Alternatives Analysis
for the
Horry County Solid Waste Authority
Highway 90 Facility Expansion Project
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Conway, SC 29526

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Project Need

In fiscal year 2025, the approximately 426,000 residents of Horry County and its approximately 20 million tourist visitors generated over 579,000 tons of solid waste. These numbers are expected to increase by about 2% every year for the foreseeable future. To deal with this massive and growing amount of solid waste, the Horry County Solid Waste Authority (SWA) has undertaken a long-range planning project to manage a projected total of about 43 million tons of waste it expects to receive over the next 45 years.

The SC Solid Waste Policy and Management Act of 1991 requires that each County be responsible for the management of solid waste within their County. The SWA was created by the County in 1992 by the Horry County Council to serve as the agency responsible for managing the County's waste stream. The SWA has established a cooperative association with local municipalities and private companies to collect, transfer, process, reuse, recycle, and dispose of three categories of solid waste:

Municipal solid waste (MSW) – a broad category that includes a variety of waste products from residential, commercial, and institutional sources, including paper and wood products, metals, plastics, food waste, glass, and fabrics. These wastes can only be placed in a Class Three landfill built with a liner system composed of synthetic fabric and compacted clay, and capped with a similar system to isolate the waste and prevent groundwater contamination. Class Three landfills are also equipped with systems to collect methane and other decomposition gases, which are burned to produce energy or to reduce odors.

Construction and demolition waste (C&D) – discarded solid waste from construction, remodeling, repair, and demolition of buildings and other structures, roadway construction, and land clearing work. These wastes include waste lumber, drywall, metals, plastics,

bricks, concrete, and other masonry materials, and tree and brush stumps. These wastes are typically placed in Class Two landfills that must be constructed at least two feet above the local water table and have a compacted clay cover.

Yard waste – mostly plant materials including leaves, branches, stumps, and soils from landscaping and yard maintenance work. Most of these materials are recycled but can be placed in a Class Two landfill as needed.

MSW, C&D, and yard waste is collected from the residential, commercial, and institutional sectors from across Horry County via curbside collection systems operated by municipal and private waste companies as well as a network of 25 convenience centers and two transfer stations located in Myrtle Beach and North Myrtle Beach. Most of this material is transported to the SWA's Highway 90 Facility, which is a complex of handling, processing, recycling, and landfilling facilities located on an approximately 1942-acre tract located on Highway 90 near Conway, SC (Figures 1-4). The Highway 90 facility consists of three separate, adjacent tracts (Horry County TMS 1380005067 totaling about 734 acres, TMS 1520001032 totaling about 1176 acres, and TMS 1390004001 totaling about 32 acres).

At the Highway 90 Facility, some of the waste is reused on-site with minimal processing, including asphalt, bricks, concrete, and soil. Other waste items are recycled, including cardboard and other paper products, appliances and scrap metal, many plastic materials, and tires, which are shipped to an out-of-state recycling facility. Yard waste, food waste, and other similar materials are composted to produce mulch and soil amendments for use by County residents and also at the Highway 90 Facility. The SWA is a leader in South Carolina in waste reuse and recycling, and through these collective efforts, about 20% of the total solid waste stream is diverted away from the two SCDES-licensed landfills at the Facility. The amount of waste diverted from its landfills has increased over the years and

the SWA expects that trend to continue into the future as new technologies and markets are developed.

Despite these efforts, existing technological and other constraints in recycling and other diversion methods require that the SWA provide landfill capacity for about 80% of the total expected waste stream of 43 million tons (about 34.4 million tons) expected over the next 45 years.

Most undivertable C&D waste is currently placed in a 17.3-acre Class Two landfill permitted by SCDES (Figure 5), which has sufficient capacity to handle the expected flow of 627,000 tons of C&D waste until 2029. MSW that cannot be diverted is currently placed in a 93.7-acre Class Three landfill. An additional 45.4 acres of Class Three landfill has been permitted as a "piggyback" on top of the 17.3-acre Class Two landfill but has not yet been constructed. The existing and permitted Class Three landfill has sufficient capacity to handle the expected flow of about 10.4 million tons of MSW until 2050. Over the next 45 years, the SWA will need to landfill a total of about 34.4 million tons of MSW and C&D waste or about 23.4 million tons above and beyond the existing and permitted landfill capacity. For the purposes of the remainder of this alternatives analysis, the waste tonnage estimates will address only the additional required landfill capacity of 23.4 million tons, with the acknowledgment that the Highway 90 facility currently has 10 million tons of existing permitted additional capacity.

To meet the future long-term needs of Horry County and its residents and visitors, the SWA has explored various alternatives to properly handle solid waste disposal for the next 40 years. This information is presented below includes analyses of a No-action alternative, Off-site alternatives, and On-site alternatives.

Basic Project Purpose

The basic purpose of the proposed project is to provide additional solid waste landfill capacity for Horry County. None of the many components of solid waste management, including collecting, transporting, processing, recycling, reusing, and landfilling require access or proximity to, or siting within a special aquatic site in order to fulfill the basic purpose of those activities and are not water dependent.

Overall Project Purpose

The overall project purpose upon which this alternatives analysis is based is as follows:

To provide solid waste management in Horry County that is practicable and consistent with all relevant Federal, State, and local regulations and provides additional landfill capacity for 23.4 million tons of nondivertable waste expected over the next 45 years.

Project Criteria

Project criteria define the requirements of a project on the basis of cost, existing technology, and logistics, and include consideration of site size and configuration, location and accessibility, availability of required utilities, and other factors. The project criteria, in addition to the project purpose, are used to determine if a potential alternative is practicable.

Location – The SWA's mandate from local and state government requires that all future solid waste management operations be located within Horry County. In addition, practical considerations related to the cost and logistics of moving waste from source areas to such a facility dictate that any landfill operation be relatively close to existing and future population centers, and accessible by existing County or State-maintained roads.

Availability of required utilities – solid waste diversion and landfilling require the combined efforts of many different operations that require the usual modern complement of utilities, including electricity, water, sewer, and internet access. Given the level of demand at such a large industrial operation, it is most cost-effective that it be readily connected to existing systems.

Site size and configuration – in order to meet the overall project purpose, a solid waste management facility must be located on a property that is large enough to accommodate all of the various components of such a facility. These include space for Class Two and Class Three landfills, receiving areas, recycling areas, borrow areas for landfill cover, internal transport routes, and administration areas. The data presented below are based on expected acreage for each component of the overall operation, derived from many years of accumulated experience by the project engineers.

Given the expected volume of waste (about 23.4 million tons over the next 45 years), about 400 acres of land is required for just the landfill cells. This value takes into consideration limitations on buildable landfill height and side slopes and assumes close to ideal geometry, which is optimized by a square or slightly elongated rectangular shape. Any significant deviation from this shape would significantly increase the minimum landfill disposal area.

In addition, internal access roads and stormwater conveyance systems around and within the landfills would be expected to need about 250 to 350 acres of land. Construction and operation of the landfills will require an additional 300 to 450 acres of land as borrow areas for soil used as landfill cover and in other aspects of operation and maintenance. Stormwater management facilities such as detention ponds would need about 50 to 70 acres of land. Support infrastructure including various buildings for receiving and

recycling operations, administration, maintenance workshops, temporary stockpiling areas, leachate management, and energy recovery will need an additional 100 to 150 acres.

Beyond the hard engineering constraints outlined above, various planning and related issues such as property line setbacks, setbacks from sensitive land use areas such as neighborhoods, schools, etc. can add an additional 200 to 300 acres to the minimum required for a modern solid waste management facility.

Based on these projections, the overall project purpose can only be accomplished by a site that is a minimum of about 1200 acres and could be up to 1800 acres in size. For the purposes of the discussion of alternatives that will follow, please note that these numbers would apply in their entirety to any Off-site alternatives involving an entirely new solid waste management facility at a new location other than the Highway 90 Facility property. Any On-site alternatives (i.e., located within the Highway 90 Facility property) would require significantly less land to accomplish the overall project purpose since most of the features outlined above are already in place or have already been accommodated by the existing layout. The use of on-site alternatives would reduce the overall new land requirement to approximately 400 acres for landfill cells as described above.

Alternatives

The discussion below addresses a wide range of alternative plans to achieve the overall project purpose of providing additional landfill capacity in Horry County that is practicable and consistent with all relevant Federal, State, and local regulations and is sufficient to provide additional capacity for the expected 23.4 million tons of nondivertable solid waste over the next 45 years. This includes No-action alternatives (ones not requiring any wetland fill), Off-site alternatives (at a totally new, approximately 1200-acre site located elsewhere in Horry County), and an On-site alternative.

As discussed above, land requirements needed to accomplish the overall project purpose vary considerably for Off-site alternatives (1200 to 1800 acres) versus On-site alternatives (400 acres). Both options require large tracts of land and pose significant challenges with regards to potential impacts given the overall abundance of wetlands and other waters throughout Horry County. For the reasons presented below, the No-Action and Off-site alternatives are found to be not practicable and do not meet the overall project purpose. The only practicable alternative and the Preferred alternative consists of construction of new landfill cells at the Highway 90 facility. The Preferred alternative is the only practicable alternative that meets the overall project purpose and is also the Least Environmentally Damaging Practicable Alternative.

No-action alternative – this alternative consists of those options that do not involve a discharge of fill material into Waters of the US. The existing landfill at the Highway 90 facility is the only approved landfill in Horry County. It has been designed and constructed to maximize its storage capacity, which will be fully utilized by 2030. At that time, No-action alternatives would involve recycling, incineration, or otherwise disposing of all wastes without the need for additional landfill capacity.

This alternative is not practicable on the basis of excess costs, logistical problems, and limitations in existing technology. The SWA is one of the leaders in waste diversion but currently is only able to reduce the amount of waste to be landfilled by about 20%. Achieving 100% diversion is not possible without dramatic increases in the cost of such operations, all of which would be passed on to the citizens of Horry County. This would result in significant economic impacts and increased illegal waste dumping, neither of which are practicable nor desirable. In addition, not all wastes are recyclable. Advances in the necessary technology may occur in the future, but absent significant developments in that area there will continue to be a need for landfilling.

Incineration of some non-divertable waste is possible but is not practicable due to costs and logistics and would not meet the overall project purpose. Much of the expected waste stream is not combustible. This alternative would require construction of a large waste incineration plant and would produce a significant amount of air pollution as well as residual ash and other combustion products. A new plant would almost certainly involve substantial wetland impacts and would likely be met with considerable opposition from all levels of government and the local community.

Another potential No-action alternative could involve placing all undivertable waste into a new landfill in Horry County, constructed entirely in uplands. Within the limits of Horry County, it is our belief that no such alternative exists. There are no alternatives, practicable or otherwise, that satisfy the overall project purpose that involve construction of new landfills at a site other than the Highway 90 facility with no associated wetland impacts. Any tract of land in Horry County large enough to satisfy the overall project purpose will without any doubt contain at least some wetlands, and in all likelihood would be about 44% wetlands and other waters as discussed below.

As much as the SWA would like to accomplish the overall project purpose with no wetland impacts, no such alternatives exist that are practicable and meet the overall project purpose.

Off-site alternatives – this alternative consists of those options that would involve creation of additional landfill capacity for 23.4 million tons of nondivertable solid waste over the next 45 years in a facility other than the Highway 90 facility. This could include construction of a new solid waste management facility at a new location in Horry County, or disposal at a facility outside the County.

Off-site alternatives outside of Horry County

In theory the County's solid waste could be shipped to some location outside of Horry County. This alternative is not practicable due to costs and logistics, would likely not be less environmentally damaging, runs contrary to Horry County regulations, and poses significant cultural, social, and political issues.

The existing Highway 90 facility represents a very significant, long-term investment by the citizens of Horry County, and prudent fiscal management would necessitate maximizing the capacity of that facility. In order to promote the financial stability, management, and public and environmental health benefits of the County's existing solid waste management facility, the citizens of Horry County, through their elected representatives to County Council, approved the County's flow control ordinance in 2009 (Horry County Ordinance 02-09). Ordinance 02-09 required that all waste (C & D and MSW) generated in Horry County must be disposed of at the County-owned Highway 90 Facility, with no transfer of such waste out of the County. This ordinance was upheld by State and Federal Courts and is also supported by the Solid Waste Association of North America (SWANA) as detailed in SWANA Technical Policy T-5.2. The ordinance was amended in 2014 to allow C & D waste to be shipped out of the County, but only because

of limitations on the current capacity of the Highway 90 facility, limitations that would be eliminated under the Preferred Alternative.

Setting aside the cultural, social, and political issues of an out-of-County alternative, not to mention local and State regulations that prohibit it, such an approach is not practicable due to costs associated with handling, processing, and the complex logistical requirements involved; would not accomplish the overall project purpose; and would probably not be less environmentally damaging. Any such facility would be required to handle the volume of solid waste projected over the 45 year planning period, so by necessity it would have to be at least 400 acres and potentially up to 1800 acres, depending on if it was an existing or new facility. Given the general prevalence of wetlands and other waters throughout South Carolina and all of its neighboring States, it is likely that significant impacts to such waters would be required.

It is doubtful if such mass transfer of hundreds of thousands of tons of solid waste each year could be accomplished without significant local and regional wetland impacts associated with what would likely be substantial improvements to local and regional transportation systems. Also, any existing out-of-County landfills are already being used for disposal of locally-produced wastes and adding the waste stream of the largest and most populous County in South Carolina would only relocate the Purpose and Need previously established for this project.

Sending Horry County's solid waste to a landfill not owned and operated by the County also creates significant and unacceptable environmental liabilities. The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), is a federal law passed in 1980 to address releases or potential releases of hazardous substances into the environment and provides the framework for the federal government to assess and clean up contaminated sites. In the event that a landfill develops any kind of environmental

contamination problem, CERCLA ensures that the responsible parties are held accountable for cleanup costs. It establishes strict, joint, and several liability for parties involved in any such contamination, including current and past owners, operators, generators, and transporters of hazardous substances. Responsible parties can be held liable for cleanup costs, regardless of fault or negligence, and multiple parties can be held jointly and severally liable, meaning each party can be held responsible for the entire cleanup cost. As a result, waste originating in Horry County and placed in an out-of-County landfill would expose Horry County to potential liabilities resulting from actions and events totally out of its control.

The SWA has been a party to this type of action when it was involved in a settlement regarding electronic waste being delivered to a State-approved contractor that walked away from their obligation to provide recycling services for the materials that were delivered. Currently, the Solid Waste Authority limits the waste that is accepted at the Highway 90 facility and does not accept industrial waste, liquid waste, sludges, asbestos, solar panels, or other materials that could be a potential issue for landfill operations now and in the future. It also provides household hazardous waste collection services to divert these types of materials from disposal. If the SWA were forced to send waste materials to an out-of-County facility, they will be going to a landfill whose operation is beyond its control, resulting in a significant and unacceptable exposure to liability for potential future cleanup costs.

Based on this analysis, Off-site alternatives located outside of Horry County are not practicable due to cost and logistics and would potentially involve significant impacts to US waters exceeding those of the Preferred alternative.

Off-site alternatives within Horry County

There are no existing landfills in Horry County other than the Highway 90 facility, so any off-site alternatives would by necessity involve construction of an entirely new solid waste management facility, requiring at least 1200 acres of land. Construction of such a new landfill facility in Horry County could satisfy the overall project purpose, however, for the reasons discussed below, such an alternative would be neither practicable nor less environmentally damaging than the Preferred alternative.

As described above, construction of a new landfill facility that meets the overall project purpose would require a new site of at least 1200 acres at a location somewhere in Horry County. This amount of land is required to accommodate the expected total volume of waste materials expected over the next 45 years, as well as all the other components of a modern solid waste management facility as discussed above.

To properly assess the potential impacts of this alternative to wetlands and other Waters of the US, we conducted an overall assessment of the conditions within Horry County regarding their distribution and extent. Based on our many years of experience evaluating property throughout Horry County and the rest of South Carolina, large, undeveloped tracts of land are very likely to contain a high proportion of wetlands.

Wetlands are identified on the basis of hydrology, vegetation, and soils, and evaluation of property for wetlands usually starts with analysis of several available mapping products that relate to these parameters. The Natural Resource Conservation Service's soil surveys are a national inventory of soil types identified by a combination of remote and ground data collection. They present an approximate but generally reliable depiction of various soil types, some of which are hydric soils usually associated with wetlands. The Web Soil Survey of Horry County contains a summary of all mapped soil types in the County (Table 1). Adding up all the acreages of mapped hydric soils indicates that about 51% of the

County is mapped as a hydric soil unit. Some of these soil units (Johnston loam and Bohicket silty clay loam) are strongly associated with the largest wetland systems in the County, including the Little Pee Dee River, Waccamaw River, most Carolina Bays, and tidal wetlands, none of which are suitable candidates for consideration of potential landfill sites. When these soil types are removed from the analysis, about 44% of the County is mapped as a hydric soil. Although not a definitive determination, the presence of mapped hydric soil units is a relatively reliable, first-order indicator that wetlands are likely to occur in the mapped areas. This allows a reasonable inference that about 44% of any large tract of land is likely to be wetlands.

Another commonly used mapping product is the National Wetland Inventory (NWI), a program by the U.S. Fish and Wildlife Service that maps and characterizes wetlands, deepwater, and related aquatic habitats across the United States using the Cowardin et al (1979) classification system. Data presented in NWI maps consist of polygons that are derived primarily through analysis of high-altitude aerial photography. These maps also include information about streams and rivers from the US Geological Survey's topographic maps. This information is subject to limited field verification. Like the NRCS soils maps, NWI maps are not a definitive depiction of wetlands, but they are a valuable resource in evaluating the potential presence and distribution of wetlands.

A 2018 analysis of the National Wetland Inventory mapping of Horry County (Xu, H., E. M. Toman, K. Zhao, and J. Baird. (2018), The potential of using LiDAR and color infrared aerial imagery for palustrine wetland typology and change. *GIScience & Remote Sensing*, *55*(6), 882-903) indicated that a total of 109,714 hectares (273,562 acres) of palustrine wetlands are mapped in Horry County, out of a total County area of 725,318 acres, or about 38% of the total land area (Table 2). This estimate is in general agreement with that from the NRCS maps (44% vs 38%).

In addition, Xu et al determined that Horry County contains about 980 acres of NWI-mapped riverine waters, presumably all of which were identified from the USGS topographic map series. This represents about 800 miles of streams and rivers, which very roughly translates to about 16 linear feet of stream per acre of palustrine wetlands. The NRCS soils and NWI wetlands information, when taken together provides an important and internally consistent representation of the extent of wetlands in the County that is also consistent with many years of field experience working there. Data obtained from site-specific wetland assessments of large tracts in Horry County, most of which were verified by the Corps of Engineers provide an additional level of confirmation. One good example is the 1971-acre Highway 90 Facility property, which contains about 800 acres of wetlands (40%, ref. SAC 2007-001187).

A number of other large tracts of land have been investigated for wetlands, and they provide additional confirmation to the general extent of wetlands in Horry County. Examples of properties in Horry County that have been investigated include a 380-acre tract near Aynor (SAC 2000-34273) that contains about 145 acres of wetlands (38%) and 10,250 linear feet of stream. A 357-acre tract near Loris, SC (SAC 2021-02037) contains 98 acres of wetlands (27%). A 306-acre tract near Loris, SC (Horry County TMS 0570001035) is estimated to contain about 157 acres of wetlands (51%) and 2700 linear feet of streams. A 165-acre tract near Wampee, SC (SAC 2006-01429) contains about 70 acres of wetlands (42%). A 383-acre tract near Loris, SC (SAC 2012-00362) contained about 254 acres of wetlands (66%) and 11315 linear feet of streams. Taken in total, these tracts consist of an overall average of about 44% wetlands, a percentage that is remarkably consistent with that indicated by the Soil Survey and NWI maps.

Based on this consistency between the soils maps, NWI maps, and field verified wetland delineations, it is reasonable to conclude that wetlands comprise about 44% of the undeveloped land in Horry County (excluding the largest riverine, Carolina bay, and tidal

wetlands which are almost 100% wetlands), and that percentage is applicable to any tract of land exceeding about 100 acres in size. This data is relevant in any evaluation of on-site versus off-site alternatives, given the relative abundance of wetlands throughout the County. Any such site, if it could be obtained and approved by the various State and County agencies involved in such decisions, would likely involve impacts to about 528 acres of wetlands and probably several thousand linear feet of streams. This level of wetland impact far exceeds what would occur at the Preferred alternative as discussed below.

It should be noted that none of the sites listed above are being considered as potential off-site alternatives because they do not meet the overall project purpose. All of them are too small by themselves, some are already developed, and some are located too near schools or other sensitive areas. Identification of an Off-site alternative that satisfied the overall project purpose would almost certainly elicit a very strong and negative reaction from many of the citizens of Horry County, especially those owning property or living in the general vicinity of a candidate site. Constructing an entirely new solid waste management facility within Horry County would be a politically charged endeavor, and its citizens would justifiably question the economic efficiency of establishing a new facility when the alternative of utilizing the existing facility remains viable.

Although the establishment of a new waste management facility in Horry County may be considered technically possible, and may even be necessary in some distant future, the likelihood of receiving political support for this endeavor from the citizens of Horry County and their elected representatives is highly unlikely. The additional costs and logistical hurdles that must be overcome to establish a totally new facility at a new location render any such alternative not practicable, and such an alternative would certainly not be less damaging than the Preferred, On-site alternative.

On-site alternatives – this alternative consists of those options that involve use of the existing Highway 90 facility property. Based on the expected very large wetland impacts associated with a totally new, off-site solid waste management facility in Horry County, and the very high costs and the numerous and significant obstacles to obtaining and developing such a facility, the only Practicable alternative, and the Least Environmentally Damaging Practicable Alternative (LEPDA) is to construct additional landfill capacity at the Highway 90 facility as described in more detail below.

A brief history of the Highway 90 facility

Initial construction and use of the Highway 90 facility began in 1968 by the City of Conway, SC. It became a County-owned facility in 1972 and has been operated by the SWA since 1990. Over that time the facility has expanded in size and in operations, and now includes two active landfill cells (a 17.3-acre Class Two C&D landfill and a 93.7-acre Class Three MSW landfill); a C&D recycling facility; a materials recycling facility (MRF) for cardboard, paper, scrap metal, and electronics; yard and food waste composting facility; a household hazardous waste facility; a gas-to-energy facility; and a disaster debris facility. The Highway 90 facility has also expanded physically from the original 734 acre property (Horry County TMS 1380005067) and now totals 1942 acres with the purchase of an additional 1176 acres in 1997 (Horry County TMS 1520001032), and 32 acres in 2006 (Horry County TMS 1390004001). The SWA also owns other, smaller properties at various locations throughout Horry County.

The Highway 90 facility has an extensive and somewhat complicated Clean Water Act permitting history, dating back to 1992 (SAC 91-31-195). A FOIA request for all available records for the site produced considerable information on this previous activity, including several jurisdictional determinations, permits, technical analyses, and other records. Included in this are several sets of recorded restrictive covenants, originally dating back to the 1992 permit and subsequently modified and amended in 1998 and 2008.

The record of these regulatory actions is complex and at times confusing, but it is our understanding that that these restrictive covenants protect a total of 243.39 acres of wetlands and 64.86 acres of upland buffers, all of which are located within the original property (Horry County TMS 1380005067) as shown in Figure 5.

The most recent permitting actions involved the multi-phase Piggyback expansion project. Initiated in 2015, the Piggyback expansion project consisted of construction of new landfill cells on top of existing, closed cells. This is an innovative approach to increasing landfill capacity within the existing landfill footprint, with little or no additional impacts to wetlands. As such, the Piggyback project was an important element of the SWA's overall approach to avoiding and minimizing wetland impacts by maximizing the capacity of the existing landfills.

At the time Piggyback expansion project was conceived and implemented, it was expected to provide sufficient capacity for C&D waste disposal until 2032, and for MSW waste disposal until 2050. A Feasibility Study for Phase 3 of Piggyback (the most recent phase) presented estimates for the amount of solid waste expected over a 32 year period between 2018 and 2050. Unfortunately, the actual amount of waste material that is generated in Horry County proved to be much higher than expected at that time. In 2018, the amount of C&D and MSW waste projected for 2024 was 394,157 tons; the actual amount received that year was more than 550,00 tons. In 2018, the total cumulative waste expected by 2050 was 16.5 million tons; current projections based on the most recent data indicate that more than 18 million tons are expected by 2050, and about 35 million tons by 2066.

This dramatic increase in the need for disposal capacity has been driven largely by a rapid increase in population in Horry County. The population of Horry County has more than doubled since 2000, growing from a population of 196,629 in 2000 to about 426,000 in 2025, and this is expected to increase to about 615,000 by 2042. The number of tourists

visiting Horry County between 2018 and 2024 varied between 17 million to over 20 million per year. As a result, Horry County is the most populous County in South Carolina and is expected to remain so for many years to come. During that same time period, the amount of waste generated per person also increased from 6.0 pounds to 6.2 pounds per day.

In order to meet the solid waste disposal requirements of this large and growing population, the only Practicable alternative, and the Least Environmentally Damaging Practicable Alternative (LEPDA) is to construct additional landfill capacity at the Highway 90 facility sufficient to accommodate 18 million tons of solid waste that must be placed in Class Two and Three landfills over the next 45 years.

The Preferred alternative

The Preferred alternative consists of the construction of three new landfill cells on the Highway 90 facility property as described below (Figures 6-12). These three new landfills will provide a total capacity of 23.6 million tons of MSW and C&D waste.

C&D Site 1

C&D Site 1 is an 85-acre area located west of and immediately adjacent to the existing C&D landfill cell, the existing MSW landfill cell, and two closed MSW cells (Figures 6 and 10). It contains 30.7 acres of wetlands and 4.85 acres of upland buffers, all of which are protected under restrictive covenants, and all of which would need to be filled to construct a new C&D landfill cell in this location. A landfill at this site would have a capacity of 4.1 million tons of C&D waste.

C&D Site 2

C&D Site 2 is a 160- acre area located south of the existing landfill (Figures 7 and 11). It contains 45.9 acres of wetlands and 23.32 acres of upland buffers, all of which are

protected under restrictive covenants, all of which would need to be filled to construct a landfill in this location. This site also contains a 600-foot reach of an unnamed tributary to South Prong Steritt Swamp. A landfill at this site would have a capacity of 8.4 million tons of C&D waste.

MSW Site 1

MSW Site 1 consists of 158-acre area located in the southeast end of the Highway 90 facility property (Figures 8 and 12). It contains 25.8 acres of wetlands, none of which are protected under restrictive covenants. A landfill at this site would have a capacity of 11.2 million tons of MSW.

Mitigation sequencing

Mitigation sequencing is the process required under the Clean Water Act in which impacts to wetlands and other waters of the United States are addressed in a hierarchical or sequential order. Impacts must be avoided wherever practicable. Avoidance is the process of preventing impacts to waters of the US by altering a project's location, design, or timing so that sensitive areas are not disturbed. Unavoidable impacts must be minimized through changes in project design to reduce the overall amount of impacts to wetlands. After all practicable measures have been taken to avoid and minimize wetland impacts, the remaining unavoidable impacts must be compensated for, primarily through the restoration and enhancement of wetlands.

Corps regulations at 33 CFR Parts 325 and 332 (Compensatory Mitigation for Losses of Aquatic Resources, also known as the Mitigation Rule) established a preferential hierarchy that is based upon the likelihood of a mitigation plan being both successful and sustainable. Compensatory mitigation provided by an approved mitigation bank or in-lieu fee program is presumed to be environmentally preferable to permittee-responsible mitigation (PRM).

Each of these elements of the mitigation sequencing process are discussed below as they relate to the consideration of the various alternatives.

Avoidance

Complete avoidance of all wetland impacts is not possible under any of the alternatives identified for this project. No-impact alternatives (i.e., those that do not involve construction of new landfill capacity) are not practicable and do not meet the overall project purpose. All Off-site and On-site alternatives (i.e., those that involve construction of new landfill cells) are simply too large to completely avoid wetland impacts. This is a direct consequence of the widespread prevalence of wetlands in Horry County and the size of the area required to accomplish the overall project purpose, which ranges from about 400 acres to over 1800 acres.

To meet the overall project purpose, about 400 acres of land is needed to construct new landfill cells sufficiently large to accommodate the expected 23.4 million tons of waste over the next 45 years. A detailed examination of the Highway 90 facility property was conducted to identify potential sites where additional landfill cells could be constructed, with initial focus on any obvious constraints to landfill construction.

The most obvious of such constraints was previously noted above. All of the wetlands on the 734-acre tract are currently protected under Corps-approved restrictive covenants as wetland preservation mitigation pursuant to previous Corps permits. In almost all situations these protections would constitute an insurmountable barrier to any kind of disturbance. However, as discussed below, the ability to properly manage Horry County's solid waste for the next several generations presents a very significant overall public interest and benefit to the health of its people and the overall environment. Accomplishing the overall project purpose is impossible without some modifications to these restrictions, and this can be accomplished by replacing the mitigation value of certain portions of the

protected area with much higher value wetland restoration mitigation from an approved wetland mitigation bank.

Under SC Department of Environmental Services Regulation 61-107.19, the MSW stored in all Class Three landfills must be located at least 200 feet from the perimeter property boundary. In addition, this regulation imposes a 1000-foot setback from residences, a number of which are located along the western property boundary. These requirements automatically excluded large portions of the overall property from consideration.

Within the areas not excluded by these setbacks, areas with large, contiguous wetlands were likewise ruled out. In particular, the entire eastern edge of the property adjacent to the existing landfill cells is dominated by a large wetland system associated with Steritt Swamp, including portions of South Prong and East Prong Steritt Swamp (Figure 13). This approximately 194-acre palustrine forested wetland includes thousands of linear feet of stream habitat, and much of this area is also likely within the 100 year floodplain, although not formally mapped by FEMA . This system is by far the largest and most important wetland habitat on the SWA property and was avoided for consideration of new landfill cells.

In addition, two clusters of Carolina bay wetlands exist on the Highway 90 property, one near the center of the property about a half mile southeast of the existing landfill (CB 1) and the other in the far eastern end near International Drive (CB 2) as shown in Figure 13. These bays form a cluster of about 100 acres and 87 acres, respectively. Carolina bays are considered Secondary priority areas (vulnerable or uncommon aquatic systems) under the Charleston District's Guidelines for Preparing a Compensatory Mitigation Plan (Mitigation Guidelines). Both areas are also located within portions of the property that are highly constrained by the property setback requirements and are thus too small to accommodate landfill cells large enough to satisfy the overall project purpose.

An additional important planning and design consideration is the presence of the Steritt Swamp Cemetery, also known as the Thompkins Cemetery and Montgomery Cemetery (Horry County TMS 1380005068, Figure 13). This one-acre parcel is located about 100 yards west of the existing landfill and is surrounded by SWA property. The Steritt Swamp Cemetery dates back to at least 1862 and contains numerous burials and memorials associated with the Thompkins and Montgomery families. The presence of this cemetery precludes any future landfill expansion in that location.

The remainder of the SWA property consists of a relatively complex mix of wetlands and uplands, and within this area the three proposed landfill sites were identified. Each of these sites consists mostly of uplands or ponds excavated in uplands.

Minimization

Minimization of wetland impacts is the one key benefits of the Preferred alternative. By utilizing the existing Highway 90 facility and all its various existing non-landfill waste management facilities (all of which would have to be replaced at an off-site alternative), wetland impacts can be reduced from potentially 500 acres or more to about 102 acres.

Wetland impacts have been further minimized by fine-tuning the location and the footprint of each proposed landfill cell. The optimal geometry of a landfill cell is square or slightly rectangular, and any significant deviation from that basic shape results in significant reductions in landfill capacity and increases in cost of construction. Various alternative shapes and sizes within these limitations were considered for each proposed landfill, with the overall goal of utilizing upland areas and ponds previously excavated in uplands within the proposed landfill footprint as much as possible, and minimizing wetland impacts as much as possible.

In addition, the project design further minimizes the overall cell footprint by maximizing the angle of the landfill side slopes (4:1), consistent with all the previously permitted landfill units there. Each landfill cell must allow for constructability during waste placement, seismic stability in the event of an earthquake, stormwater management, and short- and long-term maintenance of the overall structure. A landfill cell with 4:1 side slopes is the steepest practicable design that can accommodate these factors and minimizes the overall footprint as much as practicable.

Through these wetland impact minimization measures, the combined footprint of the three sites contains an average of about 26% wetlands, far below the County-wide average of about 44%.

Compensation

Unavoidable wetland impacts will be compensated in full compliance with the Mitigation Rule as discussed above, and the Charleston District's Guidelines for Preparing a Compensatory Mitigation Plan (Mitigation Guidelines). The latter presents a detailed description of the District's requirements to establish compliance with the Mitigation Rule and other applicable regulations, and in particular the number of mitigation credits that would be required. It is likely that for the proposed fill of 102.4 acres of wetlands, the Required Mitigation Credits will exceed 1300 credits. A final determination will be made once the proposed wetland fills have been thoroughly reviewed during the Corps' Public Notice comment period. This will include replacement mitigation for protected wetlands, and compensatory mitigation for direct impacts.

Compensatory and replacement mitigation for the proposed unavoidable wetland impacts will be provided by purchase of all Required Mitigation Credits from an approved wetland mitigation bank whose service area includes the Highway 90 facility. There are currently two approved mitigation banks whose service areas include the Highway 90 facility. The

Carter-Stilley Wetland and Stream Mitigation Bank (Phases 1 and 2) is located about eight miles to the northwest. The very recently approved Independent Heritage Preserve Wetland Mitigation Bank is located immediately adjacent to the Facility.
It is premature at this time to specify whether only one or both Banks may be involved, and any such decision would be made in coordination with the Corps, the SC Department of Environmental Services, and the various State and Federal resource agencies. It is our understanding and belief that both banks have sufficient approved and projected credits to satisfy the Mitigation Guidelines and other requirements as they may apply to this project. Full compliance with the Mitigation Rule and Mitigation Guidelines should allow for the determination that all unavoidable impacts have been properly and fully compensated and that all significant impacts have been fully mitigated. It should be noted that the proposed wetland impacts under Preferred alternative would occur over an approximately fifteen year period. This will allow for an orderly and sequential takedown of mitigation credits consistent with approved credit releases from the bank(s).

Regarding the wetlands and upland buffers currently protected under restrictive covenants, the construction of C&D Sites 1 and 2 identified under the Preferred alternative would require removal of those protections under approval from the Corps of Engineers and SC Department of Environmental Services. Removal of these protections is warranted and absolutely necessary to achieve the overall project purpose and is in the overall public interest.

These restrictive covenants date back to 1993 and have been amended several times since then. At the time of the initial recording of the covenants, preservation of wetlands for the purpose of compensatory mitigation was an accepted and common practice, and for large projects was often the only option. This was around the time that the first wetland mitigation banks in South Carolina were approved, and the availability of credits was insufficient for large wetland impacts. Since then, the Corps' policies on wetland

preservation as mitigation have changed several times such that it was limited to indirect credit only, and most recently no credit at all for wetland preservation.

As previously discussed, the demand for solid waste disposal capacity has far exceeded projections made at various times over the life of the Highway 90 facility. What originally was a reasonable approach to an immediate problem (satisfying a large mitigation requirement for Corps approval for landfill construction), on-site wetland preservation has now become an obstacle to responding to unforeseen future conditions. Given the realities of existing and future demand for additional landfill capacity, removal of the protections on the wetlands in C&D Sites 1 and 2 is essential, and there are no practicable alternatives that would not involve a protected area (other than MSW Site 1, which by itself is not large enough to satisfy the overall project purpose).

The proposed removal of restrictions and discharge of fill in wetlands at C&D Sites 1 and 2 would occur in the context of achieving a very important public interest goal. There are few, if any other programs that serve the public interest more in terms of environmental protection, public health, and overall societal functioning than the proper management of solid waste. This program is run by the SWA, whose board members are appointed by the elected members of Horry County Council. Its operations are paid for by the citizens of Horry County and millions of tourists from across the United States, and it exists for their benefit, with no profit motive or any other motive other than serving the public interest. Additional information related to the public interest aspects of the Preferred Alternative is presented below.

The SWA is prepared to provide high-quality replacement mitigation in the form of restoration and enhancement credits from an approved mitigation bank to replace the mitigation value of the protected wetlands and buffers, consistent with Corps policy and regulation. As noted above, purchasing restoration credits from an approved mitigation

bank was not an option when the covenants were first recorded, and fortunately under the current circumstances it is possible to provide such high-quality mitigation both for replacement purposes and for the actual permitted impacts. This proposed plan provides the highest quality mitigation possible, and meets the highest standards established for this purpose.

Public Interest Review

All permit applications must be evaluated through a Public Interest Review, as required by 33 CFR 320.4(a). This review ensures that the potential impacts of proposed activities affecting US waters properly balance the public benefits of a project against potential environmental, social, and economic costs. Key considerations include effects on water quality, aquatic and terrestrial habitats, floodplain functions, cultural resources, recreation, navigation, and the overall welfare of the affected community. Each of these is discussed below.

Conservation - the proposed construction of three new landfill cells would impact 102.4 acres of wetlands. These wetlands provide wildlife habitat, groundwater recharge, and limited flood storage. Avoidance and minimization measures have been considered and incorporated, and compensatory mitigation is proposed through the purchase of all required mitigation credits from an approved mitigation bank(s). While wetland loss is a negative factor, the Preferred alternative would result in much less wetland impacts compared to any potential practicable Off-site alternative, and compensatory mitigation provided by the restoration and enhancement of wetlands at an approved mitigation bank would provide long-term conservation benefits and properly balance out the negative impacts of the project.

Economics - The Horry County Solid Waste Authority and its Highway 90 facility provide an essential public service through all of its waste management programs, including waste reuse and recycling, and proper disposal of all undivertable wastes in modern C&D and MSW landfills. Without these services, solid waste management would become an environmental, economic, and logistical nightmare with significant impacts on the economic well-being and vitality of the largest and most populous County in South Carolina, including its 400,000+ residents and the tens of millions of tourists who visit there every year. The proposed expansion is required to accommodate all the solid waste

projected over the next 45 years and represents a substantial County-wide economic benefit.

Aesthetics - The proposed new landfill cells will not be visible from nearby roadways and residences and will be entirely consistent and compatible with the existing land use. Moreover, by providing much needed solid waste management services, the expanded Highway 90 facility will significantly prevent litter and other trash that might otherwise exist along the County's roads.

General Environmental Concerns - The project would result in permanent wetland loss, some wildlife habitat loss and fragmentation, and potential groundwater impacts. The new landfill cells will be constructed in compliance with all State and Federal regulations regarding liners, leachate collection system, and monitoring programs. Compensatory mitigation for wetland impacts and long-term groundwater protection measures provide the best and most effective means to address these potential impacts.

Wetlands - Wetland impacts are unavoidable given the general abundance of wetlands and their configuration on the Highway 90 facility. Wetland impacts have been minimized as much as practicable, and unavoidable wetland impacts will be fully compensated by purchase of restoration and enhancement credits from an approved mitigation bank, including any required replacement mitigation. This will achieve no net loss of wetland function and value.

Historic and Cultural Values – Information from the SC Department of Archives and History (SCDAH) on-line mapping portal SC Arch Site indicates that there are no known cultural resource sites on the property that are eligible for listing under the National Register of Historic Places. A cultural resource survey conducted by Brockington and Associates in 1998 identified a single significant site (38HR423) located on an upland terrace adjacent to South Prong Steritt Swamp about 1600 feet southwest of its confluence

with East Prong Steritt Swamp. This location is well outside of all the proposed landfill cells and will not be affected by the Preferred alternative.

Fish and Wildlife Values – a review of data available on the SCDNR Heritage Trust's SC Natural Heritage Species Review was conducted. A Request for Threatened and Endangered Species Consultation was submitted and the information provided indicates that there are no known occurrences of any Federal or State listed species within the Highway 90 facility property or within a one mile buffer area, with the sole exception of the Bald eagle which is known to occur in the one mile buffer area. Bald eagles have been observed scavenging food there along with many other species of birds. They apparently are not disturbed by the activities there and in fact rely on the landfill for at least part of their diet. No significant impacts are expected to occur to these species.

Flood Hazards and Floodplain Values – None of the proposed landfill cells are located within the 100-year floodplain. No increase in downstream flooding is expected.

Land Use - The project is consistent with County land use planning, which designates the site for solid waste disposal. Expansion supports planned regional waste management strategies.

Navigation - The project is not located on a navigable waterway and will have no effect on navigation.

Recreation - No recreational use occurs on site. Indirectly, continued waste disposal capacity supports maintenance of public parks and recreational facilities that rely on affordable waste management.

Water Supply and Conservation -the Preferred alternative will have no effect on municipal or agricultural water supplies. This project will include groundwater monitoring, landfill liner systems, and stormwater management facilities to protect water resources.

Energy Needs - The Preferred alternative supports energy conservation by avoiding long-distance transport of municipal solid waste. In addition, the Highway 90 facility has a small waste-to-energy plant that burns waste gases to produce electricity.

Safety - The Highway 90 facility and any future expansion include engineered berms, stormwater controls, and daily cover requirements, consistent with State landfill safety standards. No public safety hazards are anticipated.

Needs and Welfare of the People – the Highway 90 facility is publicly owned and operated, and it provides essential waste disposal for all county residents and visitors. Expansion supports long-term public health, sanitation, and environmental compliance and strongly supports the needs and welfare of the residents and visitors of Horry County.

Public Interest Review Balancing Conclusion - the probable impacts of the proposed landfill expansion include the permanent loss of wetlands and associated ecological functions. These losses will be completely offset by compensatory mitigation, protective engineering controls, and long-term monitoring. Beneficial effects include reliable and cost-effective municipal waste disposal, reduced regional waste transport, and continued public ownership of a critical public service. As a result, the Preferred alternative is not contrary to the public interest.

NEPA Review

In accordance with the National Environmental Policy Act (NEPA), the potential environmental consequences of the proposed project and its alternatives must be evaluated before making a permit decision to ensure that environmental impacts are identified, considered, and disclosed, and that practicable measures to avoid, minimize, or mitigate impacts are incorporated into project design.

Based on the scope and anticipated impacts, an Environmental Assessment (EA) is the appropriate mechanism to determine if the proposed project, considered in its entirety, would have significant environmental impacts, and whether a more detailed Environmental Impact Statement (EIS) is required or if appropriate mitigation measures are included such that a Finding of No Significant Impact is appropriate.

Based on the identification and analysis of project alternatives and anticipated environmental impacts; mitigation sequencing of measures to avoid, minimize, and compensate for impacts to wetlands and other aquatic resources; and public interest considerations, the Preferred alternative is consistent with the 404(b)(1) Guidelines, and is the Least Environmentally Damaging Practicable Alternative (LEDPA). In light of the proposed mitigation measures we believe that the environmental impacts of the Preferred alternative will not be significant, and a Finding of No Significant Impact (FONSI) is appropriate.

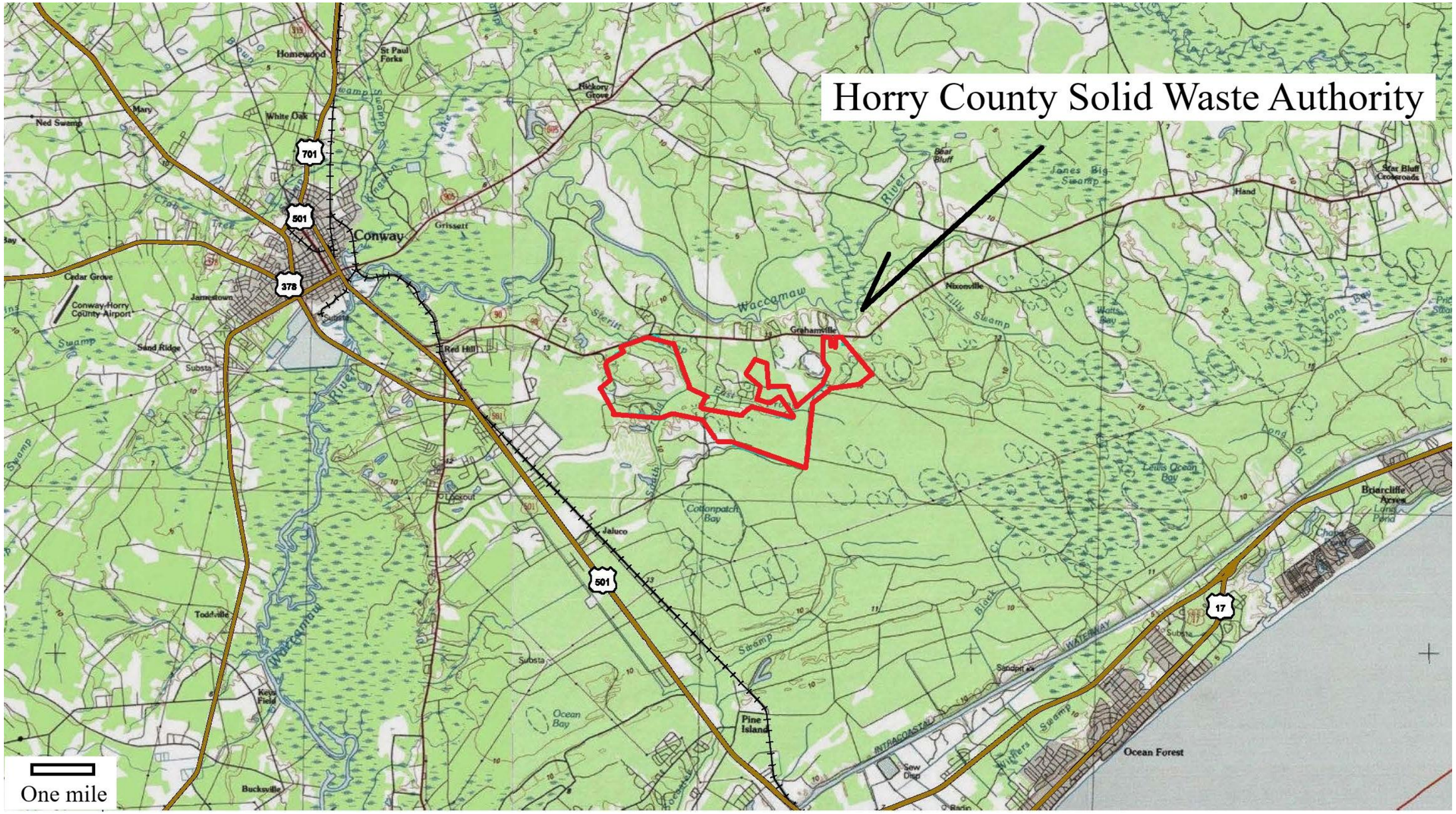

Figure 1. USGS map showing the location of the Horry County Solid Waste Authority's Highway 90 Facility near Conway, SC.

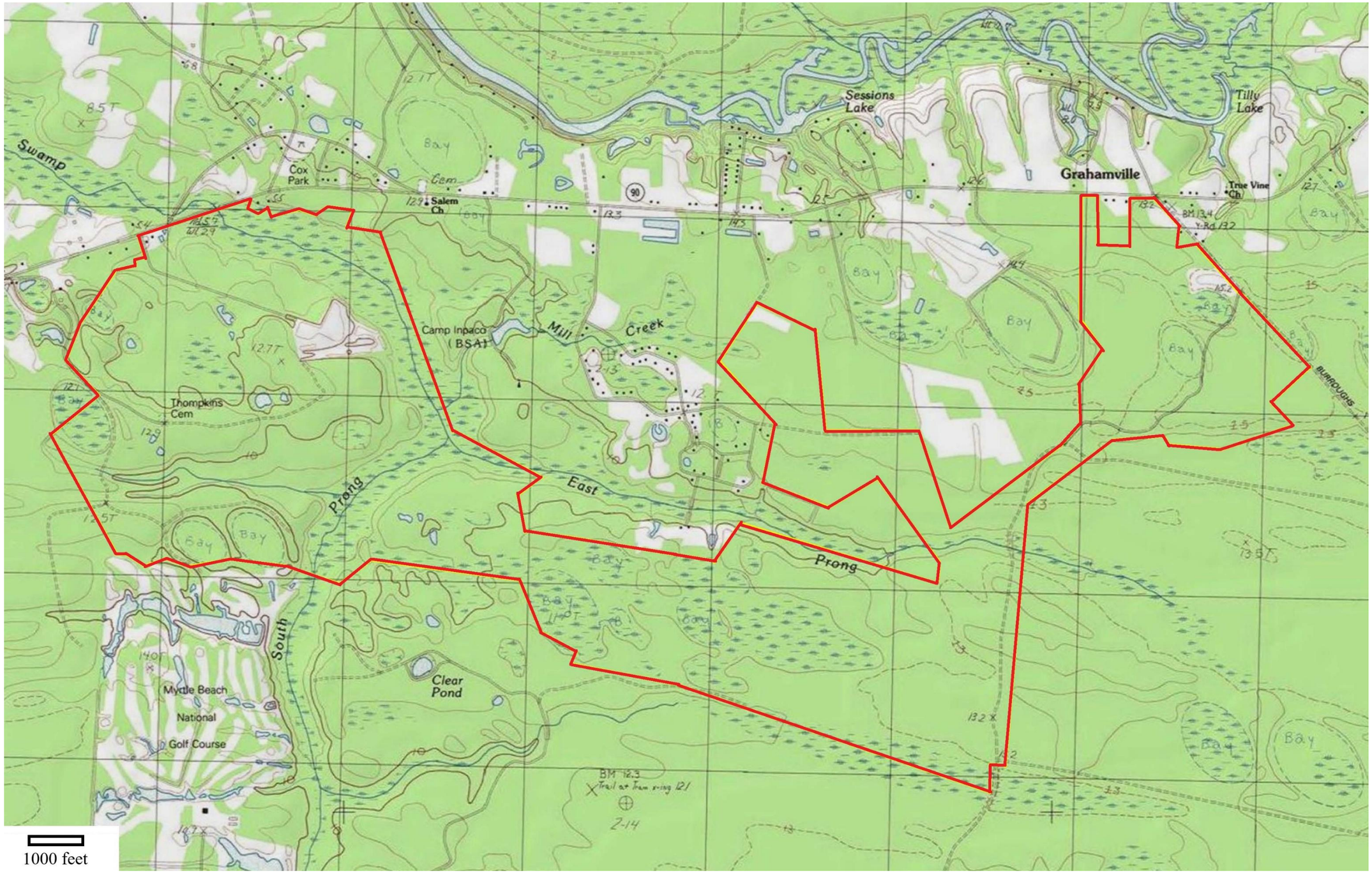

Figure 2. Detail of the USGS map showing the property boundaries of the Highway 90 Facility.

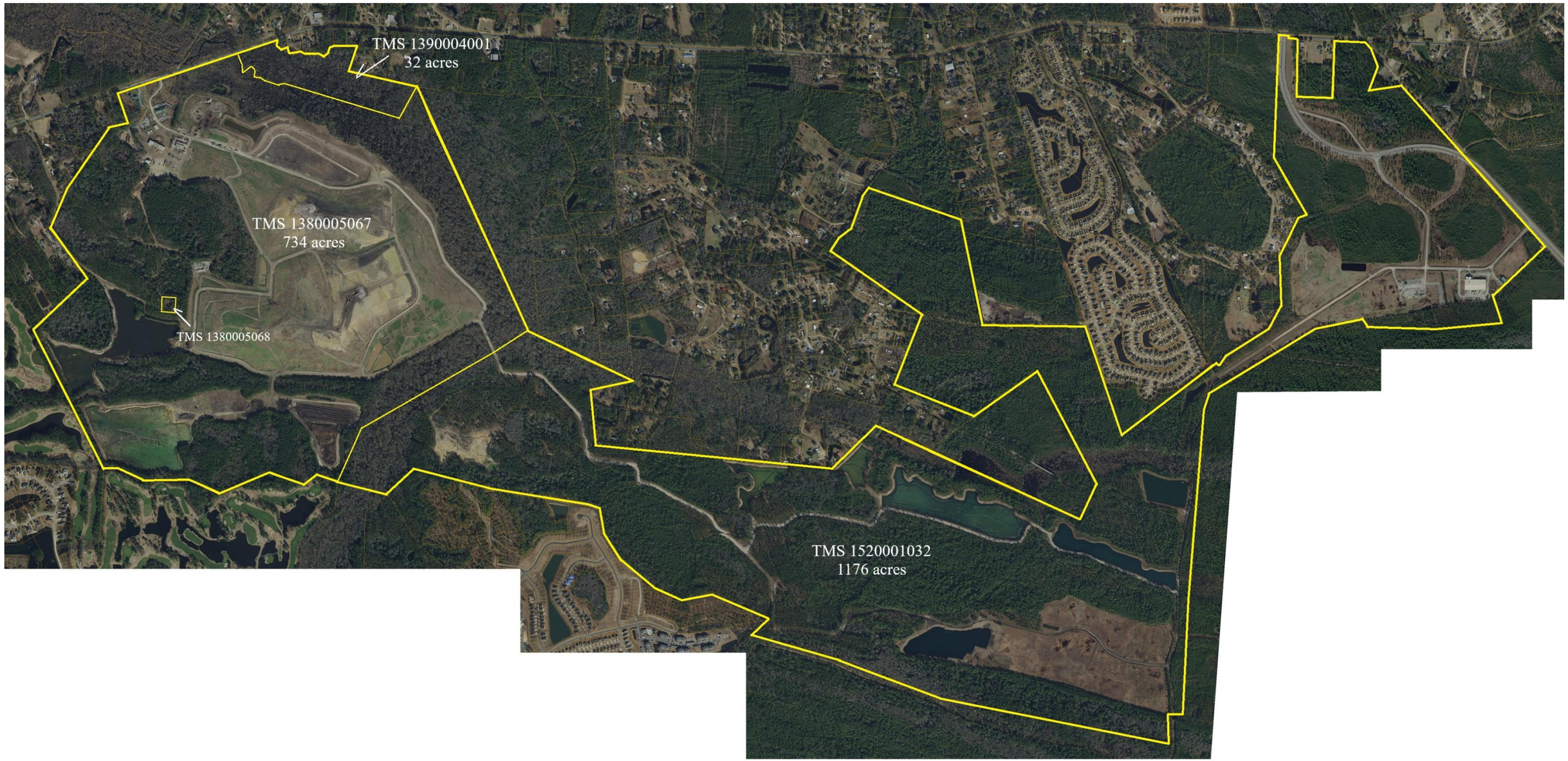

Figure 3. Aerial photograph from the Horry County GIS showing the existing property boundaries of the SWA's Highway 90 Facility, consisting of three parcels totaling 1942 acres and one outparcel.

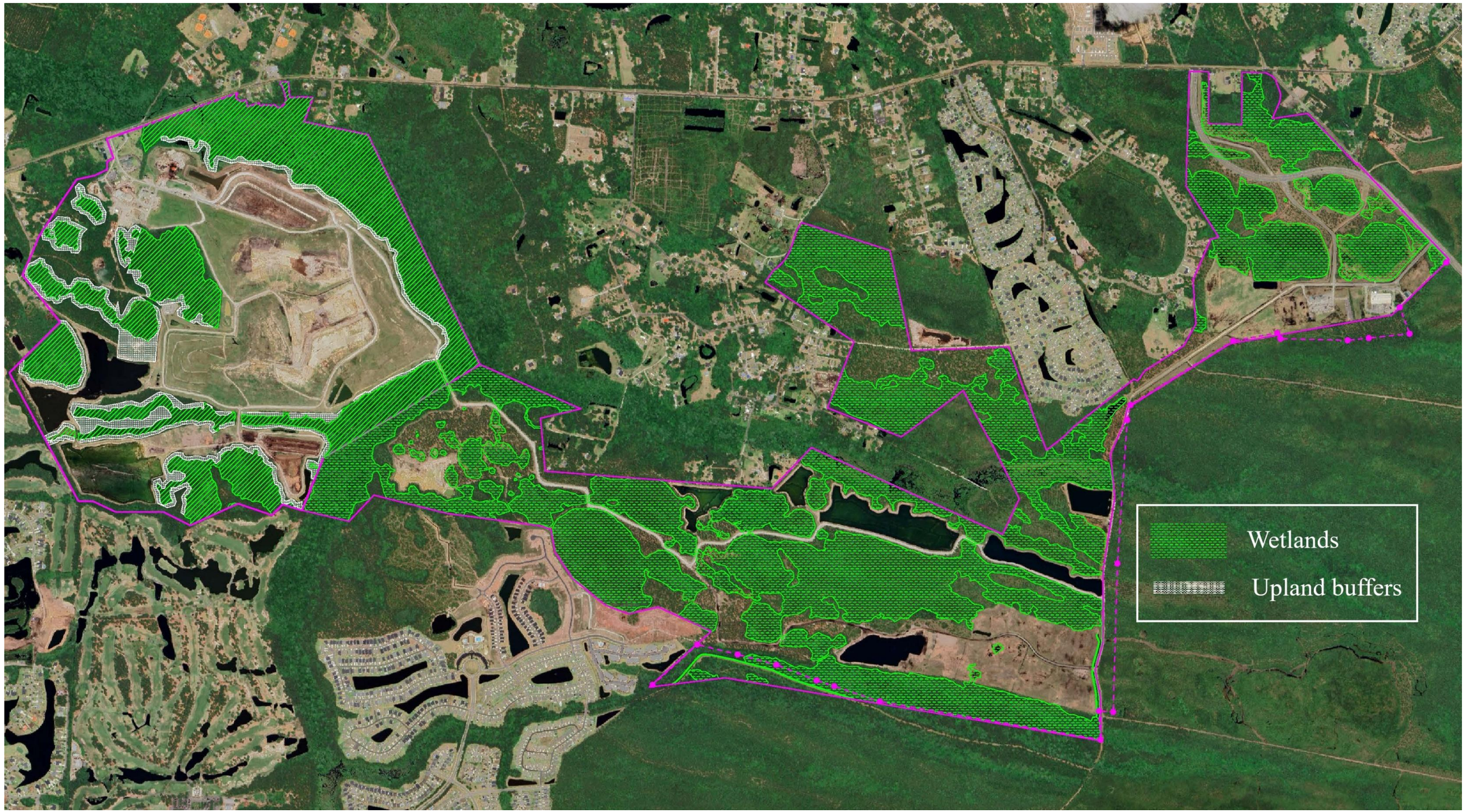

Figure 4. Aerial photograph of the Highway 90 Facility property showing wetlands and upland buffers. Aerial photograph obtained from Google Earth image date July 2023.

Figure 5. Detail of Horry County GIS aerial photograph of the Highway 90 Facility showing the location and approximate boundaries of the existing Class Two and Class Three landfills..

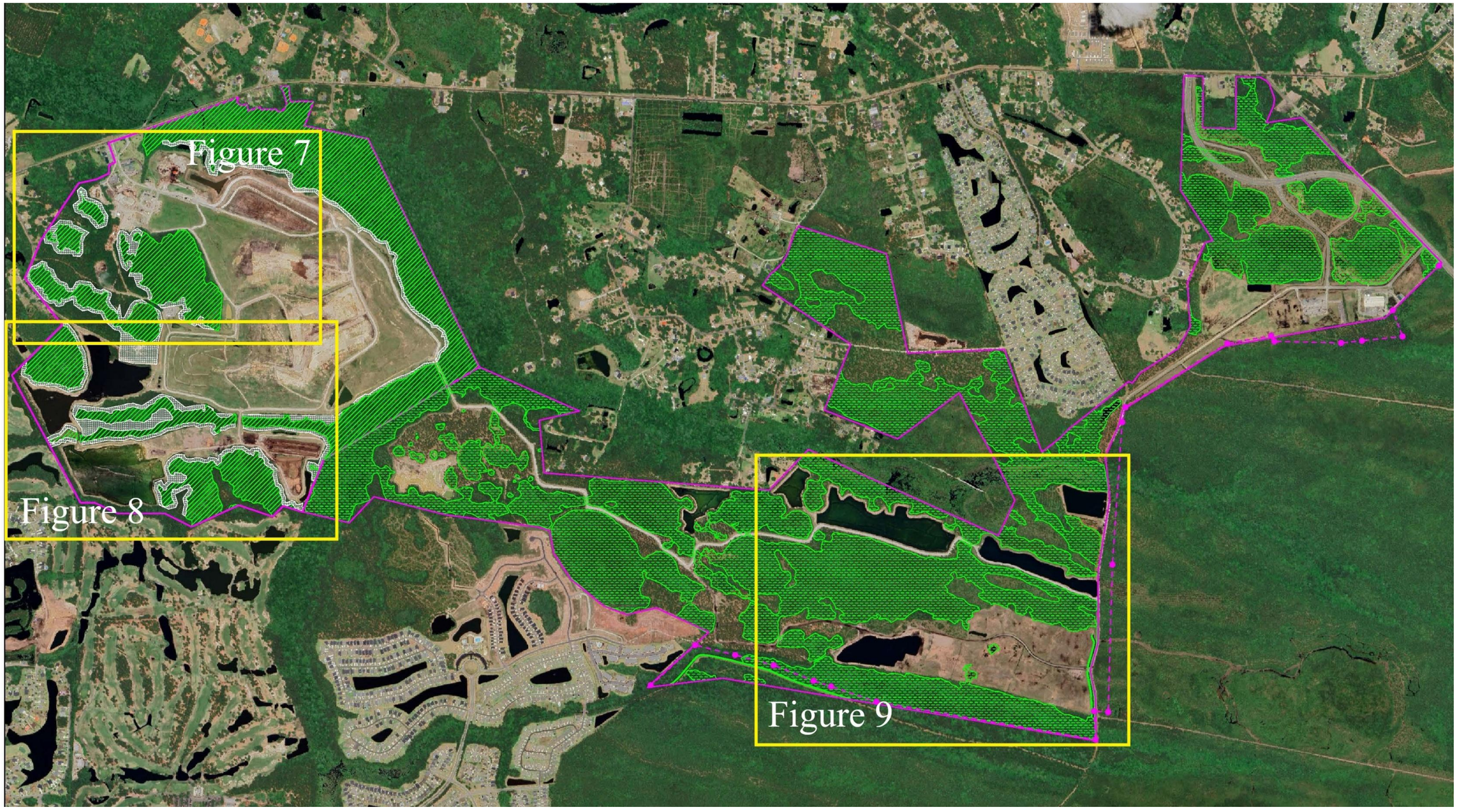

Figure 6. Aerial photograph of the Highway 90 Facility property showing the location of Figures 7-9.

Figure 7. Aerial photograph showing the location of C&D Site 1. This 85-acre area contains 30.7 acres of wetlands and 4.85 acres of upland buffers, all of which are protected under restrictive covenants.

Figure 8. Aerial photograph showing the location of C&D Site 2. This 160-acre area contains 45.9 acres of wetlands and 23.32 acres of upland buffers, all of which are protected under restrictive covenants.

Figure 9. Aerial photograph showing the location of MSW Site 1. This158-acre area contains 25.8 acres of wetlands, none of which are protected under restrictive covenants.

Figure 10. Representative views of wetlands at C&D Site 1. The Highway 90 Facility received about six inches of rain in the week prior to these photographs taken on 16 October 2025.

Figure 11. Representative views of wetlands at C&D Site 2.

Figure 12. Representative views of wetlands at MSW Site 1.

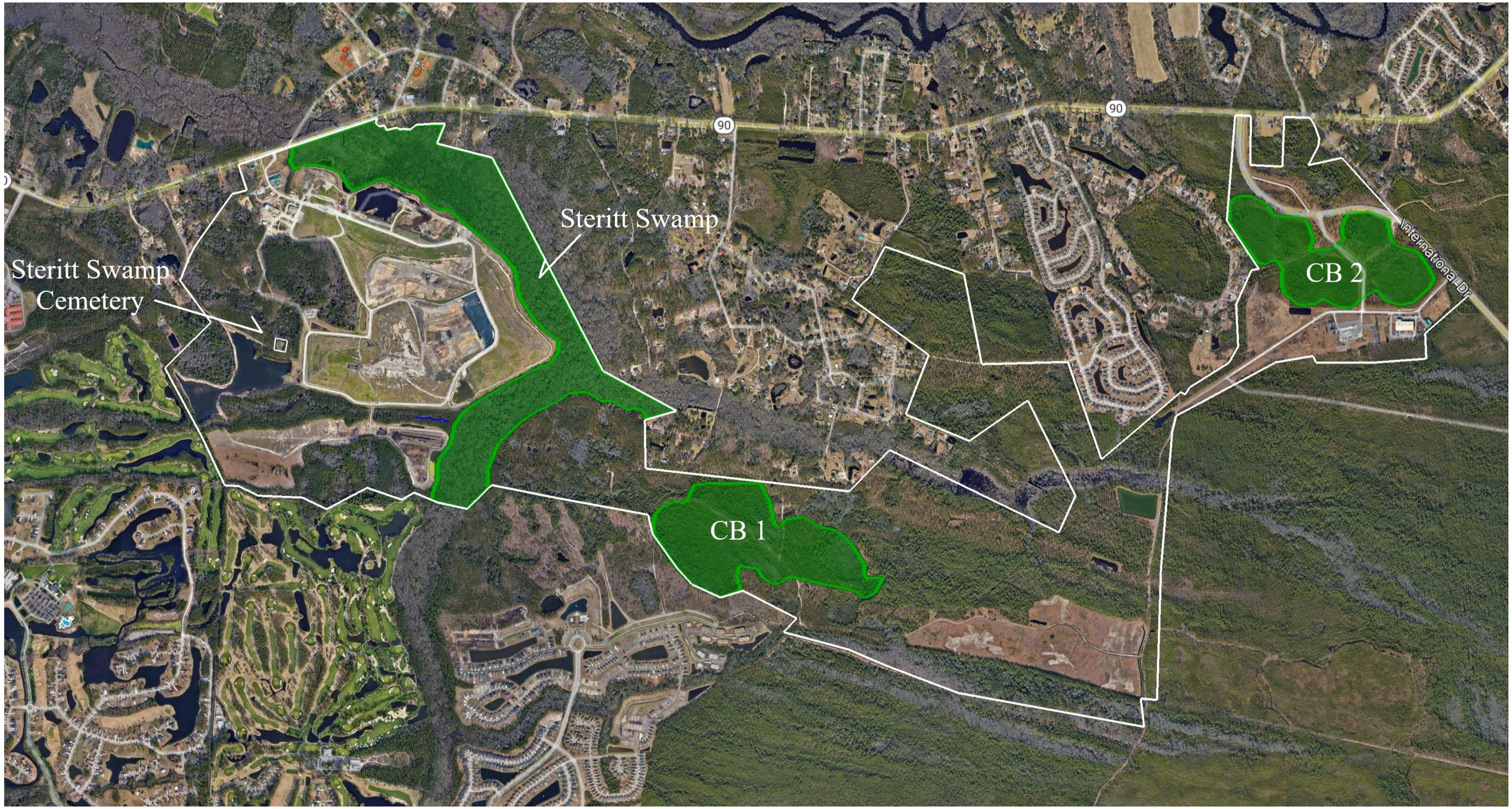

Figure 13. Aerial photograph from Google Earth highlighting Steritt Swamp, Carolina bay complexes 1 and 2 (CB 1 and CB 2), and the Steritt Swamp Cemetery. These features, along with the various property line setbacks discussed were considered as part of the overall effort to avoid wetland impacts.

Table 1. Summary of map soil units from the Horry County Soil Survey.

Legend–Horry County, South Carolina	
Map unit symbol and name	**Map unit acres**
Bc—Beaches	467
Bd—Bladen fine sandy loam	33,612
BnA—Blanton sand, 0 to 6 percent slopes	13,011
Bo—Bohicket silty clay loam	1,734
Br—Brookman loam	4,490
Ce—Centenary fine sand	20,955
ChB—Chisolm fine sand, 0 to 6 percent slopes	58
Co—Coxville fine sandy loam	6,908
DuA—Duplin loamy fine sand, 0 to 2 percent slopes	2,076
Ec—Echaw sand	19,948
EmB—Emporia loamy fine sand, 2 to 6 percent slopes	5,530
EuA—Eulonia loamy fine sand, 0 to 2 percent slopes	29,848
EuB—Eulonia loamy fine sand, 2 to 6 percent slopes	2,795
GoA—Goldsboro loamy fine sand, 0 to 2 percent slopes	32,092
Ho—Hobcaw fine sandy loam	11,615
Hy—Hobonny muck	16,156
Jo—Johnston loam	51,125
KeB—Kenansville fine sand, 0 to 6 percent slopes	36,848
LaB—Lakeland sand, 0 to 6 percent slopes	15,650
Le—Leon fine sand	36,127
Ln—Lynchburg loamy fine sand	12,040
Ly—Lynn Haven sand	22,538
Me—Meggett loam	35,324
NaB—Nankin fine sandy loam, 2 to 6 percent slopes	3,025
NeA—Nansemond loamy fine sand, 0 to 2 percent slopes	34,368
NhB—Newhan fine sand, 0 to 6 percent slopes	2,930
NoA—Norfolk loamy fine sand, 0 to 2 percent slopes	8,588
Og—Ogeechee loamy fine sand	36,725
Os—Osier loamy sand	4,380
Po—Pocomoke fine sandy loam	38,889

Table 1 (continued).

Legend–Horry County, South Carolina	
Map unit symbol and name	**Map unit acres**
RmB—Rimini sand, 0 to 6 percent slopes	2,200
Ru—Rutlege loamy sand	20,033
SfA—Suffolk loamy fine sand, 0 to 2 percent slopes	8,300
SfB—Suffolk loamy fine sand, 2 to 6 percent slopes	2,360
SmA—Summerton fine sandy loam, 0 to 2 percent slopes	1,195
Ud—Udorthents and Udipsamments, well drained	4,655
W—Water	5,266
Wa—Wahee fine sandy loam	15,430
We—Witherbee sand	4,395
Wo—Woodington fine sandy loam	42,733
YaA—Yauhannah fine sandy loam, 0 to 2 percent slopes	40,290
Ye—Yemassee loamy fine sand	16,375
Yo—Yonges fine sandy loam	29,816

Data Source Information

Soil Survey Area: Horry County, South Carolina Survey Area
Data: Version 28, Aug 29, 2024

Table 2. Summary of National Wetland Inventory wetlands in Horry County (from Xu et al, 2017)

	Wetland polygons	Area (ha)	Area (%)
Marine wetlands	0	0	0
Estuarine wetlands	55	247	0.2
Lacustrine wetlands	18	349	0.3
Riverine wetlands	10	397	0.4
Palustrine wetlands	30,388	109,714	99.1
All wetlands	30,471	110,707	100

Table 3. Comparative Matrix of Alternatives

Alternative	Cost	Logistics	Technology	Environmental Impacts	Elimination Reason
No-Action	100% recycling not practicable and would require incineration plant construction.	Logistical challenges with 100% waste diversion or incineration.	Current technology allows only 20% diversion. Incineration limited by non-combustible waste.	Minimal wetland impacts from landfill, but significant air pollution if incineration used. Potential illegal dumping if costs increase.	Not practicable due to high cost, logistical challenges, incomplete technology, and failure to meet overall project purpose.
Off-site – Outside of Horry County	High costs for waste transport and processing. Construction or expansion of offsite facilities expensive.	Complex logistics for transporting millions of tons of waste annually. Compliance with Horry County flow control ordinance required.	Existing landfill tech available, but liability exposure is unacceptable..	Likely similar or greater impacts to wetlands due to new infrastructure and transportation corridors. Potential exposure to CERCLA liabilities.	Not practicable due to cost, logistics, regulatory constraints, environmental liability, and failure to meet project purpose.
Off-site – Within Horry County	Very high costs to acquire 1000–1500 acres. Constructing new facility expensive.	Political and social challenges likely.	Standard landfill technology applicable, but requires new construction.	Wetland impacts likely to exceed 400 acres.	Not practicable due to high cost, logistical and political challenges, and greater wetland impacts than preferred alternative.
On-site / Preferred (Highway 90)	More economical: uses existing infrastructure. 403-acre expansion sufficient for 34 million tons over 45 years.	Transport of wastes to landfill already well established.	Existing landfill technology fully utilized. Potential to continue Piggyback expansion techniques.	Impacts minimized: selected sites avoid large wetlands systems and minimize overall wetland impacts. Some wetlands and upland buffers impacted under restrictive covenants	

Table 4. Public Interest Review Matrix

Factor (from 33 CFR 320.4(a))	On-Site / Preferred	Off-Site (Horry County)	Off-Site (Outside County)	No-Action
Conservation	Minimizes impacts to wetland and wildlife habitat.	~528 acres of wetlands likely impacted; significant habitat loss.	Likely similar or greater wetland impacts; new construction and transport disrupt ecosystems.	No direct wetland impact, but illegal dumping could harm environment indirectly.
Economics	Uses existing infrastructure; cost-effective; reduced transport and construction expenses.	Very high land acquisition and construction costs; operational logistics expensive.	High costs for transport, new facility construction, and regulatory compliance.	Dramatic increase in waste management costs; burden on taxpayers; potential economic losses.
Aesthetics	Limited impact; within existing landfill footprint.	Significant visual impacts from new facility in undeveloped areas.	Similar to in-county off-site; new landfill structures affect landscape.	No direct effect, but illegal dumping could reduce aesthetic quality.
General Environmental Concerns	Controlled operations; minimal wetland fill; regulated leachate and emissions.	Higher water and wetland impacts; greater transport emissions.	Same or higher impacts as on-site; limited oversight of operations.	Potential air pollution if incineration pursued; risk of uncontrolled waste disposal.
Flood Hazards / Floodplain Management / Navigation	Avoids floodplains and navigable waters.	Unknown but potential	Same as in-county off-site; potential floodplain impacts.	No impact.
Shore Erosion / Accretion	New grading and construction may increase erosion and sedimentation.	New grading and construction may increase erosion and sedimentation.	Same as above.	No impact.
Recreation	No effect; existing facility.	Potential restriction of public access to undeveloped lands.	Similar restrictions; increased traffic and development.	No impact, though illegal dumping could reduce usability of natural areas.
Water Supply / Conservation	No impacts expected.	Potential hydrologic disruption	Potential hydrologic disruption..	No direct impact; potential contamination risk from improper waste handling.

Factor (from 33 CFR 320.4(a))	On-Site / Preferred	Off-Site (Horry County)	Off-Site (Outside County)	No-Action
Energy Needs	Efficient; leverages existing infrastructure.	Higher energy use for construction and transport.	Same as above; added transport energy.	Increased energy if incineration implemented.
Safety	None expected under existing protocols.	Limited control over off-site facility safety; liability concerns.	Similar issues; CERCLA liability risk.	Potential public hazards from illegal dumping or incineration.
Food and Fiber Production	No effect on agriculture.	Large land requirement may displace agriculture.	Same as in-county off-site.	No impact.
Property Ownership / Land Use	Within County-owned property; compatible with existing use.	Requires new land acquisition; potential conflicts with owners and residents.	Requires new sites outside County; conflicts likely.	Not applicable.
Other Factors (Cultural, Historic, Social)	Minimal; uses previously permitted facility.	New construction may impact cultural/historic resources; public opposition likely.	Same as above; added political controversy.	Not applicable.

The Solid Waste Authority's Index

Projected population of Horry County for 2025: 426,140

Estimated rank of Horry County 2025 resident population among all SC counties: 4th

Estimated annual growth rate in recent years: 3.48 %

Estimated annual growth rate rank among SC counties: 2nd

Estimated population of Horry County in 2070: 1,250,000

Estimated number of tourists annually in Horry County: 18 million

Estimated rank of number and economic impact of tourists in Horry County: 1st

Amount of solid waste generated in Horry County in 2018: 362,000 tons

Amount of solid waste generated in Horry County in 2022: 394,157 tons

Amount of solid waste generated in Horry County in 2025: 579,00 tons

Amount of solid waste expected over the next 45 year: 43 million tons

Percent of solid waste that is recycled or otherwise diverted in Horry County: 20.1%

Amount of solid waste to be landfilled over the next 45 years: 34.4 million tons

Estimated percent of Horry County that is wetlands: 44%

Percent of the Preferred Alternative sites that is wetlands: 26%