A HABITAT CONSERVATION PLAN

SUBMITTED BY

DUKE ENERGY CORPORATION

AS PART OF A

SECTION 10(a)(1)(B) INCIDENTAL TAKE PERMIT

APPLICATION

FOR THE

FEDERALLY ENDANGERED INTERIOR LEAST TERN

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Duke Energy Habitat Conservation Plan (HCP)

Name Change: In April 2006, the Duke Power Company based out of Charlotte, North Carolina purchased and merged with Cinergy Corp. to form Duke Energy.

Executive Summary: In 1986, a single pair of Least Terns (*Sterna antillarum*) were discovered nesting on Duke Energy's Gibson Station property (Castrale, 1999). The nest was located on the 3.4 km long splitter dike which is part of a three thousand (3,000) acre industrial surface impoundment cooling pond associated with the generating station. Since that time, this Interior Least Tern *(S. a. anthalassos*) colony has grown steadily (Table 1). In 2010, an estimated maximum of 150 adult terns, 110 nests and 165 fledged young were present at or adjacent to the Gibson Station property.

Since this initial discovery, Duke Energy has worked cooperatively with the Indiana Department of Natural Resources (IDNR), U.S. Fish & Wildlife Service (USFWS) and others to maintain conditions favorable for successful tern production.

This growing least tern colony continues to exhibit spatial expansion. On Duke Energy property, nesting has been documented on the cooling pond splitter dike, station ash ponds, coal combustion waste landfill, construction areas and several access roads associated with the station. Off and adjacent to Duke Energy property, nesting has occurred on the Cane Ridge Wildlife Area (CRWA), which is a unit of the Patoka River National Wildlife Refuge, the Indiana Department of Natural Resources Tern Bar Slough Wildlife Diversity Conservation Area

(TBS), the Wabash River and a nearby farm field. This spatial expansion of nesting activity on Duke Energy property presents potential operational, maintenance and construction conflicts with the generating station and a greater risk of nest, egg and chick disturbance, destruction or egg failure due to these activities at the station and associated facilities.

Duke Energy's original HCP and Incidental Take Permit for least terns at Gibson Station were dated 1999, with the first renewal occurring in October 2004. Duke Energy is requesting this current HCP renewal and the associated Incidental Take Permit be valid through 2016. This HCP will describe methods that Duke Energy will undertake to continue to assist in the monitoring and maintenance of favorable least tern nesting conditions in appropriate areas on station property. Also, it will describe Duke Energy's role in the management of least tern nesting at the CRWA and TBS, which are immediately adjacent to the cooling pond.

This HCP and incidental take permit are being sought to reduce Duke Energy's liability under the Endangered Species Act in the event of an incidental take of least tern(s) as a result of the operation and maintenance of Gibson Station and associated facilities.

Duke Energy Habitat Conservation Plan

1.0 Description of Site

1.1 Gibson Station: Duke Energy's Gibson Station is a coal-fired electrical generating station consisting of five 650 mega-watt units. The project site lies approximately nine (9) miles west of Princeton, Indiana along the Wabash River in southwestern Indiana (Figures 1 & 2).

1.2 Duke Energy Property: The property consists of a total of seven thousand five hundred fifty seven (7,557) acres (hereinafter referred to as Duke Property), of which approximately three thousand (3,000) acres consist of an industrial surface impoundment cooling pond (hereinafter referred to as "cooling pond" or "the pond"). The remaining acres consist of the generating station, ash disposal ponds, coal combustion waste landfills, and buffer property (Figure 2). This buffer property consists of numerous wetlands, farmland, woodland and scrub-land. The property is located in Sections 33, 34, Township 1 South, Range 12 West and Sections 3, 4, 5, 6, 7, 8, 9, 10, 15, 16, 17, 18, 19, Township 2 South, Range 12 West, Montgomery Township, Gibson County, Indiana.

1.3 Cane Ridge Wildlife Area: This four hundred sixty three (463) acre area is immediately adjacent to Gibson Station property. The CRWA is owned and managed by USFWS as a unit of the Patoka River National Wildlife Refuge (Figure 4). CRWA includes a sixty (60) acre dedicated unit for least tern nesting. This sixty (60) acre unit consists of two 3-acre nesting islands (Figure 5). Approximately ninety percent (90%) of the cost for the construction of the least tern nesting unit of

CRWA was paid by Duke Energy. The least tern nesting unit was constructed to serve as an alternative nesting site for terns that would have attempted to nest on Duke Energy property. The least tern unit of CRWA was completed and operational for the 2005 tern nesting season. The remaining acreage of the CRWA is managed as moist soil unit wetlands and bottomland hardwood wetlands. Management of the CRWA is the responsibility of USFWS. As adjoining properties, least terns nesting in CRWA and on Duke Energy property can potentially use common resources (terns nesting on CRWA property may feed on Duke Energy property and visa versa).

1.4 Tern Bar Slough Wildlife Diversity Conservation Area: The TBS is an eight hundred forty (840) acre property owned and managed by IDNR. It is located immediately south of the Gibson Station cooling pond and immediately east of the CRWA (Figure 6). A portion of the TBS has been developed and is being managed for least tern nesting habitat. This nesting habitat also serves as an additional alternative nesting site to Duke Energy property. Similar to CRWA (described in section 1.3), TBS and Duke Energy are adjoining properties in which the terns can use the common resources from each.

2.0 History of Interior Least Terns at Gibson Station

2.1 Growth of Colony: In 1986, a single pair of least terns was discovered nesting at Duke Energy's Gibson cooling pond (Castrale, 1999). Since 1986, tern nesting activity has increased steadily. In 2010, an estimated maximum of 150 adult terns,

110 nests and 165 fledged young were present at or adjacent to the Gibson Station Property (Mills, 2010).

2.2 Splitter Dike Nesting: The initial nest discovered at Gibson Station was made on the cooling pond splitter dike. This narrow dike is a predominate feature that nearly bisects the three thousand (3,000) acre cooling pond. Nesting has occurred on the splitter dike every year except 1988 (no nesting occurred on Gibson property in 1988) and 2003.

2.3 Ash Pond Nesting: There are three (3) ash pond complexes at Gibson Station (Figure 3). These are the South ash pond, North ash pond and East ash pond complex. The East ash pond complex is made up of three (3) phases (Phase I, II and III). Nesting has occurred on one or more of these ash pond complexes every year since 1993 except 2005 and 2007 (Table 1). The South ash pond was used for nesting during the 1990s, but this ash pond has been filled to capacity with coal combustion waste and covered with soil and seeded. Therefore, it is no longer suitable for nesting. The North ash pond was used for nesting in 2004. The East ash pond complex was first used for nesting in 1995 and has been used for nesting every year since, except for the years 2004, 2005 and 2007.

2.4 Landfill Nesting: In 2003, least terns utilized a coal combustion waste landfill located east of the station (Figure 3). This is the only year that nesting was attempted in this area.

2.5 Other Areas on Duke Energy Property: Historically, least terns have sporadically used other areas on the station property. For example, in 2006, late season nest attempts (estimated 6 nest attempts) were made on a construction site (the site of the

former South ash pond). In the mid 1990s, nesting attempts were made on access interior roads within the East ash pond complex. Although considerable effort is made by Duke and IDNR personnel to locate all active nesting areas on Duke property, the possibility exists that nesting has occurred without Duke/IDNR knowledge.

2.6 Cane Ridge Wildlife Area: Nesting has occurred on the CRWA from 2005 (first year of operation) to 2007. No nesting occurred on the CRWA in 2008, but nesting resumed in 2009 and continued in 2010.

2.7 Tern Bar Slough Wildlife Diversity Conservation Area: Nesting occurred on TBS in 2008, which was the first nesting season it was available for nesting. Least tern nesting did not occur at TBS in 2009 or 2010.

2.8 Other Nesting Areas Near the Gibson Tern Colony: Other areas where terns have been documented nesting in the immediate vicinity of the Gibson colony include sandbars on the lower Wabash River in the vicinity of Gibson Station (2005-2007 and 2009) and in a soybean farm field approximately 3.5 km southwest of Gibson property (2008 and 2009).

Summary: From 1986 to 2010, nesting activity occurred on Duke Energy property every year with the exception of 1988. The significant nesting area for this tern colony is now on the CRWA, where intensive efforts are made to attract and manage nesting interior least terns. However, nesting still continues to occur on Duke property, primarily on the splitter dike and the East Ash Pond.

3.0 Description of Nesting Areas and Management Challenges

3.1 Cooling Pond/Splitter Dike: Gibson cooling pond is a three thousand (3,000) acre, nearly round, perched industrial surface impoundment used for cooling purposes. The average depth is approximately four (4) meters. The primary water source for the pond is the Wabash River. Large pumps are used to pump water from the Wabash River into the pond. There is no surface water discharge from the pond. Because the pond is used for cooling purposes, the temperature is elevated from that of ambient conditions most of the time. This temperature increase is dependent primarily on generating load, ambient air temperatures and humidity. Because of this elevated temperature, Gibson cooling pond rarely freezes during the winter. A 3.4 km long splitter dike nearly bisects the lake. This splitter dike separates the station's warm water discharge, located on the west side of the splitter dike, from the intake, located on the east side of the splitter dike (Figure 3). This splitter dike is approximately five (5) meters wide and the nesting substrate on top of the dike is finely crushed limestone on a hard surface. The side slope of the splitter dike is covered with rip-rap to prevent erosion. The splitter dike is elevated enough that flooding does not occur.

Management challenges on the lake splitter dike are minor. No significant operational conflicts are presented by nesting terns on the splitter dike.

3.2 Ash Ponds: Ash ponds are used to dispose of coal combustion waste or coal ash. The ash consists of a heavier, coarser bottom ash and lighter, finer fly ash. Ash is transported and deposited into these onsite ash ponds by mixing the ash with water and forming a slurry. This ash slurry is pumped or sluiced to these ash ponds and the water is decanted off and diverted back to the cooling pond. During the process of the ash deposit, islands, bars and extensive ash flats are formed. In active areas where the ash is being deposited, it continually changes as it moves to seek an even elevation. The color of the ash ponds vary as well, ranging from near black bottom ash areas to a creamy tan to gray color in areas with higher concentrations of fly ash. Active areas of ash ponds are completely void of vegetation, but once these ash ponds or a portion of an ash pond becomes inactive, sparse vegetation starts growing on these inactive areas. Giant reed grass (phragmitities) is the dominant vegetation. Once vegetation is established, the least terns cease using these areas for nesting. There does not appear to be a clear preference by the terns in terms of ash substrates or locations on the ash pond.

At one time, there were three (3) ash pond complexes on Duke Energy property (Figure 3). The former South ash pond was located immediately southwest of the generating station and coal storage area between the cooling lake and the Wabash River. This ash pond was approximately one hundred eighty (180) acres in size. This ash pond has been completely filled, covered with soil and seeded to grass cover. It no longer provides any suitable nesting habitat for least terns. Tern nesting occurred on this ash pond from 1993 through 1995 and again in 1997.

The North ash pond is located immediately northeast of the generating station and electrical substation. This ash pond is approximately one hundred sixty (160) acres in size. This ash pond is currently being used as a temporary ash storage area where ash is sluiced from the station. The ash is then dredged from this pond via a hydraulic dredge and transferred to the East ash pond complex. Terns nested at the North ash pond in 2004.

The East ash pond complex is located approximately 2.5 km east of the generating station and immediately east of the entrance road. This ash pond is approximately three hundred fifty (350) acres in size and was constructed in 1993. The East Ash Pond consists of three (3) phases (Phase I, II and III) and the clear pond. Phase I was constructed and filled first, followed by Phases II and III. Least terns have nested on the various phases of this ash pond complex from 1995 through 2010, with the exception of 2004, 2005 and 2007.

All ash nesting areas are prone to flooding from heavy rain events or to being buried by shifting ash slurry loads. Also, Duke Energy attempts to manage all ash ponds under water to prevent exposed ash from creating dusting episodes during hot, windy weather conditions. Starting in 2002, Duke Energy made considerable efforts to manage ash under water by installing an additional well and moving the ash discharge lines more often. Obviously, when ash is managed under water, no nesting habitat is

provided to least terns. As a result, in 2002, only 9 nests were established on ash pond areas and no nesting occurred in 2005 and 2007.

In 2008, Duke Energy made a decision to convert fly ash handling and disposal at Gibson Station to a "dry handling" process. This process will eventually eliminate the need for most of the ash ponds at Gibson Station. The scheduled completion date for the dry fly ash conversion is December 2013. Once the dry handling system is in place, the majority of the ash from the station will be handled dry and disposed of in the existing permitted coal combustion waste landfills located on the station property. As part of this conversion to dry fly ash handling, the East ash pond complex is undergoing a formal closure process. This closure plan was initiated in 2008 with formal approval from the Indiana Department of Environmental Management granted in March 2009. Currently, an effort is underway to bring to full capacity Phase III of the East ash pond complex (Figure 3). As a result of this effort, an extensive area of exposed ash was created as the filling of this pond was accelerated. A dust suppressant was applied to the exposed ash to mitigate episodic dust events. Further closure construction activities were started in early 2009 and continue today, such as the installation of a geo grid over the top of the ash and dry ash being hauled in from the North ash pond. Ash pond closure activity at the East ash pond complex is scheduled to be completed by 2020.

In summary, ash ponds provide ephemeral nesting habitat for terns that are no longer suitable when vegetation colonizes the sites or when the ash ponds reach their

capacity and are closed. Terns nesting on active ash ponds can create some significant operational challenges to Duke Energy in that it restricts Duke's ash management options during the nesting season. In addition, terns establishing nests on exposed ash potentially creates regulatory challenges if dusting episodes occur on exposed ash areas.

Duke Energy experienced a significant management challenge in 2009 associated with the closure of these ash ponds. Least terns quickly colonized the Phase III portion of the East ash pond complex even after significant efforts were made to deter terns from nesting in this active construction area. Though no known incidental take of tern nests, eggs or chicks occurred, a significant level of monitoring was required to ensure least terns did not colonize areas directly impacted by the closure process. Fortunately, there was much less colonization of the ash ponds in 2010. However, Duke Energy expects similar management challenges for the next few years when least terns colonize and nest on these ash ponds during active closure activity. Until these ash ponds are completely closed, covered with soil, and vegetation is established making them unsuitable for tern nesting, management challenges will be significant.

3.3 Coal Combustion Waste Landfills: Two (2) landfills are located on Gibson property. The existing east landfill at Gibson Station is approximately one hundred forty three (143) acres in size and is located east of Gibson Station (Figure 2). The South Landfill, which is approximately four hundred thirty (430) acres in size, is located

west-southwest of the cooling pond (Figure 2). These landfills are used to dispose of coal combustion waste, primarily waste materials resulting from Gibson Station's five scrubbers. Materials disposed of in these landfills include: fixated scrubber sludge (FSS), which is produced from the Gibson Station Units 4 and 5 scrubbers; gypsum, which is produced from the Gibson Station Units 1, 2 and 3 scrubbers; and coal ash. All of these materials are hauled to the landfill with large dump trucks and deposited on the landfill as a conditioned (damp) material to minimize dusting. It is placed in lifts and spread evenly with bulldozers. The scrubber waste then solidifies into a hard, concrete type substance after about two weeks. In 2003, least terns were discovered nesting on a portion of the east landfill. This landfill nesting presented significant operational challenges to Duke Energy in that this portion of the landfill (approximately a 20 acre area) had to be temporarily closed and avoided.

In 2003, all nests (a total of 20 nests) on this landfill failed due to flooding and washing out of the nests. For the most part, terns placed nests in small depressions on the impervious landfill surface. Rain events caused the eggs to float and wash away, resulting in complete nest failure. Therefore, as a result of the complete failure of nests due to flooding and the significant operational challenges of least terns nesting on the landfill, efforts are made to discourage nesting on the landfill areas. So far, 2003 is the only year that least terns were confirmed nesting on Duke Energy landfills.

3.4 Other Areas on Duke Energy Property: Other areas have been used sporadically by least terns for nesting. For example, in 2006, late season nest attempts (estimated 6

nest attempts) were made on a construction site (the site of the former South ash pond). This area was the filled South ash pond that was in the process of being covered by scrubber waste material and soil. Terns colonized the portion of the construction site covered with scrubber waste. Once these nests were discovered, the entire construction project was suspended to avoid disturbing and destroying the tern nests. Also, the nests were located adjacent to an active haul road. Approximately two thousand (2,000) linear feet of silt fence was installed to prevent any newly hatched chicks from entering the roadway. Shortly after discovery of the tern nests, a significant rain event occurred destroying all nests in this area.

In the mid 1990s, nesting attempts were made on access interior roads within the East ash pond complex. These nests presented significant operational challenges in that these roads had to be barricaded off to prevent vehicular access. As such, large portions of the active ash ponds became inaccessible. Since this occurred, Duke Energy has allowed these interior access roads to grow vegetation to make them less suitable as least tern nesting areas.

3.5 Cane Ridge Wildlife Area and Least Tern Nesting Unit: In 1997, four hundred sixty three (463) acres of property adjacent to Gibson cooling pond was offered for sale by Old Ben Coal Company. The site (Figure 4) is located immediately southwest of Duke Energy property. The acquisition of the Cane Ridge site involved funding from the USDA Wetland Reserve Program, North American Waterfowl Management Plan, Duke Energy and other project partner contributions. Duke Energy's involvement with the acquisition phase of this project included:

- entering into an interim purchase agreement with the selling landowner, including providing $8,500 for earnest money which was applied to the overall purchase price;
- coordinating and funding an appraisal required for the acquisition of the site ($6,000);
- coordinating and assisting in the release of surface access rights for minerals on the site;
- coordinating and assisting in the removal and release of oil well operations on the site;
- coordinating the assignment of the purchase agreement from Duke Energy to USFWS;
- coordinating and assisting in numerous other property acquisition related issues.

Acquisition of the CRWA site by USFWS was completed on January 27, 1999. Construction of the least tern nesting unit of CRWA was initiated in the summer of 2004 and was complete in 2005. Duke Energy has provided over $275,000 for the construction of the least tern nesting unit of CRWA.

The sixty (60) acre least tern nesting unit (Figure 5) consists of a perimeter dike approximately six (6) feet high around the unit. There are two nesting islands within the least tern unit. These two 3-acre nesting islands are maintained as the primary least tern nesting area for the Gibson least tern colony (Figure 5). These three-acre islands are irregular in shape to provide more habitat for forage fish and to provide more cover for tern chicks. The top, flat surface of the nesting islands are covered

with pit run sand and gravel, thereby providing optimal nesting substrate for least terns.

From 2005 (the first year of operation for CRWA) to 2007, water was supplied to CRWA from Gibson cooling pond via a siphon system. In early 2008, as a result of some concern by USFWS about the quality of the water, specifically trace levels of selenium from Gibson cooling pond, no water was supplied to CRWA by the cooling pond siphon system. Further efforts were made by USFWS to discourage least tern nesting on the nesting islands so that remediation measures could be taken at the site. As a result, tern nesting did not occur at CRWA in 2008. Beginning in the spring of 2009, water for CRWA tern unit was supplied from the Wabash River via a fourteen (14) inch HDPE pipeline approximately 2.5 miles long (Figure 7). Water is pumped from the Duke Energy cooling pond sump station. The pump, pipeline, valves and other related infrastructure for the CRWA water delivery system were constructed and paid for by Duke Energy (approximately $525,000). Duke Energy owns, operates and maintains this pump/pipe system.

Cover providing protection to chicks from sun and predators is provided by "chick shelters," which are semi-circular clay tile placed in a random manner throughout the tern nesting area. Some small isolated areas of sparse vegetation are allowed to grow to provide additional cover for chicks. There is a submerged access road to each of the tern nesting islands that can be used for maintaining the islands when the water is drawn down in the fall and winter. These submerged access roads can also be used to

access the islands (wading) to monitor tern nesting. Each island is surrounded by a predator fence. This fence consists of three strands of electric fence powered by a solar power charger. This fence has been effective at keeping out mammalian predators.

Water levels within the least tern unit are maintained at a minimum depth of four (4) feet during the nesting season (May through September). This is to provide enough water to support a viable fish community and to discourage the establishment of heavy stands of emergent wetland vegetation, such as cattails, within the least tern unit. Once the tern nesting season is complete and water is needed for the moist soil management units, the water within the least tern unit is released to these units.

Another management issue Duke Energy and USFWS are addressing is the quality and quantity of forage base. Concerns over levels of selenium in forage fish from Gibson cooling pond have been raised by USFWS.

Management challenges at CRWA also include managing or controlling avian predators. Episodic predator events from suspected avian predators cause significant disruption to the tern colony which, in turn, causes nesting terns to abandon this nesting area and attempt to re-nest in other areas. Typically, these re-nesting efforts are on Duke Energy property in areas that present operational challenges. Suspected avian predators include: Great horned owls, American kestrels, Great blue herons, and Ring-billed and Herring gulls.

Another management challenge is management and control of vegetation on the nesting islands. Since 2005, when the nesting islands became available for tern nesting, controlling water hemp pigweed was problematic. In 2009, a new herbicide mixture was used that seemed to be very effective at controlling this weed species. Duke Energy facilitated a meeting with herbicide experts to address this vegetation control issue. If these nesting islands become unacceptable nesting habitat due to vegetation establishment, the alternative may be sites on Duke Energy property that present operational challenges.

3.6 Tern Bar Slough Wildlife Diversity Conservation Area: The TBS is an eight hundred forty (840) acre area owned and managed by IDNR. Within TBS, there is a tern nesting unit consisting of two (2) islands approximately three (3) acres in size surrounded by a small water body or "moat" (Figure 6). In late 2008, an eight (8) inch HDPE pipe was run off of the line for CRWA to supply water to TBS when the CRWA tern pool is full (Figure 7). These nesting islands are covered with pit-run gravel to simulate natural river gravel bars. In similar fashion as the tern unit at CRWA, the islands are surrounded by an electrified predator fence powered by a solar charger. Each year these nesting islands are disked, graded and treated with herbicide to keep them free of vegetation. Chick shelters are provided to give least tern chicks shelter from the sun and predators. In 2008, the nesting islands at TBS were complete and ready for nesting least terns. Twelve nest attempts by least terns were made on TBS in 2008. No nesting attempts were made in at TBS in 2009 or 2010.

Similar management challenges are presented at TBS as with CRWA. These include predator management and vegetation management. In addition, there seems to be some difficulty holding water in the "moat" surrounding the TBS least tern nesting islands. The drying up of this water during the nesting season may make the islands less attractive to nesting least terns and may lead to greater predator pressure (mammalian predators) as the islands become more accessible.

4.0 Management Activities of Least Tern Colony at Gibson Station

4.1 Monitoring/Maintenance Activities: Some level of management and monitoring of the least tern colony at Gibson Station has been carried out by IDNR Division of Fish & Wildlife and Duke Energy since the initial discovery of tern nesting at Gibson Station in 1986. In 1990, the Division of Fish & Wildlife entered into a Cooperative Agreement with Public Service Company of Indiana (now part of Duke Energy) to manage the splitter dike for the benefit of nesting terns. This Agreement was subsequently renewed as a Memorandum of Understanding in 1997 (Appendix A). Both IDNR and Duke Energy have contributed to the cost of management and monitoring activities. Since 1986, Duke Energy has worked closely and cooperatively with IDNR, USFWS and others to maximize tern productivity at this site.

Management activities of the splitter dike have included:

- placing tern decoys in suitable nesting areas;

- broadcasting tern vocalizations;
- rat poisoning program and fencing (both electric and various barrier fencing), trapping for mink, and strobe lights;
- annual herbicide treatment of tern nesting areas;
- measures to control human disturbance to tern nesting areas, including:
    - installation of signs signifying tern nesting areas;
    - locking gates and restricting vehicular and pedestrian access of employees and public;
    - installation of buoys around perimeter of splitter dike to reduce boat disturbance;
    - employee education program (e-mails and training);
    - substrate maintenance of gravel to maintain suitability of the dike for tern nesting;
    - chick and adult banding;
    - assistance to monitoring program by providing access and assistance to IDNR, its contractors or agents to the splitter dike.

For station ash ponds, management activities have included actions to deter terns from colonizing these areas and, if terns do colonize, then actions to prevent disturbance to nests. Nothing is done to attract least terns to ash ponds. Management activities prior to tern activity have included:

- application of dust suppressant prior to tern nesting season;

- installation of scare devices, such as propane cannons, scare away dolls and streamers to attempt to deter nesting;
- managing water levels in ash ponds to eliminate ash islands that could be used for nesting.

Once terns have been found colonizing ash ponds, management activities have included:

- restricting human and vehicular access to tern nesting areas;
- placing signs signifying nesting areas;
- educating employees and contractors working in these areas;
- managing water levels to minimize the risk of flooding nests;
- increased monitoring when terns colonize very active construction areas.

Other management activities on Duke Energy property included:

- sampling and assessing the fish community in Gibson cooling pond and other water bodies as it relates to potential forage base for least terns;
- closure of the Gibson cooling pond to the public for recreation, including fishing and bird watching (bird watching can be done only by being escorted and under close supervision by IDNR);
- identifying and monitoring other likely nesting areas on station property such as barren construction sites, remote areas and other areas that could provide suitable nesting habitat;

- ceasing construction activity when terns are found nesting on or near a construction area;
- development of strategies to manage tern nesting colonies that develop near construction sites, including:
    - frequent briefings on specific tern nesting locations with site supervisors;
    - training to employees to identify nests, eggs and chicks and to recognize signs of possible nesting, such as mobbing behavior of adult terns;
    - installation of barriers (silt fence or pipe) between tern nesting areas and roads/active construction areas;
    - installation of scare devices (i.e. propane cannons, scare away dolls, effigies, etc.) to prevent terns from nesting in, or chicks from wandering into, active construction sites;
    - assistance in the coordination of media events related to tern nesting at Gibson Station;
    - development of an employee education program to educate Gibson employees of the importance of the tern colony and information on tern nesting areas;
    - contracting with Purdue University to perform a two year predator identification and assessment of various controls, including assistance and coordination of gull shooting;
    - hosting, at a minimum, an annual coordination meeting with Duke Energy, IDNR, and USFWS to discuss tern management.

Other general management activities have included:

- providing assistance to IDNR in monitoring tern nesting activity on the Wabash and White Rivers by providing an airboat and operator;
- participation (both funding and workforce contributions) in partnership to acquire, design, construct, operate, and monitor the CRWA, including the CRWA Tern Nesting Unit;
- participation in partnership to acquire design, construct, operate, and monitor TBS;
- installation, maintenance, and operation of a pump and pipe system to provide water to CRWA Tern Nesting Unit and also to the TBS Tern Nesting Habitat;
- purchase of sixty thousand (60,000) fathead minnows for stocking as a forage base for least terns into CRWA.

5.0 Identifying Impacts

5.1 Delineation of HCP Boundaries: The HCP Boundaries shall include the approximately seven thousand five hundred fifty seven (7,557) acres owned by Duke Energy associated with Gibson Station (Figure 2).

5.2 Biological Data for Interior Least Tern:

5.2.1 Current Population and Distribution: The interior population of the least tern was listed as endangered on June 27, 1985 (50 Federal Register 21,784-21,792). Census data from the 1990 U.S. Fish & Wildlife Service Recovery

Plan for the Interior Population of Least Terns indicate approximately 5,000 interior least terns (Sidle, 1990). Other data indicate a population of 6,800 interior least terns in the time frame of 1986 to 1991 (Thompson et al.,1997). A very comprehensive survey of interior least tern population and nesting was done in 2005, which indicated that 17,591 adults were found using 489 colonies (Lott, C.A. 2006).

Interior least terns breed along major river systems, including the Mississippi and Rio Grande drainage from Montana to Texas and from eastern New Mexico and Colorado to Indiana to Louisiana. From mid April through early September they nest on barren, scoured, sparsely vegetated river sand bars and islands, sand and gravel pits, salt flats, dredge spoil piles, lake and reservoir shorelines. Rivers that currently support interior least tern nesting include: Yellowstone; Missouri; Cheyenne; Loup; Elkhorn; Niobrara; Platte; So. Platte; Mississippi; Ohio; Wabash; Arkansas; Cimarron; Canadian; and Prairie Dog Town Fork. The Recovery Plan (USFWS, 1990) sets recovery goals for interior least tern populations along major river systems that support “essential habitat” for the species, including: Missouri River System; Mississippi and Ohio River Systems; Arkansas River System; Red River System; and Rio Grande River System. Reservoirs, lakes or national wildlife refuges which are known to provide breeding habitat for interior least terns include: Fort Peck Reservoir; Lake Oahe; Gibson cooling pond; Salt Plains NWR; Sequoyah NWR; Quivira

NWR; Adobe Creek Reservoir; Nee Noshe Reservoir; Falcon Reservoir; Lake Casa Blanca; and Amistad Reservoir.

Current distributions of least tern breeding areas are found in most of the aforementioned river systems, although its distribution is generally restricted to less altered river segments. Incidental reports of least terns have occurred in Michigan, Minnesota, Wisconsin, Ohio and Arizona.

In 2003, least terns were found nesting at another electric generating station in Indiana (Mills, 2003). Nesting occurred at the AEP Rockport Generation Station. Nesting has occurred at this site nearly every year since 2003.

Recent surveys by the Indiana and Illinois DNRs have also revealed some nesting along the lower Wabash River from the confluence of the Wabash and Ohio rivers up to above the confluence of the Wabash and White rivers (Mills, 2009).

The wintering area for interior least terns is unknown. Some least terns have been found during the winter season along the Central American coast and the northern coast of South America from Venezuela to northeastern Brazil.

5.2.2 Life History and Ecology: Least terns are the smallest members of the subfamily Sterninae and family Laridae of the order Charadriiformes,

measuring about 21-24 cm long with a wingspan of approximately 51 cm. Sexes are similar. Least terns are identified by a black-capped crown, white forehead, grayish back and dorsal wing surfaces, white undersurfaces, legs of various orange and yellow colors depending on the sex, and a black-tipped bill whose color also varies depending on sex (Sidle, 1990).

Least terns almost exclusively feed on small fish that swim near the surface (Carreker, 1985). The method of fishing involves hovering over the water and diving from a height of up to 10 m. Least terns are opportunistic feeders and will exploit any fish species within a certain size range (2.5 to 8 cm long) (Carreker, 1985).

Interior least terns arrive at breeding areas from late April through early June. They begin breeding activity by conducting courtship behavior. These courtship behaviors include aerial displays during fishing, which culminates into fish "offering" on the ground. Nest scraping is also part of the courtship behavior.

Least tern nests are shallow, inconspicuous depressions in open, sandy or gravel-type substrates, usually on flat or nearly flat surfaces. Least terns nest in colonies, and nests can be as close to just a few meters apart or widely scattered, up to hundreds of meters apart (Sidle, 1990).

Two or three eggs, which can be pale to olive buff, are laid in the scraped, shallow nest and incubated for approximately 20 to 25 days until hatching. Once the chicks hatch they are brooded for about one week and remain close to the nest territory. As the tern chicks mature they may venture farther from the nesting area. The tern chicks are a very cryptic, mottled tan color, enabling them to blend in well with the nest substrate and natural conditions of the nest area. Fledging occurs after three weeks and departure from the colony area is usually complete by early September.

Fledging success (a key parameter to population recovery) can vary greatly among colonies and among years (Thompson et al., 1997). Studies of interior least tern colonies on the lower Platte River and elsewhere in the interior region indicate fledging success to be about 0.47 young fledged per pair per year, and 0.51 fledglings/pair was estimated to be necessary for population maintenance (Kirsch, 1996; Thompson et al., 1997). Predation (especially of chicks), flooding, and disturbance are common causes of loss of eggs and chicks.

At and near Gibson Station, the number of adult least terns has varied from two in 1986 and 1987 to about 220 in 2009 (Figure 8); nest numbers have ranged from one in 1986 and 1987 to 170 in 2009 (Figure 9). Those nests produced from 1 to about 165 fledged young per year (Figure 10), which equals productivity of >0.5 fledged young per adult pair in 19 of the 24

years when least terns nested at the site (Figure 11). The overall average productivity has been 1.16 fledged young per pair of adult birds per year. As noted in Figure 11, reproductive success of the terns has fluctuated greatly from year to year. Sporadic low productivity has been the result of natural causes (e.g., predation of nests or chicks, significant rain events that wash out nests), which is similar to other sites. Overall, productivity of the tern population in and near Gibson Station has been much greater than typical of other locations and more than twice that estimated to be required for population maintenance (as discussed above), which probably is contributing to the expanding population at the site.

5.3 Determination of Proposed Activities:

5.3.1 Actions that are likely to result in an incidental take: Actions by Duke Energy that may result in an incidental take of an interior least tern(s) include any otherwise lawful activity by any Duke Energy employee, contractor or agent required to safely and effectively operate and maintain the Gibson Station. To Duke Energy's knowledge, no incidental take has occurred at Gibson Station under the Habitat Conservation Plan and associated Incidental Take Permit first issued in December 1999. However, as the population expands both spatially and numerically, the potential for an incidental take increases.

Specifically, actions that could result in incidental take include:

1. Take of nests, eggs, or chicks associated with plant operations and maintenance:
    a. Damage or destruction to nest(s), egg(s) or chick(s) resulting from, or related to, stepping on nest(s), egg(s) or chick(s) during the operation, maintenance or construction of Gibson Station and its associated facilities. Example: During the tern nesting season, an employee is walking on the ash pond construction area, but inadvertently steps on an undiscovered tern nest containing eggs.
    b. Damage or destruction to nest(s), egg(s) or chick(s) resulting from, or related to, driving a vehicle or construction equipment over nest(s), egg(s) or chick(s) during the operation, maintenance or construction of Gibson Station and its associated facilities. Example: During the tern nesting season, contractors are on site mowing the lake and ash pond levees. During this mowing activity, a tern nest might be run over by the mowing contractor.
    c. Damage, destruction or failed hatching of nest(s), egg(s) or chick(s) resulting from, or related to, the flow, storage, dredging, deposition or placement of ash and/or water in, into, or out of station ash ponds and the cooling pond pursuant to the operation of Gibson Station.
    d. Damage, destruction or failed hatching of nest(s), egg(s) or chick(s) resulting from, or related to, the depositing, spreading, storage, installation or grading of coal combustion waste, soil, fabric, dust suppressant, landfill liner, or other similar material associated with the

constructing, operating, maintaining, or closing of Gibson Station's ash ponds or coal combustion waste landfills.

2. Harassment of adult terns to discourage nesting:

   a. Tern nesting is discouraged on portions of Gibson Station property that are known to be non-productive or dangerous for the terns (e.g., landfills for coal combustion materials where nests are subjected to flooding) or where nests are likely to conflict with operation and maintenance and potentially be subjected to lethal take (ash pond, construction sites, landfills). Activities to discourage nesting, such as the use of propane cannons and visual scare deterrents, constitute harassment. "Harassment" is defined by regulation as "an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering." As with "harm," any action qualifying as harassment under this definition must be described in the HCP and authorized by the permit. Activities to discourage nesting are a take (as defined in the ESA) and must be permitted under this HCP. However, these activities are also measures that are specifically intended to minimize more serious forms of take (e.g., injury or mortalities). The intent of the harassment is that terns will be discouraged from nesting in high risk areas and will relocate to more productive nesting locations.

3. Take associated with monitoring the least tern colony: Monitoring of the least tern colony on Gibson Station property is conducted under contract to IDNR, and is covered through their authorities under Section 6 of the Endangered Species Act; therefore, take associated with monitoring is not covered under this HCP.

5.3.2 Actions that will not result in an incidental take: It is recognized that each year a percentage of the least tern eggs laid on and near Gibson Station property do not hatch and that predation of eggs and chicks may be severe. The reasons for this likely include the normal, expected egg failures found in nature and episodic losses of eggs and chicks to predators, the weather and flooding. Egg failures and chick mortality due to those natural causes will not be considered takes.

5.3.3 Actions to occur over the life of HCP: The anticipated life of this HCP renewal will be for five (5) years from the effective date of the renewed permit. Actions to occur over the life of the HCP include actions and activities required for the operation and maintenance of Gibson Station (e.g., use and maintenance of access roads, ash ponds, cooling pond, coal combustion waste landfills and other associated facilities).

5.3.4 Actions under the control of Duke Energy: All actions taken to operate and maintain Gibson Station and its associated facilities are under the control of Duke Energy. Actions not under the control of Duke Energy which may result in an incidental take of least terns may include disturbance or destruction of adults, nests, chicks or eggs by the general public. Although

public access is restricted within the operational areas of Gibson Station, including the ash pond areas, trespassing may, and sometimes does, occur.

5.4 Quantifying Anticipated Take Levels: To Duke Energy's knowledge, no incidental take of least terns has occurred at Gibson Station since the completion of the original HCP in 1999. As detailed in this HCP, efforts to continue to avoid take will be implemented at Gibson Station. However, Duke Energy, in coordination with USFWS, recognizes the potential for take exists, as described below.

5.4.1 Take of nests, eggs, or chicks associated with plant operation and maintenance: Based on past experience of least tern nesting, and on management needs on the Duke Energy property, it is anticipated that the take of least tern nests, eggs, or chicks associated with and/or the result of plant operation and maintenance (i.e., stepping on, driving over, or loss resulting from, or related to, the flow, storage, dredging, deposition, or placement of ash and/or water in, into, or out of station ash ponds and the cooling pond pursuant to the operation of Gibson Station) shall not exceed five percent (5%) of the estimated maximum adult tern population associated with the Gibson Station in a given year (e.g., in 2010, 5% of maximum adult population of 150 birds was 7). Take is expressed as a function of population size because the more birds that are present, the greater the potential for take. For example, more birds generally nest on access roads and ash ponds in years when population levels are relatively high. The number of terns occupying the site annually is highly variable, and is beyond the control of Duke Energy. Egg, chick, or nest failures

resulting from natural occurrences (e.g., predator events or nest wash outs, as described below) will not be considered to be takes.

5.4.2 Harassment of adult terns to discourage nesting: Tern nesting is discouraged on portions of Gibson Station property that are known to be non-productive or dangerous to the terns (e.g., landfills for coal combustion materials where nests are subjected to flooding) or where nests are likely to conflict with operation and maintenance and potentially be subjected to lethal take (e.g., ash ponds, landfills, and construction sites.) Activities to discourage nesting (propane cannons, streamers, other visual scare devices) will be used. These activities, which will be conducted in coordination with the USFWS Bloomington, Indiana Field Office (BFO), will be applied only when it is deemed it will provide a net benefit to the terns. Consequently, these activities will not be applied to the take limits in Section 5.4.1. Least terns will be discouraged from nesting in high risk areas with the intent that they will relocate to more productive nesting areas.

5.5 Indirect Project Effects: This HCP/Incidental take permit is not expected to result in any indirect effect on least terns. No effects on other endangered plants or animals are anticipated.

5.6 Unforeseen Circumstances: For purposes of this HCP, the term “Unforeseen Circumstances” shall mean: a) any significant, unanticipated adverse change in the biological status of the least tern or its habitat; b) any significant, unanticipated adverse change in the impacts of the operation of Gibson Station on the least tern or in other factors upon which this HCP is based; and c) any new and substantial

scientific information relevant to the HCP that was not anticipated by the Service or the permittee at the time of permit issuance and that would be likely to result in significant adverse change in a) or b) above.

The potential for Unforeseen Circumstances associated with this HCP at Gibson Station is minimal: 1) the Gibson cooling pond tern colony represents a small proportion (approximately 1.25%) of the total known population of the interior least tern; 2) the area covered in the HCP is small; and 3) the term of the HCP is only five (5) years. Nonetheless, Duke Energy commits to promptly respond to any unforeseen circumstances, and will coordinate with USFWS and IDNR to deal with any such circumstances that arise. Duke Energy understands that the "No Surprises" policy (of the U.S. Departments of Interior and Commerce) provides that in negotiating "unforeseen circumstances" provisions for HCPs, USFWS shall not require the commitment of additional land or financial compensation beyond the level of mitigation which was otherwise adequately provided for a species under the terms of a properly functioning HCP (unless Duke Energy consents to such additional measures).

6.0 Measures to Monitor, Minimize and Mitigate Such Impacts:

6.1 Monitoring commitments: Duke Energy commits to continue to allow and assist IDNR, its contractors or agents to monitor least tern nesting activity on Duke Energy property. See Appendix C for guidelines to monitor least terns on Duke Energy

property. If funding from current funding sources for monitoring the tern colony is significantly reduced or eliminated, Duke Energy will provide appropriate funding to IDNR or another appropriate resource agency to continue monitoring of the tern colony on Duke Energy property sufficient to evaluate take, as detailed in Section 5.4. Monitoring least tern activity at the CRWA and TBS will be coordinated by the USFWS Patoka Refuge Office and/or IDNR Division of Fish and Wildlife and will not be the responsibility of Duke Energy. In addition, Duke Energy commits to continue the management and monitoring activities listed below:

a. Conduct annual herbicide treatments on the tern nesting areas on the splitter dike.
b. Maintain suitable gravel substrate on the splitter dike for tern nesting.
c. Restrict pedestrian and vehicular access to tern nesting areas by employees and public during tern nesting season.
d. Erection of signs once terns are nesting that signify these areas.
e. Conduct visits with employees and contractors working near areas of tern activity to educate them of the importance of the tern colony and to provide information on nesting areas.
f. Provide assistance to IDNR in monitoring tern activity on the Wabash River by providing an airboat and operator.
g. Host, at a minimum, an annual coordination meeting with the IDNR and USFWS to discuss tern management.
h. If taking of eggs is unavoidable, BFO will be contacted before taking to determine if an alternative to destruction of eggs, such as relocation, exists.

Care will be taken in the handling of any retrievable least tern specimens (eggs, chicks, adults) to preserve biological material in the best possible state. Eggs will be refrigerated (not frozen) as soon as possible, and dead chicks or adult birds will be refrigerated or frozen. BFO will be contacted regarding the disposition of specimens and plans for transporting the specimens to BFO will be made.

i. Duke Energy will monitor and report any incidental take to the Bloomington Field Office of USFWS within forty eight (48) hours of discovery.

j. Duke Energy will pay for least tern egg analysis for mercury and selenium from non-hatched eggs identified in Sections 5.3.1 and 5.3.2 through coordination with the USFWS BFO. Un-hatched eggs will also be collected and analyzed for mercury and selenium from CRWA and TBS. If there are large numbers of un-hatched eggs collected (for example, due to a large rain/nest wash out event), Duke Energy and the BFO will cooperatively agree upon an appropriate number of un-hatched eggs to analyze. Data collected through these analyses will be used, in part, to study potential selenium impacts on any egg hatching failures at the site. The BFO will coordinate the analysis with the results also provided to Duke Energy.

k. Duke Energy will conduct fish tissue analysis (whole body) from gizzard and threadfin shad (or other small forage fish) to monitor for selenium levels. Three composite samples per year will be collected from the cooling pond between May and June of each year during the term of this HCP. Each composite will consist of 6 to 10 individuals. These collections will target

individuals no longer than three inches in length. Individual composites should consist of a single species if at all possible. Results from this analysis will be shared with the USFWS BFO.

l. The USFWS will be provided with a copy of the annual tern monitoring report by January 31 of the following year.

6.2 Minimization of Impacts: Duke Energy will continue to work cooperatively with IDNR to monitor tern nesting activity on Duke Energy Property. Activities or measures that Duke Energy will implement to minimize impacts to the tern colony include:

a. Restrict unnecessary human and vehicle access to known tern nesting areas where terns have established nests during the tern nesting season.

b. Manage the splitter dike nesting area substrate for optimal tern nesting preferences. If, in coordination with the USFWS and the IDNR, it is determined that the splitter dike should no longer be maintained to provide nesting habitat, Duke Energy will develop a plan to make the nesting habitat unfavorable for least terns.

c. Make efforts to discourage tern nesting through manipulation of vegetation and/or nesting substrate, and/or flooding in areas where nesting is likely to result in incidental take; manipulation will take place when tern nests are not present.

d. Make efforts to discourage tern nesting on ash ponds, landfills or other active areas on Duke Energy property through harassment measures prior to tern nest establishment. These measures can include the use of taxidermy or replica

dead effigies of least terns, the use of propane cannons or other noise deterrents, the use of laser lights, metallic streamers, scare man blow up figures, or other similar non-lethal devices. Duke Energy will coordinate with the Service as new strategies are developed and/or new areas are targeted.

e. Continue to make efforts to avoid incidental take if nesting does occur on ash disposal ponds, access roads, or landfills (even though incidental take in these areas will be allowed if unavoidable).

f. Develop and implement employee education efforts with regards to tern nesting areas.

g. Maintain signs, fences, gates, etc. to limit disturbance to tern nesting areas.

h. Allow access to tern nesting areas by IDNR or USFWS biologists (or contractors for those agencies) to monitor nesting activity on Duke Energy property.

i. Coordinate and assist IDNR or its contractors or agents in the control of predators at tern nesting areas and with the reasonable management of fishery resources.

j. Gibson Station is in the process of converting its fly ash handling systems from wet to dry. This conversion is scheduled to be completed for all units by 2013. This will eliminate most of the ash ponds at Gibson Station, likely reducing operational conflicts with nesting terns, as well as reducing levels of environmental stressors that terns could potentially be exposed to at this site. By converting to dry fly ash handling systems, the need for the East ash pond complex will be eliminated. The East ash pond complex is currently

undergoing a closure process. This closure process will continue through 2020. Once completed, the East ash pond complex will no longer provide favorable nesting habitat to least terns.

6.3 Mitigation of Impacts: Mitigation measures on CRWA and TBS:

In addition to the minimization measures listed above, Duke Energy agrees to continue to work in cooperation with USFWS and other partners in the operation and maintenance of the least tern nesting unit of the CRWA along with assisting IDNR with the management needs of TBS, as described below.

6.3.1 Cane Ridge Wildlife Area: The water for the CRWA least tern nesting units is provided by the Wabash River through a pump and pipe system installed by Duke Energy. Duke Energy will provide the electricity required to operate the pump. Duke Energy is committed to provide, at a minimum, one thousand (1,000) gallons of water per minute through the pipe as measured by a flow meter installed on the pipe leaving the pump house, prior to the tern nesting season so as to raise the water level in the tern units to the proper pool level, through the end of the tern nesting season. As designed, the pump and pipe system is expected to raise the water level of the nesting units to “pool” in four weeks. If there is a pump or other failure of the system during the nesting season, Duke Energy will begin to conduct the repairs immediately. Duke Energy will also conduct any normal maintenance on the system after the tern nesting season. Duke Energy also reserves the right to decrease the flow or completely shut down the system at any time due to water withdrawal restrictions in place from the Wabash

River for Gibson Station. The water withdrawal rate will be progressively reduced for Wabash River flows ranging 2665 cubic feet per second (cfs) to 2455 cfs so as to not reduce the flows of the Wabash River below 2455 cfs as measured at the Mount Carmel, Illinois gaging station (IDNR permit number NR-4). If flows are below 2455 cfs in the Wabash River, all water withdrawals will be suspended until the river levels again rise above 2455 cfs. At the point, makeup water for the cooling pond will take precedent until the levels are raised enough to maintain proper cooling of the generating units, at which time water will then be pumped to CRWA. Changes in stream morphology of the Wabash River can also affect the amount of water flowing into the pump house. If the amount of water flowing into the pump house decreases to the extent that running the supply pump will cause damage to the pump itself, Duke Energy is authorized to shut the pump down until the river level rises and sufficient supply is restored. During the 2010 nesting season, the water supply system experienced several mechanical failures of both the primary supply pump and a back-up unit. Stable water levels in the nesting unit were not being achieved due to the pump failures. In coordination with the USFWS Patoka River National Wildlife Refuge, Duke Energy and the USFWS rented a portable pump to supply water to the nesting units from a nearby county drainage ditch. Due to adequate precipitation providing high flows in the ditch, the water level in the tern unit was raised over the island entrance roads during the critical nest establishment timeframe. As concerns have

been previously raised over adequate water supplies to the CRWA least tern nesting units, Duke Energy investigated if further modifications to the pump and pipe system would be feasible and appropriate. Both physical space constraints and electric supply capacity potentially limit any additional amount of water that can be pumped. After the 2010 tern nesting season, Duke Energy engineers met with pump representatives to review the water supply system. Upon review, a new pump design was created. A larger, more efficient and reliable pump was purchased and installed at the pump house in December 2010/January 2011. The system rebuild will be completed prior to the 2011 least tern nesting season. Modifications to the CRWA water management plans might be required if there are continued concerns about the amount of water supplied by the new pump.

Duke Energy will commit to pay for the stocking of sixty thousand (60,000) fathead minnows into CRWA tern unit to serve as a forage base for least terns during the nesting season for the term of the HCP. The USFWS Patoka Refuge Office will arrange and coordinate the stocking.

6.3.2 Tern Bar Slough: Duke Energy commits to pump excess water not required in the CRWA through the pump and pipe system to TBS free of charge during the term of this HCP.

7.0 Alternative Actions: The alternative action to avoid the risk of impacting least terns, nests, eggs or chicks would involve discontinuing the use of the Gibson Station cooling pond, ash pond facilities and landfills during the tern nesting season. The station cannot be operated

without some risk of incidental take. This alternative is not feasible. In fact, the normal operation of these facilities is essential to the attraction of the tern to these sites, so the discontinued use of these facilities would result in less favorable conditions for least tern nesting. The splitter dike, which provides one of the core nesting areas for this tern colony, would not be maintained and would become unsuitable for tern nesting. Further, there would be no water supply to the CRWA nesting units, which would render that area unsuitable for nesting terns. Therefore, the No Action Alternative would not provide for continued nesting of least terns at either Gibson Station or the adjoining CRWA.

8.0 Migratory Bird Treaty Act – Incidental Take: The incidental take of an Interior Least Tern is prohibited under the Migratory Bird Treaty Act (50 CFR part 13). Pursuant to this regulation, Duke Energy is hereby requesting to have the HCP permit, when issued, also serve as a Special Purpose Permit authorized under 50 CFR 21.27. An Incidental Take Permit application is attached as Appendix B. Information supporting this application is contained in this HCP.

9.0 State of Indiana regulatory compliance: Under Indiana Law (IC 14-22-34-17) and Fish & Wildlife Administrative Rules (312 IAC 9-10-18), Duke Energy will seek a state limited take permit for interior least tern adults, eggs, chicks, and nests. Assuming approval, this state permit will be issued in conjunction with, and shall be consistent with, the federal incidental take permit. This HCP will be submitted to the Indiana Division of Fish and Wildlife accompanied by a letter for application.

10.0 Summary: This HCP has been in effect for ten (10) years. Over the life of this HCP, the Gibson least tern colony has grown from 31 nests in 1999 to an estimated 110 nests in 2010. Through efforts of Duke Energy, USFWS , IDNR and many other project partners, the CRWA and TBS Wildlife Diversity Conservation Area have been developed. The CRWA was the first nesting habitat built exclusively and specifically for least terns. The results of this have been very successful to date and have led to the development of tern nesting units at TBS and The Goose Pond Wetland Restoration Project in Greene County, Indiana.

The net result of activities proposed in this HCP will benefit the interior population of the least tern, and Duke Energy believes it will contribute to the recovery of the species. Duke Energy will continue to maintain and manage the splitter dike, which has provided a core nesting area for least terns at Gibson Station since terns first nested at the facility in 1986. In addition, Duke Energy will continue the cooperation and assistance with the management, as well as provide the water, for the least tern nesting units of CRWA and TBS. These areas are owned and managed by USFWS and IDNR respectively, which should provide assurance of long-term habitat suitability.

11.0 References Cited

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Table 1. General Nesting of Least Terns at Gibson Station 1986 to 2010

Year	Splitter Dike	South Ash Pond	North Ash Pond	East Ash Pond	Landfills	Cane Ridge Wildlife Area	Tern Bar Slough	Other Areas	Total
86	1								1
87	1								1
88									0
89	3								3
90	3								3
91	7								7
92	3								3
93	9	9							18
94	12	4							16
95	6	5		7					18
96	16			18					34
97	33	1		5					39
98	50			13					63
99	17			14					31
00	25			14					39
01	34			23					57
02	49			9					58
03				19	20				39
04	72		12						84
05	5					35			40
06	1			12		26		6*	45
07	32					28			60
08	85			25			7	2**	119
09	60			40		70		3**	173
10	74			9		26			119

Approximate number of nests

*nesting occurred on a construction site on Gibson Station property

**nesting occurred in a farm field approximately 3.5km southwest of Gibson Station property (not on Duke Energy property).

FIGURES 1 - 11

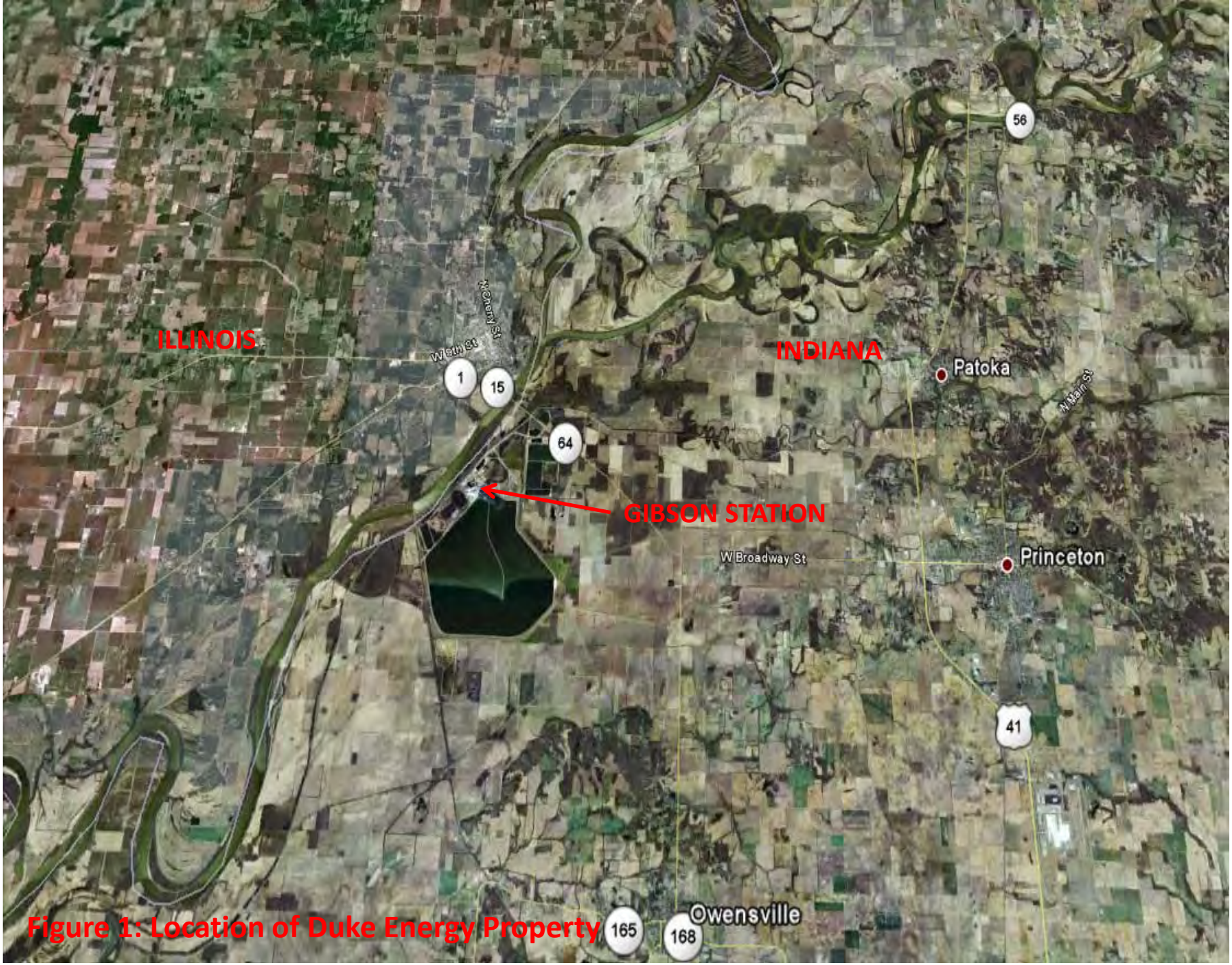


Figure 1: Location of Duke Energy Property

Figure 2: Duke Energy Property

Figure 3: General Nesting Locations (year-number of nests) of Least Terns on Duke Energy Property

Figure 4: Cane Ridge Wildlife Area

Figure 5: Least Tern Nesting Unit of CRWA

Figure 6: Tern Bar Slough Wildlife Diversity Conservation Area

Figure 7: Water Pipeline Location From Cooling Pond Sump to CRWA and Tern Bar Slough Wildlife Diversity Conservation Area

Figure 8

Number of adult least terns at/near Gibson Station

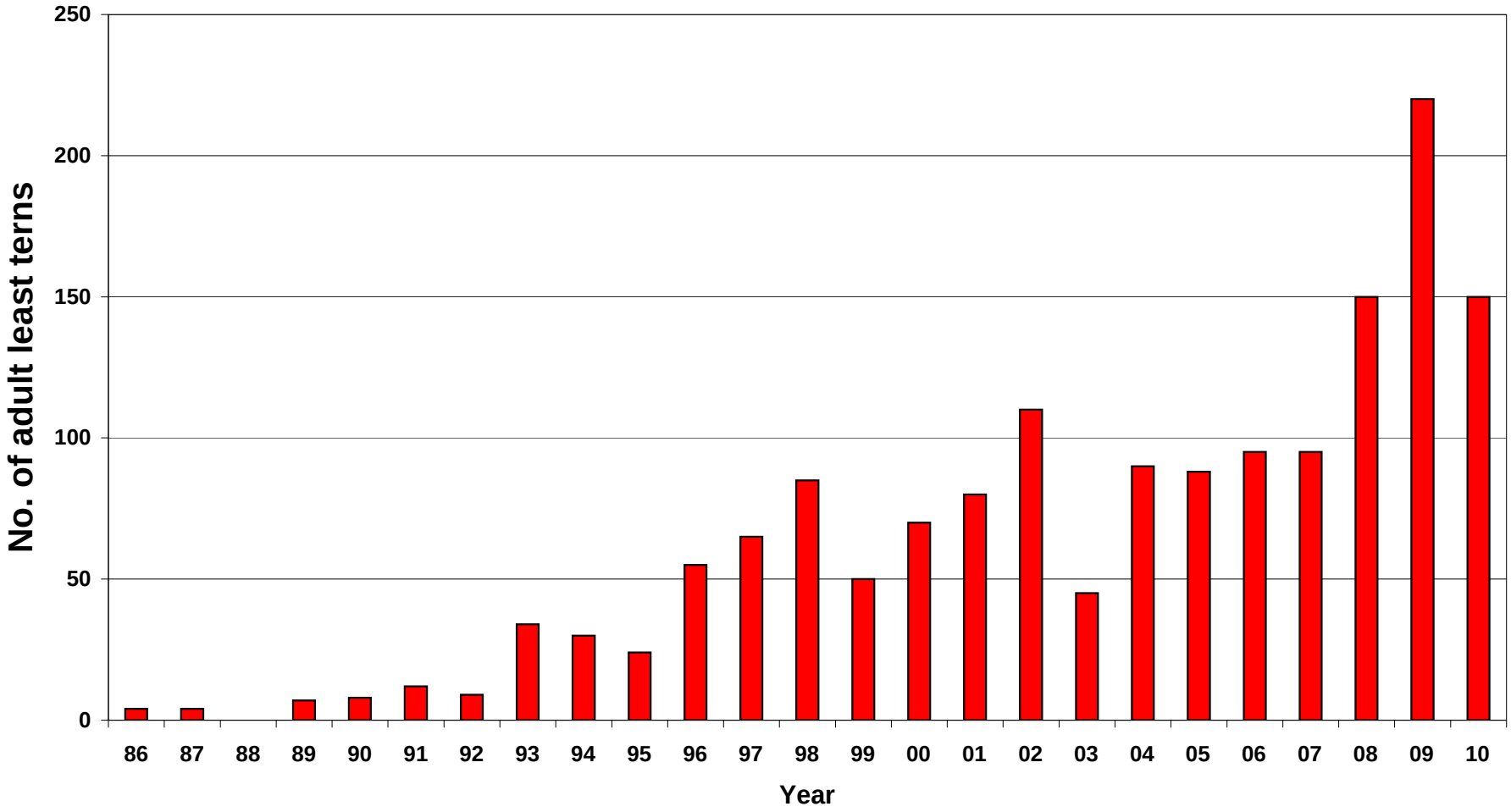


Figure 9

Least tern nests at Gibson Cooling Pond

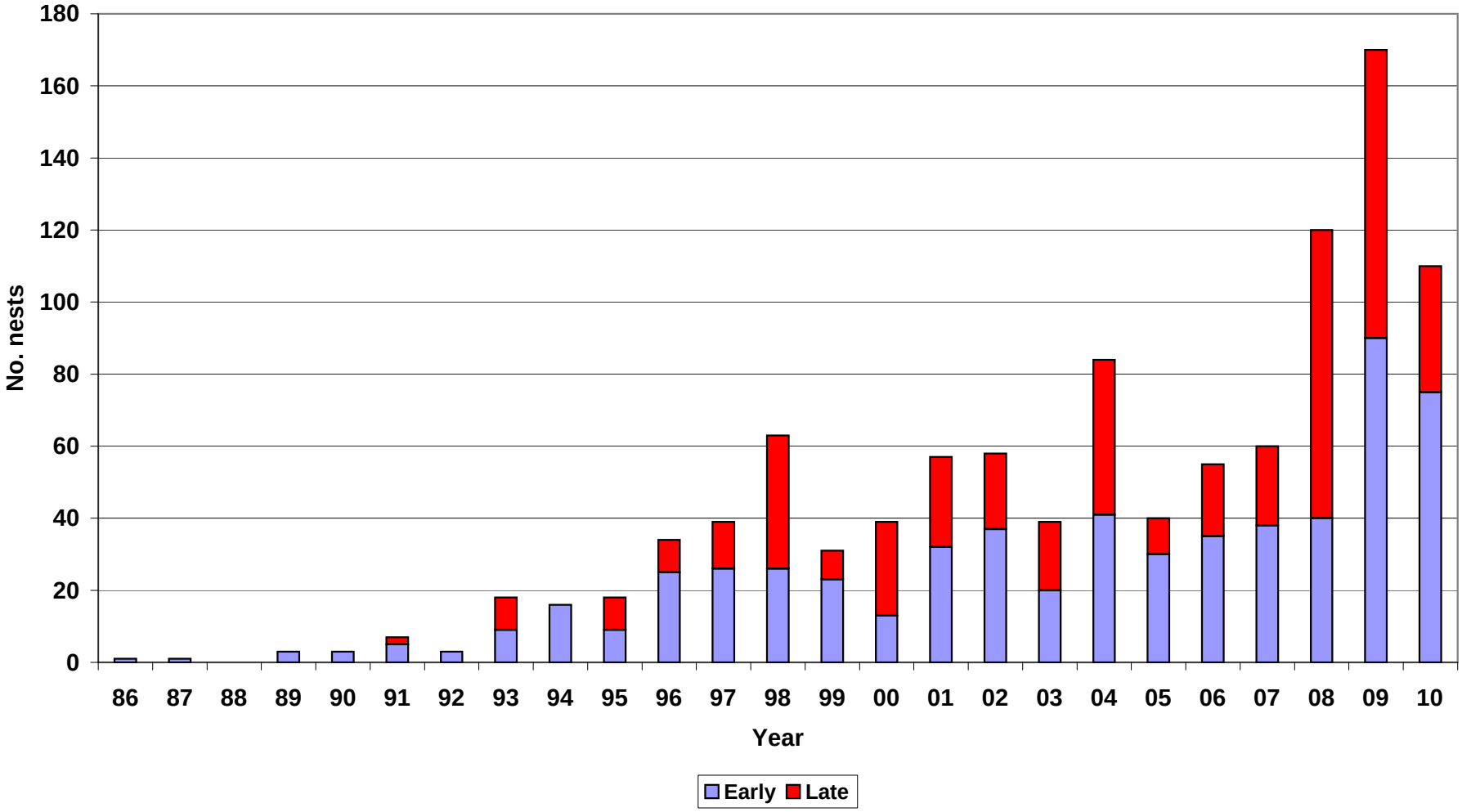


Figure 10

Least tern fledglings at Gibson Cooling Pond

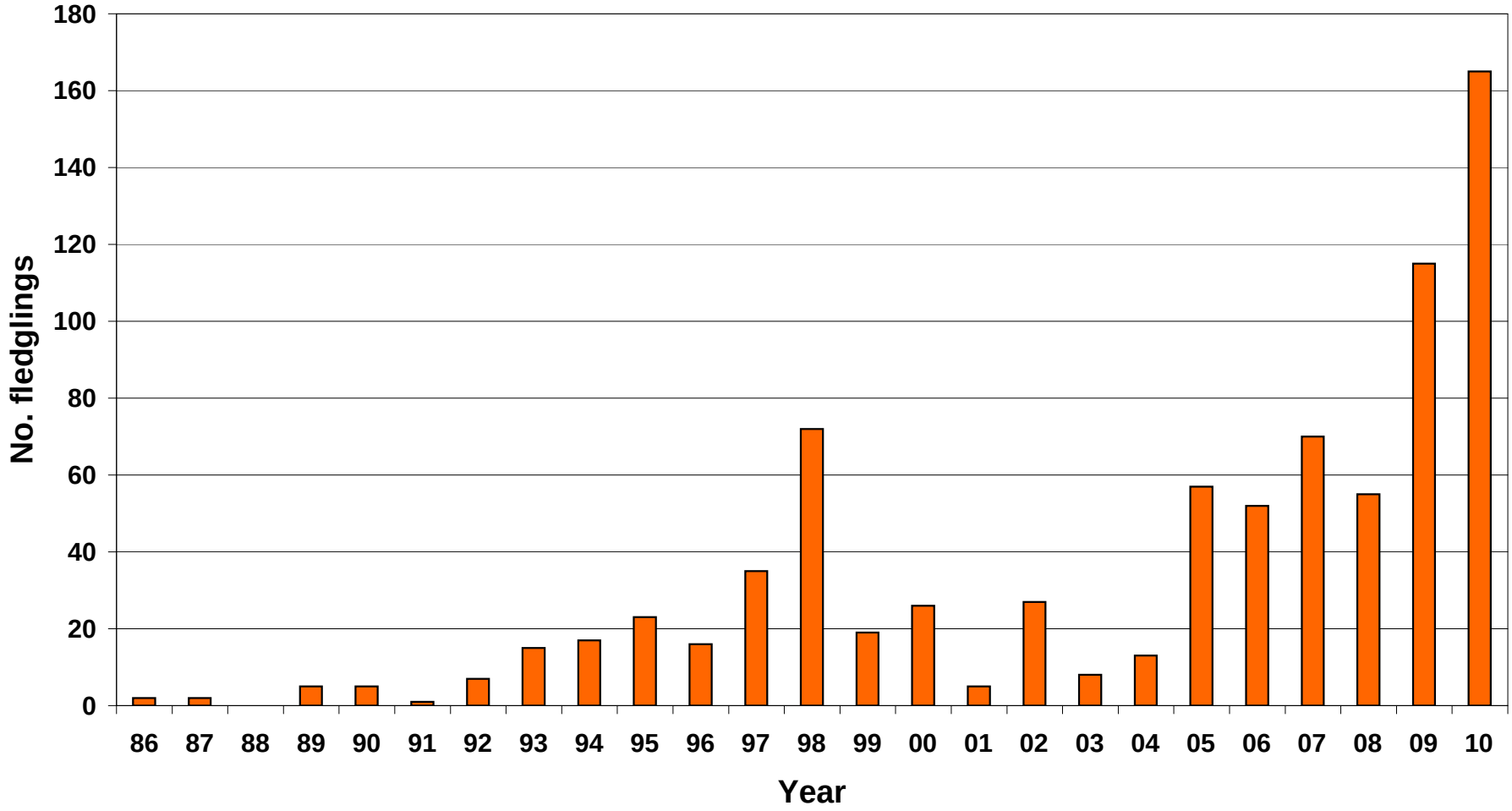
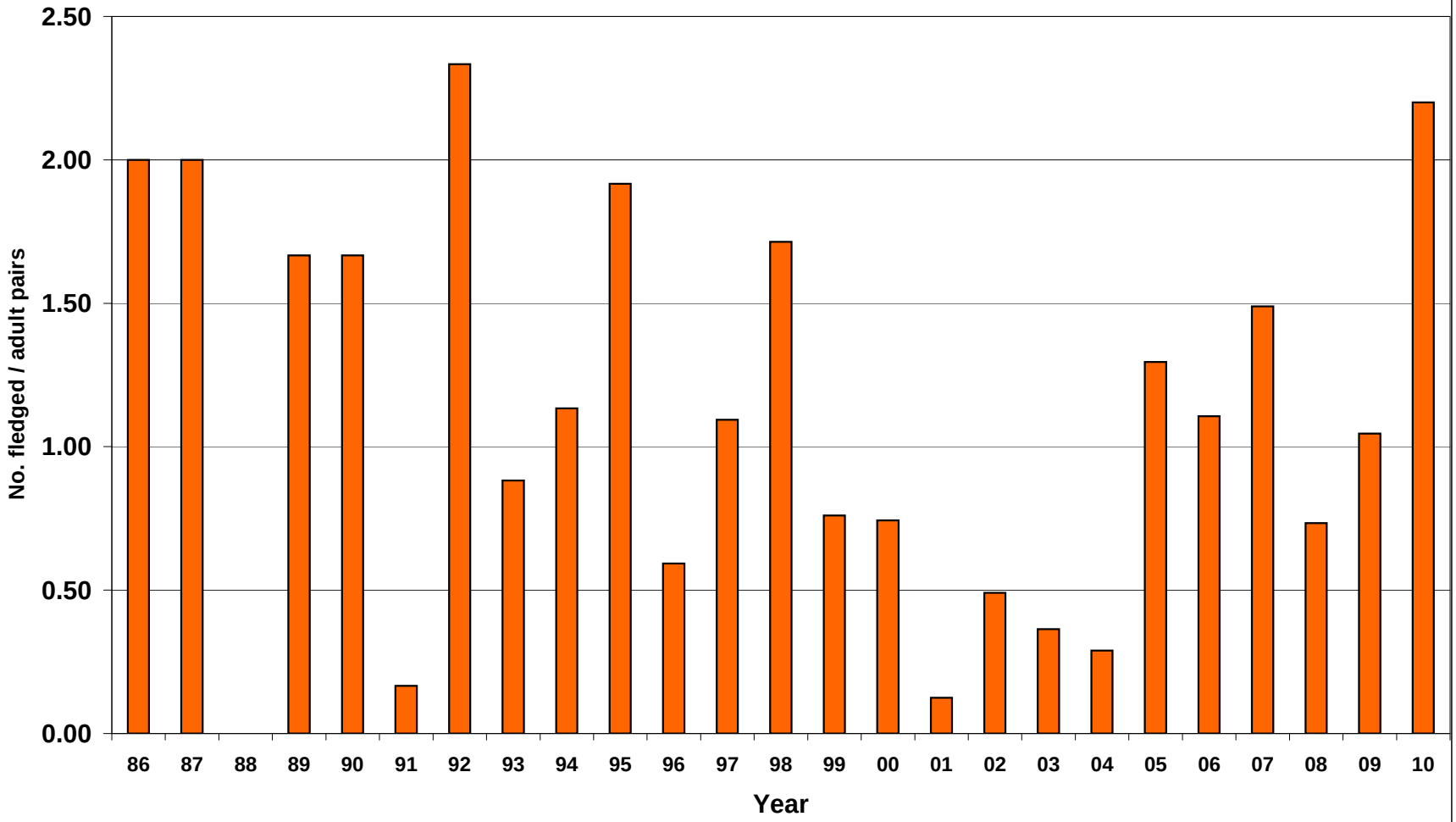


Figure 11

Relative productivity of least terns at Gibson Cooling Pond



APPENDIX A

MEMORANDUM OF UNDERSTANDING
between the
INDIANA DEPARTMENT OF NATURAL RESOURCES
and
PSI ENERGY, INC.

This MEMORANDUM OF UNDERSTANDING, is made and entered into by and between the **Indiana Department of Natural Resources,** hereinafter referred to as the **IDNR**, and **PSI Energy, Inc.**, hereinafter referred to as **PSI**. This MEMORANDUM OF UNDERSTANDING serves to identify expectations and responsibilities toward the management of a nesting colony of federally endangered Interior Least Terns (*Sterna antillarum athalassos*) at Gibson Lake, Gibson County, Indiana. **IDNR** and **PSI** agree that **PSI** has no legal or contractual obligations hereunder, and that **PSI** has voluntarily and without consideration entered into this MEMORANDUM OF UNDERSTANDING. **IDNR** and **PSI** intend for this MEMORANDUM OF UNDERSTANDING to serve as a basis to cooperate in providing for this species.

WHEREAS, the **IDNR** is legally responsible for the conservation and management of migratory and resident wildlife, including endangered species, within the state of Indiana; and

WHEREAS, the Interior Least Tern is a federally endangered species (50 CFR 102:21784) and subject to regulations contained in the Endangered species Act of 1973 and its amendments; and

WHEREAS, the only known Indiana nesting colony of Interior Least Terns is located on **PSI**-owned property at Gibson Lake; and

WHEREAS, **PSI** recognizes its responsibility to act in a legally and environmentally sound manner;

NOW, THEREFORE, in consideration of the above premises the parties hereto reach the following understanding:

A. The **IDNR** will:

1. Annually search for nests, monitor nesting attempts, and take reasonable steps to ensure successful reproduction and survival of Interior Least Terns at Gibson Lake.

2. Notify **PSI** in advance of dates of visits to the tern colony and abide by all plant regulations when on the site of the Gibson Generating Plant.

3. Provide **PSI** with a written annual report and frequent verbal updates on the nesting activity and status of Interior Least Terns at Gibson Lake.

4. Provide **PSI** with information concerning management of Interior Least Terns at Gibson Lake.

5. Obtain **PSI** approval prior to any on-site media coverage of Interior Least Terns at Gibson Lake; notify **PSI** prior to any off-site media coverage of Interior Least Terns at Gibson Lake; and provide copies of any news releases.

B. **PSI** will:

1. Take reasonable steps, that do not significantly interfere with the operation of the power plant, to manage for Interior Least Terns.

2. Take reasonable steps to limit unauthorized human trespass to the nesting colony while Interior Least Terns are present (usually form mid-May through August).

3. Allow **IDNR** officials and persons authorized by the **IDNR** access, after notice to **PSI**, to the Interior Least Tern colony in order to monitor nesting activity.

4. Allow **IDNR** to place tern decoys; to broadcast tern vocalizations; to use traps and nets to capture terns for banding; to control predators using traps, rodent bait, and fencing; to place temporary exclosures around nests; and to construct temporary blinds in order to attract, protect, and study Interior Least Terns during the nesting season.

5. Take reasonable steps to maintain nesting areas in such a way so they continue to be suitable for Interior Least Terns. This would entail control of undesirable vegetation with environmentally-approved herbicides and continuing to use small-sized crushed stone on the center of the dike.

6. Allow the **IDNR** to review and comment on fisheries management activities at Gibson Lake as they pertain to Interior Least Terns.

7. Notify the **IDNR** of any activities that **PSI** reasonably believes may affect nesting and foraging habitat for Interior Least Terns at Gibson Lake.

C. It is Mutually Understood by **IDNR** and **PSI** That:

1. Federal and state regulations prohibit anyone from killing, taking, or otherwise harassing Interior Least Terns, their eggs, or nests, except by special authorization.

2. **PSI** is not legally required to maintain nesting areas as habitat for Interior Least Terns.

3. Satisfying all of the above provisions is contingent upon the availability of funds and manpower.

4. Representatives of both parties will meet at least once annually to review the status of and management activities for Interior Least Terns.

5. This MEMORANDUM OF UNDERSTANDING may be revised as necessary, by mutual consent of both parties, by the issuance of written revisions, signed and dated by both parties.

6. Either party may terminate this MEMORANDUM OF UNDERSTANDING by providing 30 days written notice. Unless terminated by written notice, this MEMORANDUM OF UNDERSTANDING will continue through calendar year 2001.

IN WITNESS WHEREOF, the parties hereto have executed this MEMORANDUM OF UNDERSTANDING as of the last date written below.

2-13-97
Date

Patrick R. Ralston, Director
Indiana Department of Natural Resources

2/7/97
Date

Gary D. Doxtater, Director
Indiana Division of Fish and Wildlife

3/11/97
Date

Paul King, Vice President
Power Operations
PSI Energy, Inc.

3-4-97
Date

Don Snider, Station Manager
Gibson Station
PSI Energy, Inc.

APPENDIX B

Department of the Interior
U.S. Fish and Wildlife Service

Expires Nov. 30, 2010
OMB No. 1018-0094

Federal Fish and Wildlife Permit Application Form

Return to: U.S. Fish and Wildlife Service (USFWS)

USFWS, B.H. Wipple Federal Building
One Federal Drive
Fort Snelling, Minnesota 55111-4056

Type of Activity: Native Endangered and Threatened Species –

Incidental Take Permits Associated with a Habitat Conservation Plan (HCP)

Complete Sections A or B, and C, D, and E of this application. U.S. address may be required in Section C, see instructions for details.
See attached instruction pages for information on how to make your application complete and help avoid unnecessary delays.

A. Complete if applying as an individual

1.a. Last name	1.b. First name	1.c. Middle name or initial	1.d. Suffix

2. Date of birth (mm/dd/yyyy)	3. Social Security No.	4. Occupation	5. Affiliation/ Doing business as (see instructions)

6.a. Telephone number	6.b. Alternate telephone number	6.c. Fax number	6.d. E-mail address

B. Complete if applying on behalf of a business, corporation, public agency or institution

1.a. Name of business, agency, or institution	1.b. Doing business as (dba)
Duke Energy Indiana	

2. Tax identification no.	3. Description of business, agency, or institution
35-0594457	Investor Owned Utility

4.a. Principal officer Last name	4.b. Principal officer First name	4.c. Principal officer Middle name/ initial	4.d. Suffix
Stanley	James		

Principal officer title	6. Primary contact
President	John Pike

7.a. Business telephone number	7.b. Alternate telephone number	7.c. Business fax number	7.d. Business e-mail address
317/838-6218	317/431-5488	317/838-2490	John.Pike@duke-energy.com

C. All applicants complete address information

1.a. Physical address (Street address; Apartment #, Suite #, or Room #; no P.O. Boxes)
1000 East Main Street

1.b. City	1.c. State	1.d. Zip code/Postal code:	1.e. County/Province	1.f. Country
Plainfield	IN	46168	Hendricks	USA

2.a. Mailing Address (include if different than physical address; include name of contact person if applicable)

2.b. City	2.c. State	2.d. Zip code/Postal code:	2.e. County/Province	2.f. Country

D. All applicants MUST complete

1. Attach check or money order payable to the U.S. FISH AND WILDLIFE SERVICE **in the amount indicated on page 2.** Federal, tribal, State, and local government agencies, and those acting on behalf of such agencies, are exempt from the processing fee – ***attach documentation of fee exempt status as outlined in instructions.*** (50 CFR 13.11(d))

2. Do you currently have or have you ever had any Federal Fish and Wildlife permits?
Yes ☒ If yes, list the number of the most current permit you have held or that you are applying to renew/re-issue: TE 016724-1
No ☐

3. Certification: I hereby certify that I have read and am familiar with the regulations contained in ***Title 50, Part 13 of the Code of Federal Regulations*** and the other ***applicable parts in subchapter B of Chapter I of Title 50,*** and I certify that the information submitted in this application for a permit is complete and accurate to the best of my knowledge and belief. I understand that any false statement herein may subject me to the criminal penalties of 18 U.S.C. 1001.

Signature (in blue ink) of applicant/person responsible for permit (No photocopied or stamped signatures) — Date of signature (mm/dd/yyyy): 12-18-09

Please continue to next page

** See page 14 for additional instructions on completing the above form. See page 15 for information on the Paperwork Reduction Act, Privacy Act, and Freedom of Information Act aspects of this application form.

Section E. **ALL APPLICANTS COMPLETE SECTION E.** Provide the information outlined in Section E. on the following pages. Be as complete and descriptive as possible. Please do not send pages that are over 8.5"X 11", videotapes, or DVDs.

INCIDENTAL TAKE PERMITS ASSOCIATED WITH A HABITAT CONSERVATION PLAN (HCP)

Have you obtained all required State, Federal or foreign government approval to conduct the activity you propose? Please be aware that there may be other requirements necessary to conduct this activity such as an import permit, collection permit, permission to work on Federal lands, Federal bird banding permit, Corps of Engineers permits, Environmental Protection Agency NPDES permits, State, county or local permits, etc.

☐ Yes. Provide a copy of the approval(s). List the State, Federal or foreign countries involved and type of document required. Include a copy of these documents with the application.

☐ I have applied. List the State, Federal or foreign countries involved and type of documents required. Provide the reasons why the permits have not been issued _____.

☑ Not required. The proposed activity is not regulated.

Application Processing Fees
The application processing fee for a new Incidental Take permit, or to renew/re-issue an existing valid permit, is $100. If permit amendment is required at a time other than renewal/re-issuance, the processing fee is $50.

Check the appropriate box below and enclose check or money order payable to the *U.S. Fish and Wildlife Service* in the amount of

☐ $100 for a **new** permit

OR

☑ $100 to **renew/re-issue** my existing valid permit (with only *minor changes* such as updating my name and address) using my current application package on file.

OR

☐ $50 to make a **substantive amendment** (with *major changes*) to my existing valid permit [50 CFR 13.11(d)(2)].

If the information in your current application package on file has changed in a manner that triggers a major amendment or a change not otherwise specified in the permit, then you must apply for an amendment to your valid permit. For example, such major changes may include changes in location, activity, amount or type of take, or species to be covered by the permit. Please contact our Ecological Services Field Office located closest to your proposed activity for technical assistance in making this determination. The contact information for our Ecological Services Field Offices can be found on the U.S. Fish & Wildlife Service's office directory web page at http://www.fws.gov/offices/directory/listofficemap.html

Please check the **type of amendment** you are requesting --

☐ add species (specify) _____

☐ add a geographic area ☐ change in personnel

☐ other (specify) _____

If this application includes **transfer or succession** of a valid Incidental Take permit, please check the box below:

9 Transfer or succession of a valid Incidental Take permit associated with a HCP using the current application package on file. No application fee is required.

Application Processing Time

To expedite a final decision on your application, you are urged to coordinate with us as soon as possible for guidance in assembling a complete application package. If you are renewing or amending a valid permit, your complete application package must be received at least 30 days prior to the expiration of the valid permit. This time period begins when we receive a complete permit application package and does not include any time required for requesting clarification or additional information about your application.

The time required to process an application for an Incidental Take permit will vary depending on the size, complexity, and impacts of the HCP involved. Procedurally, the most variable factor in application processing is the level of analysis required for the proposed HCP under the National Environmental Policy Act (e.g., whether an application requires preparation of an Environmental Impact Statement, Environmental Assessment, or whether a categorical exclusion applies), although other factors such as public controversy can also affect application processing times. The target processing timeline from when we receive a complete application package to our final decision on a permit application is: up to 3 months for low-effect HCPs, 4 to 6 months for HCPs with an Environmental Assessment, and up to 12 months for HCPs with a 90-day comment period and/or an Environmental Impact Statement. Although not mandated by law or regulation, these targets are adopted as U.S. Fish & Wildlife Service and National Marine Fisheries Service (NMFS/NOAA Fisheries) policy and all offices are expected to streamline their Incidental Take permit programs, and to meet these targets to the maximum extent practicable.

The information provided in your permit application will be used to evaluate your application for compliance with the Endangered Species Act, its implementing regulations (which may require a 30 day public comment period), and with U.S. Fish and Wildlife Service policy. Receipt and possession of a permit under the Endangered Species Act should be regarded as a privilege, as we must balance permit issuance with our duties to protect and recover listed species.

Up-to-date annual reports and any other required reports under your valid permit(s) must be on file before a permit will be considered for renewal, re-issuance or amendment.

If your activities may affect species under the authority of the National Marine Fisheries Service (NMFS/NOAA Fisheries), then you may need to obtain a separate permit from that agency. In addition we share jurisdiction with NMFS/NOAA Fisheries for sea turtles (e.g., we evaluate applications for permits to conduct activities impacting sea turtles on land, and NMFS/NOAA Fisheries evaluates applications for permits to conduct activities impacting sea turtles in the marine environment). To apply for a permit to conduct activities with sea turtles in the marine environment or other species under NMFS/NOAA Fisheries jurisdiction, please contact them via their permit web page at http://www.nmfs.noaa.gov/pr/permits/

We cannot issue an Incidental Take permit under Section 10(a)(2)(A)(i) of the Endangered Species Act unless you submit a conservation plan that specifies the impacts that are likely to result from the incidental take associated with your activity.

Our general permit regulations at 50 CFR 13.12(a)(9) allow us to collect such other information as we determine that is relevant to the processing of a permit application. Before you submit an application for an Incidental Take permit, we may require that you conduct biological surveys to determine which species and/or habitat would be impacted by the activities sought to be covered under the permit. Biological surveys provide information necessary to develop an adequate HCP, and to assess the biological impacts of the proposed activities. In addition, the information provided in a biological survey can reduce the applicant's risk of take under Section 9 of the Endangered Species Act by ensuring that affected species and/or habitat are identified and appropriately covered under the permit.

You are required to obtain a Scientific Purposes, Enhancement of Propagation or Survival permit (commonly called a Recovery permit) from us before engaging in any biological survey activities that would take listed species. Contact our Ecological Services Field Office closest to the location of your activity to obtain technical assistance in determining the need for both a biological survey and a Recovery permit for your survey activity. The contact information for our Ecological Services Field Offices can be found on the U.S. Fish & Wildlife Service's office directory web page at http://www.fws.gov/offices/directory/listofficemap.html

If a biological survey is required, you will need to send us your complete Recovery permit application package at least 3 months prior to commencement of survey activities to facilitate processing of your Recovery permit application. The Recovery permit application is designated as U.S. Fish & Wildlife Service form # 3-200-55 and can be found on our Endangered Species permit web page at http://www.fws.gov/forms/3-200-55.pdf.

We maintain a list of Recovery permittees (such as biological consultants) who have authorized the release of their contact information to third parties for conducting biological surveys on a contract basis. This list is provided to the public at the discretion of each U.S.

Fish and Wildlife Service Regional Office as time and workload allow. Please be aware that this list does not represent an endorsement by us of any particular permittee.

****

If you are not applying as an individual but as a business, corporation, institution, or non-Federal public agency (block B. on page 1 of the application), the person to whom the permit will be issued (e.g., the landowner, president, director, executive director, or executive officer) is legally responsible for implementing the permit. Although other people under the direct control of the permittee (e.g., employees, contractors, consultants) receive third party take authorization in their capacity as designees of the permittee, the individual named as the permittee ultimately is legally responsible for the permit and any activities carried out under the permit except as otherwise limited in the case of permits issued to State or local government entities under 50 CFR 13.25(e).

****

If you wish to coordinate the processing of this permit application through an **authorized agent**, and to have that agent represent you as the primary contact with us, check the box below. Sign (in blue ink) and date the authorization statement, and provide contact information for your authorized agent.

G I hereby authorize the following person to act as an authorized agent on my behalf in the processing of this permit application and to furnish, upon request, supplemental information in support of this permit application.

_____ _____

signature (in blue ink) date

_____

please print name legibly

Your Authorized Agent's Contact Information (please print legibly)

Name: _____

Address: _____

_____

City: _____ State: _____ Zip Code: _____

Telephone: _____

Fax: _____

E-Mail: _____

INCIDENTAL TAKE PERMIT APPLICATION INSTRUCTIONS

You have 4 options for providing the required information for an Incidental Take permit application. Choose only one option.

Incidental Take Permit Application: Option I. Renewal of a Valid Incidental Take Permit.

Up-to-date annual reports and any other required reports under your valid permit(s) must be on file before a permit will be considered for renewal.

Sign the following statement if you are applying to renew an existing valid Incidental Take permit. If you are proposing major changes to your Incidental Take permit, you must use Option II.

The individual signing box D. on page 1 of the application must also sign (in blue ink) the following statement. This certification language is required under 50 CFR 13.22(a).

> I certify that the statements and information submitted in support of my original application for a U.S. Fish and Wildlife Service Incidental Take permit #TE 016724-1 are still current and correct and hereby request renewal of that permit.
>
> signature (in blue ink) — 12-18-09 date
>
> JIM L. STANLEY
> please print name legibly
>
> * Please note: If you have signed the above statement, then your renewal request is complete. Please submit completed pages 1 through 5 of this application to our Regional Office (see attached list) covering the location of your proposed activity. Requests for renewals must be received no later than 30 days prior to permit expiration to ensure that your current permit remains in effect while we process your renewal request.

Incidental Take Permit Application: Option II. Amended Incidental Take Permit (with *major changes*)

Up-to-date annual reports and any other required reports under your valid permit(s) must be on file before a permit will be considered for amendment.

Sign the following statement if you are proposing to amend a valid Incidental Take permit by making major changes. Such major changes may include changes in location, activity, amount or type of take, or species to be covered by the permit.

The individual signing box D. on page 1 of the application must also sign (in blue ink) the following statement. This certification language is required under 50 CFR 13.22(a).

> I certify that the statements and information submitted in support of my original application for a U.S. Fish and Wildlife Service Incidental Take permit # _____ are still current and correct, except for the changes listed below, and hereby request amendment of that permit.
>
> _____ _____
> signature (in blue ink) date
>
> _____
> please print name legibly

Provide a brief description of the changes to your valid permit (answer the appropriate questions for these changes under Incidental Take Permit Application Option III. below). Please submit completed pages 1 through 6 of this application form (along with the changed information relative to Option III. below) to our Regional Office (see attached list) covering the location of your proposed activity.

Incidental Take Permit Application: Option III. New Incidental Take Permit & Supplementary Information for Amendment of a Valid Permit (with *major changes*).

General permit regulations for the U.S. Fish & Wildlife Service can be found at 50 CFR 13. Regulations for an Incidental Take permit under the Endangered Species Act can be found at 50 CFR 17.22(b)(1) for endangered wildlife species and 50 CFR 17.32(b)(1) for threatened wildlife species.

Each landowner who wishes to be covered under a new or amended Incidental Take permit associated with an HCP must sign (in blue ink) and date the Incidental Take Permit Application Certification Notice at the end of this application, unless the landowner will be covered under this U.S. Fish & Wildlife Service Incidental Take permit via another vehicle, such as a certificate of inclusion (50 CFR 13.25(d)). Any change in the language of the Certification Notice must be reviewed by the Department of Interior, Office of the Solicitor and approved by the U.S. Fish & Wildlife Service. The same person who signs in box D. on page 1 of the application should sign the certification.

If the information in items A. - D. below is already provided in your final HCP (or Implementing Agreement, if applicable), then you do not have to provide it here. Instead, check the box below and use the spaces provided in items A. - D. to indicate the page numbers in your HCP or Implementing Agreement that provide the requested information.

9 I am not providing the following information for items A. - D. as part of my Incidental Take permit application, because it is already provided in my final HCP or Implementing Agreement (copy attached or already submitted).

If the requested information in items A. - D. is not provided in your final HCP or final Implementing Agreement, or you are using Option II. to amend your existing valid Incidental Take permit, then attach separate pages for the missing information. In order to assist us in processing your request, please provide the item number (A. 1.a., etc.) of the required information before each of your responses. Thank you.

Please ensure that your final HCP and Implementing Agreement (if applicable) are attached if it has not been previously submitted.

If you have previously submitted a final draft HCP or Implementing Agreement, please indicate the document's date.

Date of final draft HCP _____

Date of final draft Implementing Agreement _____

Applications for an Incidental Take permit associated with an HCP must provide the following specific information (relevant to the activity) under items A.- D. below in addition to the general information on page 1 of this application.

A. Identify species and activity:

1. For a new Incidental Take permit:

   a. Provide the common and scientific names of the species being requested for coverage in the permit and their status (endangered (E), threatened (T), proposed endangered (PE), proposed threatened (PT), candidate for listing (C), or species likely to become a candidate (LC)).

   b. Provide the number, age, and sex of such species to the extent known

   c. Quantify the anticipated effects to their habitat.

   d. Describe the land use or water management activity sought to be authorized for each species.

2. For an amended Incidental Take permit:

   a. Identify the species to be added to your valid permit (provide both the scientific, to the most specific taxonomic level, and common names), as well as the species status (see 1.a.. above).

   b. Provide the number, age and sex of such species to the extent known.

   c. If any activities requested in this application differ from those authorized in your valid permit, then for each

species state the currently authorized activity, the requested new activity, and how the new activity will impact each species.

d. Identify each activity associated with your project that would result in the incidental take of each species.

e. Quantify any anticipated effects to the habitat of each added species.

f. Identify species to be deleted from your valid permit and the reason(s) for the deletion.

Page(s) & source document : _____

B. Identify location of the proposed activity:

1. Provide the name of the State, county, and specific location of the proposed activity site(s). Include a formal legal description, section/township/range information, county tax parcel number, local address, or any other identifying property designation that will precisely place the location of the proposed activity site(s). Attach a location map and plat of the project site clearly depicting the project boundaries and the footprint and location of all portions of the property that would be affected by your proposed activities.

2. Provide the total number of acres covered by the HCP _____

   Is this the total acreage of the parcel? (circle one) yes no

3. Provide the approximate number of acres to be impacted _____

4. Provide the approximate number of acres to be protected _____

5. Provide a complete description, including timeframes, for implementation of proposed voluntary management activities to enhance, restore, or maintain habitat benefiting federally listed, proposed or candidate species, or other species likely to become candidates. Include schedules for implementing these activities.

Page(s) & source document: _____ _____

C. Describe the proposed activities in the conservation plan:

You must submit a Habitat Conservation Plan. We strongly encourage you to ensure that your HCP is consistent with the Habitat Conservation Planning Handbook, subsequent Handbook addendums, and current policies to minimize delays in evaluating your application. The Handbook and other HCP information is available on the U.S. Fish & Wildlife Service's Endangered Species web page at http://www.fws.gov/endangered/hcp/index.html

Provide a complete description of activity(ies) to be authorized or reference the applicable HCP or Implementing Agreement page numbers identifying the subject information.

The HCP must specify:

1. The impact that will likely result from the incidental taking. A discussion of the impact that will likely result from the incidental take should include quantification of any anticipated effects to the habitat of the species sought to be covered by the permit.

2. The steps that will be taken to minimize and mitigate such impacts, the funding that will be available to implement such steps, and the procedures to deal with unforeseen circumstances.

3. The steps that will be taken to monitor and report on such impacts, including a copy of the monitoring plan. We are authorized to require reports of activities conducted under a permit per the U.S. Fish & Wildlife Service's general permit regulations at 50 CFR 13.45.

4. Alternative actions to such incidental taking that have been considered and the reasons why these alternatives are not proposed for use.

5. The biological goals(s) and objectives for the HCP.

6. The duration requested for the proposed permit.

Page(s) & source document : _____

D. Implementing Agreement

An Implementing Agreement

is ***is not*** (FWS *Regional Office* to circle one)

required as part of the permit application for a Habitat Conservation Plan.

This Implementing Agreement must be signed at finalization of the HCP. Are you willing to commit to an Implementing Agreement at finalization of the HCP?

9 Yes, I am willing to commit to an Implementing Agreement. Please submit any unsigned, draft Implementing Agreement that you have prepared with our Field Office.

9 No, I am not willing to commit to an Implementing Agreement.

Incidental Take Permit Application: Option IV. Permit Transfer or Succession of a Permit

Complete the following if you are applying for transfer of a valid Incidental Take permit to you or obtaining rights of succession of a valid Incidental Take permit. In addition, you and the current permit holder may also need to sign an Assumption Agreement. Please contact our Ecological Services Field Office nearest your activity to determine whether you and the current permit holder need to execute an Assumption Agreement. The contact information for our Ecological Services Field Offices can be found on the U.S. Fish & Wildlife Service's office directory web page at http://www.fws.gov/offices/directory/listofficemap.html

Please indicate the name of the HCP to be transferred or succeeded and indicate the document's date.

Name of HCP _____

Date of HCP _____

An Assumption Agreement

is ***is not*** (FWS Ecological Services *Field Office* to circle one)

required as part of the transfer or succession permit application for the HCP.

Incidental Take Permit Application

Certification Notice

The same person who signs in box D. on page 1 of the application should sign (in blue ink) the following certification.

By submitting this application and receiving an Incidental Take permit pursuant to Section 10(a)(1)(B) of the Endangered Species Act, I

Jim L. Stanley (print name(s)) attest that I/we own the lands indicated in this application, or have sufficient authority or rights over these lands to implement the measures of the Habitat Conservation Plan (and Implementing Agreement if applicable) covered by the Incidental Take permit. Further, upon receipt of the Incidental Take permit, I/we agree to conduct the activities as specified in the Habitat Conservation Plan (and Implementing Agreement if applicable) according to the terms and conditions of the Incidental Take permit and its supporting documents.

[signature] 12-18-09

signature (in blue ink) date

Jim L. Stanley

please print name legibly

signature (in blue ink) date

please print name legibly

****

The public reporting burden for completing this application for an Incidental Take permit is estimated to be 3 hours, including time for reviewing instructions, gathering and maintaining application data, and completing and reviewing the forms. Comments regarding the burden estimate or any other aspect of the reporting requirement(s) should be directed to the U.S. Fish & Wildlife Service Information Collection Clearance Officer, MS 222 ARLSQ, U.S. Fish and Wildlife Service, Washington, DC 20240.

An agency may not conduct and a person is not required to respond to a collection of information unless a currently valid OMB control number is displayed.

****

USFWS Regional Contacts for Native Endangered & Threatened Species Permits

Pacific Region (Region 1): HI, ID, OR, WA, American Samoa, Commonwealth of the Northern Mariana Islands, Guam, and the Pacific Trust Territories

U.S. Fish and Wildlife Service
Endangered Species Permit Office
911 NE 11th Avenue
Portland, Oregon 97232-4181

Web: http://www.fws.gov/pacific/ecoservices/endangered/index.html
Phone: (503) 231-2071
email: permitsR1ES@fws.gov
Fax: (503) 231-6243

California & Nevada Operations Office (CNO): CA and NV

U.S. Fish and Wildlife Service
Endangered Species Permit Office
2800 Cottage Way, Suite W-2606
Sacramento, California 95825

Web: http://www.fws.gov/cno/es/recovery.html
Phone: (916) 414-6464
email: permitsCNES@fws.gov
Fax: (916) 414-6486

Southwest Region (Region 2): AZ, NM, OK, and TX

U.S. Fish and Wildlife Service
Endangered Species Permit Office
500 Gold Avenue S.W. (street address)
P.O. Box 1306 (mailing address)
Albuquerque, New Mexico 87103-1306

Web: http://www.fws.gov/southwest/es/EndangeredSpecies/
Phone: (505) 248-6649
email: permitsR2ES@fws.gov
Fax: (505) 248-6788

Midwest Region (Region 3): IA, IL, IN, MI, MN, MO, OH, and WI

U.S. Fish and Wildlife Service
Endangered Species Permit Office
B.H. Whipple Federal Building
One Federal Drive
Fort Snelling, Minnesota 55111-4056

Web: http://www.fws.gov/southwest/es/EndangeredSpecies/
Phone: (612) 713-5343
email: permitsR3ES@fws.gov
Fax: (612) 713-5292

Southeast Region (Region 4): AL, AR, FL, GA, KY, LA, MS, NC, PR, SC, TN, and U.S. Virgin Islands

U.S. Fish and Wildlife Service
Endangered Species Permit Office
1875 Century Blvd., Suite 200
Atlanta, Georgia 30345

Web: http://www.fws.gov/southeast/es/#
Phone: (404) 679-4176
email: permitsR4ES@fws.gov
Fax: (404) 679-7081

Northeast Region (Region 5): CT, DC, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VA, VT, and WV

U.S. Fish and Wildlife Service
Endangered Species Permit Office
300 Westgate Center Drive
Hadley, MA 01035-9589

Web: http://www.fws.gov/northeast/endangered/
Phone: (413) 253-8628
email: permitsR5ES@fws.gov
Fax: (413) 253-8482

Mountain-Prairie Region (Region 6): CO, KS, MT, NE, ND, SD, UT, and WY

U.S. Fish and Wildlife Service
Endangered Species Permit Office
Denver Federal Center
P.O. Box 25486
Denver, Colorado 80225-0489

Web: http://www.fws.gov/mountain%2Dprairie/endspp/
Phone: (303) 236-7400
email: permitsR6ES@fws.gov
Fax: (303) 236-0027

Alaska Region (Region 7): AK

U.S. Fish and Wildlife Service
Endangered Species Permit Office
1011 E. Tudor Road
Anchorage, Alaska 99503-6199

Web: http://alaska.fws.gov/fisheries/endangered/index.htm
Phone: (907) 786-3323
email: permitsR7ES@fws.gov
Fax: (907) 786-3350

PERMIT APPLICATION FORM INSTRUCTIONS

The following instructions pertain to the standard permit form 3-200 that must be completed as an application for a U.S. Fish and Wildlife Service or CITES permit. The General Permit Procedures in 50 CFR 13 address the permitting process. For simplicity, all licenses, permits, registrations, and certificates will be referred to as a permit.

GENERAL INSTRUCTIONS:

- Complete all blocks/lines/questions in Sections A or B, and C and D. Complete all of Section E.
- **An incomplete application may cause delays in processing or may be returned to the applicant. Be sure you are filling in the appropriate application form for the proposed activity.**
- Print clearly or type in the information. Illegible applications may cause delays.
- Sign the application in blue ink. Faxes or copies of the original signature will not be accepted.
- Mail the original application to the address at the top of page one of the application or if applicable on the attached address list.
- **Keep a copy of your completed application.**
- **Please plan ahead. Allow at least 60 days for your application to be processed. Some applications may take longer than 90 days to process. (50 CFR 13.11)**
- Applications are processed in the order they are received.
- Additional forms and instructions are available from http://permits.fws.gov/ .

COMPLETE EITHER SECTION A OR SECTION B:

Section A. **Complete if applying as an individual:**

- Enter the complete name of the responsible individual who will be the permittee if a permit is issued. Enter personal information that identifies the applicant. ***Fax and e-mail are not required if not available.***
- If you are applying on behalf of a client, the personal information must pertain to the client, and a document evidencing power of attorney must be included with the application.
- **Affiliation/ Doing business as (dba):** business, agency, organizational, or institutional affiliation *directly* related to the activity requested in the application (e.g., a taxidermist is an individual whose business can *directly* relate to the requested activity). The Division of Management Authority (DMA) will **not** accept *doing business as* affiliations for individuals.

Section B. **Complete if applying as a business, corporation, public agency, or institution:**

- Enter the complete name of the business, agency or institution that will be the permittee if a permit is issued. Give a brief description of the type of business the applicant is engaged in. Provide contact phone number(s) of the business.
- **Principal Officer** is the person in charge of the listed business, corporation, public agency, or institution. The principal officer is the person responsible for the application and any permitted activities. Often the principal officer is a Director or President. **Primary Contact** is the person at the business, corporation, public agency, or institution who will be available to answer questions about the application or permitted activities. Often this is the preparer of the application.

ALL APPLICANTS COMPLETE SECTION C:

- For all applications submitted to the Division of Management Authority (DMA) a physical U.S. address is **required.** Province and Country blocks are provided for those USFWS programs which use foreign addresses and are not required by DMA..
- **Mailing address** is address where communications from USFWS should be mailed if different than applicant's physical address.

ALL APPLICANTS COMPLETE SECTION D:

Section D.1 **Application processing fee:**

- An application processing fee is required at the time of application; unless exempted under 50 CFR13.11(d)(3). The application processing fee is assessed to partially cover the cost of processing a request. **The fee does not guarantee the issuance of a permit. Fees will not be refunded for applications that are approved, abandoned, or denied.** We may return fees for withdrawn applications prior to any significant processing occurring.
- **Documentation of fee exempt status is not required for Federal, tribal, State, or local government agencies; but must be supplied by those applicants acting on behalf of such agencies.** Those applicants acting on behalf of such agencies must submit a letter on agency letterhead and signed by the head of the unit of government for which the applicant is acting on behalf, confirming that the applicant will be carrying out the permitted activity for the agency.

Section D.2 **Federal Fish and Wildlife permits:**

- List the number(s) of your most current FWS or CITES permit or the number of the most recent permit if none are currently valid. If applying for re-issuance of a CITES permit, the original permit must be returned with this application.

Section D.3 **CERTIFICATION:**

- **The individual identified in Section A, the principal officer named in Section B, or person with a valid power of attorney (documentation must be included in the application) must sign and date the application in blue ink.** This signature binds the applicant to the statement of certification. This means that you certify that you have read and understand the regulations that apply to the permit. You also certify that everything included in the application is true to the best of your knowledge. Be sure to read the statement and re-read the application and your answers before signing.

Please continue to next page

APPLICATION FOR A FEDERAL FISH AND WILDLIFE PERMIT

Paperwork Reduction Act, Privacy Act, and Freedom of Information Act – Notices

In accordance with the Paperwork Reduction Act of 1995 (44 U.S.C. 3501, *et seq.*) and the Privacy Act of 1974 (5 U.S.C. 552a), please be advised:

1. The gathering of information on fish and wildlife is authorized by:
   (Authorizing statutes can be found at: http://www.gpoaccess.gov/cfr/index.html and http://www.fws.gov/permits/ltr/ltr.shtml.)

   a. Bald and Golden Eagle Protection Act (16 U.S.C. 668), 50 CFR 22;
   b. Endangered Species Act of 1973 (16 U.S.C. 1531-1544), 50CFR 17;
   c. Migratory Bird Treaty Act (16 U.S.C. 703-712), 50 CFR 21;
   d. Marine Mammal Protection Act of 1972 (16 U.S.C. 1361, *et. seq.*), 50 CFR 18;
   e. Wild Bird Conservation Act (16 U.S.C. 4901-4916), 50 CFR 15;
   f. Lacey Act: Injurious Wildlife (18 U.S.C. 42), 50 CFR 16;
   g. Convention on International Trade in Endangered Species of Wild Fauna and Flora (TIAS 8249), http://www.cites.org/ , 50 CFR 23;
   h. General Provisions, 50 CFR 10;
   i. General Permit Procedures, 50 CFR 13; and
   j. Wildlife Provisions (Import/export/transport), 50 CFR 14.

2. Information requested in this form is purely voluntary. However, submission of requested information is required in order to process applications for permits authorized under the above laws. Failure to provide all requested information may be sufficient cause for the U.S. Fish and Wildlife Service to deny the request. Response is not required unless a currently valid Office of Management and Budget (OMB) control number is displayed on form.

3. Certain applications for permits authorized under the Endangered Species Act of 1973 (16 U.S.C. 1539) and the Marine Mammal Protection Act of 1972 (16 U.S.C. 1374) will be published in the **Federal Register** as required by the two laws.

4. Disclosures outside the Department of the Interior may be made without the consent of an individual under the routine uses listed below, if the disclosure is compatible with the purposes for which the record was collected. (Ref. 68 FR 52611, September 4, 2003)

   a. Routine disclosure to subject matter experts, and Federal, tribal, State, local, and foreign agencies, for the purpose of obtaining advice relevant to making a decision on an application for a permit or when necessary to accomplish a FWS function related to this system of records.
   b. Routine disclosure to the public as a result of publishing **Federal Register** notices announcing the receipt of permit applications for public comment or notice of the decision on a permit application.
   c. Routine disclosure to Federal, tribal, State, local, or foreign wildlife and plant agencies for the exchange of information on permits granted or denied to assure compliance with all applicable permitting requirements.
   d. Routine disclosure to Captive-bred Wildlife registrants under the Endangered Species Act for the exchange of authorized species, and to share information on the captive breeding of these species.
   e. Routine disclosure to Federal, tribal, State, and local authorities who need to know who is permitted to receive and rehabilitate sick, orphaned, and injured birds under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act; federally permitted rehabilitators; individuals seeking a permitted rehabilitator with whom to place a bird in need of care; and licensed veterinarians who receive, treat, or diagnose sick, orphaned, and injured birds.
   f. Routine disclosure to the Department of Justice, or a court, adjudicative, or other administrative body or to a party in litigation before a court or adjudicative or administrative body, under certain circumstances.
   g. Routine disclosure to the appropriate Federal, tribal, State, local, or foreign governmental agency responsible for investigating, prosecuting, enforcing, or implementing statutes, rules, or licenses, when we become aware of a violation or potential violation of such statutes, rules, or licenses, or when we need to monitor activities associated with a permit or regulated use.
   h. Routine disclosure to a congressional office in response to an inquiry to the office by the individual to whom the record pertains.
   i. Routine disclosure to the General Accounting Office or Congress when the information is required for the evaluation of the permit programs.
   j. Routine disclosure to provide addresses obtained from the Internal Revenue Service to debt collection agencies for purposes of locating a debtor to collect or compromise a Federal claim against the debtor or to consumer reporting agencies to prepare a commercial credit report for use by the FWS.

5. For individuals, personal information such as home address and telephone number, financial data, and personal identifiers (social security number, birth date, etc.) will be removed prior to any release of the application.

6. The public reporting burden on the applicant for information collection varies depending on the activity for which a permit is requested. The relevant burden for an **Incidental Take** permit application is **3 hours**. This burden estimate includes time for reviewing instructions, gathering and maintaining data and completing and reviewing the form. You may direct comments regarding the burden estimate or any other aspect of the form to the Service Information Clearance Officer, U.S. Fish and Wildlife Service, Mail-Stop 222, Arlington Square, U.S. Department of the Interior, 1849 C Street, NW, Washington D.C. 20240.

Freedom of Information Act – Notice

For organizations, businesses, or individuals operating as a business (i.e., permittees not covered by the Privacy Act), we request that you identify any information that should be considered privileged and confidential business information to allow the Service to meet its responsibilities under FOIA. Confidential business information must be clearly marked "Business Confidential" at the top of the letter or page and each succeeding page and must be accompanied by a non-confidential summary of the confidential information. The non-confidential summary and remaining documents may be made available to the public under FOIA [43 CFR 2.13(c)(4), 43 CFR 2.15(d)(1)(i)].

APPENDIX C

Monitoring Guidelines For Least Terns On Duke Energy Property

A. Duke Energy, IDNR and USFWS biologists, or its designated contractors, are authorized to conduct surveys and monitor habitat use of breeding interior least terns following the guidelines outlined below:

1. Surveys or time spent in each nesting colony on Duke Energy Property will be completed within 20 minutes. Surveys and research on the tern nesting areas will be conducted when the ambient air temperature is below 90 degrees Fahrenheit.
2. General surveys may be conducted at any time from a safe distance where no tern harassment occurs by using spotting scopes or binoculars.
3. Three surveys may be conducted in the nesting areas to determine when the first territorial or breeding terns have occupied the nesting areas. When the first territorial birds are discovered, then condition A1 will take effect.
4. Nesting least terns and those observed returning to nests are not to be disturbed except as described in A5.
5. To the extent possible, biologists will remain at a distance of 30 feet or more from the nests and will not handle eggs or nestlings. Biologists may approach nests closer than 30 feet to count the number of eggs in the nest, mark the nest and/or record GPS coordinates and date of new nests, or to determine nest fate if it is evident from more than 30 feet that the nest has hatched or failed after 27 days from the date of nest discovery. At that time, un-hatched eggs, after consultation with USFWS BFO, will collected and documented with the nest location, number collected, and stored in a refrigerator on Duke Energy property until arrangements are made with the USFWS BFO for transfer. This will occur no later than 48 hours after collection. Any other salvaged adults, chicks, or eggs (from nest failures due to predation, washout, etc…) will also be collected and stored on Duke Energy property until arrangements for transfer are made with the USFWS BFO.
6. Active nesting locations may be signed or fenced (or other physical barrier) as needed to protect them from construction activity and human or predator disturbances.

B. Duke Energy, IDNR and USFWS biologists, or its designated contractors are authorized to conduct surveys for broods and nesting success following the guidelines below:

1. Nests may be checked, locations and dates recorded for new nests, and to determine success or failure no more frequently than a 3 day interval. No more than 2 visits per week into the nesting colonies will be made during the reproductive season.
2. Collection and disposal of any least tern eggs, chicks, or adults will be coordinated with the USFWS BFO according the provisions of this HCP.

C. An annual report will be provided to the USFWS as required by this HCP.

D. Collection of dead adults, chicks, or un-viable eggs, whether due to predation, weather events, or recorded as a “take” under Duke Energy’s Incidental Take Permit, will be coordinated with the USFWS BFO as described in this HCP.

Coverage for monitoring and collection according to this HCP are provisionary under the following restrictions:

E. All monitoring and collection activities shall be coordinated with the USFWS BFO as required by this HCP and will follow the guidelines listed above.

F. Duke Energy will apply for the Incidental Take Permit for least terns associated with this HCP.

G. Incidental Take Permit renewals will be made by December 31st of the expiring year.

H. Annual reports of activities conducted under the authority of this HCP and the associated Incidental Take Permit will be submitted to the USFWS no later than January 31st of the following year.