REVIEW
of the
Sea Turtle Science and Recovery Program

Padre Island National Seashore

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Signed:_____ approved 6/8/2020; amended 12/2/2020
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Top: Kemp's ridley in water; **Lower left**: Female Kemp's laying eggs; **Lower right:** Kemp's hatchlings at release (NPS photos)

Cover photo: Shoreline of the barrier island known as North Padre Island, home of Padre Island National Seashore. (NPS photo)

EXECUTIVE SUMMARY

The Padre Island National Seashore (PAIS or park) Sea Turtle Science and Recovery (STSR) program has been operating for over 40 years. Begun in the late 1970s to aid in the recovery of the Kemp's ridley sea turtle, the most endangered sea turtle in the U.S., a secondary nesting colony was successfully established at PAIS to prevent species extinction. The park has been relocating sea turtle eggs, incubating them in an NPS facility, and releasing hatchlings on park beaches to mitigate potential effects from any source of environmental, natural, or human caused mortality ranging from tidal inundation, predation, and recreational beach driving. The program has grown tremendously during this time and now has an annual operating budget of nearly $2M ($1.3 ONPS base and $700k project funds), which funds nest monitoring and management, research, and stranding response. In 3-5 years, the program is projecting a budget shortfall. A program review was requested to evaluate the financial sustainability of the program, including reviewing program operations, staffing, interagency relationships, and consistency with conservation principles and agency policy.

From 1978 to present, the worldwide population of Kemp's has grown, but is still tenuous. The epicenter for Kemp's nesting is in Mexico. Kemp's ridley nesting in Texas and at PAIS represents about 1% of the worldwide total. Nationally and internationally, those agencies with authority over species recovery have emphasized reducing threats and impacts to the species, including focusing recovery efforts on primary nesting areas in Mexico and reducing egg harvesting and bycatch in fishing gear (mostly shrimp trawling). The STSR program has contributed significantly to sea turtle science over the years through research and dozens of professional publications. The park's sea turtle nest protection/relocation/egg incubation program can be credited for improving the science and techniques for hatchling production. However, the program does implement very intensive and invasive techniques to reduce potential egg and hatchling mortality on only one percent of the worldwide population. Other influences, such as sea level rise and increases in coastal nuisance flooding, contribute to the concern over the long-term suitability and availability of sea turtle nesting habitat at PAIS and indicate a need to determine if other suitable nesting habitat exists along U.S. beaches outside of PAIS.

Program findings and recommendations are included on the topics of mission and program focus, interagency relations, sustainable funding, program staffing and operations, and safety. This report includes many recommendations intended to update the program to better align with current NPS practices, which includes continuing to contribute to sea turtle recovery and protecting and managing the many other significant natural and cultural resources in the park.

The park has achieved establishment of a secondary nesting colony of Kemp's and evidence indicates the imprinting and return of offspring to PAIS beaches. This strategy was a key component of the 1978 interagency Kemp's action plan, but has not been identified as a primary recovery action in subsequent FWS/NMFS recovery plans, including the most recent 2011 plan. The park has an opportunity to scale STSR program operations and to pilot alternate nest management strategies, which will require engaging other agencies and partners in planning for

the future, including Endangered Species Act consultation. The 5-year species status review for Kemp's (to be conducted in 2020) will be an opportunity to initiate these discussions with the Recovery Team and other partners.

Sea turtle management of Kemp's ridley requires international and domestic coordination and partnerships that promote shared stewardship. The STSR was universally praised for raising public awareness for sea turtle conservation. NPS funding, particularly PAIS funding, for Kemp's recovery is disproportionately high compared to the number of partners involved and the percentage of the turtle population being addressed. The NPS should request additional funding and support from the FWS for current recovery actions and nest location, egg collection, and hatchling release at PAIS. The NMFS currently supports PAIS for the role of State Coordinator of the Sea Turtle Stranding and Salvage Network for Texas. The park should engage the national Kemp's Recovery Team and the FWS in determining and evaluating additional and alternative locations for nesting sites outside of PAIS boundaries.

For a sustainable program operations funding model, the park should transition the sea turtle program to one that operates on existing park base that accounts for and incorporates existing permanent salaries and other fixed costs (e.g. fuel use, supplies, equipment, all vehicle maintenance and replacement, and additional utility costs). The program should not rely on additional parkwide base fund allocations or short-term project funding to cover long-term operational costs.

Alternative staffing and operations recommendations include greatly reducing overtime from over $200,000 per year to approximately $16,000 per year (the NPS Scorecard standard for resource programs), elimination of administratively uncontrollable overtime (AUO), and hiring additional seasonal staff to accomplish priority work. A reorganization of the staffing structure is proposed to reduce supervisory span of control issues and provide for more direct interaction of permanent staff with the division chief. Additional operational recommendations include focusing staff work and activities (e.g. nest management and egg collection, turtle stranding, recovery, and salvage) to within PAIS boundaries. To reduce employee burnout and provide for adequate work-rest ratios for normal operations, tours of duty should be limited to 8-hour days or 10-hour days (40 hours per week) and additional seasonal staff should be hired for days or times where coverage is demonstrated as critical.

The Regional Safety Officer recently completed a safety review in December 2019, which included a corrective action plan for beach travel. A Standard Operating Procedure (SOP) should be developed defining when the beach is closed to the public, and STSR staff should be held to that standard. The park should implement an incident command system (ICS) for management of large and unpredictable turtle stranding events to improve accountability for tasks, safety, and finances. Operational Leadership (OL) training should be provided each year to all staff and OL principles and activities (e.g. GARs) should be conducted regularly to evaluate conditions and risks unfavorable for field work and any mitigations needed.

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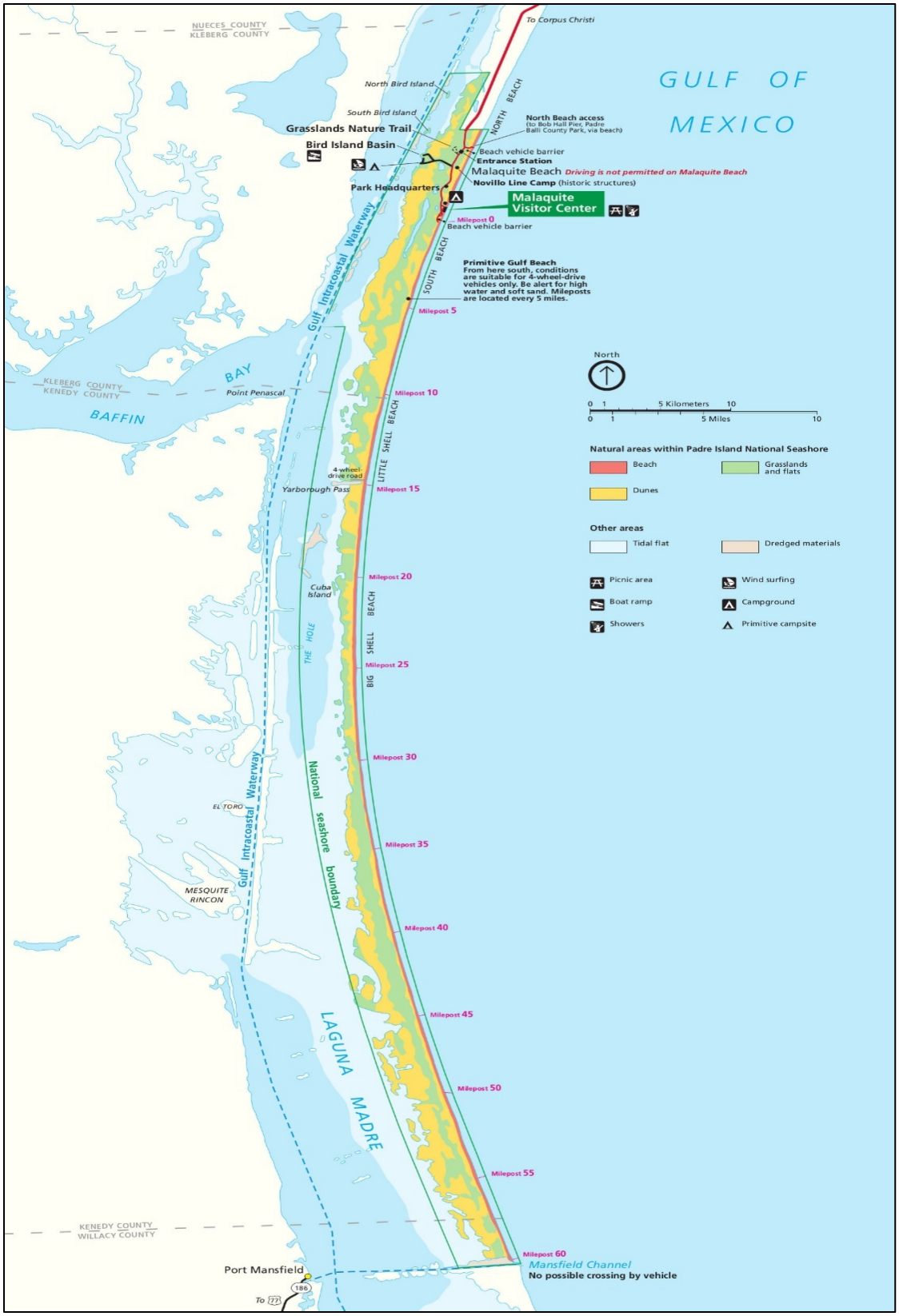

Figure 1. Map of Padre Island National Seashore.

1. Program Review Purpose, Scope, and Objectives

Prior to his retirement in fall 2019, the former Superintendent, Padre Island National Seashore (PAIS or park), requested a review of the park's sea turtle science and recovery (STSR) program. This request was based on several factors: the Management Review completed in July 2018 for PAIS and Palo Alto National Battlefield called for a more in-depth review of the STSR program; the Superintendent was preparing to address a future funding shortfall for the program and for staff succession planning; the STSR program had not been reviewed in its 40-year existence (other than for safety and internal controls); and, the program review would be a valuable resource for the new incoming Superintendent.

The scope of the review includes functional areas and operations of the STSR program. Five objectives were established:

1. Identify appropriate mission functions of the program, including the role of science/research.
2. Evaluate program staffing and identify positions and functions necessary to meet mission requirements.
3. Evaluate program funding and determine financial resources required to meet mission functions.
4. Evaluate interagency relationships and determine appropriate roles/responsibilities for shared resource stewardship.
5. Document program successes and highlight practices that should be continued and shared.

2. Assessment Methods

The program review consisted of three parts: 1) evaluation of plans and documents, 2) personal interviews with all permanent STSR staff (two were interviewed by phone) and all members of the park management team conducted on December 12, 2019, and 3) phone interviews with other Federal and State agencies and partner organizations conducted during January-February 2020. Information from these sources was incorporated into the findings, discussion, and recommendations included in section 4.

3. Program History and Context

PAIS was established in 1962, primarily for recreational purposes. The park's Foundation document (NPS, 2016), articulates the park's purpose, significance, fundamental resources and values (see Appendix A). The PAIS STSR program has a long history of success, having been established more than 40 years ago in 1978 to aid in the recovery of the Kemp's ridley sea turtle (hereafter referred to as "Kemp's"). The Kemp's was listed as endangered in 1970, under the Endangered Species Conservation Act, and subsequently listed endangered under the Endangered Species Act of 1973, as amended (ESA or Act) throughout its range in Mexico and in the U.S. This species is co-managed by the National Oceanic & Atmospheric Administration (NOAA)- National Marine Fisheries Service (NMFS) in the marine environment and the U.S.

Fish and Wildlife Service (FWS) in the terrestrial (coastal) environment. Primary threats to Kemp's include: 1) bycatch in fishing gear, 2) harvest and destruction of eggs, and 3) ocean pollution/marine debris.

Bycatch in Fishing Gear
The major ongoing threat to Kemp's is bycatch in fishing gear. Kemp's are primarily caught in shrimp trawls, but also in recreational fishing gear, gill nets, traps and pots, and dredges in the Gulf of Mexico and northwest Atlantic.

Harvest of Eggs
Almost the entire Kemp's population nests along the coast of the state of Tamaulipas, Mexico on the Gulf coast of Mexico, just south of the U.S.-Mexico border. Historically, egg collection was an extreme threat in this area, but since nesting beaches were afforded protection in both Mexico and the United States, this threat no longer poses a major concern.

Ocean Pollution/Marine Debris
Marine turtles may die after ingesting fishing line, balloons, or plastic bags, plastic pieces, or other plastic debris which they can mistake for food. They may also become entangled in marine debris, including discarded or lost fishing gear, and can be killed or seriously injured.

A Bi-National Recovery Plan for Kemp's was completed in 2011 (NMFS, 2011) as a second revision of the original 1984 Recovery Plan. Dr. Donna Shaver of the NPS was a member of the Recovery Team. A recovery plan is a guidance document, not a regulatory document. The ESA envisions a recovery plan as the central organizing tool for guiding the FWS/NMFS and their partners in efforts to recover a species – it identifies the actions necessary to support recovery of the species, and identifies goals and criteria by which to measure progress.

In 2015, FWS/NMFS completed a 5-year status review of Kemp's which assessed whether recovery/downlisting criteria included in the revised Recovery Plan (2011) were met or progress was made, as well as assessing the current status of the species. It concluded that identified downlisting and demographic criteria have not been met and endangered status was maintained.

Kemp's nesting is essentially limited to the beaches of the western Gulf of Mexico, primarily in Tamaulipas, Mexico. Nesting also occurs in Veracruz, MX and a few historical records exist for Campeche, MX. In the U.S., nesting occurs primarily in Texas (especially PAIS), and occasionally in Florida, Alabama, Georgia, South Carolina, and North Carolina (see Figure 2).

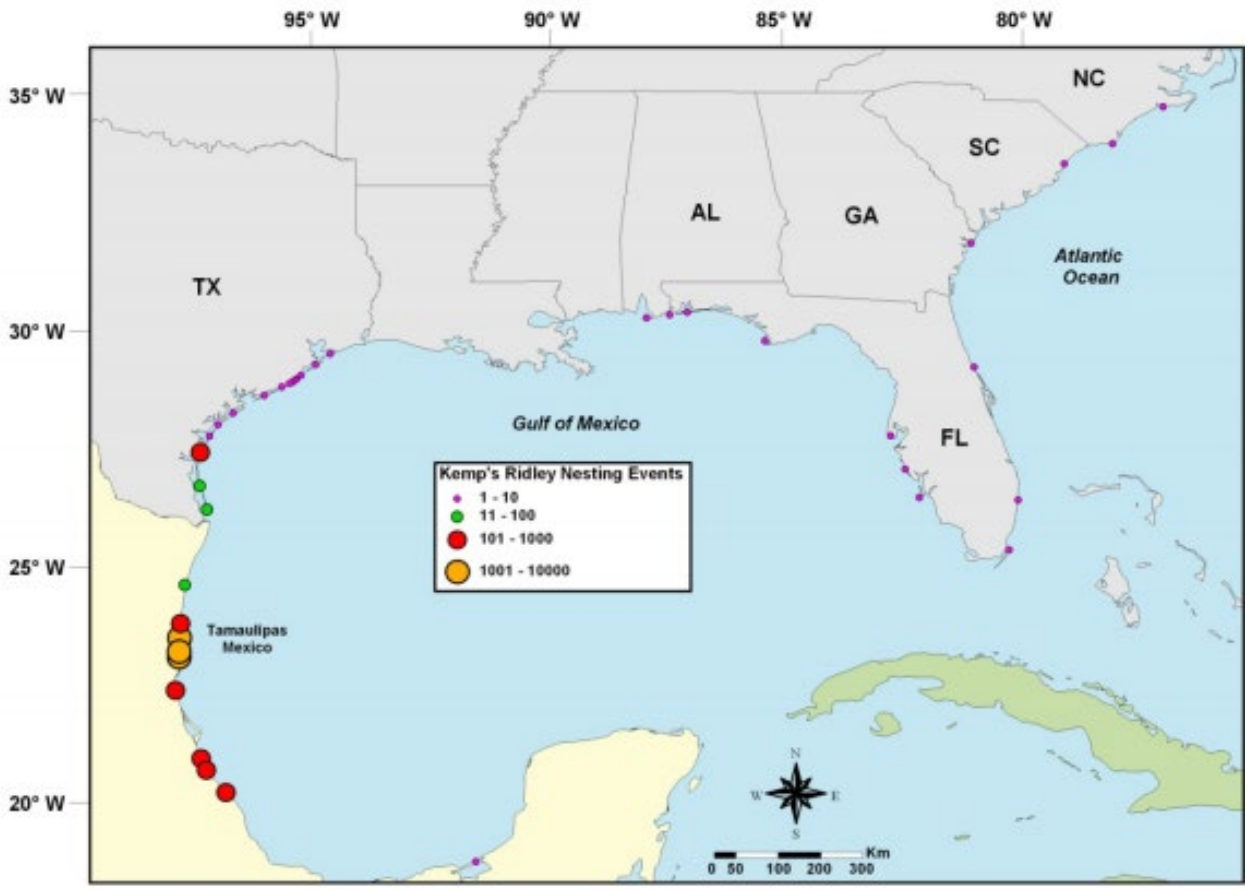

Figure 2. Distribution and relative abundance of Kemp's ridley nesting. (NMFS/FWS, 2015).

Kemp's Status at PAIS

In 1977 there were estimated to be around 200 Kemp's nesting females left in the world (NPS et al., 1978). A record low number of nests (702) was produced rangewide in 1985. The primary nesting site, where 99% of the rangewide nesting occurs, is in Mexico. In 1978, a ten-year interagency action plan was developed, which included a goal for establishing a Kemp's nesting colony at PAIS. The park has been actively working since the 1980s to establish and maintain a satellite population at PAIS that could contribute to global recovery of the species.

During the 1980s, a period of accelerating species decline, eggs from the primary Kemp's nesting beach in Mexico were relocated to PAIS to establish a secondary nesting colony in order to safeguard against species extinction. In 1980, the park also began coordinating the Sea Turtle Stranding and Salvage Network (STSSN), eventually expanding to include all species of sea turtles in Texas. The STSSN is a cooperative effort of federal, state, and private partners working to document causes of morbidity and mortality in sea turtles to inform conservation management and recovery. In the 1990s, the park continued to develop, test, and implement techniques to protect nests, incubate eggs, and produce hatchlings for continued recovery of Kemp's.

In the 2000s, the park expanded their beach patrol operations, incubation capacity, and actively pursued sea turtle research. In 2002, the park expanded its incubation facility and sea turtle program offices, and eventually developed a separate laboratory. From 2005-2007 the park conducted a study to evaluate the potential for impacts to in situ nests from predators, tidal inundation, human tampering, and vehicle driving (Walker and Shaver, 2008). From 2008-2010 a study was conducted to evaluate techniques for the use of corrals to incubate Kemp's eggs (Walker and Shaver, 2011). Corrals are temporary enclosures constructed in suitable areas on the beach using fencing, which mimic natural processes because they allow eggs to incubate on the beach under natural conditions while protecting nests from poaching and predation.

More recently (2010-2019), sea turtle strandings (vast majority being greens) have increased dramatically in the Gulf of Mexico, especially in Texas, and have become a larger part of the program's work. The park's nest patrol and management operations also increased during this period.

A record high number of Kemp's nests were recorded in 2017 (24,586 in Mexico; and 353 in Texas, of which 219 were recorded at PAIS). Currently, the number of Kemp's nests documented at PAIS is about 1% of the rangewide total (see Appendix B). Nesting dropped in 2018 and 2019, which is typical due to the reproduction biology of the species (females nest approximately every 2-3 years). For the 10-year period 2010 and 2019, an average of 110 nests were recorded annually at PAIS. A large nest production year is expected in 2020.

Unique management challenges exist in Texas at PAIS, including year-round beach driving along all 61 miles of beach (except for 4 ½ miles that are closed) and the fact that Kemp's nest during the day. These circumstances present challenges for sea turtle conservation (even in a "protected" national park unit) that are not present in other coastal NPS units. The park's intensive sea turtle nest monitoring and management program has continued to be implemented to allow unrestricted public beach driving with motor vehicles and in response to reported beach inundation that may be associated with ongoing erosion and sea level rise.

4. Findings, Discussion, and Recommendations

a. Mission Functions

Before we discuss findings of the STSR program functions, it is important to review the responsibilities of Federal agencies under the Endangered Species Act (ESA), since it serves as a guiding principle for Kemp's management actions in PAIS. First, we are required to aid and participate in the recovery of listed species by using our authorities to conserve (recover) listed species (ESA section 7(a)(1)). This is often referred to as the "proactive mandate". Specifically, we must utilize our authorities in furtherance of the purposes of the Act by carrying out programs for the conservation of endangered and threatened species. Secondly, we must ensure that our actions (or those under our authority) do not jeopardize the continued existence of the listed species. This is sometimes referred to as the "reactive mandate". Specifically, under section 7(a)(2) of ESA each Federal agency shall, in consultation with and with the assistance of the Secretary, insure

that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any endangered or threatened species. Lastly, it is illegal to "take" a Federally listed species (section 9 of ESA). "Take" is defined to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, etc. (section 3 of ESA). The FWS/NMFS can authorize take that is incidental to actions that are funded, authorized, or carried out by a Federal agency under this section of the Act in the section 7 consultation process and intentional take with a section 10 permit as applicable.

In short, under the Act our responsibilities are to provide for both the continued survival and the recovery of Federally listed species, essentially a two-prong mandate. Below we discuss important aspects of sea turtle management at PAIS and how they might apply to our responsibilities under ESA and NPS policy.

As stated previously, the FWS/NMFS identified three major threats to Kemp's: bycatch in fishing gear, harvest of eggs, and ocean pollution/marine debris. None of these threats directly apply to PAIS operations or are within the discretion of park management. However, as discussed above, legal mandates under ESA call for the NPS to utilize our authorities to develop proactive programs to conserve (recover) listed species and ensure our actions do not result in jeopardizing the continued existence (survival) of the species.

The park's sea turtle program focuses on three primary components: nest monitoring and management, stranding response, and research. The park's sea turtle program was originally designed with a single-species focus on Kemp's ridley, driven by the 1978 interagency Kemp's action plan; although the STSR program has evolved over the years to include other sea turtle species listed under the ESA that are present in the park, namely green and loggerhead sea turtles.

i. Nest Management

Findings and Discussion

Kemp's ridley sea turtle

Sea turtles are found in all warm and temperate waters throughout the world and undergo long migrations, some as far as 1,400 miles, between their feeding grounds and the beaches where they nest. That said, 95% of worldwide Kemp's ridley nesting occurs in the state of Tamaulipas, Mexico. The three main nesting beaches in Tamaulipas are Rancho Nuevo, Tepehuajes, and Barra del Tordo. Nesting also occurs in Veracruz, Mexico, and in Texas, but on a much smaller scale. Occasional nesting has been documented in Alabama, Georgia, North Carolina, South Carolina, and Florida (Figure 2).

While there is some documentation that suggests occasional and limited nesting of Kemp's historically occurred at PAIS (likely opportunistic), there is nothing in the

scientific literature that suggests PAIS ever hosted robust or even sustainable populations of Kemp's.[1] The park has carried out a voluntary, intensively managed program to proactively propagate Kemp's ridley sea turtles that originated from the 1978 interagency action plan.

In the 1970s and 80s, Kemp's were considered at risk of extinction, and emergency actions (including nest relocation, incubation, and head starting) were necessary to address the dramatic population loss that was occurring elsewhere in the listed population in Mexico. Included among these actions was the goal of establishing a secondary nesting population at PAIS, per the 1978 interagency action plan, which has been achieved. This action was successful in increasing the number of Kemp's hatchlings at PAIS during the 1990s and 2000s. Recent evidence (Frey et al., 2020) demonstrates that offspring of PAIS nesting females are returning to the park; however, the majority of nesters at PAIS are from wild stock. Whether this level of intensive wildlife management is still necessary is a legitimate scientific question now that Kemp's numbers have increased from the low identified in the 1970s that prompted intervention.

In addition to the ESA, NPS Management Policies (NPS, 2006) require NPS units to protect rare, threatened, or endangered species (4.4.2) and also actively work to recover and restore all species native to parks listed under the ESA (4.4.2.3). The NPS was a member of the Kemp's Recovery Team that developed the original action plan (NPS et. al., 1978), which called for the establishment of a secondary nesting colony at PAIS. This was achieved in the 1990s and continues to be a major conservation success. The work conducted in the 1980s and 1990s demonstrates that PAIS can serve an important role as an alternate nesting site for a segment of the population in the event of a catastrophic population crash in Mexico. The relative contribution that PAIS makes to Kemp's nesting is about 1% of the total nests. The park continues to be an active member or the Recovery Team and a contributor to sea turtle conservation science. Rangewide population recovery actions are now guided by the 2011 Bi-National Recovery Plan for Kemp's (NMFS, 2011).

The practice of nearly 100% nest relocation (removal and relocation of, or incubation of, eggs to produce hatchlings) at PAIS has been, and is, precedent setting for the NPS. Generally, the collection of all eggs to eliminate potential mortality due to beach driving, predation, or ocean inundation is inconsistent with NPS Management Policies (Chapter

[1] On page 11 of the PEER letter it noted an internal contradiction and possible error concerning the historic evidence of Kemp's nesting at PAIS. Although it appears that that there is not a robust record of evidence of historic Kemp's nesting at PAIS; some planning documents refer to the park as a major nesting site of the Atlantic Ridley Turtle (PAIS Natural Resources Management Plan, 1974), while others indicate sporadic nesting (Action Plan, Restoration and Enhancement of Atlantic Ridley Turtle Populations, 1978). Definitive, place-based evidence is available for the primary nesting beach in Mexico, while the anecdotal information noted by PEER provides the basis for PAIS. The 1978 Action Plan included the goal of establishing a secondary nesting colony of Kemp's at PAIS.

4), which requires natural processes to occur uninhibited to the degree possible. These actions, however, in the context of an endangered population and sea level rise, may be warranted to allow for the persistence of a small nesting population of Kemp's at PAIS, if that is still deemed necessary for the overall success of the species as it was in 1978. In order to determine the future of sea turtle nesting and suitable habitat along coastal areas within National Parks, the following questions need to be addressed:

- Is it appropriate or beneficial in the long-term to completely bypass the natural nesting process for all sea turtles?
- What long-term impacts may be caused by eliminating environmental factors that affect natural selection through the relocation and laboratory incubation of all nests?
- As sea level rise increases and inundation pressures make beach nesting more and more difficult, will nest relocation and laboratory incubation be the only way for the species to persist? And if so, is PAIS the most logical place to do that?
- Does an intensive nest detection program detract from focus on addressing other environmental or human caused mortality that recent recovery plans and species status documents have identified as far more substantial to Kemp's recovery?

From a larger NPS perspective, other coastal parks focused on allowing natural nesting may face increasing pressure to relocate eggs to avoid potential or perceived impacts that could be caused by recreational activities, predation, and inundation due to rising sea levels.

The 2011 Kemp's Bi-National Recovery Plan does not commit an agency to any action within the plan, nor are those actions identified mandatory in nature, rather it identifies goals and voluntary measures as a road map to species recovery. The plan focuses on the core population in Mexico and reducing threats to the species. PAIS is included as a "lead" agency for a variety of actions related to protecting and managing nesting beaches. The Recovery Plan on pages I-24 to 25 includes PAIS STSR beach patrolling and sea turtle nesting protection activities, including incubation and rearing of young, as well as their educational programs. Additionally, the plan addresses how the park manages oil and gas exploration and development as related to protecting park resources, especially Kemp's (page I-27).

The Recovery Plan does not include the PAIS nesting colony or hatchling production as part of the downlisting criteria (see Appendix B). Nesting beaches and individuals at PAIS are included as part of the delisting criteria, which includes Mexico and the U.S. The plan does not require or prescribe the continuation of egg incubation and hatchling release at PAIS, rather it focuses on "hatchling production necessary to achieve recovery goals." The plan includes an action (#214) for PAIS to develop a nesting beach management plan, which was to be completed within three years. Although PAIS performs many actions to manage the beach, the park does not have a nesting beach management plan.

The program review found two ESA section 7 consultations and associated biological opinions (BO) related to Kemp's at PAIS, which were prepared for the park's beach driving environmental assessment and the proposed construction of cabins to house beach patrollers (both in 2011). The review found no programmatic BO exists for the park's sea turtle program. The NPS holds a take permit issued by the FWS (TE840727-2, valid 7/15/19-1/31/23) that authorizes annual take of five species of sea turtles (Kemp's: 450 animals and 45,000 eggs/hatchlings; green: 3,000 animals and 300,000 eggs/hatchlings; loggerhead: 68 animals and 6,750 eggs/hatchlings). Take is permitted for authorized research and management activities identified in the permit (such as tagging, removing and incubating eggs, releasing hatchlings, etc.). There is no analysis, BO, or authorized incidental take for impacts from public beach driving in the park. According to FWS Ecological Services Office staff who were interviewed, the PAIS sea turtle program is considered part of the ESA baseline for the Kemp's listed population, due to the longevity of the park's program, and has been used as a static part of the analysis to assess the effects of and authorize take by other agencies and project proponents. Therefore, FWS asserts that any changes to the park's sea turtle program would require consultation under section 7 of the ESA (Dawn Gardiner, FWS Biologist, personal communication, Feb. 18, 2020). FWS staff in the local Corpus Christi office stated that over 20 BOs (for other agencies' projects) would need to be re-evaluated if PAIS were to change their sea turtle management program.

Green sea turtle

The green sea turtle (hereafter referred to as "greens") was listed as endangered in 1978 under the ESA and was later reclassified by NMFS/FWS (North Atlantic Distinct Population Segment (DPS)) to threatened in 2016 (NOAA, 2015). Factors contributing to the green's decline worldwide is the commercial harvest for eggs and meat; disease; loss or degradation of nesting habitat; disorientation of hatchlings by beachfront lighting; nest predation by native and non-native predators; degradation of foraging habitat; marine pollution and debris; watercraft strikes; and channel dredging and commercial fishing operations.

Four regions support nesting concentrations of particular interest in the North Atlantic DPS: Costa Rica, Mexico, Cuba, and the U.S. (Florida). By far the most important nesting concentration for green turtles in this DPS is Costa Rica. In the U.S., more than 53,000 green sea turtle nests were documented in Florida in 2019 (see Table 2, Appendix B). The Texas coast and PAIS beaches support a relatively small number of green sea turtle nests - only 97 since 1979 (23 of these nests occurred in 2017). Recent evidence shows that the green sea turtle population continues to rebound (Valdivia et al., 2019).

The most recently revised recovery plan for the U.S. Atlantic population was published in 1991 (NMFS and FWS, 1991). The revised recovery plan focuses on Florida and actions primarily by State and Federal agencies in Florida. The plan does not require

any specific PAIS actions; however, the NPS is included as one of many "responsible agencies" under action #35 as it is recommended to post educational and informational signs on important nesting beaches, as appropriate.

Loggerhead sea turtle

The loggerhead sea turtle was listed by NMFS/FWS as a threatened species throughout its worldwide range in 1978. Like other sea turtle species, identified major threats to this species include bottom trawl, pelagic longline, demersal longline, and demersal large mesh gillnet fisheries; legal and illegal harvest; vessel strikes; beach armoring; beach erosion; marine debris ingestion; oil pollution; light pollution; and predation by native and exotic species (NMFS and FWS, 2008). Since listing, its status has been periodically reviewed several times, with the most recent status review completed in 2009. Currently a new 5-year review is underway to update the status and biology of this DPS. In the U.S., loggerhead sea turtles nest predominantly in Atlantic coastal states as well as Florida and Alabama in the Gulf of Mexico. Total estimated nesting in the U.S. is approximately 68,000 to 90,000 nests per year. 80-90% of all loggerhead nesting in the U.S. occurs in Florida. Only 70 nests have been documented in Texas since 1979. PAIS is within the Northern Gulf of Mexico Recovery Unit which is the western extent of the U.S. nesting range. There are no specific demographic recovery criteria or measures for PAIS, or populations within Texas, identified in the most recent recovery plan for this species.

In addition to all Kemp's ridley nests, the park protects, collects, and incubates eggs from all green and loggerhead sea turtles. Green and loggerhead sea turtle eggs collected at PAIS, and those collected elsewhere along the Texas coast and sent to the park, are incubated at the park and the hatchlings are released on park beaches. There seems to be no conservation reason to maintain this practice, and no EA, BO, or other directive exists to support this management action. The majority of organizations interviewed suggested that this practice should stop.

Hawksbill and leatherback sea turtles

Two other species of listed sea turtles occur at PAIS: hawksbill and leatherback, both of which are endangered. Hawksbill nest mostly in the Caribbean and occur in the U.S. primarily in Puerto Rico and Florida. One hawksbill nest was recorded in Texas at PAIS in 1998. Leatherbacks nest mostly in the Virgin Islands and southeast Florida. PAIS recorded one leatherback nest in 2008.

<u>Recommendations</u>

- The STSR program should transition to a sea turtle management program that is more aligned with the 2011 Kemp's Bi-national Recovery Plan and current practices. The program should establish a formal 5-year strategic plan, with the assistance of a

professional facilitator, that is developed with input from the park's management team and includes other sea turtle experts from within the NPS. The STSR strategic plan should identify appropriate roles for NPS, NMFS and FWS with respect to endangered species management and recovery (with input from these agencies and other partners). The focus of the program should be constrained to Kemp's ridley nest protection, followed by efforts to save stranded adult Kemp's and green sea turtles (and other turtle species), given that these individuals are important contributors to reproduction and this activity is part of the STSSN that NMFS currently funds.

- The collection, incubation, and release of green and loggerhead eggs should be discontinued. Correspondingly, project funds should not be solicited for the study and management at PAIS of sea turtle species other than Kemp's.

- The park should begin to implement and test alternate management strategies that better align with NPS policy, NMFS and FWS recovery goals, and biological resource management principles that consider the entire Gulf of Mexico turtle populations. A phased pilot program is recommended, with section 7 consultation under the ESA, as necessary, to test *in situ* nest management and increased use of corrals. In situ nest management, the practice used at all other NPS units with nesting turtles, is most consistent with NPS policies and would allow for natural nesting of turtles: thereby, subjecting the species to the biotic and abiotic factors that shape populations and allow for their long-term persistence. A phased strategy could include implementing and evaluating different nest management techniques in different stretches of the beach. Implementation of this phased strategy could include near-, mid-, and long-term management objectives. It is recognized that a strategy of this form would need to be highly managed (identification, marking, and protection of nests) to avoid and minimize impacts from beach driving, and would likely require an EA to comply with the National Environmental Policy Act.

Near-term (1-2 years):

- Implement refined safety protocols (see Appendix H).
- Engage in the upcoming 5-year species status review of Kemp's.
- Identify park-specific "measure(s) of success" for nest detection and relocation, incubation at the facility versus corrals, and hatchling production and release.
- Focus the STSR program on Kemp's management and evaluate the appropriate scaling of beach patrol and other program operations. Consider the following strategies:
    - MM60-30: In down island areas that receive less beach driving, reductions in nest relocation should be the desired condition, including in situ nest protection where nests are marked, fenced, and traffic is diverted around them; similar to typical sea turtle nest management performed on beaches elsewhere in the country. Pilot nest management actions should be identified and evaluated. If nests must be moved in this area, preference should be given to relocation to corrals.

        - Patrols on down island stretches should be reduced to five days per week (e.g. Thursday through Monday), 8- or 10-hour days, and one or two patrols per day (as was done in the past). Patrols can focus on protecting nests from beach driving and monitoring to assess the potential impacts of inundation and predation.
    - MM30-17.5: A more intensive strategy of nest protection via relocation of all nests and eggs to corrals.
    - MM17.5-0: Front country areas could include continued relocation of eggs to the incubation facility. Continue to utilize volunteers to patrol front country beach and focus reduced staff resources on down island areas.

Mid-term (3-5 years):

- Implement and monitor pilot actions described above and evaluate species response.
- With federal and other partners, evaluate the long-term availability of suitable Kemp's nesting habitat at PAIS (and elsewhere along the Texas coast) (e.g. National Wildlife Refuges and South Padre Island).
- Engage the State (and other partners) in dialogue about beach driving management alternatives that maximize beach access but offset the need for, and intensity of, beach patrol and nest relocation/incubation.
- Develop a long-term nest management strategy / beach management plan.

Long-term (5-10 years):

- Continue implementation of the above strategies and work with partners on species recovery actions, including public education, and management planning that may need to be adapted due to sea level rise and continued loss of habitat.

- The park should develop a strategy that establishes goals and objectives for managing the entire portfolio of natural and cultural resources in the park, including sea turtles. The strategy should address the entire suite of habitats and species within the park and identify short-term priorities.
- Integration of the sea turtle program within the resource management and science division would allow the park Superintendent to ensure that all priority ecosystem programs are addressed, modify the program as needed to implement adaptive management, address emerging priorities and issues, prioritize and allocate limited resources, and implement efficiencies by having staff work across programs based on seasonality and workload.

ii. Strandings

<u>Findings and Discussion</u>

The park has been functioning as the Texas coordinator for the STSSN since 1980. Activities include: maintaining a network of permitted responders, training responders, coordinating response to stranding events, collecting and transferring live and injured turtles to approved rehabilitation facilities, necropsy of dead turtles and recording associated data, maintaining data and reporting to NMFS. Park staff report that over the last 10 years there has been a significant increase in the number of sea turtle strandings that occur in the Gulf of Mexico and, in particular, in Texas at PAIS. Sea grass, kelp beds, and algae in the Laguna Madre (inside the park) are a food source for juvenile greens, and thus when stranding events occur, the park can see large numbers of greens. The park indicates that the demands of these duties far exceeds the capacity they have internally, which NMFS financially supports.

Most of the strandings on the Texas coast occur in PAIS or nearby; consequently, park stranding staff are directly involved in the response. However, it also appears that NPS staff routinely respond and provide assistance outside of the park boundary, rather than relying on other STSSN responders. To date, it appears that the NPS has carried a disproportionate burden on behalf of other jurisdictions.

Texas appears to perform a large number of necropsies of stranded sea turtles. NMFS reports that about 200 necropsies are conducted for the Gulf Coast of Florida in one year versus 400 per annum for Texas.[2] NMFS indicated that the park is performing more necropsies than is required for large cold-stun events, and that they have communicated to park staff that a reduction (sub-sample) is appropriate.[3] Other suggestions from NMFS included not completing the full stranding form, measurements, or tagging each animal during mass stranding events.[4] The park should evaluate the relative cost-benefit of the data collected from performing large numbers of necropsies in their overall management of the species versus the time and staffing costs that take away from other natural resource monitoring and management activities.

<u>Recommendations</u>

- Transition from the park's current stranding response and management model to more of a coordination role in the state of Texas. The park's necropsy activities and protocols should be reviewed with NMFS to ensure that they do not go beyond what is necessary to meet NMFS' monitoring and research objectives for the necropsy program and can be justified in light of the extraordinary time and resources spent to maintain that level of activity.
    - Stranding response should be focused to inside the boundaries of PAIS and partners and other agencies should respond to non-NPS locations. This should be based on an assessment of NPS resources and capacity to carry

[2] Correction made based on information provided by NMFS (see Appendix K).
[3] Correction made based on information provided by NMFS (see Appendix K).
[4] Correction made based on information provided by NMFS (see Appendix K).

out these activities. See section c. (Staffing) for additional recommendations on stranding response.
  - Submit a funding request proposal to NMFS for additional support for cold stun response in 2021. Requests are due in August 2020 when the mid-year STSSN report must be filed.
  - Consult with NMFS on STSSN necropsy requirements and lab operations.
  - The stranding coordinator is meant to be a facilitator of the response. Response activities should be delegated to other volunteers and entities rather than PAIS being solely responsible. If PAIS continues as stranding coordinator, a more robust response network should be developed; NMFS indicated they are willing to assist with this.

iii. Research

Findings and Discussion

The park has an active research program and staff have authored or co-authored dozens of scientific publications over the last 20 years. Nearly all of the STSR permanent staff members are actively engaged in manuscript production and publishing. Conducting and facilitating research is among the primary goals of the program, according to the park's website. Park staff's significant production of science via peer reviewed publications represents an exceptional contribution to the state of knowledge on sea turtle biology, ecology, and coastal biological resource management.

It is clear that PAIS has made substantial contributions to the overall body of research and scientific knowledge of sea turtles. This review did not address whether the research substantially contributed to, addressed, or guided park management actions related to sea turtle management or other park activities at PAIS.

Recommendations

- Focus research towards efforts that directly improves management of the species within the park.
- Any Kemp's ridley research needs or projects should be closely coordinated with the national Kemp's Recovery Team and the defined needs of the recovery plan/program. Sea turtle research that is focused on impacts, ecology, and other topics outside the park, or of a more academic nature, may be supported but should be carefully balanced with the costs and tradeoffs associated with an inability to monitor, manage, and study the other myriad natural and cultural resources at PAIS.
- Contributing to scientific publications is appropriate and admirable, however, publishing should not be a driver of STSR program or individual success. The park should actively work with outside partners to identify and conduct future research that has in the past been conducted by NPS staff.
- Research conducted in the park (whether by a cooperator or by NPS personnel) should be analyzed and authorized through the issuance of a research permit and

tracked in the Research Permit Reporting System (RPRS). All requests for research in the park should be evaluated by an interdisciplinary team and approved by the Superintendent.

- When considering and refining what additional science and research is needed to address park management issues, the park should consider developing a natural resource science plan or prospectus. The plan would need to identify management goals and targets and key uncertainties that would benefit from potential research projects. Those research projects should then be prioritized and conducted in a manner so that the results would directly inform key management questions and assist with adaptive management. Preliminary areas of study may include:
    - Climate change modeling/scenario planning to evaluate impacts to sea turtle nesting habitat and to investigate alternative nesting sites.
    - Beach erosion and accretion studies to evaluate and model future sea turtle nesting habitat.
- To assist in prioritizing and focusing future research related to sea turtles, the park could request a cooperator to conduct a literature search to develop a summary of the program's research that focuses on the extent to which PAIS STSR-funded research and publications have: a) provided information applicable to park management, b) leveraged existing work of other researchers, c) been utilized by other authors, and d) fostered international collaboration.
- Ensure research follows NPS and Department of the Interior (DOI) policies, including: NPS Director's Order 79: Integrity of Scientific and Scholarly Activities; DOI Scientific Integrity Policy; and DOI Scientific Integrity Procedures Handbook.

b. Funding

Based on current operational activities and organizational structure, PAIS leadership and staff in and outside of the sea turtle program have identified potential future funding shortfalls as early as 2025 and should be commended for their foresight in identifying the issue. In the next 3-5 years, the STSR program may be unable to support current operations and discretionary activities considering workloads of existing staff and the current staffing organization. Since inception, the turtle program has and continues to rely on several short-term funding streams (e.g. Natural Resource project funding, donations, and several varied short-term funding projects related to the Deepwater Horizon Natural Resource Damage Assessment settlement). Current ONPS funds that PAIS directly controls for daily operations are insufficient, given the existing activities and programs of the STSR division. Several areas of support or subsidy continue to be provided to the STSR program from umbrella Parkwide ONPS allocations and are not tracked, accounted, or are only partially incorporated into budget and planning of the STSR program (e.g. the Facilities Management employee dedicated for about half the year to repair and maintain the large fleet of traditional and UTV vehicles). The sea turtle program also assumes several activities well outside of park boundaries and the park's primary responsibility. Interviews with representatives from FWS and Texas Parks and Wildlife Department (TPWD) indicate that neither the FWS nor the State of Texas provide funding support to the PAIS STSR

program (though Texas has provided substantial support, in-kind, boats and other equipment, during stranding events). Without additional funding the park still conducts sea turtle management and recovery activities (e.g. collection of turtle eggs, hatching and release) which serve as mitigation measures that are presumably related to BOs issued by the FWS for projects along the entire Texas coast and well beyond the boundaries and administrative responsibilities of PAIS and the NPS.

Several areas of business and program risk have been identified, including some identified as early as April 2016, that are largely unaddressed, most notably overtime well outside of Bureau policy and authority.

Key Issues

There are many issues related to funding that surfaced during the PAIS STSR program review and many of them are intertwined or overlap with other issues that are addressed in other sections of this report. Consequently, the review team chose to focus on the following three issues because a.) they rose to the top in terms of impacts (both direct and indirect and short term/long term), and b.) were broad enough to allow other important issues to logically nest under them.

i. Overtime and other staffing costs.
ii. Short-term project funding was used to create long-term funding obligations.
iii. The funding level of the STSR program is not aligned with overall park priorities.

i. Overtime and other staffing costs

<u>Findings and Discussion</u>

Following an April 2016 Internal Controls Audit of several PAIS programs and operations, the audit team noted that the STSR program paid $162,320.10 in overtime for FY2015 and had seven employees that exceeded 250 hours of overtime, including two that exceeded 600 hours. NPS policy requires that “Bureau heads must approve overtime pay for non-emergency situations involving: … Overtime pay in excess of 600 hours in a fiscal year for an employee at any grade level.” (Personnel Management Letter (PML) No. 88-5, May 16, 1988). The supplemental report on overtime also indicated that alternative forms of overtime (e.g. compensatory time) also need be accounted for as if they were overtime in any bi-weekly pay limitations. In FY2016 when the internal audit and recommendations were developed, the turtle program recorded a total of $127,580 of overtime and that amount has increased every year to a FY2019 total of $201,232 of regular overtime for 44 employees and Administratively Uncontrollable Overtime (AUO) for two employees. The number of employees that worked over 250 hours of overtime has not decreased. In FY2016, seven employees had over 250 hours overtime. In FY2019, 27 employees had between 100 and 249 hours of overtime, eight employees had between 250 and 399 hours of overtime, and two employees recorded 433 hours and 569 hours, respectively.

Approximately 7,845 hours of regular overtime were recorded in FY19. Based on the overtime pattern that has occurred for at least five years, the work attributed to these hours is assumed to be a critical need and should be addressed by additional personnel, rather than significant amounts of overtime being incurred over a long period of time. This represents approximately seven seasonals (at 1040 hours/season) or 10 seasonals (for the nesting season of 720 hours). If additional staff were hired to cover the above hours, total costs would be less than what was paid out of overtime since these staff would presumably be accomplishing the hours of extra work deemed critical at standard pay rates.

In FY2019, $35,978 was paid out as AUO. This amount is equivalent to two GS-5 6-month seasonals ($18,889/season or $37,778) or three GS-4 nesting season seasonals ($10,857/season or $32,571).

Overall, in FY2019, $201,232 was paid out in overtime and AUO (14.6% of the STSR base budget). This represents nearly 19 additional GS-4 seasonals ($10,858/ 720-hour seasonal) or 11 additional GS-5 six-month seasonals ($18,889/1040-hour seasonal).

Prior to obtaining a minimum 332% increase in ONPS funds between FY2008 and FY2019 ($413,850 ONPS in FY2008 to $1,443,000 in FY2010 to $1,374,902 in FY2019), the STSR program consisted of two permanents and two GS-5 term employees and 24 GS-4 seasonal employees (with four seasonal employees identified as vacant) in FY2008. By 2019, the program had one GS-13 permanent-full-time (PFT), one GS-11 PFT, three GS-7 PFT, one GS-6 PFT, one GS-7 permanent career seasonal (PCS), one GS-5 PCS, and as many as 35 to 41 seasonals. In addition, five PFT and PCS positions were listed as vacant but are included in the latest signed organization chart (Appendix C). Statements from park staff have indicated a need to hire more staff to assist in accomplishing program activities, as developed by the Division Chief and approved by the Superintendent.

The current fixed cost commitment of seven permanent employees is $482,901. Two additional permanent employees (one GS-7 PFT and one GS-5 PCS) are paid out of NOAA Restoration Stranding funds (currently funded at $112,000/year) and currently cost $104,286. In FY2019, approximately 35 seasonals worked for the program with 29 working primarily around the nesting season (April through mid-July equating approximately 640-720 hours) and six employees working about the full six months (1040 hours). The seasonal costs during the nesting season were estimated at $314,770 and the 6-month seasonal costs were estimated at $113,334. Total personnel services for a year (not including STSSN permanent salaries) are estimated at $912,105 with the above personnel configuration. This figure represents approximately 66% of the current allocated ONPS base funds. Total personnel services costs would be $1,016,391 or 74% of the current base allocation when the two

permanent personnel, currently working on STSSN project funds, are included in personnel services costs.

Recommendations

The 2016 overtime audit recommended 11 different actions for the park and program to undertake. Specifically, the audit recommended: "After discussion with park management and regional staff, a cohesive effort in regard to overtime should be made to consider employee well-being, employee safety, staff morale, ensuring all mandated laws and NPS policies are followed, and ensure the park establishes effective controls over overtime and premium pay." To date, we are only aware of one recommendation, AUO, that was pursued. Specific recommendations from the 2016 report are included and are again recommended:

- "(a) Reassigning work to other employees,
- (b) Rescheduling tours of duty,
- (c) Using flexible and compressed work schedules,
- (d) Establishing work priorities,
- (e) Discontinuing low priority activities, and
- (f) Seeking other more cost-effective alternatives."

Other recommendations include:

- Supervisors should pre-schedule, and per NPS and other policies, supervisors must pre-approve all overtime deemed essential to carry out critical program activities.
    - Unless an actual emergency response is required (e.g. human health and safety), personnel should not be allowed or authorized to work overtime (including compensatory time) without prior written or documented approval. Overtime requests should clearly state the nature and justification for the overtime.
- The Division Chief should develop a staffing plan and prioritize work to immediately reduce all overtime to 1.2% of the turtle program's ONPS base allocation (based on NPS Scorecard standards).
    - Based on a FY2019 ONPS Base allocation of $1,374,902, overtime should not exceed approximately $16,500.
    - Stand-by pay and AUO should not be authorized.
    - In three years, an objective should be that overtime and compensatory time are only used for short-term emergency response activities.
- Hire additional seasonal staff and implement shift tour of duties, reassign and redistribute work responsibilities to other staff, with particular emphasis to address those critical duties and critical times where nighttime work is essential for Kemp's egg care.
    - Other more cost-effective administrative solutions and staffing solutions are available and should be fully explored and implemented. In the case of AUO, in addition to other considerations, these administrative options must be explored before implementing AUO…"In such a situation, the hours of duty cannot be controlled by such administrative devices as hiring additional personnel; rescheduling the hours of duty (which can be done when, for example, a type of

work occurs primarily at certain times of the day); or granting compensatory time off duty to offset overtime hours required." (5 CFR, Ch 1§550.153).

ii. Short-term project funding was used to create long-term funding obligations.

Findings and Discussion

The park has been very successful in obtaining project funding to maintain and grow its nest detection and patrol program (over $14M in project funds since 1994). Funding from several internal NPS sources [USGS-Natural Resource Preservation Program (USGS-NRPP), Natural Resource Fund Source (NRFS), and Southwest Border Resource Protection Program (SWBRPP)] have been used to fund STSR operations and have enabled the expansion of the program. Unlike "programs", projects are typically defined as "a temporary undertaking to create a unique product or service." A project has a defined start and endpoint and specific objectives that, when attained, signify completion. PMIS records show that the STSR program has been receiving these project funds annually for nearly 20 years; often with small changes to project scope and title.

From 2019 through 2026, total projected funding allocated to the sea turtle program averages approximately $1,996,000/year. Total projected annual soft (project) funding from 2019 through 2026 averages about $621,000/year with approximately $519,900/year coming from Deepwater Horizon (DWH) restoration related funding. One-time event soft funds, in this case DWH funds, currently comprise an annual average of 26% of the program. Other competitive NPS funds over the 8-year period average approximately 5% of the program.

Beginning in FY2017, NMFS has been providing approximately $112,000 to support the STSR program in carrying out duties related to serving as the Texas state coordinator of the STSSN.[5] Beginning in FY2018, the park also started receiving approximately $139,000 in stranding support funds from the DOI Deepwater Horizon Trust Fund. Despite nearly $250,000/year in project fund support for stranding activities, the park indicates that response needs exceed available funds. NMFS staff indicated that when the Texas STSSN mid-year report (for the period Jan.-June) is due in August 2020, additional funds could be requested for the next fiscal year.[6]

While the park does not track individual fuel usage by program or division, interviews indicated that possibly as much as half of the parkwide fuel used in a season might be

[5] The DWH Sea Turtle Early Restoration Project provides support to each of the state stranding networks in the Gulf of Mexico annually. These funds are explicitly intended for enhancement of the five state stranding networks in order to achieve restoration benefits. See Appendix K.

[6] These proposals must be for stranding network enhancement projects. The DWH Sea Turtle Early Restoration Project funds are explicitly intended for enhancement of the STSSN in order to achieve restoration benefits. To date, PAIS has received an additional $129,000 (2018-2019) for two seasonal stranding response positions at Packery Channel, two SCA interns for stranding response, and necropsy facility improvements. See Appendix K.

attributed to the STSR program. The turtle program reported patrolling 229,220 km (142,431 mi), 234,787 km (145,890 mi) and 251,022 km (155,978 mi) of beach during the turtle nesting season from 2016 through 2018, respectively. An analysis of fuel usage for nest patrol activities was completed using an estimate of 10 miles per gallon for all vehicles, which results in fuel costs of about $32,000/year.

Recommendations

- Ensure that ongoing STSR program operations (recurring, permanent work) is funded by park base (or other reliable and dedicated funding) and not by special project funding that is meant to fund specific projects. Project funds should not be used to fund permanent personnel (except for Career Seasonal employees during their non-core season), activities, or purchases that create ongoing or future costs/obligations of any kind.
    - Project funds should not be solicited for the study and management at PAIS of sea turtle species other than Kemp's. PMIS#248312, which focuses on night-time protection and collection of green sea turtle eggs (FY21-23), should be cancelled and WASO notified. Similarly, SWBRPP funds should not be awarded to and used by PAIS for ongoing research and management activities for green sea turtles (PMIS#305534 for FY21). Projects must not support continuation of existing or operational activities and recurrent monitoring and surveys.
- The park should begin planning for what critical activities must be accomplished with a 30% reduction in funding resources available.
    - One-time event or recovery funding like DWH should not be used to build programs. Restoration funding like DWH is intended to recover from damages caused by disasters (or provide for compensatory restoration) to a baseline that existed prior to the event. This funding expires in 2025, and the park should have no expectation other funds will become available to fill this perceived shortfall.
- Personnel services costs for this program should not exceed about 80% of the ONPS base allocations (based on NPS best practice and Budget Office guidance).
    - Annual position management should be discussed with the Superintendent, particularly when any permanent position becomes vacant. Replacing a vacant position in-kind should not be assumed.
    - Seasonal staffing strategies should be developed to reduce overtime needs that reflect 1.2% of ONPS base funding.
    - New staffing configurations must be developed along with scaling back currently configured patrol efforts to stay within current ONPS allocations and reduce the reliance on additional parkwide ONPS funding and unreliable soft funding sources.
    - Two staffing plans should be developed with the above constraints, a minimal staffing plan emphasizing minimal and critical work requirements and an optimal or desired staffing plan (that includes discretionary activities).
- Develop STSR annual work plans that specify tasks, budget and staffing that are approved by the Superintendent and monitored and tracked regularly. Ideally this would

incorporate measures to document and verify that expenditures (including staff time) are made consistent with fund source purposes and requirements.

- All capital expenditures over $10,000 should be approved by the Superintendent, after budget forecasting analysis has been completed by the Division Chief.
- Generate philanthropic support. There are abundant opportunities for the STSR program to leverage the high public support for sea turtle protection. The sea turtle program at PAIS is well regarded and the species are charismatic and generally beloved by the American public. The park could work with partners to develop a "friends group" or philanthropic support organization that could raise funds for priority sea turtle management and research. Similarly, many non-governmental organizations (NGOs) have existing and well-funded programs that support sea turtle conservation worldwide that the park could tap into by establishing new relationships. Additionally, a significant amount of public environmental education may be accomplished through a philanthropic support work plan that would be implemented by a friends group.
- Implement a pilot user fee for cost recovery. The park may consider a permit program to recover costs associated with implementation of the unrestricted off-road vehicle (ORV) program. A permit program could generate substantial cost recovery associated with the needs to protect sea turtles and other wildlife species while allowing for recreational beach driving. Other NPS units, such as Cape Cod National Seashore, Cape Hatteras National Seashore, and Assateague Island National Seashore, implement cost recovery permit programs for implementation of their ORV and protected species management programs. These programs can generate revenue to offset costs associated with management activities that are conducted to allow the ORV use. Cost recovery permit programs are a widely used practice throughout the NPS system.
    - A reasonable approach would be to require a beach vehicle driving permit for the period April 1-July 15, which is the Kemp's nesting season, when potential impacts to nesting turtles and eggs could occur. Fees collected should be commensurate with the cost of the NPS operating the mitigation program.
- Program personnel should stop conducting management activities that occur outside PAIS boundaries and evaluate elimination of some duties that take park staff away from higher priority activities in PAIS.
    - Documents and interviews with staff and other agencies indicate STSR personnel are conducting field activities (e.g. turtle stranding recovery, egg collection, beach surveys, etc.) outside PAIS boundaries. This is a liability concern for the NPS. Other agencies or groups should assume these duties or activities outside PAIS boundaries. If others (for example, FWS, TPWD, NMFS) cannot or do not assume these activities then this would indicate a lower priority to those groups and thus not relevant to PAIS priorities.
- Other fixed costs should be identified and included in the STSR program budget.
    - Itemize and incorporate line item budgets for actual high capital equipment costs and repairs (e.g. vehicles, UTVs, etc.), fixed fuel costs (at least $30,000/year), building utility and maintenance costs, anticipated other supplies and equipment costs and support costs needed for other Divisions, such as when public releases are planned.

- The STSR program should immediately begin building in and accounting for fuel costs, not only for nest patrol, but for other important programs like the STSSN program. For the near term a figure of $30,000/year can be used for FY20 and FY21, which is consistent with a line item identified in the park's original OFS budget increase request to the Regional Director for approximately $1.2 million for the turtle program.
- Install a fuel metering system to track fuel usage by vehicle and/or Division. This will allow all Divisions and the park to plan for future fixed costs. Electronic fuel metering is a best practice for all parks.

- The current personnel and position configuration for the STSSN coordination program should remain as is until 2025 and incorporate those personnel services from that program into the STSR ONPS base by FY2026.
  - Nearly six years of outside funding is available to support the STSSN activities, which is sufficient time to recalibrate work efforts to operate within the provided funding level and to further develop the network, contacts, procedures, training program, and cadre of outside entities needed for responding to strandings outside the park. If after 2025, PAIS chooses to maintain the Texas STSSN coordination role, the program and duties should be scaled back to focus and emphasize coordination, training, and reporting; and with limited use of ONPS funds.
  - The STSSN funds ($112,000) that NMFS provides currently pay for these personnel and they should be allowed to only focus on the many duties the STSSN requires for in-park strandings (see Appendix G, section on State Stranding Coordinators and Stranding Responders). If these personnel are occasionally needed for other critical duties, then NMFS should be consulted and other funding allocated for that work, particularly for the Career Seasonal employee.[7]
  - After 2025, the one permanent full time and one permanent career seasonal total salary of $104,286 (FY2019) will need to be incorporated into ONPS base funds, should PAIS choose to remain as the Texas Coordinator.
  - By FY2021, the park should begin working with other partners (e.g. FWS, volunteer groups, etc.) so that other partners are responsible for and patrol the beach outside of PAIS boundaries, particularly during the Kemp's nesting season (see Appendix G, Stranding Responders).

- The park management team should discuss how they want to address significant support (staffing or monetary) provided by other divisions for turtle program operations, including turtle release events.
  - The number of public hatchling release events is a discretionary activity and should be reduced. Total actual costs of these events (all personnel and time) should be tallied in FY20 so the Division Chief and Park Superintendent can

[7] Personnel supported with DWH Sea Turtle Early Restoration Project funds are intended to support the TX STSSN as a whole in order to enhance the network effectiveness across the state (e.g., additional training, statewide data entry/data management, necropsy support). If these personnel work on other park projects/activities then their time spent on those activities must be paid with other funding sources. See Appendix K.

identify how many public events can be planned in relation to budget availability to support these events and other park priorities and needs. Another possibility would be to identify one week of the year where turtle releases and related public events would occur ("Turtle Week!" or "Turtle Daze!"), thereby allowing staff to effectively plan for and conduct outreach and education activities.

iii. The funding level of the STSR program is not aligned with overall park priorities.

Findings and Discussion

The park's current (FY20) budget for the sea turtle program is $2,196,055 (see Appendix F). The sea turtle program's annual base funding (ONPS) is $1,374,902. As such, the STSR base budget is equal to nearly one quarter (23.8%) of the park's ONPS budget. In addition, the program typically secures between $500,000 - $1,000,000 in project funds each year.

The Science and Resources Management (SRM) division's budget ($248,670 in FY20), which is used to manage all other natural and cultural resources science and stewardship, planning and compliance, and Native American relations, is only 4.3% of the park's base budget. The Regional average of park base budget for resource management programs (which includes cultural and natural resources) was 12.5% in 2018. The STSR percent of park base is about twice the Regional average. Conversely, the SRM program is funded at a small fraction of the regional average. The park's Scorecard shows zero staff, zero labor spending, and zero base funds being applied to cultural resource stewardship responsibilities, and no use of volunteers in the program (NPS, 2019). The perception of some park staff is that most natural and cultural resource management programs have been largely ignored as a result of the intense and disproportionately high allocation of financial and staff resources applied to the sea turtle program.

The park's Foundation document includes a variety of other park resources and values that warrant study, management, and protection, including nine other listed species. The resources (funding and staffing) available for protecting, restoring and interpreting those other resources is much less than the funding levels for the STSR program and in some cases completely non-existent.

The park has many important and internationally significant natural and cultural resources that are not being monitored, studied, or managed. For example, the park provides habitat for more than 300 bird species, it contains 16th century Spanish shipwrecks, and there are thousands of acres of prairie, dune habitat, and freshwater marshes. The Laguna Madre within PAIS is considered one of only about 6 hyper-saline lagoons in the world, where close to 80% of all redhead ducks winter in the U.S., about 80% of all seagrass beds occur in the entire state of Texas, and where Federally- and State-listed

migratory bird species find important habitat. The park's natural resource condition assessment documents that a majority of ecological communities and resources in the park have insufficient information to establish their current condition and trend (Amberg et. al., 2014). These unique and sensitive resources may be threatened by visitor, and adjacent land uses.

Members of the review team were shocked at the volume and extent of trash on the PAIS beaches; in some areas, the entire sandy beach was covered by trash. Close inspection of the sand indicated large numbers of small plastic particles (microplastics) that were interspersed with the sand along the entire beachfront. Although the cause of this situation is outside of the park's control, more attention should be raised so that progress can be made to reduce adverse impacts to wildlife and beach aesthetics.

The park's visitor understanding scores are significantly lower than the Regional and NPS averages (NPS, 2019).

Recommendations

- The park management team should identify annual park priorities; these one or two top priorities should be readily known by the division chiefs and budget allocations should reflect what is required to achieve them.
- The park would benefit from closer coordination and resource sharing between, if not a full integration of, the STSR and SRM divisions. For example, Biotech positions may be shared or employment periods extended to accomplish other resource management work. Funding shortfalls for general natural and cultural resource stewardship can be addressed by identifying and instituting measures for leveraging STSR staff capacity to address other park natural resource priorities such as bird strandings, habitat restoration, and trash cleanup (particularly outside of the Kemp's nesting season).
- The SRM division is grossly understaffed and underfunded. We recommend that the park management team support the hiring of the two permanent FTEs that are currently in classification.
- Expand beach cleaning (marine debris removal) to improve visitor conditions and to limit impacts to wildlife; consider developing a parkwide/visitor recycling program and an interpretive program around it to reduce trash on the beach.

c. Staffing

Findings and Discussion

The program includes a large permanent staff (7-8 FTEs) and approximately 25-35 seasonal staff during the summer nesting season (see Appendix C for current organization chart). During the interviews with PAIS staff, several personnel management and work culture issues were observed including supervisory span of control, staff morale, inappropriate

authorization of overtime, telework arrangements that may not match with position descriptions and work requirements, and lack of effective workload management.

In FY2018, 30 STSR biotechs patrolling the beach in PAIS logged 13,383 hours (during the nesting season April 1-July 15), covering 155,978 miles – this level of effort equates to 103 staff hours spent per nest detected (130 nests were detected in 2018). A similar level of effort was expended in 2016 and 2017, where 142,431 and 145,890 miles of beach were patrolled, respectively (NPS, 2017). The number of hours patrolled at PAIS has steadily increased over the last 20 years. By contrast, 42 miles of beach on South Padre Island are patrolled by six staff members from Sea Turtle, Inc. Approximately 30% of Kemp's and green sea turtle nesting in Texas occurs on South Padre Island.

Interviews with STSR staff indicated that the two employees paid for with the NMFS stranding funds are regularly relied upon to work on the nest management program. Not only does this detract from identified STSSN work needs, but this regular practice could become a source of staff conflict, burnout, and morale issues. Observations and discussions suggest that sufficient regular operational work exists for assistant coordinators (e.g. reporting, compiling data, necropsy, providing updates to NMFS, coordinating activities throughout Texas, training of others, pre-November coordination meetings with other area coordinators, rehabilitation facilities, and local and agency partners, etc.). Interviews also indicated that workload allocation was often not commensurate with grade level. For example, it is not uncommon for higher graded employees to take shifts monitoring the incubation rooms.

While the STSR division employs up to eight permanent FTEs and between 24-40 seasonals, the park's SRM division, which has responsibility for all other natural resources including nine other endangered species, compliance, external review, park planning, and cultural resources, has only three permanent FTE (see Appendix E).

<u>Recommendations</u>

- Identify and institute measures for leveraging STSR staff capacity to address other park natural resource priorities such as bird strandings, habitat restoration, and beach cleanup (particularly outside of the Kemp's nesting season). Also, the STSR administrative assistant can likely help other park divisions outside of the turtle nesting season.
- The NMFS-funded STSSN positions should be used only for work specifically identified for stranding response. Management and accounting practices that clearly distinguish these activities from those related to the nesting program should be implemented.
- All new employees should receive an orientation to the park and an understanding that STSR is one division within the park. The orientation should describe the park priorities and mission and how the STSR division contributes.
- Continue to utilize volunteers to patrol front country beach to MM17.5 and focus NPS staff resources on down island areas.

- Reduce the number of public sea turtle release events to reduce costs and reduce the impact on staff from other divisions. Proactively and directly contact other division staff assisting with releases so those staff do not have to continually call into the hotline to see if they are working early in the morning.
- News releases and other media contact should be handled by the Park Public Information Officer (PIO). After consultation with the Park PIO, and in accordance with Superintendent guidance/policy, STSR staff members may do interviews with media.
- Consider developing and cost-sharing a seasonal Biotech/Interpreter position that could participate in beach patrolling and attend turtle release public events to provide interpretive messages.
- A revised organizational chart for the current STSR program is included in Appendix D. It includes a structure that can be utilized for the near- to mid-term and can be scaled according to needs and funding availability. In the longer term the STSR program should become part of a reconfigured resource management division, which would allow appropriate supervisory controls and more easily facilitate the leveraging of staff expertise and resources.

Supervisory

- Improve oversight, direction, and communication provided to the GS-7 Biotechs by having them report directly to the Division Chief.
- Ensure annual continuing supervisory training for all supervisors regardless of level.
- Evaluate telework agreements (remote duty station employees) to ensure compliance with NPS and DOI telework requirements. Further agreements should only be allowed for duties that can be effectively accomplished and the arrangement is to the benefit of the government and not for the convenience of the employee.
- Focus on staff retention and morale.
- Hold the Division Chief accountable for ensuring that requests for overtime and compensatory time must be approved in advance and should be rare.
- Consider hiring permanent career seasonals as an option to retain experienced personnel and reduce administrative/supervisor time and burden of hiring each season.
- Ensure higher graded staff are not performing activities that could be accomplished with hiring additional lower graded staff or assigned to existing lower graded staff.

d. Safety

<u>Findings and Discussion</u>

As a result of discussions with STSR staff and a thorough review of program accomplishments, it is clear that the park and all other divisions have an exceptional commitment to sea turtle management and research activities. There is a potential in any organization for passionate employees to take unnecessary risks to accomplish the mission. Discussions with some staff indicated that this potential exists at PAIS. Additionally, the nature of the STSR program's compressed turtle nesting season and high workload to

monitor, relocate, excavate, incubate, and release turtles, may result in staff burnout and fatigue. Fatigue and burnout were mentioned as a concern by some staff.

Recommendations[8]

- The program should evaluate work requirements and operational plans to reduce and manage risk - risk avoidance and risk mitigation are recommended strategies.
- The program should implement all safety action items included in Appendix H as part of the safety review on beach travel conducted in December 2019.
- Implement a standard operating procedure (SOP) for beach entry. This SOP would define the conditions and parameters for when the beach is closed to the public and to NPS staff. STSR staff should not be allowed to patrol on the beach when it is closed to the public.
- The park should review overtime costs and evaluate scheduling and staffing options to reduce overtime and compensatory time. This would reduce potential fatigue and mitigate risks associated with working long hours or days without breaks.
- Work-rest ratios should be closely monitored, particularly during turtle nesting season and stranding events.
    - The park should limit the number of employees that work more than 10 hours/day, particularly for routine, operational field activities like nest patrols. Nesting season activities and patrols are predictable, planned, and an operational function of the program.[9] Additionally, these patrols occur outside in hot and humid environmental conditions that may contribute to fatigue.
    - Nesting season patrols and activities should be appropriately staffed to provide beach patrol coverage necessary to:
        - Ensure that field leaders and subordinates are working no more than 10 hours per day or 40 hours per week.
        - The workdays are set and predictable such that staff can plan their workdays and plan for other life demands on non-workdays.
        - For the remote work at Base Camp (MM30), consider a staffing plan to implement 4/10-hour days Thursday through Monday or a 5/4/9 schedule (presumably during the highest visitation during the week) and overtime only authorized and approved for observed arribada events (when in PAIS's case, perhaps 5 or more females observed nesting) to respond to the extra effort needed for data collection, egg protection, and transport of eggs to remote corrals.

[8] Some of these recommendations are general, best practices and the STSR program may have implemented one or more of them in the past. STSR program managers and supervisors, and the park safety officer, should review these to verify they are in place.

[9] The timing and duration of sea turtle nesting is variable, which creates operational challenges for the STSR program. Based on its many years of experience, the STSR program can proactively estimate work requirements, structure work shifts, and hire seasonals to reduce the amount of overtime hours expended by the program. However, extraordinary circumstances necessitating overtime may arise from time to time.

        - Some PAIS staff indicated that the majority of visitors conduct beach driving within the first 17.5 miles of beach. Consider developing a staffing plan and tour of duty of 40 hours/week (**with no reliance on overtime**) to only provide 7 day patrol for nesting turtles for this beach stretch during the nesting season (April to mid-July) and during time periods when beach driving is highest and is the highest risk to nesting turtles.
- Each day, field leads (with subordinate input) should evaluate current and predicted field conditions and staff fitness and be empowered and supported in determining a go/no-go for nesting patrol operations (e.g. lightning and weather forecast, tidal flooding/tide level, equipment issues, etc.).
- Field supervisors and field leads should regularly conduct a green-amber-red (GAR) risk analysis with subordinates that specifically discuss and address each of the 8 GAR categories, indicate overall group discussion and team rating, and discuss and document mitigations to be employed to mitigate mission risk.
    - Train staff in the use of GARs and support and ensure their routine implementation.
    - New GARs should be initiated when the planned mission, environmental, or other conditions change from that discussed and evaluated in the weekly GAR.
- The park should implement an incident command system (ICS) for the management of large or unpredicted stranding events. The ICS system can be used to manage and improve accountability for tasks, safety, and finances.
- When full radio communications are unavailable (e.g. repeater is down), all beach patrol operations for turtles should be discontinued and suspended until communications are restored. Staff should carry spot devices or other satellite communication devices to provide a backup for emergency communications in remote areas with unreliable connectivity.
- For remote employees, regular check-in/check-out (on-duty/off-duty, periodic checks) radio calls and status update should be implemented and recorded at Dispatch.
- Establish written procedure for safety check-ins for staff working after hours tied to either entrance station closing times (i.e., stranding response after hours and working solo), Visitor Center closing times, or when Emergency Services personnel go off duty for the day.
- Establish limits and procedures for STSSN Asst. Coordinator and team to physically respond to stranding calls. Unless a true emergency, the stranding team should not work more than a standard 40-hour week. The stranding hotline is available and can be used to follow up on after-hours calls.
- Ensure at least two permanent STSR staff has Operational Leadership (OL) instructor certification so that OL training can be provided regularly and each year to all patrol staff.
- Adopt the OL principles that empower employees and respect and support their decision to determine when conditions are not favorable for field work.
- Review the agreement PAIS signed after the fatal accident in 2007 to ensure all safety recommendations are being addressed, implemented, and met.

e. Interagency Relationships

<u>Findings and Discussion</u>

Sea turtle management requires international and domestic coordination. In the U.S., jurisdiction for sea turtles is shared among the FWS, NMFS, federal land management agencies (NPS for PAIS), and the various states that have sea turtle habitat. Consequently, sea turtle conservation by necessity is an international, interagency, collaborative effort among many partners including states, academia and NGOs working together.

This review evaluated interagency relationships for their effectiveness, to assess the appropriateness of PAIS' role in interagency partnerships, and to promote shared stewardship. To gain full understanding of the STSR program, the review team interviewed (by phone) 12 individuals representing seven different organizations (see section 8 for the list of interviewees). For every interview, two to four members of the review team were on the call. Each call began with introductions and a brief discussion of the program review objectives. Relevant questions were then asked depending on the expertise and jurisdiction of the interviewee.

All the interviewees stated they hold the STSR program in high regard and respect how far the program has come in 40 years. Texas partners stated that the STSR program staff are leaders in the sea turtle community. Throughout the calls the review team heard about the history of the program and how it has transitioned through the years. The STSR was also praised for raising public awareness for sea turtle conservation. The STSR program has a very close and good working relationship with FWS Region 2 Ecological Services, Houston Field Office, for Kemp's recovery. STSR works closely with the Texas State Aquarium and Sea Turtle, Inc. on sea turtle stranding response efforts.

NMFS and TPWD expressed their gratitude for PAIS STSR staff taking on the role of the state stranding coordinator and confirmed no other entity has the capacity to assume the role. They also praised the early detection and identification of the recruitment pulse of juvenile greens and threats to areas such as the Packery Channel.

In general, agencies and organizations outside of Texas disagreed with the intensity of sea turtle management practices at PAIS and how to best protect and recover the species; however, they understood the unique challenges that PAIS faces with impacts from public beach driving. Multiple partners interviewed expressed their scientific concerns over the highly manipulative measures utilized in the recovery efforts at PAIS and recommended even though there may be some mortality (either of adults or nests) that the program transition to less manipulative actions that allow for natural processes. No mandates, ESA or otherwise, exist for such intensive management of the species. Sea turtles have loss built into their reproductive strategy and not every egg requires intensive management. Concerns were also expressed about the fitness of hatchlings incubated in a facility. Overall, the professional recommendation was to encourage actions to remove human threats and impacts to sea turtle nests and to allow for natural, in situ nesting whenever and wherever possible.

Discussions were had with various partners on the effectiveness of rescuing cold stun turtles and whether this is a natural phenomenon or if anthropogenic factors have led to an increase in these events. Modeling predicts increased cold stun events in the future, including at PAIS (Putnam et. al., 2019).

NPS funding for Kemp's recovery is disproportionately high compared to the number of partners involved and the percentage of turtle population being addressed.
The STSR program partners with FWS, NMFS, the State of Texas and many academic institutions and NGOs. However, the NPS contributes a disproportionate share of funding for these "collaborative" turtle conservation efforts in Texas. This occurs even though there is broad consensus among partners and among STSR staff that the number of Kemp's nests at PAIS represents just 1% of the worldwide number of nests. Furthermore, funding and staff time are regularly used for activities related to the role of the Texas Coordinator STSSN that occur outside the park's boundaries. The time and money spent on these activities outside park boundaries is not tracked or monitored separately (that the review team could determine) and therefore appears co-mingled with and treated as part of the park's general STSR program functions. While the population and nesting numbers for Kemp's have increased dramatically since establishment of the secondary nesting population, according to the FWS (website) "the recent nesting increase can be attributed to full protection of nesting females and their nests in Mexico, and the requirement to use turtle excluder devices in shrimp trawls both in the United States and Mexico." From web documents and recent and revised recovery plans, the FWS does not consider the PAIS nest relocation program the most important factor that would contribute to overall recovery of Kemp's. Even if the costs and staffing levels necessary for such intensive management can be supported from a scientific and policy perspective, all partners, particularly the FWS, should share in the costs more equitably.

If FWS believes the current management activities conducted at PAIS are critical and must be maintained for successful Kemp's recovery, then FWS should provide funding to assist in this intensive patrol, nest detection, egg relocation and hatching, and release effort. Otherwise, a thorough assessment of management activities that are critical to recovery (e.g. the 2011 Recovery Plan) should be the guide for determining appropriate management.

<u>Recommendations</u>

- Continue to serve on the Kemp's Recovery Team and provide data and input as requested.
- Critically evaluate the efficacy of the nest relocation policy and program given the predictions and consequences of sea-level rise and loss of suitable nesting habitat at PAIS. NPS climate change policy requires parks to evaluate potential impacts to park resources, infrastructure, and operations. The NPS should engage the Kemp's Recovery Team in discussions about alternative locations for other nesting sites and strategies to address rangewide changes to nesting.

- Request $300,000 from FWS to support Kemp's recovery actions.
- Partner with U.S. Coast Guard, FWS, NMFS, and TPWD to use drones to monitor beach nesting, to monitor for stranded turtles, and to assist with enforcement in remote areas.
- Partner with NMFS and TPWD to more actively and stringently enforce poaching of ESA-protected species and other activities related to sea turtle conservation in Texas.
- Engage with the State to establish limits on beach driving during sea turtle nesting season (seasonal closures or other protective measures). Consider implementation of a temporary or trial ORV permit and evaluate the success and challenges.
- If Texas were to pass a state law that allows ATV/UTVs to utilize public roadways open to street legal vehicles, then the beach at PAIS (currently open to street legal vehicles) could be subject to increased use by a new form of vehicle. Therefore, the park should monitor this issue and determine if the Compendium and/or a special regulation must be promulgated to manage the activity.

5. Program Successes

PAIS has a long history of dedication and success with respect to the sea turtle program. Much of this success rests with, and relies upon one individual, Dr. Donna Shaver, who has led the program since the 1980s. A number of program successes and highlights are included below:

- A secondary nesting colony of Kemp's ridley sea turtles was established at PAIS in the 1980s, through successful translocation of eggs from Mexico, as a safeguard against species extinction. The population has grown since then, resulting in a record number of documented nests rangewide and at PAIS in 2017. In 2017, nesting records indicate about 27,000 nests in total: 353 in Texas (219 of which were at PAIS), 24,586 at Tamaulipas in Mexico where the primary nesting occurs, and about 2,000 at Veracruz in Mexico.
- The park has conducted the longest continuous mark-recapture study in the U.S. for Kemp's ridley. These data, along with STSSN data, have been included in numerous scientific publications, most of which appear in the peer-reviewed literature.
- PAIS became the Texas Coordinator for the STSSN in 1980 and has continued to manage stranding data and train partners in stranding response for four decades.
- The program has been very successful in obtaining outside funding, over $14M in project funds since 1994.
- STSSN data aided the State of Texas with adopting a 5-mile oceanic protective zone in 2000 for shrimping operations, which greatly benefited sea turtle protection.
- The STSR program facility complex (administrative offices, incubation facility, necropsy lab) was built with funds from DOI in 2002 as one of the Top 12 Projects to Restore America's Parks. The incubation lab has a hatchling success rate of 85%.
- The sea turtle program at PAIS has greatly influenced the success of Kemp's ridley sea turtle conservation in Texas and in the Gulf of Mexico. Research conducted at the park has been included in many peer-reviewed publications and former PAIS STSR seasonal staff have become prominent researchers and managers working on marine conservation.

- Sea turtle releases are a popular event, which have led to engagement, education, and support from the public. This program, as stated by the park management team, has “floated all boats” with its popularity and success.
- Partnerships with universities and others have contributed to growth in knowledge and capacity for rehabilitation of sea turtles. For example, in November 2019, KIII TV 3 featured a story about operating on injured green sea turtles. This project is a partnership between NPS, Texas State Aquarium, and Texas A&M University - Kingsville Veterinary Technology program. Partnerships like this are contributing to endangered species recovery and to public education and support for conservation.

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8. List of Agencies, Organizations, and Individuals Interviewed

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Mary Kay Skoruppa, Biologist, Texas Coastal Ecological Services Field Office (R2) (sea turtle coordinator for Texas)

Appendix A: Park Purpose, Significance, Fundamental Resources and Values

Park Purpose

Padre Island National Seashore was established when the enabling legislation adopted by Congress was signed into law on September 28, 1962. The enabling legislation reads: "…*That in order to save and preserve, for purposes of public recreation, benefit, and inspiration, a portion of the diminishing seashore of the United States that remains undeveloped, the Secretary of the Interior shall take appropriate action in the public interest toward the establishment of the following described lands and waters as the Padre Island National Seashore…"*

A park purpose statement identifies the park's interpretation of the specific reason(s) for establishment of a park unit. The purpose statement for Padre Island National Seashore was drafted through a careful analysis of its enabling legislation and the legislative history that influenced its development.

The park purpose statement included in its Foundation document (NPS, 2016) includes the words "and scientific understanding," which were not included in the enabling legislation passed by Congress. It reads: "Located on the Texas coast, Padre Island National Seashore preserves, protects, and interprets the outstanding natural, cultural, and recreational resources of the longest undeveloped barrier island in the United States and its surrounding water for public benefit, inspiration, and scientific understanding."

Significance

Significance statements express a park manager's explanation of why a park's resources and values are important enough to merit designation as a unit of the national park system. These statements are linked to the purpose of the park, and are supported by data, research, and consensus.

- Padre Island National Seashore is the longest section of undeveloped barrier island in the United States, protecting the majority of remaining Texas coastal prairie, a dynamic environment constantly sculpted by wind and sea, and the Laguna Madre, one of the few hypersaline lagoon environments left in the world.
- As the largest stretch of undeveloped barrier island in the United States, Padre Island National Seashore provides unobscured views and diverse recreational opportunities such as beachcombing, swimming, picnicking, camping, sunbathing, fishing, kayaking, and bird and wildlife viewing in a pristine and solitary environment. Laguna Madre is an internationally recognized windsurfing area.
- The waters and lands of Padre Island National Seashore provide important habitat for marine and terrestrial plants and animals, including a number of rare, threatened, and endangered species. Geography, gulf dynamics, rare coastal prairie and pristine wetlands, wind tidal flats, biodiversity, location along multiple migration routes, and

lack of development make the park an ideal place for natural communities and species associated with barrier islands.

- Five species of threatened and endangered sea turtles occur in the Gulf of Mexico, and Padre Island National Seashore is the only area on the Texas coast where nests from all five of these species have been documented. More Kemp's ridley sea turtle nests are found at the park than at any other location in the United States, making it the most important nesting beach in the United States for this endangered species. Park waters of the Gulf of Mexico, Laguna Madre, and Mansfield Channel also provide important foraging and migratory habitat for these species.
- Padre Island National Seashore is critical for bird species including more than 380 documented migratory, overwintering, and resident bird species. The island is designated as a Globally Important Bird Area by the American Bird Conservancy and was the first NPS unit to be recognized as a Site of International Importance by the Western Hemisphere Shorebird Reserve Network.
- Padre Island National Seashore includes important archeological resources relating to American Indian occupation, the era of early Spanish exploration, maritime history and shipwrecks, and a robust military history from the US war with Mexico through World War II. The Novillo Line Camp and associated historic resources of Padre Island National Seashore include some of the last remaining structures relating to barrier island open-range cattle ranching in the United States.

Fundamental Resources and Values

Fundamental resources and values are those features, systems, processes, experiences, stories, scenes, sounds, smells, or other attributes determined to warrant primary consideration during planning and management processes because they are essential to achieving the purpose of the park and maintaining its significance. Fundamental resources and values are closely related to a park's legislative purpose and are more specific than significance statements.

- *Recreational Opportunities*. Created in 1962 "for purposes of public recreation, benefit, and inspiration," Padre Island National Seashore is recognized as an outstanding recreation destination. The park's beaches, flora, fauna, and surrounding waters, as well as its cultural sites, present opportunities for a broad array of interests and recreational pursuits that are uniquely suited and appropriate to the park's resources. Big Shell Beach is known for its fishing and shelling. Bird Island Basin attracts the avid birdwatcher and is one of the nation's most popular windsurfing spots. The Laguna Madre is a popular aquatic playground for boating, kayaking, and fishing. From a highly social beach environment where driving is allowed, to beachcombing along isolated stretches closed to vehicles, the island provides a diverse range of opportunities for visitors.
- *Barrier Island Ecosystem*. From the gulf to the lagoon, the width of land varies along the island from 0.5 to 3.0 miles, and the park's landscape changes from beaches to the primary dune line, then to grasslands broken by scattered small dunes, hardwood

hammocks, ponds, and wetlands, and finally to transitional back-island dunes and mudflats that merge with the waters of the Laguna Madre. These habitats, rich in biotic diversity, provide important sanctuary for hundreds of species of plants and animals, including many threatened and endangered species. These habitats also provide rich opportunities for scientific research.

- *Sea Turtles*. Sea turtles have become a major natural resource and major visitor draw because the park offers one of the few places the public can go to witness Kemp's ridley sea turtles nesting on the beach and the release of their hatchlings. In recent years, Padre Island National Seashore has documented nests of all five sea turtle species found in the Gulf of Mexico and has played an active role in species protection and conservation research. Since the 1970s, the park has been active in a major, international research and conservation project to save the most endangered of all sea turtles, the Kemp's ridley. These efforts have been expanded to include ongoing patrol programs aimed to detect, study, and protect sea turtle nests with the help of the local community, a variety of partners and donors, and a large and active volunteer force.
- *Undeveloped Barrier Island*. The park protects one of the largest portions of undeveloped barrier island in the world, providing a wide variety of flora, fauna, and recreational opportunities. Padre Island is a dynamic system, formed and continually being reshaped by the action of wind, waves, and tide. Sixty-five and one-half miles of the island habitat have been set aside for future generations to experience the sites, natural sounds, and seemingly unending vistas and dark night skies that comprise this dynamic barrier ecosystem. The 4-1/3-mile section of beach that is closed to beach driving provides an excellent opportunity for scientific research. This may be the only stretch of Texas shoreline protected to preserve its natural state while also being easily accessible to research scientists.
- *Collective History*. The cultural resources of Padre Island National Seashore include archeological sites, cultural landscapes, and historic structures. Prehistoric sites show that Karankawa Indians inhabited the island prior to the arrival of the first Europeans, using the barrier island and ocean waters for hunting, gathering, and fishing. The park also protects remnants of historic ranching structures, a campsite dating from the Mexican-American war, shipwrecks from the days of the Spanish fleet, as well as plane wrecks and other artifacts from the use of the island as a World War II bombing area.

Appendix B: Nests Detected of Kemp's ridley and Green Sea Turtles & ESA Recovery Criteria

Table 1. Kemp's ridley Sea Turtle Nests

	Average Number of Nests/Year by Decade			
Location	1980-1989	1990-1999	2000-2009	2010-2019
Mexico	791	2,014	10,993	17663*
Texas	0.4	5	79	196
PAIS	0.2	3.4	44	110

* For Mexico data in 2010-2019 column, average only includes nest numbers from 2010-2018.

Table 2. Green Sea Turtle Nests for Select Areas of North Atlantic Population DPS*

	Year				
Location	2015	2016	2017	2018	2019
Florida	37,341	5,393	53,102	4,545	53,015
PAIS	4	0	23	4	11

* Primary nesting location for this DPS is in Costa Rica.

ESA Recovery Criteria

Kemp's ridley

Downlisting (applies to Mexico only; there are no criteria for U.S.)
10,000 nesting females per season (~25,000 nests) in Mexico (Tamaulipas)
300,000 hatchlings released per season in Mexico

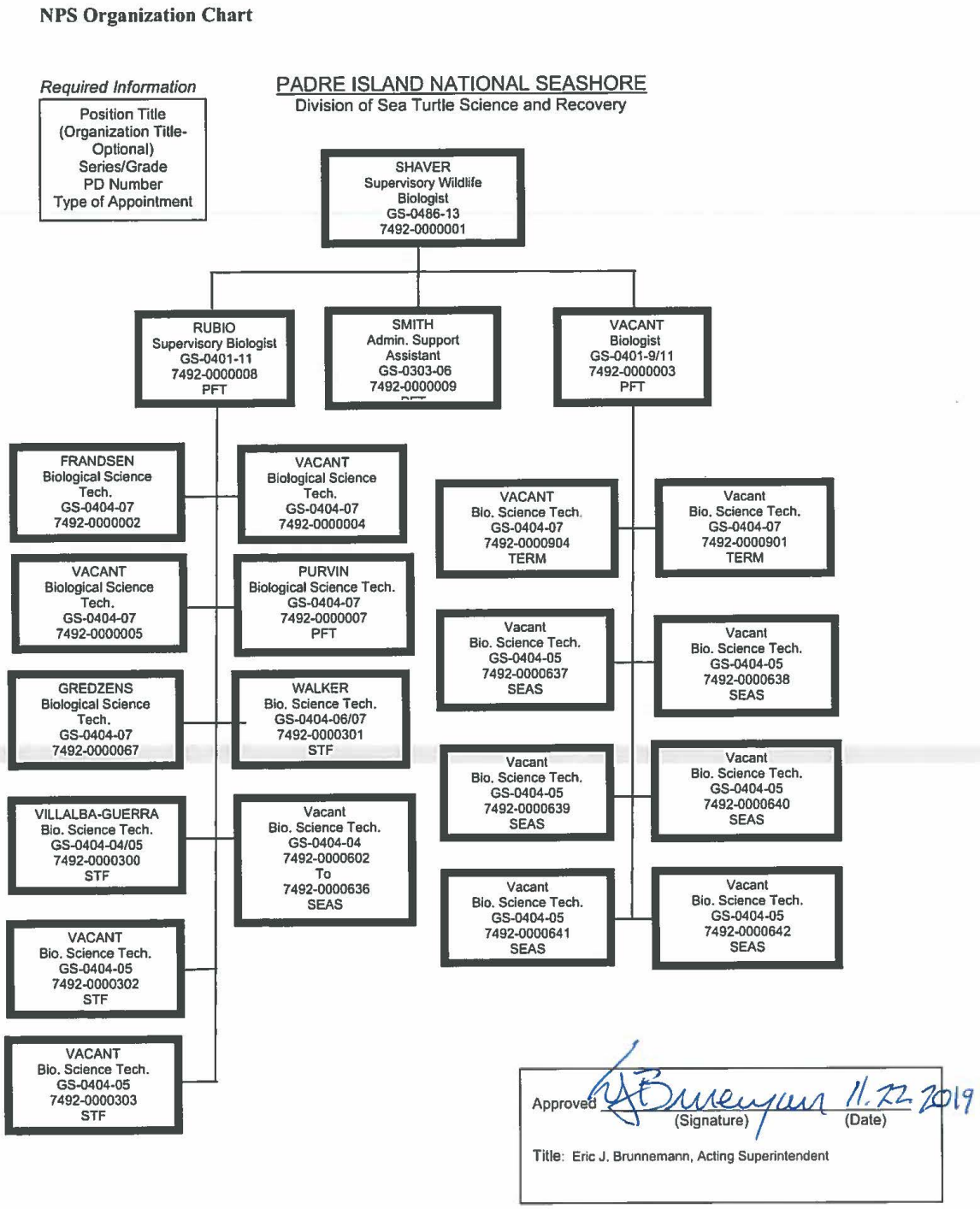
Delisting
6-yr. average of 40,000 nesting females per season (~100,000 nests) in Mexico and the U.S.
6-yr. average of hatchlings is enough to sustain 40,000 nesting females per season in Mexico and the U.S.

Green

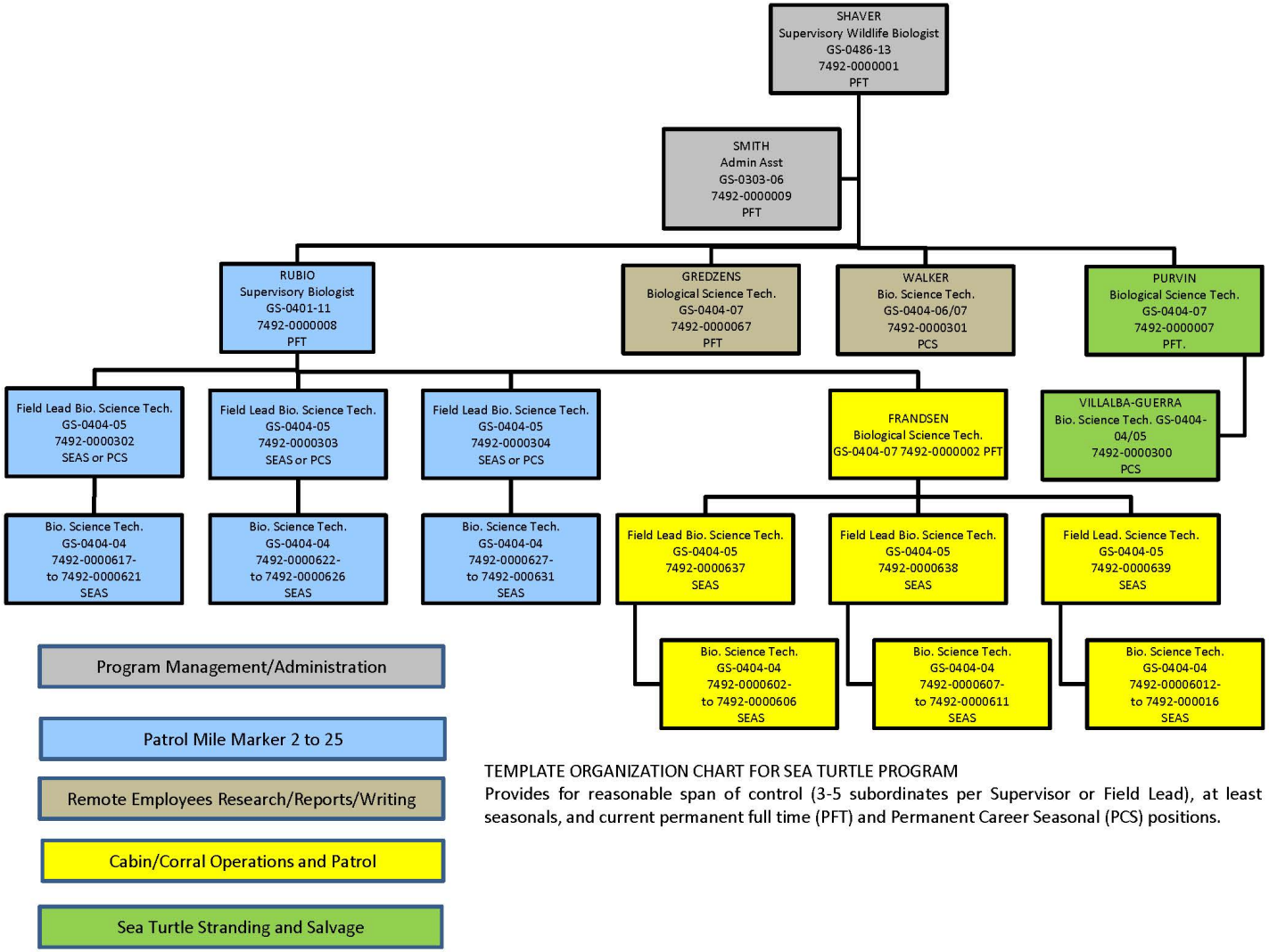
Downlisting
There are no specific criteria included for downlisting in the 1991 recovery plan. However, the species was reclassified and downlisted to threatened in 2016.

Delisting
1) The level of nesting in Florida has increased to an average of 5,000 nests per year for at least six years.
2) At least 25% (105km) of all available nesting beaches (420km) is in public ownership and encompasses greater than 50% of the nesting activity.
3) A reduction in stage class mortality is reflected in higher counts of individuals on foraging grounds.
4) All priority one tasks (listed in the recovery plan) have been successfully implemented.

Appendix C: PAIS STSR Organizational Chart (FY20)



Appendix D: PAIS STSR Organizational Chart (recommended)



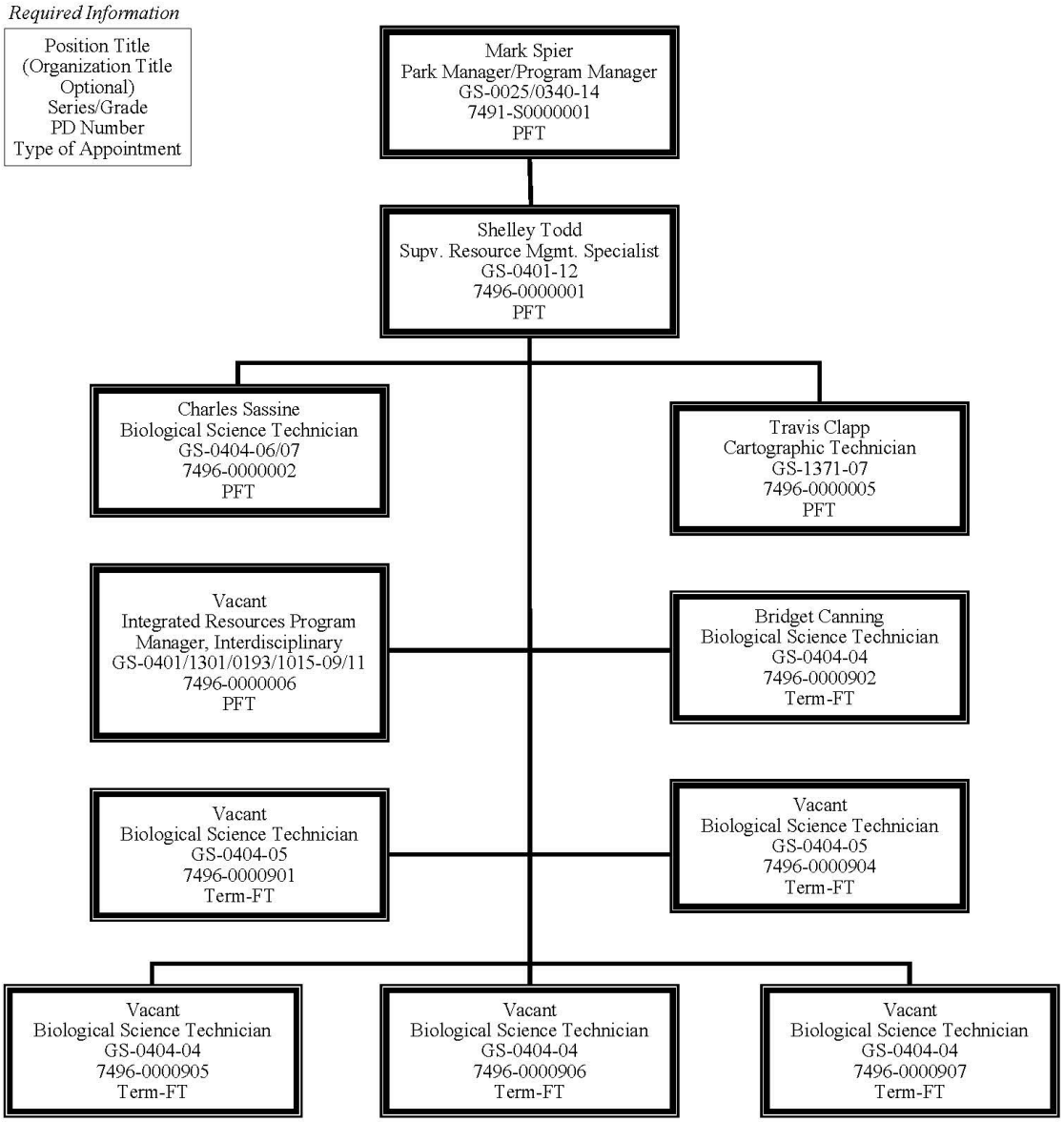
TEMPLATE ORGANIZATION CHART FOR SEA TURTLE PROGRAM
Provides for reasonable span of control (3-5 subordinates per Supervisor or Field Lead), at least 36 seasonals, and current permanent full time (PFT) and Permanent Career Seasonal (PCS) positions.

Appendix E: PAIS SRM Organizational Chart (FY19)

Organization Chart

Padre Island National Seashore

Division of Science and Resource Management



Approved

MARK SPIER Digitally signed by MARK SPIER
Date: 2019.05.20 12:38:43 -05'00'

Mark Spier, Superintendent Date

Appendix F: PAIS STSR Current and Future Funding

Division of Sea Turtle Science and Recovery Budget Projection FY2019 - FY2029

Type	PMIS	Account Name	Authorized	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029
PAIS		Division of Sea Turtle Sciene and Recovery - Base Funds					$1,374,902	$1,374,902	$1,374,902	$1,374,902	$1,374,902	$1,374,902	$1,374,902	$1,374,902	$1,374,902	$1,374,902	$1,374,902
DON		WCCR/Green Turtle Tracking					$18,625										
PMIS	2E+05	SWBRPP: Conservation of green turtles					$50,000										
PMIS	3E+05	SWBRPP: Conservation of green turtles						$50,000									
PMIS	2E+05	NRPP SCC: Investigating Kemp's ridley decline					$147,000	$147,000	$147,000								
PMIS	2E+05	NRPP SCC: Assess and Protect Green Turtles at PAIS							$80,000	$80,000	$80,000						
PMIS	3E+05	Emergnecy Funds for Stranded Endangered Sea Turtles at PAIS					$14,000										
WASO		DOI RESTORATION NESTING (phase1)	$1,558,423	#######	$69,250	$377,649	$362,862	$275,983	$105,000	$44,700							
WASO		DOI RESTORATION NESTING (phase2)	$1,026,197						$205,239	$205,239	$205,239	$205,239	$205,239				
WASO		DOI RESTORATION STRANDING	$1,016,874	$0	$0	$81,174	$101,112	$139,098	$139,098	$139,098	$139,098	$139,098	$139,098				
WASO		NOAA RESTORATION STRANDING	$1,114,437	$0	$106,135	$112,151	$112,151	$112,000	$112,000	$112,000	$112,000	$112,000	$112,000	$112,000			
WASO		NOAA RESTORATION PACKERY CHANNEL					$15,357	$47,072									
WASO		Restoration, Sea Turtle Cabin Construction	$600,000														
WASO/ TEXAS		Restoration, Sea Turtle Nesting Texas, Patrol Supplies					$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000				
WASO/ TEXAS		Restoration, Sea Turtle Restoration CABIN building supplies					$100,000										
		TOTAL PROJECT FUNDS					$2,346,009	$2,196,055	$2,213,239	$2,005,939	$1,961,239	$1,881,239	$1,881,239	$1,486,902	$1,374,902	$1,374,902	$1,374,902

crubio 2 **3/10/2020**

SWBRPP = **IMR- Southwest Border Resource Protection Program**

WCCR = **Texas State Aquarium-Wildlife Care, Conservaiton and Reseach Grant Fund**

Appendix G: STSSN Roles and Responsibilities

SEA TURTLE STRANDING AND SALVAGE NETWORK (STSSN)

PURPOSE/MISSION STATEMENT

The Sea Turtle Stranding and Salvage Network (STSSN) is a cooperative effort to inform causes of morbidity and mortality in sea turtles by responding to and documenting sea turtles, found either dead or alive (but compromised), in a manner sufficient to inform conservation management and recovery. The STSSN accomplishes this through (1) collection of data in accordance with STSSN protocols; (2) improved understanding of causes of death and threats to sea turtles in the marine environment; (3) monitoring of stranding trends; (4) provision of initial aid to live stranded sea turtles; (5) provision of sea turtle samples/parts for conservation-relevant research; and (6) availability of timely data for conservation management purposes.

STSSN ROLES AND RESPONSIBILITIES

NMFS and USFWS

The National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (FWS) share federal jurisdiction for the conservation and recovery of sea turtles. In accordance with the 2015 Memorandum of Understanding, FWS has lead responsibility on the nesting beaches and NMFS has lead responsibility in the marine environment. Sea turtle stranding response and rehabilitation has traditionally operated with a shared jurisdictional responsibility between the two agencies. Both agencies have codified regulations authorizing each other to respond to stranded sea turtles on land and in the water. All sea turtle Recovery Plans include a recovery action to maintain and enhance the STSSN with both NMFS and FWS listed as responsible parties.

In accordance with the MOU:
NMFS shall serve as the lead for and coordinator of the Sea Turtle Stranding and Salvage Network (STSSN) to attend to dead or distressed turtles in the marine environment or when washed ashore from the marine environment. Coordination by NMFS of the STSSN may include coordinating placement of stranded turtles at permitted rehabilitation facilities. Within its capacity, FWS shall provide assistance to the STSSN, including within the National Wildlife Refuge system. NMFS shall share STSSN information with FWS to promote the recovery and conservation of sea turtles.

FWS shall serve as the lead for and coordinator of permitted facilities holding sea turtles for rehabilitation or captive display. FWS shall share information with NMFS on captive sea turtles and coordinate with NMFS on guidelines and standards for such facilities.

STSSN Network Coordinator

● provide national stranding network protocols, including data collection methods, to ensure consistent data collection and reporting efforts throughout network

- manage NOAA STSSN Database and maintain user accounts for state data entry

● enter additional stranding data, not entered by states, into the STSSN Database

● code all stranding reports using established notecodes to facilitate data summaries for specific impacts and anomalies, and enter notecodes into national database

● coordinate national response and assist state coordinators (as needed) with local response to unusual or mass stranding events

● provide assistance to state coordinators and network members, as needed

● participate in scheduled conference calls, meetings, and/or training events and engage in regular communication with State Coordinators and national coordination team to ensure effective STSSN implementation

● respond to national-level data requests and refer requests to states appropriately in a timely manner

● ensure consistency in stranding documentation practices

● monitor strandings for unusual events/occurrences and alert/coordinate with relevant entities

● provide real time updates and summaries across the network

NOAA Sea Turtle Veterinary Medical Officer and Mortality Investigation Coordinator

● facilitate/coordinate collection of clinical and necropsy data/samples necessary to identify causes of strandings

● provide stranding response and necropsy instruction and training to network members, as needed

● provide veterinary assistance to FWS and other agencies for any needs related to live stranded sea turtles, including animal welfare concerns and compliance with permit conditions

● ensure effective investigation of any unusual or mass stranding/mortality events through direct involvement, coordination of participating individuals/groups, and/or documentation/reporting of findings

● ensure data collection efforts are appropriate to inform mortality and morbidity investigations

● provide overarching network guidance on how to investigate mortality events

● participate in scheduled conference calls, meetings, and/or training events and engage in regular communication with State Coordinators and national coordination team to ensure effective STSSN implementation

● ensure newly available information is incorporated into network function for mortality investigations

● monitor for unusual events in real time and conduct outreach as near real time as possible to ensure data are not lost and ensure monitoring is increased if necessary

NOAA National Sea Turtle Coordinator

● coordinate with FWS on issues of joint jurisdiction and interagency coordination

● facilitate national level discussions

● guide STSSN enhancements and program direction to ensure data collection efforts (and data collected) are meeting conservation and recovery needs

● facilitate/coordinate response to mass/unusual stranding events

● identify/seek/support funding for priority network activities

● participate in scheduled conference calls, meetings, and/or training events and engage in regular communication with State Coordinators and national coordination team to ensure effective STSSN implementation

NOAA Greater Atlantic Region Stranding Coordinator

● facilitate communication within network and b/w network partners and FWS/NOAA including running monthly network meetings

● provide protocols and training (as needed) for stranding response and disentanglement

● collate data on stranding, incidental capture, and rehab to produce annual report for FWS and to provide data to managers

● assist with logistics during stranding events as needed, including organizing transports, working with municipal, state, and government partners, and media

● provide funding and/or supplies as funds allow and need arises

● data entry and QA/QC

● work with FWS regarding permitting issues such as telemetry and rehabilitation

● investigate unusual stranding trends including engaging national vet and investigating human activities in the area

● coordinate rehab activities including inspecting new facilities, receiving euthanasia notification, approving release sites, finding placement for turtles

U.S. Fish and Wildlife Service

● coordinate with NMFS on issues of joint jurisdiction and interagency coordination

● provide Standard Care Conditions (including transport, rehabilitation, and release conditions) for the Care and Maintenance of Captive Sea Turtles to permitted rehabilitation facilities

● assist where needed on response to mass/unusual stranding events

● engage in regular communication with State STSSN Coordinators and NMFS on rehabilitation facilities that meet our Standard Care Conditions

● coordinate with the NMFS and State Sea Turtle Stranding Coordinators on the location and timing of turtle release

● coordinate regarding sea turtle samples that may be transferred out of state for research purposes

State Stranding Coordinators

● oversee and actively coordinate a network of permitted individuals and organizations that participate as members of the STSSN

● facilitate a response to all reports of stranded sea turtles in their state unless logistically unfeasible or prohibited by weather or other safety considerations

● organize/provide training to STSSN responders to ensure adherence to STSSN protocols

● establish and maintain a reporting protocol, including the preferred methods of contact for their state responders

● enter all basic stranding data and photos into the NOAA National STSSN Database weekly (i.e., within 7 days of the stranding event)

● submit completed and QA/QC'd STSSN original forms to the NOAA National STSSN Coordinator (originals) within one month or sooner from the date of stranding

● provide real-time notification/alert to national coordination team (regarding unusual or mass stranding events (note: further definition of "unusual" is needed

● participate in scheduled conference calls, meetings, and/or training events and engage in regular communication with national coordination team to ensure effective STSSN implementation

● assist with analyses/interpretation of data and provide expertise to ensure proper data context

Stranding Responders

● document all strandings in accordance with standard STSSN procedures, including the STSSN reporting form and digital photographs

● report all basic stranding information (date, species, lat/long, condition, injuries) to the state coordinator within 48 hours of the stranding event and send completed STSSN forms to the state coordinator within 7 days of the stranding event

● provide real-time notification/alert to State Coordinator regarding unusual or mass stranding events

● regularly communicate with State Coordinator and participate in scheduled training events and/or call or meetings to ensure effective STSSN implementation

● collect samples and salvage carcasses if requested and permitted

● assist with transport of live animals to rehab and dead animals to point identified, if requested and feasible

Appendix H: Corrective Action Plan - PAIS Beach Travel

Corrective Action Plan			
Incident Name:	**Beach Travel Review**		
Unit Name:	Padre Island National Seashore		
Date of Accident/Incident	December, 2019		
Date of Corrective Action Plan	January 28, 2020		
Critical Finding	**Action Item**	**Responsible Party**	**Due Date**
1. Park standards do not provide guidance to employees on acceptable levels of risks they can accept. Specifically, there is no parkwide guidance on when beach travel and operations are acceptable.	1. The park will develop a risk assessment checklist to provide risk guidance to employees (Similar to fire watch-out criteria). The document will: • Apply a risk number to common operational hazards • Account for the accumulative nature of hazards • Assign the appropriate management level for acceptance of risk (Potentially Supt Level) • Will account for cumulative fatigue • Operations when communications are compromised		
2. The park's Backcountry SOP does not address environmental conditions in terms of appropriateness for beach travel.	2. The park will establish parkwide conditions acceptable for beach travel.		
3. The park's Backcountry SOP does not require employees traveling down island to complete daily risk assessment documents.	3. The park's Backcountry SOP will require that the Risk Assessment Checklist described in Finding #1 and SPE/GAR documents to be completed daily.		
4. The park's Backcountry SOP does not establish approval authority level for varying levels of risk.	4. The park's Backcountry SOP will establish approval authority level for varying levels of risk. It will include a "Vocal" authority with appropriate documentation for down island or changing conditions.		

5. The south radio repeater was not operating on non-Law Enforcement frequencies	5. When a repeater is not operating, repairs must be a high park priority.		
6. The park has no formal method of passing general information to employees; particularly those staying down island.	6. The park will develop a process for providing an informational report to all employees (a Morning Report). This report will be delivered using multiple forms of media and consists of pertinent information such as weather / tide forecasts and other significant activities.		
7. The park does not provide employees formal training on driving the full-size vehicles on the beach.	7. The park will develop a formal driver training for employees driving the full-size vehicles on the beach. In addition to driving techniques, the training will include hazard awareness, extrication techniques, and for vehicle towing for those chosen to perform the task.		
8. The park does not formally track minor incidents such as stuck vehicles or mechanical malfunctions.	8. The park will establish a parkwide system to track stuck vehicles and mechanical failures down island.		

Appendix I: Interview Questions

PAIS STSR Staff

Interviewee's Name and Title:_____

(select questions as appropriate for level/role of individual being interviewed)

What are the priorities of the STSR program?

Has the program's focus changed over the years?

Is the park's role in responding to strandings well understood?

How does science and research fit into the program's priorities?

Is the science that is being funded targeted at park-specific conservation/management needs OR is it intended to benefit the species at large?

Is there a program implementation plan that defines near-term and long-term needs and actions?

What are the successes and challenges of the park's nest management practices?

Are there concerns about safety?

How does the park work with other divisions?

Are there certain functions and duties that could be shared with other divisions? (for example, administrative support, PIO, seasonals, patrolling)

How does the park work with other agencies (FWS, NMFS, TPWD) and cooperators (universities, NGOs)?

Are there opportunities for others (other federal agencies, cooperators, partners) to take on certain stewardship functions?

What suggestions do you have to improve the program?

PAIS Management Team

Interviewee's Name and Title:_____

What is your overall impression of the STSR program?

How does the STSR Chief work with you and your Division? Are there areas of concern or needed improvement? Are there successes? How does the STSR Chief work with the rest of the Park Mgmt. Team?

Is there a common understanding of Park-wide priorities? How do the STSR priorities fit into these?

Are there certain functions and duties that could be shared between your divisions? (for example, administrative support, PIO, seasonals, patrolling)

Should the STSR program remain as a separate division or should it be combined with and fall under the RM division?

Other:

PAIS Cooperators

Interviewee's Name and Title:_____

(select questions as appropriate for role of agency/organization/partner being interviewed)

How does PAIS work with your agency/organization/university?

How does PAIS partner with you on sea turtle science needs? How does PAIS partner with you on management needs?

Is the science that you are conducting on behalf of NPS/PAIS targeted at park-specific conservation/management needs OR is it intended to benefit the species at large?

How is the science you are conducting meeting the research priorities of your agency/organization and those of NPS/PAIS?

What are the successes/challenges/concerns of the park's nest relocation and management practices? Are there other nest management practices that should be considered?

What are your thoughts about NPS/PAIS serving as the state coordinator for the STSSN? Are there other interested/suitable entities?

What are your thoughts about the level of response/action that is appropriate for strandings?

What is the role of your agency/organization in responding to threats to sea turtles, such as illegal fishing, climate change, etc? What do you feel is the appropriate role for NPS/PAIS?

Are there opportunities for you/your agency to take on certain stewardship activities that PAIS has historically handled?

What suggestions do you have to improve the PAIS sea turtle program?

What, if any, additional partnerships do you think are needed at PAIS?

Appendix J: Superintendent E-mail

Brunnemann, Eric J
Fri 6/12/2020 11:14 AM

PAIS STSR Review Report_20200608_final_signed.pdf
2 MB

Good Morning,

I am the new superintendent of Padre Island National Seashore and Palo Alto Battlefield National Historical Park. Having come from Texas and spent the last 31 years throughout the National Park Service, it's an honor for me to return to Central and South Texas to serve at these exceptional units of the National Park Service.

I'm reaching out to you this morning to share a recent program review of Padre Island's popular Division of Sea Turtle Science and Recovery. From my own days when I would pack-up and travel to the coast, I know first-hand how much the Kemp's ridley sea turtle means to Texans, and the pride we feel with stakeholders and partners about such magnificent animals. For that reason, I am committed to sharing this information with you.

The attached National Park Service review not only underscores the importance of this program to the park, but also outlines goals to strengthen its mission, clarify its priorities, and expand opportunities for the program's shared stewardship.

Our path forward to strengthen this program is built upon my support for park staff whose passion and dedication have carried it through these last 40 years. My experience also tells me that to maintain an effective sea turtle program, we must increase safety and reduce burnout among our park staff by reducing long shifts and extensive overtime.

The review speaks to how we might use the success of the sea turtle program to broaden the park's preservation and interpretation of other world-class park resources for the enjoyment of our visitors. This means working to pay down our considerable maintenance backlog, while also building out programs related to the park's more than 300 bird species, preserving our 16th century Spanish and ranching resources, and interpreting our coastal and tidal ecosystems.

Thank you for your time, consideration, and support of Padre Island National Seashore. I look forward to working with you. Should you have further questions regarding this review or about Padre Island National Seashore, please do not hesitate to contact me.

Respectfully,

Eric J. Brunnemann

Eric J. Brunnemann, Superintendent
US Department of the Interior
National Park Service, Interior Region 6

Padre Island National Seashore
PO Box 181300
Corpus Christi, TX 78480
(361) 949-8173 ext 222

Palo Alto Battlefield NHP
600 East Harrison Street; Room 1006
Brownsville, TX 78520
(956) 541-2785 ext. 222

Appendix K: NMFS E-mail

Barbara Schroeder <barbara.schroeder@noaa.gov>
Tue 6/30/2020 2:07 PM

To: Brunnemann, Eric J
Cc: Malone, Patrick; Stacy Hargrove <Stacy.Hargrove@noaa.gov>; Shaver, Donna J

Hello Superintendent Brunnemann,

Thank you for providing a copy of the recent program review of Padre Island's Division of Sea Turtle Science and Recovery. NMFS appreciates the long-standing efforts of Padre Island National Seashore, and in particular, Dr. Donna Shaver who has served as the State Coordinator for the Sea Turtle Stranding and Salvage Network for over three decades. As the STSSN Texas State Coordinator Dr. Shaver's efforts have helped inform and drive important conservation management measures such as the requirements to use Turtle Excluder Devices (TEDs).

For NMFS, both Stacy Hargrove and I were contacted by the Review Panel and we participated in separate discussions with the Panel. Thank you very much for the opportunity to participate in this important effort. We found the report to accurately reflect most of the conversations we had with the Review Panel, however, there are a few places specifically referencing NMFS where we feel that clarification and/or additional context is needed. Below we include the specific statement(s) and page number from the report as well as the needed clarification. A lot of topics were covered during our telephone discussions and perhaps we were not clear in some of our responses. We are happy to discuss our clarifications below so please let me know if you would like to further discuss.

We look forward to continuing to work together to advance the conservation and recovery of threatened and endangered sea turtles. Thank you again for the opportunity to participate in the program review.

Sincerely,

Barbara Schroeder

<u>NOAA/NMFS Clarifications to STSR Program Review Report</u>

1. STSR Review Report Statement (page 18): ***NMFS reports that about 200 necropsies are conducted for all of Florida in one year versus 400 per annum for Texas.***

NMFS Clarification: The "about 200 necropsies" is only for the Gulf coast of Florida, not the entire state.

2. STSR Review Report Statement (page 18): ***NMFS indicated that the park is performing more necropsies than is required, and that they have communicated to park staff that a reduction (sub-sample) is appropriate.***

NMFS Clarification: This comment was specific to necropsies associated with large cold-stun events. When large numbers of turtles die from a known cause of mortality, such as a cold-stun event, it is appropriate to sub-sample for necropsies. Since the number of strandings varies by

year, we cannot set a target for number of necropsies to conduct each year. Moreover, the number of necropsies indicated depends on the circumstances and concurrent findings. For example, more necropsies may be necessary to investigate unusual events or strandings suspected to be caused by human activities. Our goal is to enhance mortality investigations and ensure they are done systematically and consistently. It is true that Texas has conducted more necropsies than Florida (Gulf coast only) each year under the DWH Sea Turtle Early Restoration project. Necropsies are a critical part of the DWH Sea Turtle Early Restoration Project and we intend to continue these collaborative efforts across the GOM to enhance mortality investigations. NOAA has provided in-person support for necropsies in Texas and will continue to provide that support at PAIS and elsewhere in Texas as long as it is needed and welcomed.

3. STSR Review Report Statement (page 18): ***Other suggestions from NMFS included not completing the full stranding form, measurements, or tagging each animal during mass stranding events. The level of effort currently being done by the park is not recommended by NMFS, as there is no conservation benefit.***

NMFS Clarification: The comment "there is no conservation benefit" was specific to measuring and tagging every animal during cold stun events, not a blanket statement about the current level of effort.

4. STSR Review Report Statement (page 24): ***Beginning in FY2017, NMFS has been providing approximately $112,000 to support the STSR program in carrying out duties related to serving as the Texas state coordinator of the STSSN.***

NMFS Clarification: The DWH Sea Turtle Early Restoration Project provides support to each of the state stranding networks in the Gulf of Mexico annually. These funds are explicitly intended for enhancement of the five state stranding networks in order to achieve restoration benefits.

5. STSR Review Report Statement (page 24): ***Beginning in FY2018, the park also started receiving approximately $139,000 in stranding support funds from the DOI Deepwater Horizon Trust Fund. Despite nearly $250,000/year in project fund support for stranding activities, the park indicates that response needs exceed available funds. NMFS staff indicated that when the Texas STSSN mid-year report (for the period Jan -June) is due in August 2020, additional funds could be requested for the next fiscal year.***

NMFS Clarification: The report correctly notes that proposals for additional funding may be submitted each August. These proposals must be for stranding network enhancement projects. As noted above in #4, the DWH Sea Turtle Early Restoration Project funds are explicitly intended for enhancement of the STSSN in order to achieve restoration benefits. To date, PAIS has received an additional 129K (2018-2019) for two seasonal stranding response positions at Packery Channel, two SCA interns for stranding response, and necropsy facility improvements.

6. STSR Review Report Statement (page 27): ***The STSSN funds ($112,000) that NMFS provides currently pay for these personnel and they should be allowed to only focus on the many duties the STSSN requires for in-park strandings (see Appendix G, section on State Stranding Coordinators and Stranding Responders). If these personnel are occasionally***

needed for other critical duties, then NMFS should be consulted and other funding allocated for that work, particularly for the Career Seasonal employee.

NMFS Clarification: Personnel supported with DWH Sea Turtle Early Restoration Project funds are intended to support the TX STSSN as a whole in order to enhance the network effectiveness across the state (e.g., additional training, statewide data entry/data management, necropsy support). If these personnel work on other park projects/activities then their time spent on those activities must be paid with other funding sources. NMFS agrees that there is sufficient STSSN operational work for the funding provided.

--
Barbara Schroeder
National Sea Turtle Coordinator
National Oceanic and Atmospheric Administration - NMFS

email: barbara.schroeder@noaa.gov
Phone: 301-427-8450