturbance. One Small Mouth Buffalo fingerling.  AR side  OBSERVERS:  Boyd, Fowlkes, K. Jones, W. Jones, Rumancik				% Cloud:	100%
Right Bank. Long, broad, large, attached at least to wooded island with large back chute. Perimeter count yields 4 nests, but many chicks observed up to 1 wk. old. No signs of disturbance. One Small Mouth Buffalo fingerling.  AR side  OBSERVERS:  Boyd, Fowlkes, K. Jones, W. Jones, Rumancik	OTHER NOTES:				
yields 4 nests, but many chicks observed up to 1 wk. old. No signs of disturbance. One Small Mouth Buffalo fingerling.  AR side  OBSERVERS:  Boyd, Fowlkes, K. Jones, W. Jones, Rumancik		, attached at least to	o wooded island with	ı large back chut	te. Perimeter count
OBSERVERS: Boyd, Fowlkes, K. Jones, W. Jones, Rumancik	yields 4 nests, but many chicks				
OBSERVERS: Boyd, Fowlkes, K. Jones, W. Jones, Rumancik	Burraio iirigeriirig.				
	ORSEDVEDS:	Royd Fowler	as K Jones W Jor	nes Rumancik	AR side
DIVED OAGE BEADING Manual 1		•		ioo, rumanoik	10.45
RIVER GAGE READING: Memphis = 10.4 R  (Gage Location) (Elevation)	RIVER GAGE READING:		•	=	

FLY

BOAT 🗸

SPECIES: Interior Least Tern (Sternula antillarum athalassos) DATE: 7/27/2008 TIME OF DAY: 15:55 RIVER MILE 757.5 LOCALITY: \_\_\_\_\_ Tipton \_\_\_\_ TN\_\_\_ SITE NAME: Densford Dikes County/Parish State NUMBERS SIGHTED: Adults: 18 WHERE SITED: Latitude: Juveniles: Longitude: Eggs: Approximate Distance to Water: Feet Nests: Chicks: No Over Sandbar IN FLIGHT ON GROUND On Nest Area SUBSTRATE: Over Water • On Resting Area Sand: Calm Water Gravel: Debris: Land Side Center **VEGETATION:** Channel Side MID-CHANNEL Type: Rapid Currents MID-CHANNEL SANDBAR Distance: Feet River Side SIDE CHANNEL SANDBAR Center FIELD CONDITION: Land Side River Side [ Temperature: 81 °F Calm Water Rain: No Wind: calm % Cloud: 100% OTHER NOTES: Left Bank. Terns fishing above dikes and along revetment. TN side OBSERVERS: Boyd, Fowlkes, K. Jones, W. Jones, Rumancik RIVER GAGE READING: Memphis 10.4 R (Gage Location) (Elevation)

			FLY	′ □ BOAT 🗹
SPECIES: Interior Least Tern	(Sternula antillarui	n athalassos)		
DATE: 7/27/2008	TIME OF DAY:	16:02	RIVER MILE _	755.0
LOCALITY: Shelby	TN	_ SITE NAME:	Der	nsford Bar
County/Pa	rish State		NUMBERS SIG	iHTED:
WHERE SITED: Latitude	e: 35.3902		Adults:	75
	ide: 90.0703		Juveniles:	
		<b>.</b>	Eggs:	
Approximate Distance to Wa	ater: 500	<u>Feet</u>	Nests:	8
			Chicks:	No
IN FLIGHT Over Sandbar	ON GROOME OF	n Nest Area 🗸	SUBSTRATE:	
Over Water	On R	esting Area	Sand:	<b>✓</b>
Calm Water <b>✓</b>		47.1	Gravel:	
Land Side 🗹	<u>``</u>	$\sim$	Debris:	
Center . ✓ Channel Side ✓	MID-CHANNE		VEGETATION:	
,	<i>-</i>	→	Type: Will	lows/Cottonwoods
MID-CHANNEL SANDBAR	apid Currents River Side		Distance:	1000 Feet
SIDE CHAN	INEL SANDBAR Center [		FIELD CONDIT	ION:
River Side □	Calm Water		Temperatu	ıre: 81 <sup>0</sup> F
77777	777		Rain: No	
	1 . 7	<del></del>	Wind: ca	alm
			% Cloud:	100%
OTHER NOTES:				
Left Bank. Long, high (10 ft. amidst patches of gravel. M				
				TN side
OBSERVERS:	Boyd, Fowlk	es, K. Jones, W. Jor	nes, Rumancik	
RIVER GAGE READING:	Me	mphis		10.4 R
	(Gage	Location)		(Elevation)

				FLY [	□ BOAT ✓
SPECIES: Interior Lea	st Tern <i>(Stern</i>	ula antillarum	athalassos)		
DATE: 7/27/2008	TIME OF	- DAY:	16:20	RIVER MILE	743.7
LOCALITY:	-	TN State	SITE NAME:	Above Loosa	hatchie Dikes
	•			NUMBERS SIGHT	ΓED:
WHERE SITED:	Latitude:	35.2515			38
	Longitude:	0.09205			
Approximate Distance	e to Water:	1	Feet		
				Nests:	
				Chicks:	No
III III III III III III III III III II			lest Area	SUBSTRATE:	
Over V	Vater     /	On Res	ting Area 🗸	Sand: 🗸	
Calm Water [			_/ .	Gravel:	
Land Side				Debris:	
Center	<u> </u>		]	VEGETATION:	
Channel Side	_ A	MID-CHANNEL	□ →	Type:	
MID-CHANNEL SANDBA	Rapid Current	s, 🗸	·	туре	
A		River Side 🗸		Distance:	Feet
<u>SI</u>	DE CHANNEL SAND	: BAR Center ✓		FIELD CONDITIO	NI:
River Side 🗔		Land Side 🗸	<u> </u>	Temperature	
┣ <del>-╱┈</del> ╭┈┊		Calm Water	, TY		. 01 1
	-/'/7		·	Rain: No	
	,	' / 7	<del></del>	Wind: <u>calm</u>	1
				% Cloud: 10	00%
OTHER NOTES:					
Left Bank. Small, lov	u haralu avnasas	l bar recting o	alv		
Leit Balik. Siliali, lov	v, barely exposed	r bar, resuring or	пу.		
					TN side
OBSERVERS:		Boyd, Fowlkes	s, K. Jones, W. Jor	nes, Rumancik	114 5100
RIVER GAGE READIN	IG:	Mem	phis		10.4 R
		(Gage Lo	ocation)	_ (1	Elevation)

			FL`	Y 🗌	BOAT	<b>✓</b>
SPECIES: Interior Least Tern (Ste	ernula antillarum	athalassos)				
DATE: 7/27/2008 TIME	OF DAY:	16:36	RIVER MILE		740.5	
LOCALITY: Crittenden	AR	SITE NAME:	Sycamo	re Chut	e Dikes	
County/Parish	State		NUMBERS SIG	GHTED:		
WHERE SITED: Latitude:	35.20767		Adults:		32	
Longitude:			Juveniles:			
Approximate Distance to Water:		Feet	Eggs:			
Approximate distance to water.		1 001	Nests:			
IN FLIGHT Over Sandbar ✓			Chicks:	-	No	
IN FLIGHT Over Sandbar ✓ Over Water ✓		Nest Area 🗸 sting Area	SUBSTRATE:			
		/ ,	Sand:	✓		
Calm Water		$\langle \langle   \rangle  $	Gravel:	✓		
Land Side 🔲		$\sim$	Debris:	✓		
Center Channel Side	MID-CHANNEL		VEGETATION	:		
		<u></u> →	Type: <u>Ha</u>	rdwoods	3	
MID-CHANNEL SANDBAR Rapid Cur	River Side <b>▼</b>		Distance:	1000	Feet	
SIDE CHANNEL SA	NDBAR Center Land Side		FIELD CONDI	ΓΙΟΝ:		
River Side	Calm Water	~ :1	Temperat	ure:	81 <sup>0</sup> F	
7777171	77	<u> </u>	Rain: No	)		
<u> </u>	. / /~	<del></del>	Wind: <u>c</u>	alm		
			% Cloud:	100%		
OTHER NOTES:						
Right Bank. Medium size gravel be and undulating with scattered lignit				dike field	I. Attache	ed
					AR side	
OBSERVERS:	Boyd, Fowlke	s, K. Jones, W. Jor	nes, Rumancik		AI I SIUE	
RIVER GAGE READING:	Mem	nphis		10.4	4 R	
	(Gage L	ocation)	=	(Eleva	ation)	

			FLY	∕ □ BOAT	<b>✓</b>
SPECIES: Interior Least Tern (St	ernula antillarun	n athalassos)			
DATE: 7/28/2008 TIME	OF DAY:	9:10	RIVER MILE _	733.0	
LOCALITY: Crittenden	AR	SITE NAME:	Engine	eer Bar Dikes	
County/Parish	State		NUMBERS SIG	HTED:	
WHERE SITED: Latitude:	35 12323		Adults:	18	
Longitude:			Juveniles:		
Approximate Distance to Water:		Feet	Eggs:		
Approximate distance to water.		T eet	Nests:	0	
IN FLIGHT Over Sandbar ✓			Chicks:	No	
<u>IN FLIGHT</u> Over Sandbar <b>✓</b> Over Water <b>✓</b>		Nest Area ☐ sting Area ✔	SUBSTRATE:		
Market 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1		/ /	Sand:	<b>✓</b>	
Calm Water	~	$\langle \langle \rangle  $	Gravel: Debris:		
Land Side		$\sim$	Debris.		
Center Channel Side	MID-CHANNEL	. 🗆 📗	VEGETATION:		
Rapid Cur	rents	→	Type: Wil	lows	
MID-CHANNEL SANDBAR	River Side		Distance:	800 Feet	
SIDE CHANNEL SA	ANDBAR Center L		FIELD CONDIT	ION:	
River Side 🔽	Calm Water [		Temperatu	ıre: <u>79 <sup>0</sup> F</u>	
77771	77		Rain: No		
· ·	′′/~	<del>///</del>	Wind: N	E 3mph	
			% Cloud:	10	
OTHER NOTES:					
Right Bank. Low, flat, medium size One Cattle Egret and sand piper (s		bar with most terns	resting at waterl	ine. Resting only.	
OBSERVERS:	Boyd. Fowlke	s, K. Jones, W. Jor	nes. Rumancik	AR side	
RIVER GAGE READING:	• •	nphis	,	10.6 R	
		ocation)	=	(Elevation)	

			FLY	□ BOAT ✓
SPECIES: Interior Least Tern (St	ernula antillarun	n athalassos)		
DATE: 7/28/2008 TIME	OF DAY:	9:23	RIVER MILE	729.5
LOCALITY: Shelby	TN	SITE NAME:	Vice Preside	ents Island #46
County/Parish	State		NUMBERS SIGH	TED:
WHERE SITED: Latitude:	35.1264		Adults:	25
	90.1594		Juveniles:	
			Eggs:	
Approximate Distance to Water:		Feet	Nests:	0
			Chicks:	No
_		Nest Area	SUBSTRATE:	
Over Water/	On Re	sting Area 🗸	Sand:	
Calm Water			Gravel:	
Land Side  Center		$\sim$	Debris:	
Channel Side 🗹	MID-CHANNEL	. 🗆 . 📗	VEGETATION:	
Rapid Cur	rranta 🗆	→	Туре:	
MID-CHANNEL SANDBAR	River Side		Distance: _	Feet
SIDE CHANNEL SA	NDBAR Center L		FIELD CONDITIO	ON:
River Side	Calm Water [		Temperature	e: <u>81 <sup>0</sup> F</u>
77771	77		Rain: No	
· ·		<del>7-7-1</del>	Wind: <u>calr</u>	<u>n</u>
			% Cloud: <u>1</u>	0
OTHER NOTES:				
Left Bank. Very small, barely expo	sed sand bar les	ss than a few hundr	ed square feet Re	estina only
				gy.
ODOEDVEDO.	Povd Foulle	o K Jones W. Jar	non Pumanaile	TN side
OBSERVERS:	-	s, K. Jones, W. Jor	ies, numancik	
RIVER GAGE READING:		nphis	=	10.6 R
	(Gage L	.ocation)		(Elevation)

				FLY	BOAT	<b>✓</b>
SPECIES	: Interior Least Ter	n <i>(Sternula antillaru</i>	m athalassos)			
DATE:	7/28/2008	TIME OF DAY:	9:35	RIVER MILE _	725.0	
LOCALIT	Y: Crittend	den AR	SITE NAME:	Dismal	Point Dikes	
	County/P	arish State		NUMBERS SIGI	HTFD:	
WILEDE (	NTED Lati	ds 0004			18	
WHERES		de: <u>35.0691</u>		<del>-</del>		
	Longi	tude: <u>90.1838</u>		Eggs:		
Approxir	nate Distance to W	ater:	Feet	Nests:		
				Chicks:	No	
<u>IN FLIG</u>	<del></del>	<u>en ancend</u> 0	n Nest Area 🗌	SUBSTRATE:		
$\angle$	Over Water	On F	Resting Area 🗸	Sand:	<b>✓</b>	
	Calm Water		4/ 』	Gravel:	✓	
7-7	Land Side $\square$	<u> </u>		Debris:		
	Center Channel Side	MID-CHANNE		VEGETATION:		
`		•	<sup></sup> →	Type:		
MID-CHA نر	ANNEL SANDBAR	Rapid Currents		Distance:	Feet	
	SIDE CHA	NNEL SANDBAR Center Land Side		FIELD CONDITI	ON:	
[_ <i>]</i>	River Side 🔲	Calm Water	~ :1	Temperatur	re: 82 ° F	
7	7777	+7+7+		Rain: No		
		///7	<del></del>	Wind: SV	V 5 mph	
<u> </u>				% Cloud:	20	
OTHER N	OTES:			-		
		r attached to wooded is	sland One hundred	sand niners along	ı water line. No	
	disturbance.	i allacito i woodoa le	maria. Ono nanaraa	sana piporo along	water iii o. 140	
					AR side	
OBSERVE	ERS:	Boyd, Fowlk	es, K. Jones, W. Jor	ies, Kumancik		
RIVER GA	AGE READING:		mphis	=	10.6 R	
		(Gage	Location)		(Elevation)	

				FLY L	」 BOAT ▼
SPECIES: Interior	Least Tern (Stern	ula antillarum a	nthalassos)		
DATE: 7/28/2	008 TIME OI	- DAY:	9:59	RIVER MILE	716.0
LOCALITY:	Desoto		SITE NAME:	Cow Island	Bend Upper
	County/Parish	State		NUMBERS SIGHT	
WHERE SITED:	Latitude:	35.0074		Adults:	
	Longitude:	90.2937		Eggs:	1(2)
Approximate Dist	tance to Water:	400 F	eet		14
				Chicks:	
int i Elaiti	over Water   ater   de  ter  Side   Rapid Current	On Resti	4	SUBSTRATE:  Sand:  Gravel:  Debris:  VEGETATION:  Type:  Distance:  FIELD CONDITION  Temperature:  Rain:  No  Wind:  SW 5	Feet N: 83 OF
	, flat, unattached san	d bar (300 x 900	ft.) below Coaho	% Cloud: <u>20</u> oma Dikes. Scattere	
with no signs of o	disturbance.				
					MC aida
OBSERVERS:		Boyd, Fowlkes.	K. Jones, W. Jor	nes, Rumancik	MS side
RIVER GAGE REA	ADING:	Memp		,	10.6 R
THE LIT GAGE HEA		(Gage Loc		=	Elevation)
		, 5	,	\-	,,

FLY

BOAT 🗸

SPECIES: Interior Least Tern (Sternula antillarum athalassos) DATE: 7/28/2008 TIME OF DAY: 10:17 RIVER MILE 714.5 LOCALITY: Desoto MS SITE NAME: Cow Island Bend Lower County/Parish State NUMBERS SIGHTED: 8 Adults: WHERE SITED: Latitude: Juveniles: Longitude: Eggs: Approximate Distance to Water: Feet Nests: Chicks: No Over Sandbar IN FLIGHT ON GROUND On Nest Area SUBSTRATE: Over Water On Resting Area Sand: Calm Water Gravel: **~** Debris: Land Side . Center **VEGETATION:** Channel Side MID-CHANNEL Type: Rapid Currents MID-CHANNEL SANDBAR Distance: Feet River Side SIDE CHANNEL SANDBAR Center FIELD CONDITION: Land Side -River Side [ Temperature: \_\_\_ 83 <sup>O</sup>F Calm Water Rain: No Wind: SW 5 mph % Cloud: 20 OTHER NOTES: Left Bank. Small, attached point bar (200 x 400ft.) below Cow Island Bend. Resting only. MS side OBSERVERS: Boyd, Fowlkes, K. Jones, W. Jones, Rumancik RIVER GAGE READING: Memphis 10.6 R (Gage Location) (Elevation)

			FLY	BOAT ✓
SPECIES: Interior Least Tern	Sternula antillarum	athalassos)		
DATE: 7/28/2008 TI	ME OF DAY:	10:45	RIVER MILE	706.5
LOCALITY: Desoto	MS	SITE NAME:	Norfolk St	ar Revetment
County/Parish WHERE SITED: Latitude:	State34.8981		_	108
Longitude	90.2575			1(2)
Approximate Distance to Water	: 150	<u>Feet</u>	Nests:	1 No
MID-CHANNEL SANDBAR		sting Area	SUBSTRATE: Sand: Gravel: Debris: VEGETATION: Type: Distance: FIELD CONDITION Temperatur Rain: No	Feet ON: e: 85 OF
OTHER NOTES:  Left Bank. Small (700 x 400ft.) by Army Corps of Engineers MV				
OBSERVERS:	Boyd Fowlke	s, K. Jones, W. Jor	nes. Rumancik	MS side
RIVER GAGE READING:	Mem	phis	=	10.6 R
	(Gage L	ocation)		(Elevation)

			FLY	BOAT	<b>✓</b>
SPECIES: Interior Least Tern (\$	Sternula antillarui	m athalassos)			
DATE: 7/28/2008 TIM	ME OF DAY:	11:14	RIVER MILE _	705.0	
LOCALITY: Crittenden	AR	_ SITE NAME:	Seyp	pel Dikes	
County/Parish	State		NUMBERS SIGI	HTED:	
WUEDE CITED	04.0044		Adults:		
WHERE SITED: Latitude:			•	20	
Longitude:	90.27175		Eggs:		
Approximate Distance to Water:	75	Feet	Nests:	18	
			Chicks:	Yes	
<u>IN FLIGHT</u> Over Sandbar <b>⊻</b>	ON GROUND Or	n Nest Area 🗸	SUBSTRATE:		
Over Water	On R	esting Area	Sand:	✓	
Calm Water		47.1	Gravel:		
Land Side		$\sim$	Debris:		
Center Channel Side	MID-CHANNE		VEGETATION:		
		→	Туре:		
MID-CHANNEL SANDBAR	Currents 🗸 River Side	- 1	Distance:	Feet	
SIDE CHANNEL	SANDBAR Center Land Side	<u>~</u> · · · · · · · · · · · · · · · · · · ·	FIELD CONDITI	ON:	
River Side 🗌	Calm Water	~~. : ·	Temperatu	re: 85 ° F	
77777	77		Rain: No		
	′ ′ ′ ′	<del></del>	Wind: SV	V 5 mph	
			% Cloud:	10	
OTHER NOTES:					
Right Bank. Long, low, flat sand	bar (600ft X 1 mil	e long) with birds sit	ting along high ce	enter of bar No	
disturbance noted.	(00011171 11111		g a.ogg		
ODOEDVEDO:	Poud Faville	oo K Jones W Jee	non Pumanaik	AR side	
OBSERVERS:	-	es, K. Jones, W. Jor	ies, muiliancik		
RIVER GAGE READING:		mphis	=	10.6 R	
	(Gage	Location)		(Elevation)	

FLY BOAT 🗸 SPECIES: Interior Least Tern (Sternula antillarum athalassos) DATE: 7/28/2008 TIME OF DAY: 11:25 RIVER MILE 704.4 \_\_ AR LOCALITY: Crittenden SITE NAME: Pickett Dikes County/Parish State NUMBERS SIGHTED: Adults: 107 WHERE SITED: Latitude: 34.8757 Juveniles: Longitude: 90.3050 Eggs: Approximate Distance to Water: 200 Feet 3 Nests: Chicks: No Over Sandbar IN FLIGHT ON GROUND On Nest Area 🗸 SUBSTRATE: Over Water • On Resting Area Sand: **V** Calm Water Gravel: **~** Debris: **V** Land Side Center VEGETATION: MID-CHANNEL Channel Side Type: Rapid Currents 🗸 MID-CHANNEL SANDBAR Distance: Feet River Side 🗸 SIDE CHANNEL SANDBAR Center FIELD CONDITION: Land Side -River Side [ Temperature: 84 °F Calm Water 🗸 Rain: No Wind: SW 5 mph % Cloud: 10 OTHER NOTES: Left Bank. Unattached, long sand bar (3/4 mile x 300ft.) between dikes. Fifteen Canada Geese on periphery. MS side Boyd, Fowlkes, K. Jones, W. Jones, Rumancik OBSERVERS: RIVER GAGE READING: Memphis 10.6 R (Gage Location) (Elevation)

			FLY	□ BOAT ✓
SPECIES: Interior Least Tern	Sternula antillarum a	athalassos)		
DATE: 7/28/2008 TI	ME OF DAY:	11:40	RIVER MILE	700.5
LOCALITY: Crittenden	AR	SITE NAME:	Porter L	ake Dikes
County/Parish WHERE SITED: Latitude:     Longitude:     Approximate Distance to Water    IN FLIGHT	34.84330 90.36764 : F		NUMBERS SIGHT Adults: Juveniles: Eggs: Nests: Chicks: SUBSTRATE: Sand: Gravel: Debris: VEGETATION: Type: Distance: FIELD CONDITION Temperature Rain: No Wind: SW	TED:  16  0  No  Feet  ON: 91
OTHER NOTES:  Right Bank. Small sand bar, ba	arely exposed, birds re	sting only.	% Cloud: <u>1</u>	
OBSERVERS:	Boyd, Fowlkes,	K. Jones, W. Jor	nes, Rumancik	AR side
RIVER GAGE READING:	Memp (Gage Loc		=	10.6 R (Elevation)

			FLY	∕ □ BOAT	Γ
SPECIES: Interior Least Tern (S	Sternula antillarur	n athalassos)			
DATE: 7/28/2008 TIM	E OF DAY:	11:53	RIVER MILE _	698.5	
LOCALITY: Crittenden	AR	_ SITE NAME:	Basket B	ar Dikes Upper	
County/Parish	State		NUMBERS SIG	HTED:	
WHERE SITED: Latitude:	24 9201		Adults:	380	
_	90.3786		Juveniles:	3	
			Eggs:	10(2)	
Approximate Distance to Water:	400	Feet	Nests:	10	
			Chicks:	Yes	
IN FLIGHT Over Sandbar ✔	ON GROUND On	Nest Area 🗸	SUBSTRATE:		
Over Water 🗸	On Re	esting Area	Sand:	<b>✓</b>	
Calm Water		47.1	Gravel:		
Land Side 🔲		$\sim$	Debris:		
Center Channel Side	MID-CHANNE		VEGETATION:		
		- →	Type: Cot	tonwoods	
MID-CHANNEL SANDBAR	urrents 🗸 River Side		Distance:	50 Feet	
SIDE CHANNEL S	SANDBAR Center L		FIELD CONDIT	ION:	
River Side 🗌	Calm Water	~ :1	Temperatu	ıre: 91 <sup>0</sup> F	:
77777	77		Rain: No		
		<del></del>	Wind: S	W 5 mph	
			% Cloud:	10	
OTHER NOTES:					
Right Bank. Long, low sand bar sand with scattered 10ft. Cottonw Gizzard Shad and Drum fingerling	oods. Many aban	doned eggs and chi			
				AR sic	de
OBSERVERS:	Boyd, Fowlke	es, K. Jones, W. Jor	nes, Rumancik		
RIVER GAGE READING:	Mer	mphis	=	10.6 R	
	(Gage	Location)		(Elevation)	

FLY

BOAT 🗸

SPECIES: Interior Least Tern (Sternula antillarum athalassos) DATE: 7/28/2008 TIME OF DAY: 12:15 RIVER MILE 697 SITE NAME: Basket Bar Dikes Lower LOCALITY: County/Parish State NUMBERS SIGHTED: 20 Adults: WHERE SITED: Latitude: Juveniles: Longitude: Eggs: Approximate Distance to Water: Feet 0 Nests: Chicks: No Over Sandbar IN FLIGHT ON GROUND On Nest Area SUBSTRATE: Over Water • On Resting Area Sand: Calm Water Gravel: Debris: Land Side Center VEGETATION: Channel Side MID-CHANNEL ✓ Type: Rapid Currents MID-CHANNEL SANDBAR Distance: 0 Feet River Side SIDE CHANNEL SANDBAR Center FIELD CONDITION: Land Side -River Side [ Temperature: 91 F Calm Water Rain: No Wind: SW 5 mph % Cloud: 10 OTHER NOTES: Twenty terns feeding mid-channel. OBSERVERS: Boyd, Fowlkes, K. Jones, W. Jones, Rumancik RIVER GAGE READING: Memphis 10.6 R (Gage Location) (Elevation)

				FLY	′ 🗌	BOAT	<b>✓</b>
SPECIES: Interior L	east Tern <i>(Sternu</i>	la antillarum at	halassos)				
DATE: 7/28/200	8 TIME OF	DAY:1;	3:39	RIVER MILE _	6	93.5	
LOCALITY:	Tunica	MS	SITE NAME:	Comr	nerce Dil	kes	
C	County/Parish	State		NUMBERS SIG	HTED:		
WHERE SITED:	Latitude: 34	4.81545		Adults:			
	Longitude: 9	0.4572		Juveniles: Eggs:			
Approximate Distar	nce to Water:	300 Fe	<u>et</u>	Nests:		1	
				Chicks:		No	
in i	Sandbar ✓ <u>ON G</u> er Water ✓	ROUND On Nes On Resting	t Area	SUBSTRATE:			
Calm Wate	· <del></del> //		, Alea _	Sand:	✓		
Cain Water			4/1	Gravel: Debris:			
Land Side Center							
Channel Side	e'	MID-CHANNEL ✓	→	VEGETATION: Type:			
MID-CHANNEL SAND	Rapid Currents	<b>∨</b> L		Distance:		Feet	
<u>ہ</u> ۔۔ "	SIDE CHANNEL SANDB	River Side 🗸	·				
River Side		Land Side -		FIELD CONDIT		90 ° F	
<del>                                     </del>	<del>}</del>	Calm Water 🗌		Rain: No			
	' ' /	LALL.	<del>-,</del>	Wind: ca			
			/ /	% Cloud:			
OTHER NOTES:				, o 0.10 ad.	<u> </u>		
Left Bank. Large, a	attached point bar w I and Coyote tracks		waterline, but o	ne observe sittin	g inland.	Ten ter	ns
nstring this charine	Tana Goyote tracks	ргозопа.					
						MS side	;
OBSERVERS:	[	Boyd, Fowlkes, k	K. Jones, W. Jor	nes, Rumancik			
RIVER GAGE READ	ING:	Helena			16.8		
		(Gage Loca	ition)		(Elevat	ion)	

FLY  $\square$ BOAT 🗸 SPECIES: Interior Least Tern (Sternula antillarum athalassos) DATE: 7/28/2008 TIME OF DAY: 14:04 RIVER MILE 687.0 LOCALITY: Lee AR SITE NAME: Mhoon Bend County/Parish State NUMBERS SIGHTED: Adults: 226 WHERE SITED: Latitude: 34.73875 Juveniles: Longitude: 90.45414 Eggs: Approximate Distance to Water: 150 Feet 7 Nests: No Chicks: Over Sandbar IN FLIGHT ON GROUND On Nest Area 🗸 SUBSTRATE: Over Water • On Resting Area Sand: Calm Water Gravel: **~** Debris: **V** Land Side . Center **VEGETATION:** MID-CHANNEL 🗸 Channel Side Type: Rapid Currents 🗸 MID-CHANNEL SANDBAR Distance: Feet River Side SIDE CHANNEL SANDBAR Center FIELD CONDITION: Land Side - \_\_\_ Temperature: 90 F River Side [ Calm Water Rain: No Wind: calm % Cloud: 20 OTHER NOTES: Right Bank. Another very large (3 miles) attached, undulating, sand and gravel bar with large stand of willows at center. Perimeter count with colony dispersed widely across the high center. AR side OBSERVERS: Boyd, Fowlkes, K. Jones, W. Jones, Rumancik RIVER GAGE READING: 16.8 R Helena

(Elevation)

(Gage Location)

			FLY [	□ BOAT ✓
SPECIES: Interior Least Tern (S	iternula antillaru	ım athalassos)		
DATE: 7/28/2008 TIM	E OF DAY:	14:30	RIVER MILE	680.0
LOCALITY: Tunica	MS_	SITE NAME:	Bordeaux F	Point Dikes
County/Parish	State		NUMBERS SIGHT	FD.
			Adults:	
WHERE SITED: Latitude:		_	Juveniles:	
Longitude: _	90.56013	-	Eggs:	
Approximate Distance to Water:	300	Feet		8
			Chicks:	Yes
<u>IN FLIGHT</u> Over Sandbar	ON GROUND C	on Nest Area <b>✓</b>	SUBSTRATE:	
Over Water 🗸	) On I	Resting Area	Sand:	
Calm Water	<del></del> -((	Z /	Gravel:	
		$\sim$	Debris:	
Land Side ☐ Center ☐		$\forall$		
Channel Side	MID-CHANN		VEGETATION:	
Rapid C	urrents 🗸	7	Type:	
MID-CHANNEL SANDBAR	╁┯┼┷┯┯	·	Distance:	Feet
SIDE CHANNELS	River Side SANDBAR Center		FIELD CONDITION	.,
River Side ✓	Land Side	□\ <u>-</u>	FIELD CONDITION	
<b>├</b> ─ <del>/</del> ───────────────────────────────────	Calm Wate	<u>.</u> ~	Temperature:	91 F
/ / / / / / /	7		Rain: No	
	ليكرز		Wind: <u>calm</u>	
			% Cloud: 0	
OTHER NOTES:			<u>=</u>	
Left Bank. Large, sloping, attach	and point har of a	and gravel and mud	Many juvonilos ob	convod with 9
sitting inland on nests. No signs		and, graver and mud	. Many juvernies ob	serveu with o
				MS side
OBSERVERS:	Boyd, Fowl	kes, K. Jones, W. Jor	nes, Rumancik	
RIVER GAGE READING:	Н	elena	=	16.8 R
	(Gage	Location)	_ (E	Elevation)

			FLY L	」 BOAT ⊻
SPECIES: Interior Leas	st Tern <i>(Sternula antill</i>	arum athalassos)		
DATE: 7/28/2008	TIME OF DAY: _	14:44	RIVER MILE	676.5
LOCALITY:	Lee AF	SITE NAME:	Below Walnut	t Bend Dikes
	nty/Parish Sta	te	NUMBERS SIGHT	
	_atitude: 34.6753 _ongitude: 90.5742	_	_	
Approximate Distance	to Water: 100	Feet_	Nests:	2 No
Calm Water Land Side Center Channel Side	/ater  /	On Resting Area ☐	SUBSTRATE: Sand: Gravel: Debris:  VEGETATION: Type: Distance: FIELD CONDITION Temperature: Rain: No	Feet N:
		للكر	Wind: <u>SW 5</u> % Cloud: 0	i mph
	oping, attached sand bar arent disturbance or track			t waterline, two  AR side
OBSERVERS:	Boyd, Fo	wlkes, K. Jones, W. Jor	nes, Rumancik	AN SIDE
RIVER GAGE READING	·	Helena age Location)	=(E	16.8 R Elevation)

			FL'	Y □ BOAT 🗹
SPECIES: Interior Least Tern	(Sternula antillarul	n athalassos)		
DATE: 7/28/2008 T	IME OF DAY:	15:00	RIVER MILE	672.5
LOCALITY:Tunica	MS_	_ SITE NAME:	St. F	rancis Bend
County/Paris	sh State		NUMBERS SIG	GHTED:
WHERE SITED: Latitude:	34 6340		Adults:	520
	90.5832		Juveniles:	
			Eggs:	3(1) 18(2) 11(3)
Approximate Distance to Wate	r: <u>80</u>	<u>Feet</u>	Nests:	110
			Chicks:	Yes
IN FLIGHT Over Sandbar ✓		Nest Area	SUBSTRATE:	
Over Water 🗸	/	esting Area	Sand:	<b>✓</b>
Calm Water <b>✓</b>		47.1	Gravel:	
Land Side 🗹		$\sim$	Debris:	
Center . ✓ Channel Side ✓	MID-CHANNE		VEGETATION:	:
		→	Type:	
MID-CHANNEL SANDBAR	d Currents River Side		Distance:	Feet
SIDE CHANNE	EL SANDBAR Center Land Side	- · · · · ·	FIELD CONDIT	ΓΙΟΝ:
River Side	Calm Water		Temperati	ure: 92 <sup>0</sup> F
77777	7+7-7		Rain: No	
	′ ′ ′ ′	<del></del>	Wind: S	W 5 mph
			% Cloud:	0
OTHER NOTES:				
Left Bank. Very large, flat, hig wide, with nests widely scattered No signs of disturbance.				
				MS side
OBSERVERS:	Boyd, Fowlk	es, K. Jones, W. Jor	nes, Rumancik	3100
RIVER GAGE READING:	Нє	elena		16.8 R
	(Gage	Location)	_	(Elevation)

			FLY		BOAT	<b>✓</b>
SPECIES: Interior Least Tern (St	ernula antillarun	n athalassos)				
DATE: 7/28/2008 TIME	E OF DAY:	15:36	RIVER MILE _		667.5	
LOCALITY: Phillips	AR	SITE NAME:	Prairie	Point D	Dikes	
County/Parish	State		NUMBERS SIG	HTED:		
WHERE SITED: Latitude:	34 5625		Adults:		144	
Longitude:			Juveniles:			
_	_		Eggs:			
Approximate Distance to Water:		Feet	Nests:		0	
			Chicks:		No	
		Nest Area	SUBSTRATE:			
Over Water 🗸	On Re	sting Area 🔽	Sand:			
Calm Water			Gravel:	<b>✓</b>		
Land Side		$\sim$	Debris:			
Channel Side	MID-CHANNEL	. 🗆 . 📗	VEGETATION:			
	rrents 🗹	→	Type:			
MID-CHANNEL SANDBAR	River Side •		Distance:		Feet	
SIDE CHANNEL S.	ANDBAR Center L		FIELD CONDIT	ION:		
River Side 🔲	Calm Water [		Temperatu	ıre:	90 °F	
77777	77		Rain: No			
	′ ′ ′ /~	<del>7-7-1</del>	Wind: S	W 5 mp	h	
			% Cloud:	0		
OTHER NOTES:						
Right Bank. Large, high, undulatir	ng, gravel bar atta	ched to heavily woo	oded island. Ter	ns restir	ng at	
waterline.						
					AR side	)
OBSERVERS:	Boyd, Fowlke	s, K. Jones, W. Jor	nes, Rumancik			
RIVER GAGE READING:	Hel	ena	=	16.8	3 R	
	(Gage L	ocation)	_	(Eleva	ation)	

				FLY	□ BOAT ✓
SPECIES:	Interior Least Te	rn <i>(Sternula antillaru</i>	ım athalassos)		
DATE:	7/29/2008	TIME OF DAY:	8:50	RIVER MILE _	661.5
LOCALITY	: Coahc	oma MS	SITE NAME:	Hele	na Reach
	County/F	Parish State		NILIMPEDO CIO	UTED.
				NUMBERS SIG	
WHERE S	SITED: Latitu	ide: 34.4602	-		47
	Long	itude: 90.5827	-		
Approxin	nate Distance to V	Vater:	Feet	Eggs:	
					0
				Chicks:	No
<u>IN FLIG</u>	<del></del>	<u>ON GITOOND</u>	n Nest Area	SUBSTRATE:	
$\angle \angle$	Over Water	<u> </u>	Resting Area 🗸	Sand:	<b>✓</b>
	Calm Water			Gravel:	
1	Land Side 🔲			Debris:	
	Center  Channel Side	A MID-CHANNI	<sub>=</sub>	VEGETATION:	
`	-	•		Type:	
MID-CHA	NNEL SANDBAR	Rapid Currents		Distance:	Feet
		River Side  ANNEL SANDBAR Center	₽.		
ے ا	·	Land Side	<u> </u>	FIELD CONDIT	_
/:	River Side 🕢	Calm Water	.□ >~~!	Temperatu	re: 85 <sup>0</sup> F
[77	7777	444		Rain: No	
		///7	<del></del>	Wind: N	5 mph
				% Cloud:	0
OTHER N	0.750				
OTHER N			<b>.</b>		
		bar of clean, solid sand activity noted. Four Ca			ost resting at
		•			
					MS side
OBSERVE	RS:	Boyd, Fowlkes, ł	K. Jones, W. Jones, N	Maloney, Rumano	
RIVER GA	GE READING:	Н	elena		16.9 R
		(Gage	Location)	=	(Elevation)

			FLY	∕ □ BOAT 🛭	<b>~</b>
SPECIES: Interior Least Tern	(Sternula antillarui	n athalassos)			
DATE: 7/29/2008	TIME OF DAY:	9:03	RIVER MILE _	656.0	
LOCALITY: Phillips	AR	_ SITE NAME:	Montezuma	a Towhead Dikes	
County/Par	ish State		NUMBERS SIG	HTED:	
WHERE SITED: Latitude	: 34.4097		Adults:	47	
	de: 90.5917		Juveniles:		
-		Foot	Eggs:		
Approximate Distance to Wat	er	Feet	Nests:	0	
			Chicks:	No	
<u>IN FLIGHT</u> Over Sandbar ✓	<u>on ancone</u>	Nest Area	SUBSTRATE:		
Over Water	On R	esting Area 🔽	Sand:	$\checkmark$	
Calm Water 🗌		47 JI	Gravel:	$\checkmark$	
Land Side  Center	2	$\sim$	Debris:	<b>✓</b>	
II \	MID-CHANNE		VEGETATION:		
Bar	oid Currents 🗸	→	Type:		
MID-CHANNEL SANDBAR	River Side	<b>2</b>	Distance:	Feet	
I /	I <u>EL SANDBAR</u> Center L Land Side	<del>-</del>	FIELD CONDIT	ION:	
River Side	Calm Water	~ :1	Temperatu	ıre: <u>84 <sup>0</sup> F</u>	
7777	777		Rain: No		
		<del></del>	Wind: N	3-5 mph	
			% Cloud:	0	
OTHER NOTES:					
Right Bank. Attached mediur were Great Egrets, hundreds Tern.					
				AR side	
OBSERVERS:	Boyd, Fowlkes, K	. Jones, W. Jones, N	Maloney, Ruman	cik	
RIVER GAGE READING:	Нє	elena		16.9 R	
	(Gage	Location)		(Elevation)	

			FLY	□ BOAT ✓
SPECIES: Interior Least Tern	(Sternula antillaru	m athalassos)		
DATE: 7/29/2008	TIME OF DAY:	9:18	RIVER MILE	651.2
LOCALITY: Coahom	a MS	SITE NAME:	Friars P	oint Dikes
County/Par	rish State		NUMBERS SIGH	TED:
WUIEDE OITED.	04.0757		Adults:	
WHERE SITED: Latitude			·	
Longitue	de: <u>90.6618</u>		Eggs:	
Approximate Distance to Wa	ter: 20	Feet	Nests:	6
			Chicks:	No
<u>IN FLIGHT</u> Over Sandbar <b>⊻</b>	ON GROUND O	n Nest Area 🗸	SUBSTRATE:	
Over Water	On F	Resting Area	Sand: ⊌	•
Calm Water	·	47.II	Gravel:	7
Land Side 🔲	7	$\sim$	Debris:	]
Center Channel Side	MID-CHANNE		VEGETATION:	
		-	Туре:	
MID-CHANNEL SANDBAR	pid Currents 🔽 River Side		Distance: _	Feet
SIDE CHANI	NEL SANDBAR Center Land Side		FIELD CONDITION	ON:
River Side	Calm Water	1	Temperature	e: 84 <sup>0</sup> F
17777	7777		Rain: No	
	' ' ' /	<del></del>	Wind: N 5	mph
			% Cloud: 0	)
OTHER NOTES:			_	
Left Bank. Clean, small (1.5	acre) low flat unatta	ached sand har No.	sions of disturbanc	<b>^</b>
Lott Barnt: Gloan, oman (1.0	doroj, iow, nat, driatte	toriou daria bar. 110 t	signe of diotarband	<u>o.</u>
				MS side
OBSERVERS:	Boyd, Fowlkes, k	K. Jones, W. Jones, N	Maloney, Rumancil	K
RIVER GAGE READING: _	Н	elena		16.9 R
	(Gage	Location)	_	(Elevation)

				FLY	□ BOAT 🗸
SPECIES: Interior Leas	et Tern <i>(Sternula ant</i>	illarum athalas	sos)		
DATE: 7/29/2008	TIME OF DAY:	9:27		RIVER MILE	648.5
LOCALITY: F			E NAME:	Kangaroo P	oint Dikes Upper
Coul	nty/Parish S	tate		NUMBERS SIGI	HTED:
WHERE SITED: L	.atitude: 34.367	1		Adults:	23
	ongitude: 90.700				
Approximate Distance	to Water	Feet			
Approximate Distance	to Water.	1 001			0
				Chicks:	No
IN FLIGHT Over Sand	<u>en ancem</u>	<del>-</del>		SUBSTRATE:	
V/, Over w	/ater	On Resting Area		Sand:	<b>✓</b>
Calm Water _	]		,	Gravel:	
Land Side		$\sim$	J	Debris:	<b>✓</b>
Center _	7			VEGETATION:	
Channel Side	MID-CI	HANNEL ☐ →			
MID-CHANNEL SANDBAR	Rapid Currents				
1		er Side 🗹		Distance:	Feet
SIDE	<u> CHANNEL SANDBAR</u> Ce	nter 🗌		FIELD CONDITI	ION:
River Side 🗀		d Side □ Water □	ال		re: 84 <sup>0</sup> F
7777	7+7+7		4	Rain: No	
	1 / / 7		_	Wind: N	5 mph
				% Cloud:	•
				,0 Oloud.	
OTHER NOTES:					
Right Bank. Long, low resting bar only.	v, attached sand bar. A	all terns resting a	at waterline	e, no signs of repr	roductive behavior,
					AR side
OBSERVERS:	Boyd, Fowl	kes, K. Jones, V	V. Jones, N	Maloney, Rumano	sik
RIVER GAGE READING	G:	Helena			16.9 R
	(1	Gage Location)		_	(Elevation)

			FLY	□ BOAT ✓
SPECIES: Interior Least Tern	(Sternula antillaru	ım athalassos)		
DATE: 7/29/2008	TIME OF DAY:	9:36	RIVER MILE	647.5
LOCALITY: Phillips	AR	SITE NAME:	Kangaroo Po	oint Dikes Lower
County/Par	ish State		NUMBERS SIGH	HTED:
WHEDE SITED: Latituda	24 2677			42
WHERE SITED: Latitude	de: 90.7163	_	Juveniles:	
		=	Eggs:	
Approximate Distance to Wa	ter: 50	Feet	Nests:	3
			Chicks:	No
<u>IN FLIGHT</u> Over Sandbar ✓	ON GROUND C	n Nest Area 🔽	SUBSTRATE:	
Over Water	On F	Resting Area	Sand:	
Calm Water	·	∠ / .ll	Gravel:	
Land Side	<b>5</b>	~~	Debris:	
Center Channel Side	MID-CHANNI		VEGETATION:	
		→	Туре:	
MID-CHANNEL SANDBAR	pid Currents River Side		Distance: _	Feet
トープー・ドへき	NEL SANDBAR Center Land Side	₩	FIELD CONDITION	ON:
River Side	Calm Water	~ · · · ·	Temperatur	e: <u>84 <sup>0</sup> F</u>
7777	7777		Rain: No	
	/ _ /	<u> </u>	Wind: N 5	5 mph
			% Cloud: (	0
OTHER NOTES:				
Right Bank. Small, isolated s	sand har helow last d	ike Three terns sittir	ng inland with 300	Bough-wing
Swallows. No signs of distur		into: Trifoo torrio ontin	ig illiana with 500	Trough Wing
				AR side
OBSERVERS:	Boyd, Fowlkes, I	K. Jones, W. Jones, N	Maloney, Rumanci	k
RIVER GAGE READING:	Н	elena	=	16.9 R
	(Gage	Location)		(Elevation)

FLY  $\square$ BOAT 🗸 SPECIES: Interior Least Tern (Sternula antillarum athalassos) DATE: 7/29/2008 TIME OF DAY: 9:50 RIVER MILE 643.4 LOCALITY: <u>Coahoma</u> MS SITE NAME: Old Town Bend County/Parish State NUMBERS SIGHTED: 47 \_\_\_ Adults: WHERE SITED: Latitude: 34.3428 Juveniles: Longitude: 90.7632 Eggs: Approximate Distance to Water: Feet 0 Nests: No Chicks: Over Sandbar IN FLIGHT ON GROUND On Nest Area SUBSTRATE: Over Water • On Resting Area Sand: Calm Water Gravel: **V** Debris: Land Side Center **VEGETATION:** Channel Side MID-CHANNEL Type: Rapid Currents 🗸 MID-CHANNEL SANDBAR Distance: Feet River Side SIDE CHANNEL SANDBAR Center FIELD CONDITION: Land Side -River Side 🗸 Temperature: \_\_\_ 85 OF Calm Water Rain: No Wind: N 5 mph % Cloud: 0 OTHER NOTES: Left Bank. Attached, convoluted bar of sand, mud and gravel, with large back chute. Most birds resting or fishing along waterline. No signs of disturbance. MS side OBSERVERS: Boyd, Fowlkes, K. Jones, W. Jones, Maloney, Rumancik RIVER GAGE READING: 16.9 R Helena

(Elevation)

(Gage Location)

			FLY	′ □ BOA	T 🗸
SPECIES: Interior Least Tern	(Sternula antillarul	m athalassos)			
DATE: 7/29/2008	TIME OF DAY:	10:00	RIVER MILE _	640.5	
LOCALITY: Phillips	AR	_ SITE NAME:	Island #6	32 Dikes Upper	<u>-</u>
County/Pa	rish State		NUMBERS SIG	HTED:	
WHERE SITED: Latitude	e: 34.30384		Adults:	28	
	de: 90.7389		Juveniles:		
		Feet	Eggs:		
Approximate Distance to Wa		<u>reet</u>	Nests:	0	
			Chicks:	No	
IN FLIGHT Over Sandbar	- <u>ON GROOND</u> OF	Nest Area	SUBSTRATE:		
Over Water V	On R	esting Area 🗸	Sand:	<b>✓</b>	
Calm Water		/i	Gravel:		
Land Side  Center	2	$\sim$	Debris:		
II \	MID-CHANNE	<u> </u>	VEGETATION:		
B <sub>B</sub>	pid Currents	→	Type:		
MID-CHANNEL SANDBAR	River Side	<u> </u>	Distance:	Feet	
ロー・ブー・ 下へご	NEL SANDBAR Center Land Side	=	FIELD CONDIT	ION:	
River Side	Calm Water		Temperatu	ıre: <u>88 <sup>0</sup> F</u>	<u> </u>
77777	7 7 7 7 7		Rain: No		
		<del></del>	Wind: N	W 10 mph	
			% Cloud:	0	
OTHER NOTES:					
Right Bank. Gently sloping, waterline.	attached sand bar ups	tream from wooded	point bar. Most	Terns resting a	<u>at</u>
				AR si	de
OBSERVERS:	Boyd, Fowlkes, K	. Jones, W. Jones, N	Maloney, Ruman	cik	
RIVER GAGE READING:	Не	elena		16.9 R	
	(Gage	Location)	_	(Elevation)	

FLY ☐ BOAT 🗹

SPECIES: Interior Least Tern (	Sternula antillarui	m athalassos)		
DATE: 7/29/2008 TIM	ME OF DAY:	10:15	RIVER MILE	637.0
LOCALITY: Phillips County/Parish		_ SITE NAME:	Island #62	
		Feet	Adults: Juveniles: Eggs: Nests:	0
MID-CHANNEL SANDBAR	On R		Debris:  VEGETATION:  Type:  Distance:  FIELD CONDITIC  Temperatur  Rain: No	Feet ON: re: 88 OF
OTHER NOTES:  Five terns fishing mid-channel.				
OBSERVERS:	Boyd, Fowlkes, K	. Jones, W. Jones, N	Maloney, Rumanc	AR side ik
RIVER GAGE READING:		elena Location)	=	16.9 R (Elevation)

				FLY	′ 🗌	BOAT	<b>✓</b>
SPECIES: Interior Lea	ast Tern <i>(Sternul</i> a	a antillarum a	thalassos)				
DATE: 7/29/2008	TIME OF [	DAY: <u>1</u>	0:28	RIVER MILE _	6	29.5	
LOCALITY:	Phillips	AR	SITE NAME:	Island	d #64 Dik	kes	
Со	unty/Parish	State		NUMBERS SIG	HTED:		
WHERE SITED:	Latitude: 34	.2187		Adults:			
	Longitude: 90	0.8495		Juveniles: Eggs:			
Approximate Distanc	e to Water:	500 Fe	<u>eet</u>			•	
				Chicks:		Yes	
<u></u>	·		st Area 🗸	SUBSTRATE:			
Over V	Water 🔽	On Restin	g Area	Sand:	<b>✓</b>		
Calm Water			7.1	Gravel:			
Land Side			$\sim$	Debris:	<b>✓</b>		
Center Channel Side	<u>-</u>	MID-CHANNEL	,	VEGETATION:			
\	<i>/</i> ·		~>	Type: Will	ows		
MID-CHANNEL SANDBA	$\sqrt{}$	River Side 🗌		Distance:	600	Feet	
SII .	DE CHANNEL SANDBA	<u>R</u> Center    Land Side     Land Side     Land Side    Land Side     Land Side     Land Side     Land Side     Land Side     Land Side     Land Side     Land Side      Land Side      Land Side		FIELD CONDIT	ION:		
River Side 🗸		Calm Water	~~:J	Temperatu	ıre:8	89 ° F	
7 7 7 7			<u>, , ,                                </u>	Rain: No			
	/ /	لمراجر	<del>-                                    </del>	Wind: N	W 10 mp	oh	
				% Cloud:	0		
OTHER NOTES:							
Right Bank. Small, u				igh center. Chic	ks abund	dant up t	to 1
•							
						AR side	<del>)</del>
OBSERVERS:	Boyd,	Fowlkes, K. Jo	nes, W. Jones, N	Maloney, Ruman	cik		
RIVER GAGE READIN	NG:	Helen			16.9	R	
		(Gage Loc	ation)		(Elevat	tion)	

			FLY	′ □ BOAT	<b>✓</b>
SPECIES: Interior Least Tern	(Sternula antillarui	m athalassos)			
DATE: 7/29/2008	TIME OF DAY:	10:50	RIVER MILE _	625.0	
LOCALITY: Phillips	AR	_ SITE NAME:	Sunflo	wer Cut-Off	
County/Pari	sh State		NUMBERS SIG	HTED:	
WHERE SITED: Latitude:	. 3/ 1728		Adults:	238	
	le: 90.8991		Juveniles:	5	
_			Eggs:	1(3)	
Approximate Distance to Wat	er: <u>10</u>	Feet	Nests:	10	
			Chicks:	Yes	
IN FLIGHT Over Sandbar ✓	<u>on anconb</u> or	Nest Area	SUBSTRATE:		
Over Water 🗸	/_/_ / On Ri	esting Area	Sand:	<b>✓</b>	
Calm Water <b>✓</b>		4/ .	Gravel:		
Land Side ☑ Center ☑	1	$\sim$	Debris:		
II 🔪 👉	MID-CHANNE		VEGETATION:		
		→	Type: Will	lows/Cottonwoods	S
MID-CHANNEL SANDBAR	oid Currents River Side		Distance:	100 Feet	
SIDE CHANN	I <u>EL SANDBAR</u> Center [ Land Side [		FIELD CONDIT	ION:	
River Side □	Calm Water		Temperatu	ıre: <u>88 <sup>0</sup> F</u>	
7777	7 7 7 7		Rain: No		
	′ ′ ′ ′	<del></del>	Wind: N	W 10 mph	
			% Cloud:	0	
OTHER NOTES:					
Left Bank. Small (300 x 700ff	t) 3 ft tall flat mid-c	hannel har of sand a	and mud_unattac	hed at entrance t	to
Desoto Lake. Many juveniles				TIOG AT OTHER TOO	
_					
				MS side	!
OBSERVERS:	Boyd, Fowlkes, K	. Jones, W. Jones, N	Maloney, Rumano	cik	
RIVER GAGE READING:	He	elena	<b>=</b>	16.9 R	
	(Gage	Location)		(Elevation)	

			FLY	′ 🗌	BOAT	<b>✓</b>
SPECIES: Interior Least Tern	(Sternula antillaru	n athalassos)				
DATE: 7/29/2008	TIME OF DAY:	10:57	RIVER MILE _	6	23.0	
LOCALITY: Phillips	AR	_ SITE NAME:	Below	Ludlow D	ikes	
County/Paris	sh State		NUMBERS SIG	HTED:		
WHERE SITED: Latitude:	34 1613		Adults:		22	
	e: 90.9277		Juveniles:			
_			Eggs:			
Approximate Distance to Water	er:	Feet	Nests:		0	
			Chicks:		No	
IN FLIGHT Over Sandbar		Nest Area	SUBSTRATE:			
Over Water	/ / / On R	esting Area 🗸	Sand:			
Calm Water		47.1	Gravel:	<b>✓</b>		
Land Side ☐ Center ☐		$\sim$	Debris:			
	MID-CHANNE	<u> </u>	VEGETATION:			
	id Currents	→	Туре:			
MID-CHANNEL SANDBAR	River Side	<b>2</b>	Distance:		Feet	
SIDE CHANN	EL SANDBAR Center Land Side		FIELD CONDIT	ION:		
River Side _	Calm Water		Temperatu	ıre: <u>8</u>	38 <sup>O</sup> F	
7777	7+7+7-7-4		Rain: No			
	′ ′ ′ ′	<del></del>	Wind: N	W 10 mp	)h	
			% Cloud:	0		
OTHER NOTES:						
Right Bank. Small gravel bar	with terns resting at v	vaterline. No signs o	f disturbance			
Tagin Dain. Omai graver bar	mar torno resuing at t	Tatoriirio Tvo sigris o	alotarbarioo.			
					AR side	)
OBSERVERS:	Boyd, Fowlkes, K	. Jones, W. Jones, N	Maloney, Ruman	cik		
RIVER GAGE READING:	He	elena	=	16.9	R	
	(Gage	Location)		(Elevat	ion)	

			FLY	∕ □ BOAT	<b>✓</b>
SPECIES: Interior Least Term	(Sternula antillaru	ım athalassos)			
DATE: 7/29/2008	TIME OF DAY:	11:05	RIVER MILE _	620.0	
LOCALITY: Coahom		SITE NAME:	Island #6	37 Dikes Upper	
County/Pa	rish State		NUMBERS SIG	HTED:	
WHERE SITED: Latitude	e: 34.1260		Adults:	180	
	ide: 90.9528	-	Juveniles:		
_		Faat	Eggs:		
Approximate Distance to Wa	ater: 200	<u>Feet</u>	Nests:	18	
			Chicks:	No	
IN FLIGHT Over Sandbar	<u>en ancene</u> 0	n Nest Area 🗸	SUBSTRATE:		
Over Water	On F	Resting Area	Sand:	<b>✓</b>	
Calm Water	<del></del>	<u>ار / ک</u>	Gravel:		
Land Side ☐ Center . ☐	<u>`</u>	$\sim$	Debris:	✓	
Channel Side	MID-CHANNE		VEGETATION:		
B.	apid Currents	→	Type: Wil	lows/Cottonwood	ds
MID-CHANNEL SANDBAR	River Side	- L	Distance:	800 Feet	
SIDE CHAN	INEL SANDBAR Center Land Side	<u>~</u> ,	FIELD CONDIT	ION:	
River Side 🗌	Calm Water		Temperatu	ure: 90 <sup>0</sup> F	
77777	747		Rain: No		
	/	<del></del>	Wind: N	W 10 mph	
			% Cloud:	0	
OTHER NOTES:					
Left Bank. Long, medium (8 length of bar's high center all Canada Goose in proximity.					
				MS sid	
OBSERVERS:	Boyd, Fowlkes, h	K. Jones, W. Jones, N	//aloney, Ruman		<u> </u>
RIVER GAGE READING:	•	elena	-	16.9 R	
_		Location)	<b>=</b>	(Elevation)	

			FLY	Y □ BOAT 🗹
SPECIES: Interior Least Ter	n (Sternula antillaru	ım athalassos)		
DATE: 7/29/2008	TIME OF DAY:	11:46	RIVER MILE _	619.0
LOCALITY: Coahor		SITE NAME:	Island #6	67 Dikes Lower
County/P	arish State		NUMBERS SIG	GHTED:
WHERE SITED: Latitud	No: 24 1100		Adults:	160
	ude: 90.9436	-	Juveniles:	
_		-	Eggs:	1(1) 9(2) 1(3)
Approximate Distance to W	ater:50	<u>Feet</u>	Nests:	11
			Chicks:	Yes
IN FLIGHT Over Sandbar	<u>on anomb</u>	n Nest Area 🗸	SUBSTRATE:	
Over Water	<b>☑</b> / / On F	Resting Area	Sand:	<b>✓</b>
Calm Water		<u>ار / ک</u>	Gravel:	
Land Side	<del>''</del> ~	$\sim$	Debris:	
Center Channel Side	MID-CHANNE		VEGETATION:	
	Rapid Currents	→	Type: Cot	tonwoods
MID-CHANNEL SANDBAR	River Side		Distance:	50 Feet
プー・トへ。	NNEL SANDBAR Center Land Side		FIELD CONDIT	ΓΙΟΝ:
River Side	Calm Water		Temperatu	ure: 92 <sup>0</sup> F
77777	† <del>7</del> † <del>7</del>		Rain: No	
	/ _ /	<del></del>	Wind: N	IW 10 mph
			% Cloud:	0
OTHER NOTES:				
Left Bank. High downstrea mortality, cause unknown. carp (sp?).				
				MS side
OBSERVERS:	Boyd, Fowlkes. h	K. Jones, W. Jones, N	Maloney, Ruman	
RIVER GAGE READING:	-	elena	•	16.9 R
Charle Herbind.		Location)	=	(Elevation)

			FLY	BOAT ✓
SPECIES: Interior Least Term	(Sternula antillaru	m athalassos)		
DATE: 7/29/2008	TIME OF DAY:	11:56	RIVER MILE _	616.0
LOCALITY: Desha	AR	SITE NAME:	Below Know	vlton Dikes Upper
County/Pa			NUMBERS SIG Adults:	HTED: 69
WHERE SITED: Latitude  Longitu	e: 34.0811 ide: 90.9081			
Approximate Distance to Wa	iter:	Feet	Nests:	0 No
	<u>en ancens</u> of	n Nest Area ☐ lesting Area ✓	Gravel: Debris: VEGETATION: Type:	✓ ✓ □ Feet
SIDE CHAN	River Side  NEL SANDBAR Center  Land Side  Calm Water		FIELD CONDIT Temperatu Rain: No	ION: re: 94 <sup>0</sup> F W 10 mph
OTHER NOTES:  Right Bank. Small, unattach	ned sand bar below firs	t dike. Perimeter co	unt yields no nes	ting terns.
OBSERVERS:	Boyd Fowlkes K	Jones, W. Jones, N	Maloney Rumano	AR side
OBSERVERS.	•		viaioney, mumani	
RIVER GAGE READING:		elena Location)	=	16.9 R (Elevation)

			FLY U	BOAT 🔽
SPECIES: Interior Least Terr	n (Sternula antillarum a	athalassos)		
DATE: 7/29/2008	TIME OF DAY:	12:02	RIVER MILE	612.0
LOCALITY: Desha		SITE NAME:	Below Knowlton	Dikes Lower
County/1 a	ansii State		NUMBERS SIGHTE	:D:
WHERE SITED: Latitud	le: 34 04383		Adults:	49
	ude: 90.89169		Juveniles:	
		_	Eggs:	1(2)
Approximate Distance to W	ater: 80 F	<u>eet</u>	Nests:	18
			Chicks:	No
<u>IN FLIGHT</u> Over Sandbar	ON GROUND On Ne	est Area 🗸	SUBSTRATE:	
Over Water	✓ On Resti	ng Area	Sand: 🗸	
Calm Water		. /	Gravel:	
	<u>`</u>	<b>~</b>	Debris:	
Land Side Center		7	_	
Channel Side	MID-CHANNEL	□ 🚤 📗	VEGETATION:	
R	apid Currents 🗸	7	Type:	
MID-CHANNEL SANDBAR	╬┈┾┰┼┰┯┯┯┯		Distance:	Feet
SIDE CHAI	River Side  NNEL SANDBAR Center	·	FIELD CONDITION	_
River Side 🔽	Land Side	·	FIELD CONDITION	
<b>├</b> ─ <del>/</del>	Calm Water	$\sim$	Temperature:	93 F
	1/7/ <del>7/</del>	·	Rain: No	
	/ / / / / / / / / / / / / / / / / / / /	<del>/-/-/</del>	Wind: NW 1	) mph
			% Cloud: 0	
OTHER MOTES			,,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
OTHER NOTES:	alala a a malila a maratta malila	dalawia Nia atawa .		
Right Bank. Attached, river	side, sand dar, scattered (	debris. INO signs (	of disturbance.	
				AR side
OBSERVERS:	Boyd, Fowlkes, K. Je	ones, W. Jones, N	Maloney, Rumancik	
RIVER GAGE READING:	Helei	na		16.9 R
	(Gage Lo	cation)	_ (El	evation)

			FLY	<b>/</b> $\square$	BOAT	<b>✓</b>
SPECIES: Interior Least Tern	(Sternula antillarur	m athalassos)				
DATE: 7/29/2008	ΓΙΜΕ OF DAY:	12:36	RIVER MILE	60	0.8(	
LOCALITY: Bolivar		_ SITE NAME:	Island #	70 Dikes l	Jpper	
County/Pari	sh State		NUMBERS SIG	HTED:		
WHERE SITED: Latitude:	34.0227		Adults:		82	
	e: 90.9657		Juveniles:			
Approximate Distance to Water	or:	Foot	Eggs:			
Approximate distance to water		T eet	Nests:			
Over Condition			Chicks:	-	No	
IN FLIGHT Over Sandbar ✓  Over Water ✓		n Nest Area 🔲 esting Area 🗸	SUBSTRATE:			
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	<u> </u>	esting Area 🗸	Sand:	<b>✓</b>		
Calm Water 🗌		$\langle \langle \rangle \rangle$	Gravel:	<b>✓</b>		
Land Side 🗌	•	$\sim$	Debris:			
Center Channel Side	MID-CHANNE		VEGETATION:			
		* **	Type:			
MID-CHANNEL SANDBAR	id Currents  River Side [	<u>√</u>	Distance:	F	-eet	
SIDE CHANN	EL SANDBAR Center Land Side		FIELD CONDIT	TION:		
River Side _	Calm Water		Temperati	ure:9	2 <sup>0</sup> F	
7777	7 7 7		Rain: No			
	1 1 7	<del></del>	Wind: N	W 5 mph		
			% Cloud:	5		
OTHER NOTES:						
Left Bank. Long, sand and gr signs of disturbance.	avel bar with birds at	waterline and none	sitting inland. R	esting bar	only. N	<b>1</b> 0
				Ŋ	MS side	<del>)</del>
OBSERVERS:	Boyd, Fowlkes, K	. Jones, W. Jones, N	Maloney, Ruman	cik		
RIVER GAGE READING:	He	elena	=	16.9 F	ર	
	(Gage	Location)		(Elevation	on)	

			FL`	Y □ BOAT 🗹
SPECIES: Interior Least Tern	(Sternula antillaru	m athalassos)		
DATE: 7/29/2008	TIME OF DAY:	12:44	RIVER MILE	606.2
LOCALITY: Bolivar		SITE NAME:	Island #	70 Dikes Lower
County/Pa	rish State		NUMBERS SIG	GHTED:
WHERE SITED: Latitude	24.0152		Adults:	27
	de: 90.9897		Juveniles:	
_			Eggs:	
Approximate Distance to Wa	ter:	Feet	Nests:	0
			Chicks:	No
<u>IN FLIGHT</u> Over Sandbar	ON GROUND O	n Nest Area	SUBSTRATE:	
Over Water	] / On F	esting Area 🗸	Sand:	<b>✓</b>
Calm Water	<del></del>	4 / T	Gravel:	<u> </u>
	<b>-</b>	~~	Debris:	
Land Side U		٦		
Channel Side		<u> </u>	VEGETATION	
MID-CHANNEL SANDBAR	apid Currents		Type: Wi	llows
MID-CHANNEL SANDBAR	River Side		Distance:	200 Feet
SIDE CHAN	NEL SANDBAR Center	⊒ ∵ <u>`</u>	FIELD CONDI	TION:
River Side 🗌	Land Side	~ :1		ure: 92 <sup>0</sup> F
<b>├</b> <del>/</del> ─────────	Calm Water	<u> </u>		
l′ ′ ′ ′ ′	1/7		Rain: No	)
	_ / /	<u> </u>	Wind: N	IW 5 mph
			% Cloud:	5
OTHER NOTES:				
Left Bank. Small, low, sand	and gravel bar (100 x	200 ft.). All birds res	stina onlv.	
	, , , , , , , , , , , , , , , , , , ,	,	<u> </u>	
	Doved Cavilles 1	longo M. long- M	Anlanay Dumen	MS side
OBSERVERS:	-	Jones, W. Jones, N	naioney, Rumar	
RIVER GAGE READING:		elena 	=	16.9 R
	(Gage	Location)		(Elevation)

			FLY	□ BOAT 🗸
SPECIES: Interior Least Tern	(Sternula antillaru	m athalassos)		
DATE: 7/29/2008	TIME OF DAY:	13:05	RIVER MILE _	603.0
LOCALITY: Bolivar	MS	_ SITE NAME:	Henr	rico Dikes
County/Pa	rish State		NUMBERS SIGI	HTED:
WHERE SITED: Latitude	e: <u>33.9945</u> de: 91.0418			98
_		Foot	Eggs:	
Approximate Distance to Wa	iter:	<u>reet</u>		0
IN FLIGHT Over Sandbar	ON GROUND O	n Nest Area	Chicks:	No
Over Water Calm Water		esting Area 🔽	Gravel:	<b>V</b>
Land Side U Center U Channel Side U	MID-CHANNE	<u>.</u>	VEGETATION:	<b>✓</b>
MID-CHANNEL SANDBAR	apid Currents 🗸 River Side		Type:	Feet
SIDE CHAN	NEL SANDBAR Center  Land Side  Calm Water	~~. : 1	FIELD CONDITI	ION: re: 91 <sup>0</sup> F
77777	7+5		Rain: No	
	, / / 기	7-7-7	Wind: NV	N 5 mph
			% Cloud:	0
OTHER NOTES:				
Right Bank. Long, low, flat, no nesting terns. No disturb		nd bar with some deb	oris. Perimeter co	ount yields shows
ODOLD//LDO	Royd Foulkon K	. Jones, W. Jones, N	Malanay Pumana	AR side
OBSERVERS:	•		naioney, numano	
RIVER GAGE READING: _		elena Location)	=	16.9 R (Elevation)

(Elevation)

			FLY	BOAT	<b>✓</b>
SPECIES: Interior Least Tern	(Sternula antillaru	m athalassos)			
DATE: 7/29/2008 T	ME OF DAY:	14:05	RIVER MILE _	599.5	
LOCALITY: Bolivar	MS	SITE NAME:	Smith	Point Dikes	
County/Paris	n State		NUMBERS SIG	HTED:	
WHERE SITED: Latitude:	33.9571		Adults:	210	
	: 91.0798		Juveniles:		
Approximate Distance to Water	200	Feet	Eggs:		
- Ipproximate Dietailes to Trate				11	
IN FLIGHT Over Sandbar	ON GROUND O	n Nest Area 🗸	Chicks:	No	
Over Water 🗸		Resting Area	SUBSTRATE:		
Calm Water	<u></u>	/ / ]	0	<b>✓</b>	
		$\sim$	Dalada		
Land Side  Center		$\neg$	2000.		
	MID-CHANNE	<u>.</u> □	VEGETATION:		
Rapid	Currents	7	Type:		
MID-CHANNEL SANDBAR	River Side	$\overline{}$	Distance:	Feet	
SIDE CHANNE	L SANDBAR Center		FIELD CONDIT	ION·	
River Side 🗸	Land Side Calm Water	~ :1		re: 91 <sup>0</sup> F	
77777	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7		Rain: No		
		<del></del>	Wind: N	N 5 mph	
			% Cloud:	0	
OTHER NOTES:					
Left Bank. Large, attached poi	nt bar with undulatir	ng and dissected mu	d and sand. Mos	t birds at water	line.
but 11 sitting inland on presum					
OBSERVERS:	Boyd Fowlkes K	. Jones, W. Jones, N	Malonev Rumano	MS sid	е
RIVER GAGE READING:	-			17.2 F	
TIVEN GAGE READING.		nsas City Location)		(Elevation)	

			FLY	<b>/</b> $\square$	BOAT	<b>✓</b>
SPECIES: Interior Least Tern (	Sternula antillaru	m athalassos)				
DATE: 7/29/2008 TII	ME OF DAY:	14:25	RIVER MILE _		589.5	
LOCALITY: Bolivar	MS	SITE NAME:	Ter	rene Dik	<u>ces</u>	
County/Parish	State		NUMBERS SIG	HTED:		
WHERE SITED: Latitude:	33.8415		Adults:	<u> </u>		
Longitude:	91.0632		Juveniles: Eggs:			
Approximate Distance to Water:	300	Feet	Nests:		7	
			Chicks:		No	
<u>IN FLIGHT</u> Over Sandbar ✓		n Nest Area 🔽	SUBSTRATE:			
Over Water	On R	esting Area	Sand:	<b>✓</b>		
Calm Water 🗌		$\leq$ /I	Gravel:	<b>✓</b>		
Land Side 🔲		~~	Debris:			
Channel Side	MID-CHANNE	<u> </u>	VEGETATION:			
MID-CHANNEL SANDBAR Rapid	Currents _	7	Type:			
MID-CHANNEL SANDBAN	River Side		Distance:		Feet	
	SANDBAR Center Land Side		FIELD CONDIT	ΓΙΟΝ:		
River Side 🗸	Calm Water		Temperati	ure:	94 <sup>0</sup> F	
/ / <del>////</del> /	+7+		Rain: No			
	/ / /	7-7-	Wind: N	IE 5 mpl	<u>1</u>	
L			% Cloud:	10		
OTHER NOTES:						
Left Bank. Long, unattached, un	ndulating sand bar	with some gravel an	d 7 terns sitting i	inland o	n scrapes	S
					MS side	9
OBSERVERS:	Boyd, Fowlkes, K	. Jones, W. Jones, N	Maloney, Ruman	cik		
RIVER GAGE READING:		sas City	=	17.2		
	(Gage	Location)		(Eleva	ation)	

			FLY	□ BOAT ✓
SPECIES: Interior Least Tern	(Sternula antillaru	m athalassos)		
DATE: 7/29/2008	TIME OF DAY:	14:45	RIVER MILE	584.5
LOCALITY: Desha	AR	SITE NAME:	Malone	Field Dikes
County/Par	ish State		NUMBERS SIGH	HTFD:
WUEDE OITED	00 7 10 1			206
WHERE SITED: Latitude			-	Yes
Longitud	de: 91.0499		Eggs:	
Approximate Distance to Wat	er: <u>300</u>	Feet		10
			Chicks:	Yes
<u>IN FLIGHT</u> Over Sandbar <b>✓</b>	ON GROUND O	n Nest Area 🗸	SUBSTRATE:	
Over Water	On F	lesting Area		<b>/</b>
Calm Water 🗌	<del></del>	Z /	0 1	
	3	$\sim$	Б.:	
Land Side U		7		
I \ /_	MID-CHANNE	<u> </u>	VEGETATION:	
Rap	oid Currents	7	Type: <u>Willo</u>	ws/Cottonwoods
MID-CHANNEL SANDBAR	River Side	<u> </u>	Distance:	1000 Feet
SIDE CHANN	IEL SANDBAR Center	%	FIELD CONDITION	ONI:
River Side 🔽	Land Side	□\ \ \		e: <u>96 <sup>0</sup> F</u>
<b>├</b> ─ <del>/                                    </del>	Calm Water	୍ ~ା	remperatur	e. <u>90 F</u>
	/		Rain: No	
	, / , / كبي	<del>-7-7-</del>	Wind: NE	5 mph
			% Cloud:	10
OTHER NOTES:			_	
Right Bank. Broad, wide, hig	h attached flat-toppe	ad har of sand and o	ravel and wrack li	nes on higher
ground. Coyote tracks in cold		sa, bar or sand and g	naver and wrack in	ries on riigriei
				AR side
OBSERVERS:	Boyd, Fowlkes, K	Jones, W. Jones, N	Maloney, Rumanci	ik
RIVER GAGE READING:	Arkar	nsas City	=	17.2 F
	(Gage	Location)		(Elevation)

			FLY	BOAT	<b>✓</b>
SPECIES: Interior Least Tern (S	ternula antillaru	m athalassos)			
DATE: 7/29/2008 TIM	E OF DAY:	15:10	RIVER MILE _	579.0	
LOCALITY: Bolivar	MS	SITE NAME:	Below P	rentiss Dikes	
County/Parish	State		NUMBERS SIGI	HTED:	
WHERE SITED: Latitude:	22 7520		Adults:	289	
_	91.1285		Juveniles:	Yes	
			Eggs:		
Approximate Distance to Water:	500	<u>Feet</u>	Nests:	0	
			Chicks:	Yes	
<u>IN FLIGHT</u> Over Sandbar <b>✓</b>		n Nest Area 🔽	SUBSTRATE:		
Over Water 🗸	/ / On F	esting Area	Sand:	<b>✓</b>	
Calm Water	<del></del>	4/.	Gravel:		
Land Side 🔲			Debris:		
Center Channel Side	MID-CHANNE		VEGETATION:		
	urrents 🗸	→	Туре:		
MID-CHANNEL SANDBAR	River Side	- L	Distance:	Feet	
	ANDBAR Center Land Side	<u>*</u> }	FIELD CONDITI	ION:	
River Side _	Calm Water	~ :1	Temperatu	re: 98 <sup>0</sup> F	
77777	77		Rain: No		
	′ ′ ′ /	<del></del>	Wind: NE	E 5 mph	
			% Cloud:	10	
OTHER NOTES:					
Left Bank. Long, flat, unattached fishing in back chute, mid-channe				oes. Many terns	<b>S</b>
				MS side	e
OBSERVERS:	Boyd, Fowlkes, K	. Jones, W. Jones, N	Maloney, Rumano	:IK	
RIVER GAGE READING:		sas City	=	17.2 F	
	(Gage	Location)		(Elevation)	

			FLY	′ □ BOAT	Γ 🗸
SPECIES: Interior Least Ter	n (Sternula antillaru	m athalassos)			
DATE: 7/29/2008	TIME OF DAY:	15:26	RIVER MILE _	574.5	
LOCALITY: Desha	a AR	SITE NAME:	Caulk I	Neck Cut-Off	
County/Pa	arish State		NUMBERS SIG	HTED:	
WHERE SITED: Latitud	lo. 00.711E		Adults:	89	
	de: <u>33.7115</u>		Juveniles:	Yes	
Longit	ude: 91.1652		Eggs:		
Approximate Distance to W	ater:	Feet	Nests:	0	
			Chicks:	Yes	
IN FLIGHT Over Sandbar	ON GROUND O	n Nest Area 🗸	SUBSTRATE:		
Over Water	On F	Resting Area	Sand:	<b>✓</b>	
Calm Water	<del></del>	4/.1	Gravel:	<b>✓</b>	
Land Side	<u> </u>		Debris:		
Center Channel Side	MID-CHANNE		VEGETATION:		
	Rapid Currents	→	Type: Will	ows	
MID-CHANNEL SANDBAR	River Side		Distance:	500 Feet	
ロー・ブー・トペー	NNEL SANDBAR Center Land Side		FIELD CONDIT	ION:	
River Side 🔽	Calm Water		Temperatu	ıre: <u>100 <sup>0</sup> F</u>	: 
77777	777		Rain: No		
	, , , ,	<del></del>	Wind: N	E 5 mph	
			% Cloud:	20	
OTHER NOTES:					
Right Bank. Attached, med	lium size point bar, with	many juveniles but	no current nestin	g activity indica	tive
of a successful colony site.					
	D. J. E. II IV	/	Adam D	AR sid	de
OBSERVERS:	•	K. Jones, W. Jones, N	viaioney, Rumani		
RIVER GAGE READING:		nsas City	=	17.2 F	
	(Gage	Location)		(Elevation)	

FLY  $\square$ BOAT 🗸 SPECIES: Interior Least Tern (Sternula antillarum athalassos) DATE: 7/29/2008 TIME OF DAY: 15:41 RIVER MILE 568.6 LOCALITY: Bolivar MS SITE NAME: Catfish Point Dikes County/Parish State NUMBERS SIGHTED: 171 Adults: WHERE SITED: Latitude: 33.6592 Juveniles: Yes Longitude: 91.2003 Eggs: Approximate Distance to Water: 500 Feet 10 Nests: Chicks: Yes Over Sandbar IN FLIGHT ON GROUND On Nest Area 🗸 SUBSTRATE: On Resting Area Over Water • Sand: **V** Calm Water Gravel: **~** Debris: **V** Land Side . Center **VEGETATION:** MID-CHANNEL ✓ Channel Side Type: Rapid Currents 🗸 **MID-CHANNEL SANDBAR** Distance: Feet River Side 🗸 SIDE CHANNEL SANDBAR Center FIELD CONDITION: Land Side -River Side [ Temperature: \_\_\_ 94 OF Calm Water Rain: No Wind: NE 5-10 mph % Cloud: 30 OTHER NOTES: Left Bank. Wide, attached, sand and gravel bar. Most Least Terns were counted along waterline, but 10 sitting indicated nests in gravel patches. Much courting activity, 2 Mallards present. No signs of disturbance. MS side OBSERVERS: Boyd, Fowlkes, K. Jones, W. Jones, Maloney, Rumancik RIVER GAGE READING: 17.2 F Arkansas City

(Elevation)

(Gage Location)

			FLY	BOAT	<b>✓</b>
SPECIES: Interior Least Tern	(Sternula antillaru	ım athalassos)			
DATE: 7/29/2008	TIME OF DAY:	16:01	RIVER MILE	563.0	
LOCALITY: Desha	AR	SITE NAME:	Choctaw Ba	ar Island Upper	
County/Par	rish State		NUMBERS SIGH	HTED:	
MUIEDE CITED.	20,000			151	
WHERE SITED: Latitude	de: <u>33.6339</u> de: <u>91.1573</u>	-		Yes	
Longitu	ue. 91.15/3	=	Eggs:		
Approximate Distance to Wa	ter:	Feet	Nests:	0	
			Chicks:	Yes	
<u>IN FLIGHT</u> Over Sandbar	ON GROUND O	n Nest Area 🗸	SUBSTRATE:		
Over Water	On F	Resting Area	Sand:	<b>/</b>	
Calm Water	·	۷/ .ll	Gravel:	<b>/</b>	
Land Side 🔲	2	$\sim$	Debris:		
Center Channel Side	MID-CHANNE		VEGETATION:		
	•	→	Туре:		
MID-CHANNEL SANDBAR	pid Currents River Side		Distance: _	Feet	
ロー・ノー・トへき	NEL SANDBAR Center Land Side	<u> </u>	FIELD CONDITION	ON:	
River Side ✓	Calm Water		Temperatur	e: <u>93                                   </u>	
77777	7 7 7 7		Rain: No		
	/ / /	<del></del>	Wind: NE	5-10 mph	
			% Cloud: 3	30	
OTHER NOTES:					
Right Bank. Large sand and waterline and feeding juvenil			taw Bar Island. B	Birds restin along	g
				AR side	)
OBSERVERS:	Boyd, Fowlkes, k	K. Jones, W. Jones, N	Maloney, Rumanci	ik	
RIVER GAGE READING: _	Arkaı	nsas City		17.2 F	
	(Gage	Location)		(Elevation)	

				FLY	□ BOAT 🗹
SPECIES: Interior Le	east Tern <i>(Sternu</i>	la antillarum a	thalassos)		
DATE: 7/29/2008	8 TIME OF	DAY:1	16:10	RIVER MILE	558.5
LOCALITY:		AR State	SITE NAME:	Choctaw B	ar Island Lower
C	ounty/Fansh	State		NUMBERS SIGH	HTED:
WHERE SITED:	Latituda: 3	3 5836		Adults:	166
WHENE ON ED.	Longitude:	<del>.</del>		Juveniles:	Yes
				Eggs:	
Approximate Distan	ce to Water:	Fe	<u>eet</u>	Nests:	0
				Chicks:	Yes
1111210111			st Area 🗸	SUBSTRATE:	
Ove	r Water	On Restir	ng Area 🗌	Sand:	<b>✓</b>
Calm Water	· 🗆	~~~	7.1	Gravel:	
l constant		Ì	$\sim$	Debris:	
Land Side Center	<i>(</i>		٦	VECETATION	
Channel Side		MID-CHANNEL •	<b>2</b> →	VEGETATION:	N40
MID-CHANNEL SANDI	Rapid Currents			Type: Willo	
1		River Side 🗌		Distance:	500 Feet
<u>ه</u> ببرسر	IDE CHANNEL SANDB	AR Center  Land Side		FIELD CONDITI	ON:
River Side 🗸		Calm Water	~~~	Temperatur	e: <u>96                                   </u>
777	╁╼┾┼╱┼			Rain: No	
	/	/ 7~~,		Wind: NE	5-8 mph
					·
				% Cloud:	30
OTHER NOTES:					
Right Bank. Back of					sting at waterline,
feeding juveniles, o	r lishing in back chic	ite, no visible o	iisturbance ractor	5.	
					AR side
OBSERVERS:	Boyd,	Fowlkes, K. Jo	nes, W. Jones, N	Maloney, Rumanc	
RIVER GAGE READ	ING:	Arkansas	City		17.2 F
		(Gage Loc	-	=	(Elevation)

FLY

BOAT 🗸

SPECIES: Interior Least Tern (Sternula antillarum athalassos) DATE: 7/29/2008 TIME OF DAY: 16:18 RIVER MILE 554.5 LOCALITY: Bolivar MS SITE NAME: Huntington Point County/Parish State NUMBERS SIGHTED: 3 Adults: WHERE SITED: Latitude: NA Juveniles: Longitude: NA Eggs: Approximate Distance to Water: Feet 0 Nests: Chicks: No Over Sandbar IN FLIGHT ON GROUND On Nest Area SUBSTRATE: Over Water • On Resting Area Sand: Calm Water Gravel: Debris: Land Side Center **VEGETATION:** Channel Side MID-CHANNEL ✓ Type: Rapid Currents **MID-CHANNEL SANDBAR** Distance: Feet River Side SIDE CHANNEL SANDBAR Center FIELD CONDITION: Land Side -River Side [ Temperature: \_\_\_ 96 OF Calm Water Rain: No Wind: NE 5-10 mph % Cloud: 30 OTHER NOTES: Three terns fishing mid-channel. MS side OBSERVERS: Boyd, Fowlkes, K. Jones, W. Jones, Maloney, Rumancik RIVER GAGE READING: 17.2 F Arkansas City (Gage Location) (Elevation)

			FLY	BOAT	<b>✓</b>
SPECIES: Interior Least Tern	(Sternula antillaru	ım athalassos)			
DATE: 7/29/2008	TIME OF DAY:	17:12	RIVER MILE _	540.0	
LOCALITY: Washingt	on MS	SITE NAME:	Leland	Neck Dikes	
County/Pa	rish State		NUMBERS SIG	HTED:	
				133	
WHERE SITED: Latitude		=		Yes	
Longitu	de: 91.1087	_	Eggs:		
Approximate Distance to Wa	ter:	Feet		0	
			Chicks:	Yes	
<u>IN FLIGHT</u> Over Sandbar <b>⊻</b>	ON GROUND C	n Nest Area 🗸	SUBSTRATE:		
Over Water	On F	Resting Area	Sand:	<b>✓</b>	
Calm Water 🗌	·	۷/ .ll	Gravel:		
Land Side 🖂	<b>-</b>		Debris:	✓	
Center Channel Side	A MID-CHANNI		VEGETATION:		
	,	→	Туре:		
MID-CHANNEL SANDBAR	pid Currents 🔽 River Side		Distance:	Feet	
ロー・ブー・ 下へき	NEL SANDBAR Center Land Side	<u>~</u>	FIELD CONDIT	ION:	
River Side 🔲	Calm Water		Temperatu	re: 91 <sup>0</sup> F	
77777	7 7 7 7		Rain: No		
	/ _ /	<del>اسد</del> در	Wind: NE	E 5 mph	
			% Cloud:	30	
OTHER NOTES:					
Left Bank. Small, low, unatta	ached sand har 3 mile	es unstream from ent	rance to Greenvil	le harbor No	
tracks or other disturbance w		o apolicam nom om	Tarioo to Groonvii	10 1101011 110	
-					
				MS side	Э
OBSERVERS:	Boyd, Fowlkes, h	K. Jones, W. Jones, N	Maloney, Rumano	cik	
RIVER GAGE READING:	Gre	eenville		28.6 F	
	(Gage	Location)		(Elevation)	

SPECIES: Interi	or Least Tern	(Sternula antillaru	m athalassos)		
DATE: 7/29	/2008	ΓΙΜΕ OF DAY:	17:36	RIVER MILE	539.0
LOCALITY:	Chicot County/Pari		SITE NAME:	Tarpley Cเ	ut-Off dikes
	,			NUMBERS SIGHT	ΓED:
WHERE SITED:	Latitude:	NA		Adults:	1
	Longitud	e: NA		Juveniles:	
Approvimate D	istance to Wate	er:	Feet	Eggs:	
Approximate D	istance to wate		1 661		0
				Chicks:	No
IN FLIGHT C	Over Sandbar		n Nest Area	SUBSTRATE:	
K4_4_	Over Water 🗸	//_ / On F	Resting Area	Sand:	
Calm	Water		<u>ار / ک</u>	Gravel:	
	صب			Debris:	
	Side $\square$		٦	VEGETATION	
Channe	l Side ☐	MID-CHANNE		VEGETATION:	
MID-CHANNEL S	SANDBAR	d Currents River Side		Type:	
' سر		EL SANDBAR Center Land Side		FIELD CONDITIO	
River Sic	de 🕍	Calm Water		Temperature	: 91 <sup>0</sup> F
777	<del>- /- /-</del>	7+7+7-		Rain: No	
		′′′′	<del></del>	Wind: NE	5 mph
				% Cloud: 30	)
OTHER NOTES					
					AR side
OBSERVERS: _		Boyd, Fowlkes, K	Jones, W. Jones, N	Maloney, Rumancik	
RIVER GAGE RI	EADING:	Gre	enville		28.6 F
		(Gage	Location)	= (	Elevation)

			FLY	□ BOAT 🗹
SPECIES: Interior Least Tern (Ster	rnula antillarun	n athalassos)		
DATE: 7/30/2008 TIME 0	OF DAY:	9:02	RIVER MILE _	534.0
LOCALITY: Washington	MS State	_ SITE NAME:	Island	l #84 Dikes
County/Parish	State		NUMBERS SIG	HTED:
WHERE SITED: Latitude:	NΙΛ		Adults:	270
Longitude:			Juveniles:	
Longitude.	INA		Eggs:	
Approximate Distance to Water:	400	Feet	Nests:	40
			Chicks:	No
Over Water  Calm Water  Calm Water  Center  Channel Side  MID-CHANNEL SANDBAR  River Side	MID-CHANNEL ents  River Side		Gravel: Debris:  VEGETATION: Type: Distance:  FIELD CONDIT	Feet
	4		Rain: No	
		′ / ′	Wind: <u>W</u>	·
OTHER NOTES:  Left Bank. Large (3 x 1/2 mile), flat, entire bar with fishing on all sides ar Purple Martins.				spread across
OBSERVERS:	Boyd, Cam	pen, Davin, Fowlke	s. Rumancik	เพเอ รเนย
RIVER GAGE READING:	•	enville		28.1 F
TIIVEIT GAGE READING.		Location)	=	(Elevation)

			FLY L	_ BOAT ▼
SPECIES: Interior Least	Tern <i>(Sternula antillarum</i>	athalassos)		
DATE: 7/30/2008	TIME OF DAY:	9:35	RIVER MILE	529.0
LOCALITY: Was	hington MS	SITE NAME:	Refuge	e Dikes
WHERE SITED: La Lo Approximate Distance to  IN FLIGHT Over Sandb Over Wat  Calm Water   Land Side  Center  Channel Side   MID-CHANNEL SANDBAR  River Side   SIDE O  River Side   Land Side   Center  Channel Side   Note: Side   Side   Side   River Side   Side   Side   River Side   Side   Side   River Side   Side   River Side   Side   Side   River Side   Side   Side   River Side   Side   Side   River Side   Side	ngitude: 91.12264  D Water: 50  Dar ✓ ON GROUND On N	Nest Area viting Area	Eggs: Nests: Chicks: SUBSTRATE: Sand: Gravel: Debris: VEGETATION: Type: Willow Distance: 2  FIELD CONDITION Temperature: Rain: No Wind: W 12 % Cloud: 0	4 (1) 4 No  s/Grass 200 Feet N: 78
				MS side
OBSERVERS:	Boyd, Camp	en, Davin, Fowlke	s, Rumancik	
RIVER GAGE READING:			=	28.1 F
	(Gage Lo	ocation)	(1	Elevation)

FLY

BOAT 🗸

SPECIES: Interior Least Tern (Sternula antillarum athalassos) DATE: 7/30/2008 TIME OF DAY: 9:50 RIVER MILE 526.5 LOCALITY: Chico AR SITE NAME: Aconia Chute Dikes County/Parish State NUMBERS SIGHTED: 26 Adults: WHERE SITED: Latitude: NA Juveniles: Longitude: NA Eggs: Approximate Distance to Water: Feet 0 Nests: Chicks: No Over Sandbar IN FLIGHT ON GROUND On Nest Area SUBSTRATE: Over Water On Resting Area Sand: Calm Water Gravel: Debris: Land Side Center **VEGETATION:** MID-CHANNEL Channel Side Type: Rapid Currents MID-CHANNEL SANDBAR Distance: Feet River Side 🗸 SIDE CHANNEL SANDBAR Center FIELD CONDITION: Land Side - \_\_\_ River Side [ Temperature: 87 °F Calm Water Rain: No Wind: W 12 mph % Cloud: 0 OTHER NOTES: Right Bank. Small, unattached, sandbar (300x 100 ft.). All terns resting at waterline. No signs of disturbance. AR side Boyd, Campen, Davin, Fowlkes, Rumancik OBSERVERS: RIVER GAGE READING: 28.1 F Greenville (Gage Location) (Elevation)

			FLY	′ 🗌 💮 I	BOAT	<b>✓</b>
SPECIES: Interior Least Tern (St	ernula antillaru	m athalassos)				
DATE: 7/30/2008 TIME	OF DAY:	10:20	RIVER MILE _	51	8.0	
LOCALITY: Chico	AR	_ SITE NAME:	Island	վ #86 Dike	es .	
County/Parish	State		NUMBERS SIG	HTED:		
WHERE SITED: Latitude:	33 12910		Adults:		147	
Longitude:	_		Juveniles:			
_	_	Fact.	Eggs:	3(1	) 4(2)	
Approximate Distance to Water:	400	<u>Feet</u>				
			Chicks:		No	
		Nest Area	SUBSTRATE:			
Over Water 🗸	<u> </u>	esting Area	Sand:	<b>✓</b>		
Calm Water		$\langle \langle \rangle /   \rangle$				
Land Side 🗌		$\sim$	Debris:	<b>✓</b>		
Center Channel Side	MID-CHANNE		VEGETATION:			
		<sup>≒</sup> →	Type:			
MID-CHANNEL SANDBAR Rapid Cu	rrents River Side		Distance:	F	-eet	
SIDE CHANNEL S.	ANDBAR Center	☑ ∵. `	FIELD CONDIT	ION:		
River Side 🗌	Land Side { Calm Water	~ :1	Temperatu		9 <sup>0</sup> F	
1 7 7 7 7 17 1	77		Rain: No			
	′′′	<del></del>	Wind: W	10 mph		
			% Cloud:	0		
OTHER NOTES:						
Right Bank. Small, unattached, lo fishing back chute, courting or res Carp fingerlings.						
				F	AR side	)
OBSERVERS:	Boyd, Can	npen, Davin, Fowlkes	s, Rumancik			
RIVER GAGE READING:	Gre	enville	=	28.1 F	=	
	(Gage	Location)		(Elevatio	on)	

			FLY L	BOAT 🗸
SPECIES: Interior Least Terr	(Sternula antillarum a	athalassos)		
DATE: 7/30/2008	TIME OF DAY:	10:45	RIVER MILE	514.0
LOCALITY: Washing	ton MS	SITE NAME:	Leota I	Dikes
Approximate Distance to Walling FLIGHT Over Sandbar Over Water Calm Water Land Side Center Channel Side MID-CHANNEL SANDBAR	e: 33.09132  ude: 91.16353  ater: F  ON GROUND On No On Rest  MID-CHANNEL  apid Currents  River Side  NNEL SANDBAR Center  Land Side  Calm Water  Calm Water  Gravel bar, attached with the	est Area  ing Area  ing Area	Eggs:	O No Feet I: 86 OF
				MS side
OBSERVERS:	Boyd, Campe	en, Davin, Fowlke	s, Rumancik	
RIVER GAGE READING:	Green		=	28.1 F
	(Gage Lo	cation)	(E	levation)

			FLY	<b>/</b> $\square$	BOAT	<b>✓</b>
SPECIES: Interior Least Tern (\$	Sternula antillaru	m athalassos)				
DATE: 7/30/2008 TIM	ME OF DAY:	11:14	RIVER MILE _	5	508.5	
LOCALITY: Chicot	AR	SITE NAME:	Cracraft Lo	wer Dik	es Upper	<u>•</u>
County/Parish WHERE SITED: Latitude:			NUMBERS SIG Adults:			
Longitude: Approximate Distance to Water:	91.15770	Feet	Juveniles: Eggs:			
Approximate Distance to Water.		1001	Nests: Chicks:			
MID-CHANNEL SANDBAR	On F	→ No. 1	SUBSTRATE: Sand: Gravel: Debris:  VEGETATION: Type: Distance:  FIELD CONDIT Temperatu Rain: No Wind: M % Cloud:	TION: ure:	91 <sup>0</sup> F	
OTHER NOTES:  Right Bank. Upstream point of is and 3 Anhingas in vicinity.	sland at Cracraft c	likes, clean sand, ter	ns on scrapes .	One Silv	er Carp	
OBSERVERS:	Boyd, Car	npen, Davin, Fowlke	s, Rumancik		AR side	)
RIVER GAGE READING:		eenville Location)	=	28.1 (Eleva		

(Elevation)

FLY

BOAT 🗸

SPECIES: Interior Least Tern (Sternula antillarum athalassos) DATE: 7/30/2008 TIME OF DAY: 11:23 RIVER MILE 507.5 \_\_\_ AR LOCALITY: Chicot SITE NAME: Cracraft Lower Dikes Lower County/Parish State NUMBERS SIGHTED: Adults: 19 WHERE SITED: Latitude: NA Juveniles: Longitude: NA Eggs: Approximate Distance to Water: Feet 0 Nests: No Chicks: Over Sandbar IN FLIGHT ON GROUND On Nest Area SUBSTRATE: Over Water • On Resting Area 🗸 Sand: Calm Water Gravel: Debris: Land Side . Center **VEGETATION:** MID-CHANNEL ✓ Channel Side Type: Willows/Cottonwoods Rapid Currents MID-CHANNEL SANDBAR Distance: 300 Feet River Side SIDE CHANNEL SANDBAR Center FIELD CONDITION: Land Side -River Side 🗸 Temperature: \_\_\_ 89 <sup>O</sup>F Calm Water Rain: No Wind: W 10 mph % Cloud: 40 OTHER NOTES: Right Bank. Long, narrow, attached, riverside sand bar. All terns resting at waterline. Great Blue Heron, Cattle Egrets and Great Egrets present also. No disturbance noted. AR side Boyd, Campen, Davin, Fowlkes, Rumancik OBSERVERS: \_\_\_ RIVER GAGE READING: 28.1 F Greenville (Gage Location) (Elevation)

			FLY	′ □ BC	DAT [	<b>✓</b>
SPECIES: Interior Least Tern (S	ternula antillaru	m athalassos)				
DATE: 7/30/2008 TIM	E OF DAY:	11:55	RIVER MILE _	503.	5	
LOCALITY: Issaquena	MS	SITE NAME:	Corre	gidor Dikes		
County/Parish	State		NUMBERS SIG	HTED:		
MULTIPE CITED.	00.05700			24	3	
WHERE SITED: Latitude: _						
	91.14347			1(1) 2		
Approximate Distance to Water:	800	Feet	Nests:	35	<u>;</u>	
			Chicks:	No	)	
<u>IN FLIGHT</u> Over Sandbar ✔	ON GROUND O	n Nest Area 🔽	SUBSTRATE:			
Over Water 🗸	/ / On R	esting Area	Sand:	<b>✓</b>		
Calm Water		4/.	Gravel:			
Land Side 🔲			Debris:	<b>✓</b>		
Center Channel Side	MID-CHANNE		VEGETATION:			
Rapid Co	urrents 🗸	→	Туре:			
MID-CHANNEL SANDBAR	River Side	- L	Distance:	Fee	et	
SIDE CHANNEL S	SANDBAR Center Land Side	<b>≚</b> ,	FIELD CONDIT	ION:		
River Side 🗌	Calm Water	~ :1	Temperatu	ıre: <u>93</u>	<sup>o</sup> F	
77777	77		Rain: No			
	′ ′ ′ /	<del></del>	Wind: W	8-10 mph		
			% Cloud:	10		
OTHER NOTES:						
Left Bank. Long (1.5 mile), wide bend of Sarah Cut-Off (attached if feeding on both sides. No signs of the sides of the si	n 2006). Nests w					
				MS	side	
OBSERVERS:	Boyd, Can	npen, Davin, Fowlke	s, Rumancik			
RIVER GAGE READING:	Gre	enville	=	28.1 F		
	(Gage	Location)		(Elevation)	)	

			FL	Y 🗌	BOAT	<b>✓</b>
SPECIES: Interior Least Tern	(Sternula antillarun	n athalassos)				
DATE: 7/30/2008	TIME OF DAY:	12:13	RIVER MILE		499.0	
LOCALITY: East Carro	I LA	_ SITE NAME:	Wilson	n Point I	Dikes	
County/Paris	sh State		NUMBERS SIG	GHTED:		
WHERE SITED: Latitude:	32.9435		Adults:		149	
			Juveniles:			
Longitud	e: <u>91.0833</u>		Eggs:			
Approximate Distance to Water	er:	Feet	Nests:		0	
			Chicks:		No	
<u>IN FLIGHT</u> Over Sandbar ✓	ON GROUND On	Nest Area	SUBSTRATE:			
Over Water 🗸	/ / / On Re	esting Area 🗸	Sand:	<b>✓</b>		
Calm Water	·	47.II	Gravel:			
Land Side 🔲		~~	Debris:	<b>✓</b>		
Center . Channel Side	MID-CHANNEL	<u>.</u>	VEGETATION:	:		
1		→	Type: Wil	llows		
MID-CHANNEL SANDBAR	d Currents River Side		Distance:	150	Feet	
SIDE CHANN	EL SANDBAR Center L	- · · · ·	FIELD CONDIT	ΓΙΟΝ:		
River Side _	Calm Water		Temperati	ure:	92 <sup>0</sup> F	
7777	7 7 7 7 7		Rain: No	)		
	/ / /	<del></del> -	Wind: <u>V</u>	V 5 mph		
			% Cloud:	10		
OTHER NOTES:						
Right Bank. Attached, sand b	ar above last visible o	like. Most Terns ob	served resting a	t waterli	ne or fish	ina
during perimeter count with so						
					LA side	
OBSERVERS:	Boyd, Cam	pen, Davin, Fowlke	s, Rumancik		Er ( Side	
RIVER GAGE READING:	Gree	enville		28.	1 F	
	(Gage I	_ocation)	_	(Eleva	ation)	

SPECIES: Interior Least Te	ern <i>(Sternula antillaru</i>	ım athalassos)		
DATE: 7/30/2008	TIME OF DAY:	13:07	RIVER MILE	495.4
LOCALITY: East C County/		SITE NAME:	Cottonw NUMBERS SIGH	-
WHERE SITED: Latitu  Long  Approximate Distance to V	gitude: NA	Feet	Eggs:	Yes 0
IN FLIGHT Over Sandbar Over Water  Calm Water   Land Side  Center  Channel Side   MID-CHANNEL SANDBAR  SIDE CH	— <u>ON GROONB</u> C		SUBSTRATE: Sand: Gravel: Debris: VEGETATION: Type: Distance:	Feet ON: re: 91 OF
OTHER NOTES:  Right Bank. Low, small (1 indicate prior colony site.			w wooded island.	Juveniles present  LA side
OBSERVERS:	Boyd, Car	mpen, Davin, Fowlke	s, Rumancik	
RIVER GAGE READING:		eenville Location)	=	28.1 F (Elevation)

			FLY	BOAT	<b>✓</b>
SPECIES: Interior Least Tern (S	ternula antillaru	m athalassos)			
DATE: 7/30/2008 TIM	E OF DAY:	13:21	RIVER MILE _	491.5	
LOCALITY: Issaquena	MS	_ SITE NAME:	Baleshed	Landing Dikes	
County/Parish	State		NUMBERS SIGI	HTED:	
WULTER CITER Latitudes	20.0417		Adults:	83	
WHERE SITED: Latitude: _			Juveniles:	Yes	
Longitude	91.1278		Eggs:		
Approximate Distance to Water:		Feet	Nests:	0	
			Chicks:	Yes	
<u>IN FLIGHT</u> Over Sandbar <b>✓</b>	ON GROUND Or	n Nest Area 🗸	SUBSTRATE:		
Over Water	On R	esting Area	Sand:	✓	
Calm Water	<del></del>	Z /	Gravel:		
Land Side 🔲		$\sim$	Dalaria		
Channel Side	MID-CHANNE		VEGETATION:		
1		- →	Type:		
MID-CHANNEL SANDBAR	urrents 🗸 River Side	I	Distance:	Feet	
SIDE CHANNEL S	SANDBAR Center [	<u>~</u>	FIELD CONDITI	ON:	
River Side 🔲	Calm Water		Temperatur	re: 92 ° F	
77777	7		Rain: No		
	/ / / -	<del>7-7-7</del>	Wind: W	5-10 mph	
			% Cloud:	60	
OTHER NOTES:					
Left Bank. Small (100 x 600 ft.), disturbance factors noted.	barely exposed (2	fft.) clean, sand bar u	upstream from Sta	ack Island. No	
				MS side	9
OBSERVERS:	Boyd, Can	npen, Davin, Fowlkes	s, Rumancik		
RIVER GAGE READING:	Gre	enville	=	28.1 F	
	(Gage	Location)		(Elevation)	

			FLY	′ □ B	OAT	<b>✓</b>
SPECIES: Interior Least Ter	n (Sternula antillaru	m athalassos)				
DATE: 7/30/2008	TIME OF DAY:	13:40	RIVER MILE _	482	2.5	
LOCALITY: Issaque	ena MS	_ SITE NAME:	Ajax Ba	r Dikes Up	per	
Approximate Distance to W  IN FLIGHT Over Sandbar Over Water  Calm Water   Land Side  Center  Channel Side   MID-CHANNEL SANDBAR	de: 32.74550  ude: 91.14376  ater:	→   	Gravel:	1	es	
OTHER NOTES:  Left Bank. Broad, high, undat waterline. No tracks or described to the second s	Calm Water		Temperatu Rain: <u>No</u> Wind: <u>W</u> % Cloud:	/ 5-8 mph 60 and feeding		
OBSERVERS:	Boyd, Can	npen, Davin, Fowlke	s, Rumancik			
RIVER GAGE READING:		sburg Location)	=	23.1 F (Elevation		

(Elevation)

			FLY	′ □ BOAT	<b>✓</b>
SPECIES: Interior Least Tern	(Sternula antillarur	n athalassos)			
DATE: 7/30/2008 T	ME OF DAY:	13:56	RIVER MILE _	480.8	
LOCALITY: Issaquena	MS	_ SITE NAME:	Ajax Ba	r Dikes Lower	
County/Parisl	n State		NUMBERS SIG	HTED:	
WHERE SITED: Latitude:	20 72746		Adults:	95	
	: 91.11895				
			Eggs:		
Approximate Distance to Water	:	Feet	Nests:	3	
			Chicks:	Yes	
<u>IN FLIGHT</u> Over Sandbar ✓		Nest Area 🗸	SUBSTRATE:		
Over Water	On Re	esting Area	Sand:	<b>✓</b>	
Calm Water		47.1	Gravel:		
Land Side		$\sim$	Debris:		
Center Channel Side	MID-CHANNE		VEGETATION:		
Ranid	Currents 🗸	→	Туре:		
MID-CHANNEL SANDBAR	River Side [	- I	Distance:	Feet	
	L SANDBAR Center L		FIELD CONDIT	ION:	
River Side	Calm Water		Temperatu	ıre: <u>98 <sup>0</sup> F</u>	
77777	**************************************		Rain: No		
	1 1 /	<del></del>	Wind: W	<sup>1</sup> 5-8 mph	
			% Cloud:	40	
OTHER NOTES:					
Left Bank. High, flat-topped, m Chicks up to 2 weeks old, but n				ning and courting.	
				MO aida	
OBSERVERS:	Bovd. Cam	pen, Davin, Fowlkes	s, Rumancik	MS side	
RIVER GAGE READING:	-	sburg		23.1 F	
		Location)	=	(Elevation)	

SPECIES: Interior Least Te	ern <i>(Sternula antilları</i>	um athalassos)		
DATE: 7/30/2008	TIME OF DAY:	14:15	RIVER MILE _	475.0
LOCALITY: East C		SITE NAME:	Point L	
WHERE SITED: Latite  Long  Approximate Distance to V	gitude: NA	- - Feet	Adults: Juveniles: Eggs:	75 0
IN FLIGHT Over Sandbar Over Water  Calm Water   Land Side  Center .  Channel Side   MID-CHANNEL SANDBAR  SIDE CH	ON GROOME	→	Gravel: Debris:  VEGETATION: Type: Distance:  FIELD CONDIT	Feet  ION: are: 92
OTHER NOTES:  Right Bank. Low, small (2	2 acre) flat, wet, unattacl	ned sand bar in Filter	Bend. No tracks	or disturbance.
OBSERVERS:	Boyd, Ca	mpen, Davin, Fowlke	s, Rumancik	LA side
RIVER GAGE READING:	Vio		=	23.1 F (Elevation)

FLY

BOAT 🗸

SPECIES: Interior Least Tern (Sternula antillarum athalassos) DATE: 7/30/2008 TIME OF DAY: 14:20 RIVER MILE 470.0 LOCALITY: <u>Issaquena</u> MS SITE NAME: Arcadia Point Dikes County/Parish State NUMBERS SIGHTED: Adults: 61 WHERE SITED: Latitude: NA Juveniles: Longitude: NA Eggs: Approximate Distance to Water: Feet 0 Nests: No Chicks: Over Sandbar IN FLIGHT ON GROUND On Nest Area SUBSTRATE: Over Water On Resting Area Sand: Calm Water Gravel: Debris: Land Side . Center VEGETATION: MID-CHANNEL Channel Side Type: Rapid Currents 🗸 MID-CHANNEL SANDBAR Distance: Feet River Side 🗸 SIDE CHANNEL SANDBAR Center FIELD CONDITION: Land Side -River Side [ Temperature: \_\_\_ 94 OF Calm Water 🗸 Rain: No Wind: W 5 mph % Cloud: 65 OTHER NOTES: Left Bank. Small (600 x 150ft.), low, clean, flat, unattached sand bar. All birds resting at waterline. Storm approaching with 28 White Pelicans 1 mile downstream. MS side Boyd, Campen, Davin, Fowlkes, Rumancik OBSERVERS: RIVER GAGE READING: 23.1 F Vicksburg (Gage Location) (Elevation)

			FLY	′ □ BOA	T 🗸
SPECIES: Interior Least Tern (S	ternula antillarur	n athalassos)			
DATE: 7/30/2008 TIM	E OF DAY:	15:00	RIVER MILE _	461.0	
LOCALITY: East Carroll	LA	_ SITE NAME:	Willow	Cutoff Dikes	
County/Parish	State		NUMBERS SIG	HTED:	
WHERE SITED: Latitude:	32.5361		Adults:	84	
	91.1006				
Approximate Distance to Water:	100	Feet	Eggs: Nests:	10	
			Chicks:		
<u>IN FLIGHT</u> Over Sandbar ✔	ON GROUND On	Nest Area ✓	SUBSTRATE:		
Over Water 🔽	On Re	esting Area	Sand:	<b>✓</b>	
Calm Water		$\langle \langle \rangle   \rangle$			
Land Side 🗌		$\sim$	Debris:		
Center . C	MID-CHANNEI	_	VEGETATION:		
Ranid C	urrents 🗹	*	Type:		
MID-CHANNEL SANDBAR	River Side		Distance:	Feet	
SIDE CHANNEL S	SANDBAR Center L	Z	FIELD CONDIT	ION:	
River Side 🔲	Calm Water	~ :1	Temperatu	ıre: 81 <sup>O</sup> F	=
777777	7		Rain: No		
		7-7-7	Wind: W	/ 10 mph	
			% Cloud:	100	
OTHER NOTES:					
Right Bank. Series of small, una after thunderstorm. No othe distri		bars up to 2 ft. in ele	evation. Ten terr	s sitting on ne	sts
arter triuriderstorm. No othe distr	arbance noted.				
				LA sid	de
OBSERVERS:	Boyd, Cam	pen, Davin, Fowlkes	s, Rumancik		
RIVER GAGE READING:		sburg	=	23.1 F	
	(Gage I	_ocation)		(Elevation)	

			FLY	□ BOAT ✓
SPECIES: Interior Least Tern	(Sternula antillarum a	athalassos)		
DATE: 7/30/2008	ΓΙΜΕ OF DAY:	15:42	RIVER MILE	447.0
LOCALITY: Madison		SITE NAME:	Marshall	Cutoff Dikes
County/Pari	sh State		NUMBERS SIGH	HTED:
WHERE SITED: Latitude:			Adults:	63
	e: 91.00311		Eggs:	
Approximate Distance to Water	er: <u> </u>	<u>eet</u>	Nests:	0
IN FLIGHT Over Sandbar			Chicks:	No
IN FLIGHT Over Sandbar ☐ Over Water ✓		est Area 🗌 ng Area 🗸	SUBSTRATE:	_
Calm Water			Sand: Gravel:	
	`	$\leq$	Debris:	
Land Side Center C		_ ]	VEGETATION:	
	MID-CHANNEL [	<sup>-</sup> ' →	Type: Cotto	onwoods
MID-CHANNEL SANDBAR	id Currents 🔽		Distance:	500 Feet
SIDE CHANN	River Side 🗹		FIELD CONDITION	ON.
River Side	Land Side 🗸			e: 84 <sup>0</sup> F
7777	7+7-	<u></u>	Rain: No	
		<del></del>	Wind: W	5 mph
			% Cloud:	70
OTHER NOTES:				
Right Bank. Unattached, sma observed. Coyote observed oalso.				
				LA side
OBSERVERS:	Boyd, Campe	n, Davin, Fowlke	s, Rumancik	
RIVER GAGE READING:	Vicksb	-	=	23.1 F
	(Gage Lo	cation)		(Elevation)

SPECIES: Interior	Least Tern (Sterr	nula antillarun	n athalassos)		
DATE: 7/30/2	008 TIME O	F DAY:	16:28	RIVER MILE	437.0
LOCALITY:	Warren County/Parish	MS State	SITE NAME:	Vicksbur	g Harbor
	County/r anon	Otato		NUMBERS SIGHT	ED:
WHERE SITED:	Latitude:	NA		Adults:	18
	Longitude:			Juveniles:	
A ' l . D'al			E	Eggs:	
Approximate Dist	tance to Water:		<u>Feet</u>	Nests:	0
				Chicks:	No
HAT EIGHT			Nest Area	SUBSTRATE:	
<u> </u>	Over Water 🔽	On Re	sting Area	Sand:	
Calm Wa	ater 🗸	—- <u>-</u>		Gravel:	
Land Si	de 🗆			Debris:	
Cen	ter . 🖵			VEGETATION:	
Channel S	Side" □	MID-CHANNEL	`	Type:	
MID-CHANNEL SAI		River Side		Distance:	
- سرسر	SIDE CHANNEL SAND	DBAR Center L		FIELD CONDITION	٧:
River Side		Calm Water	~ :1	Temperature:	84 <sup>0</sup> F
777	<del>ᡝ</del> ᠊᠌ᡝᡳ <sup>ᡰ</sup> ᡳ	7		Rain: No	
	/	1 / 7	7-7-7	Wind: W 5	mph
				% Cloud: 70	
OTHER NOTES:  Eighteen terns fe	eding in Vicksburg F	Harbor.			
					MS side
OBSERVERS:		Boyd, Cam	pen, Davin, Fowlkes	s, Rumancik	
RIVER GAGE REA	ADING:	Vick	sburg		23.1 F
		(Gage L	ocation)	_ (E	Elevation)

			FLY	BOAT ✓
SPECIES: Interior Least Te	rn <i>(Sternula antillart</i>	ım athalassos)		
DATE: 7/31/2008	TIME OF DAY:	10:20	RIVER MILE _	425.5
LOCALITY: Madis	on LA	SITE NAME:	Letourr	neau Landing
County/F	Parish State		NUMBERS SIG	HTED:
WHERE SITED: Latitu	de: NA		Adults:	20
	tude: NA	=	Juveniles:	
		_	Eggs:	
Approximate Distance to V	Vater:	<u>Feet</u>	Nests:	0
			Chicks:	No
IN FLIGHT Over Sandbar	ON GINDOND	On Nest Area 🗌	SUBSTRATE:	
Over Water	On	Resting Area 🔽	Sand:	$\checkmark$
Calm Water		<b>∠</b> / .∥ _	Gravel:	
Land Side ☐	<u>~</u>		Debris:	$\checkmark$
Center 🖵		_ ]	VEGETATION:	
Channel Side	MID-CHANN	<sup>≞</sup> → ┃	Type: Will	ows
MID-CHANNEL SANDBAR	Rapid Currents			
	River Side		Distance:	60 Feet
SIDE CH/	ANNEL SANDBAR Center Land Side	H	FIELD CONDIT	ION:
River Side 🗸	Calm Wate	~ · · · · ·	Temperatu	re: 83 <sup>0</sup> F
77777	+7+7+	×	Rain: No	
	///~	~~~	Wind: W	′ 12 mph
			% Cloud:	100
OTHER NOTES				
OTHER NOTES:  Right Bank. Small (80 x 10)	00 ft / attached sand b	ar All tarne resting a	t waterline No.d	isturbance noted
Tilgrit Barik. Siriali (00 x 1)	oo ii.), altaciied saild bi	ar. Air terris resting a	t waterime. No d	isturbance noted.
				LA side
OBSERVERS:	Boyd, Ca	mpen, Davin, Fowlke	s, Rumancik	
RIVER GAGE READING:	Vio	cksburg	=	22.5 F
	(Gage	e Location)		(Elevation)

				FLY	′ □ BOAT	<b>✓</b>
SPECIES:	Interior Least Te	ern <i>(Sternula antillaru</i>	ım athalassos)			
DATE:	7/31/2008	TIME OF DAY:	10:39	RIVER MILE _	419.0	
LOCALITY	': Madi	son LA	SITE NAME:	Newtor	n Bend Dikes	
	County/	Parish State		NUMBERS SIG	HTED:	
					52	
WHERE S		ude: <u>32.1367</u>	-			
	Long	itude: 91.0100	-	Eggs:		
Approxim	nate Distance to \	Water: 20	Feet		8	
					No	
IN FLIG	HT Over Sandbar	✓ <u>ON GROUND</u> O	n Nest Area ✓	SUBSTRATE:		
1//	Over Water		Resting Area		<b>✓</b>	
	Calm Water	~~~~~	Z /	Gravel:		
بر_ ا	سبب	>	$\sim$	Б	<b>✓</b>	
	Land Side  Center		$\neg$			
0	Channel Side	MID-CHANNE		VEGETATION:		
`		Rapid Currents	→	Type: Will	ows	
MID-CHA	NNEL SANDBAR	River Side		Distance:	15 Feet	
	SIDE CH	ANNEL SANDBAR Center	☑	FIELD CONDIT	ION:	
/	River Side 🔲	Land Side			ire: <u>84 <sup>0</sup> F</u>	
<b>├</b> ─ <del>/``</del>	<del></del>	Calm Water	<u>~</u>			
	/ / /			Rain: No		
		/ /	لحدر	Wind: W	12 mph	
				% Cloud:	100	
OTHER N	OTES:					
_		undulating bar only 80 f	eet wide, attached w	th scattered willo	ows up to 15 ft. tall	l.
		rbance Turkey Vultures				
OD0ED\/5	·DC·	Poud Cor	nnon Davin Foulke	Dumanaik	LA side	
OBSERVE		-	npen, Davin, Fowlke	s, numancik		
RIVER GA	GE READING:		ksburg	=	22.5 F	
		(Gage	Location)		(Elevation)	

SPECIES: Interi	or Least Tern <i>(Ste</i>	rnula antillarun	n athalassos)		
DATE: 7/31/	/2008 TIME	OF DAY:	11:00	RIVER MILE	414.0
LOCALITY:			SITE NAME:	Togo Islaı	nd Dikes
	County/Parish	State		NUMBERS SIGHTI	ED:
WHERE SITED:	Latitude:	<del></del>		Juveniles:	1
Approximate D	istance to Water:		Feet	Eggs: Nests:	0
				Chicks:	
Calm	Over Water  Water  Side  Penter  I Side  Rapid Curr	On Re  MID-CHANNEL  ents  River Side		SUBSTRATE:  Sand:  Gravel:  Debris:  VEGETATION:  Type:  Distance:  FIELD CONDITION  Temperature:  Rain: No  Wind: W 12	Feet I: 82 <sup>0</sup> F
				% Cloud: <u>10</u> 0	0
OTHER NOTES: One tern in trar	: nsit mid-channel.				
					MS side
OBSERVERS: _		Boyd, Cam	pen, Davin, Fowlke	s, Rumancik	
RIVER GAGE RI	EADING:	Vicks	sburg		22.5 F
		(Gage L	ocation)	= (E	levation)

				FLY	′ □ BOAT 🗹
SPECIES: Interior L	east Tern <i>(Stern</i>	ula antillarum	athalassos)		
DATE: 7/31/200	08 TIME O	F DAY:	11:18	RIVER MILE _	410.0
LOCALITY:		MS State	SITE NAME:	Yuca	atan Dikes
(	Dounty/Fansii	Siale		NUMBERS SIG	HTED:
WHERE SITED:	Latitude:	32 07094		Adults:	150
WHERE OHED.	Longitude:			Juveniles:	
		_	_	Eggs:	1(1) 1(2)
Approximate Dista	nce to Water:	500	<u>Feet</u>	Nests:	19
				Chicks:	No
<u></u>			Nest Area 🗸	SUBSTRATE:	
	er Water	On Res	sting Area	Sand:	<b>✓</b>
Calm Wate	er 🗌			Gravel:	<b>✓</b>
Land Side				Debris:	
Center	r. <u>P</u>	MID CHANNEL		VEGETATION:	
Channel Sid	e'□ <i>≱</i>	MID-CHANNEL	<b>→</b>		ows/Cottonwoods
MID-CHANNEL SAND	DBAR Rapid Curren	ts 🗸			
1		River Side <a>V</a>	. %	Distance.	800 Feet
ببيتسر	SIDE CHANNEL SAND	BAR Center <a href="#">MBAR</a> Center <a href="#">Center</a>		FIELD CONDIT	ION:
River Side [		Calm Water	~ :1	Temperatu	ıre: 82 <sup>0</sup> F
777	<del>ᠯ᠆ᢇ</del> ᡰᡔᡰᠵ	1	<u> </u>	Rain: No	
	/		<del></del>	Wind: W	/ 8 mph
L				% Cloud:	90
OTHER NOTES:					
OTHER NOTES:	. In a start of the start of the	a alaka di Marada a	D'I a cara l Na'alalla		Maria Berli
	ny located in chute l ar with gravel patch k Terns present				
	Torrio prosoni.				
OBSERVERS:		Boyd, Camp	en, Davin, Fowlke	s, Rumancik	LA side
RIVER GAGE REAL	DING:	Vicks			22.5 F
		(Gage L		<del></del> =	(Elevation)

SPECIES: Interior Least 7	Tern <i>(Sternula antillart</i>	um athalassos)		
DATE: 7/31/2008	TIME OF DAY:	12:40	RIVER MILE	403.0
LOCALITY: Clail	oorne MS	SITE NAME:	Coffee P	oint Dikes
County	y/Parish State		NUMBERS SIGH	TFD·
				1
WHERE SITED: Lat		_		
Lor	ngitude: NA	_	_	
Approximate Distance to	Water:	Feet		0
				No
<u>IN FLIGHT</u> Over Sandba	<u>en ancenb</u>	On Nest Area	SUBSTRATE:	
Over Wate	er 🗹 / On	Resting Area	Sand:	]
Calm Water		<b>∠</b> / .∥	Gravel:	]
Land Side 🔲	$\geq$		Debris:	]
Center Channel Side	A MID-CHANN		VEGETATION:	
- Orlanner Side 🗀	ŕ	→	Type:	
MID-CHANNEL SANDBAR	Rapid Currents River Side	%	Distance: _	Feet
SIDE C	CHANNEL SANDBAR Center Land Side		FIELD CONDITIO	N:
River Side 🗔	Calm Wate	~ · · · · · ·	Temperature	e: <u>85 <sup>O</sup>F</u>
7777	<del>7</del> † <del>7</del> † <del>7</del>		Rain: No	
	/ / / 7	<del></del>	Wind: W 5	mph
			% Cloud: <u>9</u>	0
OTHER NOTES:				
One tern fishing mid-cha	nnel.			
				LA side
OBSERVERS:	Boyd, Ca	mpen, Davin, Fowlke	s, Rumancik	
RIVER GAGE READING:	Vio	cksburg		22.5 F
		e Location)	=	(Elevation)

SPECIES: Interio	or Least Tern (Sterr	nula antillaru	m athalassos)		
DATE: 7/31/2	2008 TIME O	F DAY:	12:55	RIVER MILE	392.2
LOCALITY:	Claiborne County/Parish	MS State	SITE NAME:	Dondurant	Towhead Dikes
	County/1 anon	Oldio		NUMBERS SIGH	HTED:
WHERE SITED:	Latitude:	NA		Adults:	225
	Longitude:			Juveniles:	
Annrovimato Dia	-		Foot	Eggs:	1(1)
Approximate Dis	stance to Water:	700	<u>reel</u>	Nests:	5
				Chicks:	Yes
1111 210111			n Nest Area 🗸	SUBSTRATE:	
414	Over Water 🔽	, On R	Resting Area	Sand:	<b>✓</b>
Calm W	Vater	<del></del>	47 JL	Gravel:	
Land S	Side I			Debris:	<b>✓</b>
	nter		٦	VECETATION	
Channel	Side 🔲 🧳	MID-CHANNE	≞ □ <b>&gt;</b>	VEGETATION:	
MID-CHANNEL SA		River Side		Type:	
River Side	SIDE CHANNEL SAND	BAR Center Land Side		FIELD CONDITION	
		Calm Water	<u></u> ✓ `~'	Temperatur	e: 89 <sup>0</sup> F
/ / /	7 / 77	<b>-</b>		Rain: No	
	/	/ / ¬		Wind: W	5 mph
				% Cloud:	100
OTHER NOTES:	gh, flat, mid-sized (120	10 v 800 ft ) s	and har unstream fro	om wooded island	Many juyeniles
at the waterline	with 5 adults sitting in Mississippi Kites and	land on nests	s. No signs of disturb		
					MS side
OBSERVERS: _		Boyd, Can	npen, Davin, Fowlke	s, Rumancik	
RIVER GAGE RE	ADING:	Vic	ksburg		22.5 F
		(Gage	Location)	_	(Elevation)

			FLY	∕ □ BOAT 🗹
SPECIES: Interior Least Tern (S	ternula antillarui	m athalassos)		
DATE: 7/31/2008 TIM	E OF DAY:	14:11	RIVER MILE _	383.0
LOCALITY:Jefferson		_ SITE NAME:	Spithead	Towhead Dikes
County/Parish	State		NUMBERS SIG	HTED:
WHERE SITED: Latitude:	21 22712		Adults:	98
	91.34592		Juveniles:	Yes
		_	Eggs:	1(1) 9(2) 19(3)
Approximate Distance to Water:	150	<u>Feet</u>	Nests:	19
			Chicks:	Yes
IN FLIGHT Over Sandbar ✓	ON GROUND Or	n Nest Area 🔽	SUBSTRATE:	
Over Water 🗸	/ / On R	esting Area	Sand:	<b>✓</b>
Calm Water	<del></del>	47.1	Gravel:	<b>✓</b>
The state of the s		<b>V</b>	Debris:	<b>✓</b>
Land Side  Center		٦	VECETATION	
Channel Side	MID-CHANNE	<sup>∟</sup> ¬→	VEGETATION:	
MID-CHANNEL SANDBAR Rapid Cu	ırrents 🗸	.	Type: <u>Wil</u>	
	River Side	<u>~</u>	Distance:	800 Feet
SIDE CHANNEL S	ANDBAR Center L		FIELD CONDIT	ION:
River Side	Calm Water		Temperatu	ıre: <u>89 <sup>0</sup> F</u>
77777	7		Rain: No	
		- <del></del>	Wind: W	<i>l</i> 8-10
			% Cloud:	100
OTHER NOTES:				
Left Bank. Medium sized sand b	ar (900 x 300 ft )	unattached downstre	eam from larger	har Terns sitting
inland on 19 nests and utilizing all			sam nom largor	can rome onling
				MS side
OBSERVERS:	Boyd, Cam	npen, Davin, Fowlke	s, Rumancik	
RIVER GAGE READING:	Na	tchez		31.2 F
	(Gage	Location)		(Elevation)

			FLY	<b>/</b> $\square$	BOAT	<b>✓</b>
SPECIES: Interior Least Tern	(Sternula antillaru	m athalassos)				
DATE: 7/31/2008	TIME OF DAY:	14:35	RIVER MILE	;	378.5	
LOCALITY:Tensas	S LA	SITE NAME:	Wate	rproof D	ikes	
County/Pa	rish State		NUMBERS SIG	HTED.		
			Adults:		43	
WHERE SITED: Latitude			Juveniles:			
Longitu	ide: 91.3708		Eggs:	-		
Approximate Distance to Wa	iter:	Feet	Nests:		0	
IN FLIGHT Over Sandbar	ON GROUND O	n Nest Area				
Over Water		Resting Area	SUBSTRATE: Sand:			
Calm Water	-<{{	/ /	Gravel:	<b>✓</b>		
	h-1	$\sim$ / $\parallel$	Debris:			
Land Side 🔲	<b>_</b>		DCDII3.	✓		
Center Channel Side	MID-CHANNE		VEGETATION:			
	•	→	Type:			
MID-CHANNEL SANDBAR	apid Currents 🗌	_	Distance:		Feet	
	River Side NEL SANDBAR Center	<b>₽</b> .⁄~				
ロー・ブー・ 下へき	Land Side	<u> </u>	FIELD CONDIT		0	
River Side 🗌	Calm Water	_ <u>}</u> ~~	Temperati	ure:	86 °F	
1777	77		Rain: No			
		<del>-7-7-</del>	Wind: <u>V</u>	V 10 mp	h	
			% Cloud:	100		
OTHER MOTEO.				-		
OTHER NOTES:	har (1/2 mile v 1900 ft	\ with all birds restin	a at waterline N	la alana	of	
Right Bank. Attached sand disturbance. Thousands of					OI	
					LA side	)
OBSERVERS:	Boyd, Car	npen, Davin, Fowlke	s, Rumancik			
RIVER GAGE READING:	Na	atchez		31.2	2 F	
	(Gage	Location)		(Eleva	ation)	

			FLY	Y 🗌	BOAT	<b>✓</b>
SPECIES: Interior Least Terr	n (Sternula antillaru	m athalassos)				
DATE: 8/1/2008	TIME OF DAY:	9:30	RIVER MILE	3	357.0	
LOCALITY: Adam		_ SITE NAME:	Carthag	ge Point	Dikes	
County/Pa	arish State		NUMBERS SIG	HTED:		
WHERE SITED: Latitud	le: 31.51529		Adults:		111	
	ude: 91.49665		Juveniles:			
		Foot	Eggs:			
Approximate Distance to W	aler	Feet	Nests:		0	
	_		Chicks:		No	
IN FLIGHT Over Sandbar		Nest Area	SUBSTRATE:			
Over Water	On R	esting Area 🗸	Sand:	<b>✓</b>		
Calm Water		<u>/</u> / ا	Gravel:	<b>✓</b>		
Land Side ☐ Center ☐	<u></u>	$\sim$	Debris:			
Channel Side	# MID-CHANNE	<u> </u>	VEGETATION:	i		
	apid Currents 🗸	→	Type: Wil	lows		
MID-CHANNEL SANDBAR	River Side		Distance:	300	Feet	
ロー・ブー・ト トン・	NNEL SANDBAR Center Land Side	-{. · · } √	FIELD CONDIT	TION:		
River Side 🗸	Calm Water		Temperati	ıre:	82 <sup>0</sup> F	
7777	777		Rain: No			
	, , , ,	<u> </u>	Wind: S	W 5 mpl	h	
			% Cloud:	100		
OTHER NOTES:						
Left Bank. Small, attached Tern at downstream point w				ctors. O	ne Caspi	an
					MS side	)
OBSERVERS:	Boyd, Campen, David	n, Fowlkes, K. Jones	, W. Jones, Rur	nancik		
RIVER GAGE READING:	Na	tchez	=	30.5	F	
	(Gage	Location)		(Eleva	tion)	

			FLY	BOAT ✓
SPECIES: Interior Least Ter	n <i>(Sternula antillaru</i>	m athalassos)		
DATE: 8/1/2008	TIME OF DAY:	9:48	RIVER MILE _	352.0
LOCALITY: Adam		_ SITE NAME:	Opposite War	nicott Landing Dikes
County/Pa	arish State		NUMBERS SIG	HTED:
WHERE SITED: Latitud	de: 31.419		Adults:	53
	ude: 91.4927		Juveniles:	
		Fact	Eggs:	
Approximate Distance to W	aler:	Feet	Nests:	0
			Chicks:	No
IN FLIGHT Over Sandbar	ON GROOME	n Nest Area	SUBSTRATE:	
Over Water	<u>✓</u> On R	esting Area 🗸	Sand:	$\checkmark$
Calm Water	_	// /I □</td <td>Gravel:</td> <td></td>	Gravel:	
Land Side	<del>```</del>	$\sim$	Debris:	
Channel Side	MID-CHANNE	<u> </u>	VEGETATION:	
<u> </u>	Rapid Currents	7	Type:	
MID-CHANNEL SANDBAR	River Side	<u> </u>	Distance:	Feet
	NNEL SANDBAR Center Land Side	<u></u>	FIELD CONDIT	ION:
River Side	Calm Water		Temperatu	re: 82 <sup>0</sup> F
77777	777		Rain: No	
	′ ′ ′ ′	<del></del>	Wind: S	W 5 mph
			% Cloud:	100
OTHER NOTES:				
Left Bank. Large, attached colony.	sand bar with all birds	resting at waterline.	Coyote and goos	se tracks within
_				
				MS side
OBSERVERS:	Boyd, Campen, Davi	n, Fowlkes, K. Jones	s, W. Jones, Rum	nancik
RIVER GAGE READING:	Na	tchez		30.5 F
	(Gage	Location)		(Elevation)

			FLY	∕ 🗌 BOAT 🗹
SPECIES: Interior Least Terr	n (Sternula antillaru	m athalassos)		
DATE: 8/1/2008	TIME OF DAY:	10:15	RIVER MILE _	346.5
LOCALITY: Adam		SITE NAME:	Opposite Esp	perance Point Dikes
County/Pa	arish State		NUMBERS SIG	HTED:
WHERE SITED: Latitud	le: 31.3937		Adults:	27
	ude: 91.4675		Juveniles:	
			Eggs:	
Approximate Distance to W	ater:	<u>Feet</u>	Nests:	0
			Chicks:	No
<u>IN FLIGHT</u> Over Sandbar	<u>on anoons</u>	n Nest Area 🗌	SUBSTRATE:	
Over Water	<b>⊻</b>	Resting Area 🔽	Sand:	<b>✓</b>
Calm Water		4/.1	Gravel:	
Land Side	<u> </u>		Debris:	
Center Channel Side	A MID-CHANNE		VEGETATION:	
	/	→	Type: Cot	tonwoods/grass
MID-CHANNEL SANDBAR	apid Currents 🗹 River Side	- L	Distance:	400 Feet
	NNEL SANDBAR Center Land Side	<u>v</u>	FIELD CONDIT	TON:
River Side	Calm Water	~ :1	Temperatu	ıre: <u>82 <sup>0</sup> F</u>
77777	7777		Rain: No	
	, , , ,	<del></del>	Wind: S	W 5 mph
			% Cloud:	100
OTHER NOTES:				
Left Bank. Small, attached, noted. One Spotted Sand F			No tracks or dis	sturbance factors
				MS side
OBSERVERS:	Boyd, Campen, Davi	n, Fowlkes, K. Jones	s, W. Jones, Run	nancik
RIVER GAGE READING:	Na	ıtchez		30.5 F
	(Gage	Location)		(Elevation)

			FLY	BOAT	<b>✓</b>
SPECIES: Interior Least Ter	n (Sternula antillaru	m athalassos)			
DATE: 8/1/2008	TIME OF DAY:	10:49	RIVER MILE	329.0	
LOCALITY:Adam	s MS	SITE NAME:	Jacks	son Point	
County/P	arish State		NUMBERS SIGH	HTED:	
WHERE SITED: Latitud	le: 31 2408		Adults:	46	
	ude: 91.6484		Juveniles:	Yes	
Longit	uue. 91.0464		Eggs:		
Approximate Distance to W	ater:	Feet	Nests:	0	
			Chicks:	Yes	
IN FLIGHT Over Sandbar	<u>ON GROONE</u>	n Nest Area 🗸	SUBSTRATE:		
Over Water	<b>✓</b> / / On F	Resting Area	Sand:	<b>V</b>	
Calm Water		∠ / .ll	Gravel:		
Land Side 🖂	<u> </u>	$\sim$	Debris:		
Center Channel Side	A MID-CHANNE		VEGETATION:		
· · ·	/	- □ →	Туре:		
MID-CHANNEL SANDBAR	Rapid Currents  River Side	I	Distance:	Feet	
SIDE CHA	NNEL SANDBAR Center Land Side		FIELD CONDITION	ON:	
River Side 🗔	Calm Water	~ :1	Temperatur	re: 84 ° F	
77777	777		Rain: No		
	′ ′ ′ / 7	<del></del>	Wind: SW	V 5 mph	
			% Cloud:	50	
OTHER NOTES:					
Left Bank. Mid-channel, iso	plated point bar unattag	ched clean sand 3-5	5 ft hiah Juvenile	es present. No	
signs of disturbance. One	ittle Blue Heron and 1	3 White Ibis just dow			
2007 at same location). Tw	o Black Terns flying m	id-channel.			
				MS side	)
OBSERVERS:	Boyd, Campen, Davi	n, Fowlkes, K. Jones	s, W. Jones, Ruma	ancik	
RIVER GAGE READING:	Na	atchez	=	30.5 F	
	(Gage	Location)		(Elevation)	

			FLY $\square$	BOAT 🗸
SPECIES: Interior Least Tel	rn (Sternula antillarum	athalassos)		
DATE: 8/1/2008	TIME OF DAY:	11:10	RIVER MILE	322.0
LOCALITY: Concor		SITE NAME:	Homochito	Cuttoff
County/P	Parish State		NUMBERS SIGHTE	ED:
WHERE SITED: Latitu	de: <u>31.1742</u>		Adults:	3
Longi	tude: 91.5947		_	
Approximate Distance to W	/ater: F	<u>eet</u>		0
			Chicks:	
IN FLIGHT Over Sandbar	— <u>ON GROOND</u> OHN	est Area	SUBSTRATE:	
Over Water	On Rest	ing Area	Sand:	
Calm Water		./ .	Gravel:	
Land Side 🖂	<u>~</u>		Debris:	
Center 🖳		_ 1	VEGETATION:	
Channel Side	MID-CHANNEL	<b>→</b>	Type:	
MID-CHANNEL SANDBAR	Rapid Currents			
1 1	River Side	<u> </u>	Distance:	Feet
SIDE CHA	ANNEL SANDBAR Center  Land Side		FIELD CONDITION	:
River Side 🗸	Calm Water		Temperature:	85 <sup>0</sup> F
77777	+7+7+		Rain: No	
		7-7-7	Wind: SW 5	mph
			% Cloud: <u>50</u>	
OTHER NOTES:				
Right Bank. Riverside san	d bar (5 ft. elev.) behind Is	land in Homochito	Cuttoff. Three adult	s in transit.
				LA side
OBSERVERS:	Boyd, Campen, Davin,	Fowlkes, K. Jones	s, W. Jones, Rumano	ik
RIVER GAGE READING:	Natch		=	30.5 F
	(Gage Lo	cation)	(El	evation)

			FLY	′ 🗌	BOAT	<b>✓</b>
SPECIES: Interior Least Ter	n <i>(Sternula antilları</i>	ım athalassos)				
DATE: 8/1/2008	TIME OF DAY:	11:53	RIVER MILE _		305.0	
LOCALITY: West Feli	ciana LA	SITE NAME:	Shreve	es Bar L	Jpper	
County/P	arish State		NUMBERS SIG			
WHERE SITED: Latitud	de: <u>30.9960</u>	_	Adults: Juveniles:	·		
Longit	ude: 91.6441	_	Eggs:	-		
Approximate Distance to W	ater:	Feet	Nests:		0	
O. a. a. O. a. alla a a			Chicks:		No	
<u>IN FLIGHT</u> Over Sandbar Over Water	<u>GIV GITGGIVB</u>	On Nest Area ☐ Resting Area ✔	SUBSTRATE:			
Calm Water		<i>J</i> ,	Sand: Gravel:	<b>✓</b>		
Land Side $\Box$	<u>~</u>	$\sim$	Debris:			
Center . ☐ Channel Side ✓	A MID-CHANN		VEGETATION:			
\	•	<sup>™</sup> →	Type:			
MID-CHANNEL SANDBAR	Rapid Currents  River Side		Distance:		Feet	
SIDE CHA	NNEL SANDBAR Center Land Side		FIELD CONDIT	ION:		
River Side □	Calm Wate	~~ : ·	Temperatu	ıre:	85 °F	
7777	77		Rain: No			
	/ / /	<del></del>	Wind: S	W 5 mp	h	
			% Cloud:	90		
OTHER NOTES:						
Left Bank. Attached, upstre		nd. Medium high bar	with all birds rest	ing at w	vaterline.	
OBSERVERS:	Boyd, Campen, Dav	in, Fowlkes, K. Jones	s, W. Jones, Run	nancik		
RIVER GAGE READING:	N	atchez		30.	5 F	
	(Gage	Location)	_	(Eleva	ation)	

			FLY	′ □ BOAT 🗹
SPECIES: Interior Least Terr	n (Sternula antilları	um athalassos)		
DATE: 8/1/2008	TIME OF DAY:	11:50	RIVER MILE _	304.0
LOCALITY: West Feli		SITE NAME:	Shreve	es Bar Lower
County/Pa	arish State		NUMBERS SIG	HTED:
WHERE SITED: Latitud	le: 30.9916		Adults:	57
	ude: 91.6507	_	Juveniles:	
		_	Eggs:	4(2)
Approximate Distance to W	ater: <u>200</u>	<u>Feet</u>	Nests:	5
			Chicks:	No
<u>IN FLIGHT</u> Over Sandbar	ON GROUND C	On Nest Area 🗸	SUBSTRATE:	
Over Water	<b>✓</b> / / On I	Resting Area	Sand:	<b>✓</b>
Calm Water		/</td <td>Gravel:</td> <td></td>	Gravel:	
Land Side 🔲	<u></u>		Debris:	<b>✓</b>
Center 🖵		1	VEGETATION:	
Channel Side 🗌	MID-CHANN	<sup>℡</sup> □→┃		ows/Cottonwoods
MID-CHANNEL SANDBAR	apid Currents			
1 1	River Side	. ☑	Distance:	700 Feet
SIDE CHA	NEL SANDBAR Center Land Side		FIELD CONDIT	ION:
River Side	Calm Wate	~ · · · · ·	Temperatu	ıre: <u>88 <sup>0</sup> F</u>
	+7+74	·	Rain: No	
	/ / / <del>/ / / / / / / / / / / / / / / / </del>			
	<u> </u>	7 7 7	Wind: S	W 5 mph
			% Cloud:	90
OTHER NOTES:				
Left Bank. Atached, downs				
1600 ft.) sand bar with terns One Black Tern in vicinity.	s sitting on scrapes ald	ong weak wrack line o	f fine debris. No	disturbance noted.
OBSERVERS:	Boyd, Campen, Dav	rin, Fowlkes, K. Jones	s, W. Jones, Rum	nancik
RIVER GAGE READING:	N	atchez		30.5 F
	(Gage	Location)	_	(Elevation)

			FLY	<b>′</b> 🗆	BOAT	<b>✓</b>
SPECIES: Interior Least Ter	n (Sternula antillaru	ım athalassos)				
DATE: 8/1/2008	TIME OF DAY:	12:14	RIVER MILE _		300.5	
LOCALITY: West Felio	ciana LA	SITE NAME:	Hog	Point Di	kes	
County/Pa	arish State		NUMBERS SIG	HTED.		
				LD.		
WHERE SITED: Latitud	-	_	Juveniles:	· ·		
Longit	ude: 91.6458	_	Eggs:			
Approximate Distance to W	ater:	Feet	Nests:		0	
			Chicks:		No	
<u>IN FLIGHT</u> Over Sandbar	ON GROUND C	n Nest Area	SUBSTRATE:			
Over Water	<b>✓</b> / On F	Resting Area 🗸	Sand:	<b>✓</b>		
Calm Water		۷/ .ll	Gravel:			
Land Side 📋	<del>``</del>	$\sim$	Debris:			
Center Channel Side	MID-CHANNI		VEGETATION:			
	Rapid Currents	→	Type: Wil	lows/gra	ass	
MID-CHANNEL SANDBAR	River Side	<u>.</u>	Distance:	200	Feet	
l ノー・下へ。	NNEL SANDBAR Center Land Side	<u> </u>	FIELD CONDIT	TON:		
River Side	Calm Water		Temperatu	ıre:	90 °F	
77777	+7+7+7		Rain: No			
	/ _ / _ /	<del></del>	Wind: S	W 5 mp	h	
			% Cloud:	90		
OTHER NOTES:						
Left Bank. Attached, upstre	eam point of wooded is	land with large, open	back chute. All	terns re	sting at	
waterline. Seventeen Black						
OBSERVERS:	Boyd, Campen, Dav	in, Fowlkes, K. Jones	s, W. Jones, Run	nancik		
RIVER GAGE READING:	Na	atchez		30.5	5 F	
	(Gage	Location)	= -	(Eleva	ation)	_