



DEPARTMENT OF THE ARMY
SAVANNAH DISTRICT, CORPS OF ENGINEERS
1590 ADAMSON PARKWAY, SUITE 200
MORROW, GEORGIA 30260-1777

REPLY TO
ATTENTION OF

APRIL 25 2012

Regulatory Division
SAS-2011-01048

JOINT PUBLIC NOTICE
Savannah District/State of Georgia

The Savannah District has received an application for a Department of the Army Permit, pursuant to Section 404 of the Clean Water Act (33 U.S.C. 1344), as follows:

Application Number: SAS-2011-01048

Applicant: Mr. Gerald Allen
Advanced Disposal Services
7915 Baymeadows Way #300
Jacksonville, Florida 32256

Agent: Mr. Brandon Smith
Environmental Services, Inc.
Post Office Box 2383
Savannah, Georgia 31402

Location of Proposed Work: The project site is located at northwestern corner of Forsyth County, with the northern project area boundary being the Forsyth/Dawson County line and the eastern property line being the Etowah River, two miles north of Georgia 369 on the east side of Old Federal Road, near Cumming, Forsyth County, Georgia (latitude 34.3332, longitude -84.2449).

Description of Work Subject to the Jurisdiction of the US Army Corps of Engineers: To expand the existing Eagle Point Municipal Solid Waste and Construction and Demolition Debris Landfill in order to accommodate the proper handling of waste and debris for an additional 25-30 years. The project would impact 0.48 acre of jurisdictional wetland, 0.01 acre of ephemeral channel and a total of 1904.4 linear feet of stream on the 764.1-acre site. The expansion includes the relocation and/or construction of a scale house, maintenance shops, haul/facilities maintenance roads, storm water management areas and structures, borrow area expansion, associated side-slope fill and waste disposal cells. Upon completion of the project, the expansion would add 13 waste disposal cells for a total of 32 cells at full capacity. Much of the existing infrastructure can remain in service for a portion and/or all of the expanded life. The project (including impacts) would be phased over a 25-30 year build out. To offset the impacts from the

proposed project, the applicant proposes to purchase 2.35 wetland credits and 8,677.07 stream credits from Bannister Creek Mitigation Bank.

Please see applicant's Supporting Documentation for more information. The views expressed by the applicant are not necessarily those of US Army Corps of Engineers (USACE).

BACKGROUND

On February 10, 2012, USACE issued the applicant an expanded preliminary jurisdictional determination verifying the delineation. This Joint Public Notice announces a request for authorizations from both the US Army Corps of Engineers and the State of Georgia. The applicant's proposed work may also require local governmental approval.

STATE OF GEORGIA

Water Quality Certification: The Georgia Department of Natural Resources, Environmental Protection Division, intends to certify this project at the end of 30 days in accordance with the provisions of Section 401 of the Clean Water Act, which is required for a Federal Permit to conduct activity in, on, or adjacent to the waters of the State of Georgia. Copies of the application and supporting documents relative to a specific application will be available for review and copying at the office of the Georgia Department of Natural Resources, Environmental Protection Division, Water Protection Branch, 4220 International Parkway, Suite 101, Atlanta, Georgia 30354, during regular office hours. A copier machine is available for public use at a charge of 25 cents per page. Any person who desires to comment, object, or request a public hearing relative to State Water Quality Certification must do so within 30 days of the State's receipt of application in writing and state the reasons or basis of objections or request for a hearing. The application can be reviewed in the Savannah District, US Army Corps of Engineers, Regulatory Division, 1590 Adamson Parkway, Suite 200 Morrow, Georgia 30260-1777.

State-owned Property and Resources: The applicant may also require assent from the State of Georgia, which may be in the form of a license, easement, lease, permit or other appropriate instrument.

US ARMY CORPS OF ENGINEERS

The Savannah District must consider the purpose and the impacts of the applicant's proposed work, prior to a decision on issuance of a Department of the Army Permit.

Cultural Resources Assessment: A cultural resources survey was conducted on the site in 1996, on behalf of the FSL Corporation during the original permitting of the landfill. The survey recorded 21 archaeological sites and seven isolated prehistoric artifact occurrences within the project area. Two sites were recommended for potential eligibility for inclusion in the National Register of Historic Places (NRHP), and the remaining sites were considered ineligible for inclusion in the NRHP. Prior to the survey in 1996, three other structures and a cemetery were

recorded within proximity of the project, but outside of the Area of Potential Effect (APE). A Memorandum of Agreement was issued between the USACE, Georgia Department of Natural Resources-Historic Preservation Division and the applicant for in-place management and preservation of the two eligible archaeological sites in 1999.

Endangered Species: Pursuant to Section 7(c) of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.), we request information from the US Department of the Interior, Fish and Wildlife Service, the US Department of Commerce, the National Oceanic and Atmospheric Administration, and the National Marine Fisheries Service; or, any other interested party, on whether any species listed or proposed for listing may be present in the area.

Public Interest Review: The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. All factors, which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and in general, the needs and welfare of the people.

Consideration of Public Comments: The US Army Corps of Engineers is soliciting comments from the public; federal, state, and local agencies and officials; Native American Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the US Army Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Application of Section 404(b)(1) Guidelines: The proposed activity involves the discharge of dredged or fill material into the waters of the United States. The Savannah District's evaluation of the impact of the activity on the public interest will include application of the guidelines promulgated by the Administrator, Environmental Protection Agency, under the authority of Section 404(b) of the Clean Water Act.

Public Hearing: Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application for a Department of the Army Permit. Requests for public hearings shall state, with particularity, the reasons for requesting a public hearing. The decision whether to hold a public hearing is at the discretion of

the District Engineer, or his designated appointee, based on the need for additional substantial information necessary in evaluating the proposed project.

Comment Period: Anyone wishing to comment on this application for a Department of the Army Permit should submit comments in writing to the Commander, US Army Corps of Engineers, Savannah District, Attention: Megan C. Singleton, 1590 Adamson Parkway, Suite 200Morrow, Georgia 30260-1777, no later than 30 days from the date of this notice. Please refer to the applicant's name and the application number in your comments.

If you have any further questions concerning this matter, please contact Megan C. Singleton, Regulatory Specialist, Piedmont Branch at 678-422-2723.

****Encls**

1. Applicant's Supporting Documentation (3 pgs.)
2. Location Map (1 pg.)
3. Site Selection Criteria (3 pgs.)
4. Alternatives Analysis (8 pgs.)
5. Avoidance and Minimization (1pg.)
5. Offsite Alternatives Map (1 pg.)
6. Onsite Alternatives Map (3 pgs.)
7. Proposed Impacts Map (preferred alternative map) (1 pg.)



2.0 SUPPORT DOCUMENTATION

INTRODUCTION

On behalf of Advanced Disposal Services, (ADS), Environmental Services, Inc., (ESI) is submitting an Individual Permit application pursuant to Section 404 of the Clean Water Act. The applicant is seeking this Individual Permit in order to extend the life expectancy of the existing Eagle Point MSW (municipal solid waste) and C&D (construction and demolition debris) Landfill (EPL) by expanding landfill operations and capacity on to adjoining lands owned by ADS. This project is intended to allow for continued landfill operations for another 25-30 years. The project site is located in the extreme northwestern corner of Forsyth County, off of Old Federal Road, approximately 9.5 miles northwest of Cumming, Forsyth County, Georgia (Appendix 1, Figure 1). The 764.1-acre site is comprised of ± 163 -acres of existing permitted waste disposal area and ± 90 -acres of waste expansion zone surrounding the existing waste disposal area. Another ± 82 -acres is used for landfill operations like borrow material for daily waste cover use, internal roads, parking, stormwater ponds, scale house, offices, and maintenance shops; however are not part of the waste disposal area. The expansion zones are dominated mostly by a vegetation community described as mixed hardwood and scatter pine (Section 4.0). Of the total remaining study area acreage, 10.89-acres is considered freshwater wetland, 4,503.4 linear feet of ephemeral features, 7,135.6 linear feet of intermittent channel, and 7,022.8 linear feet of perennial stream channels exist, with the remainder of the project area being upland. It should also be noted that 11,406.2 linear feet of the Etowah River comprises the eastern and portions of the northern project site boundaries for a total of 18,429 linear feet of perennial stream associated with the study area.

As defined in the following portions of this application, the project involves the construction of additional waste disposal areas and the re-routing and construction of infrastructure necessary for long-term landfill operations. This expansion includes the relocation and/or construction of a scale house, maintenance shops, haul/facilities maintenance roads, stormwater management areas and structures, borrow area expansion, associated side-slope fill, and waste disposal cells. Much of the existing infrastructure can remain in service for a portion and/or all of the expanded life. As a result of the proposed project 0.48-acre of jurisdictional wetland, 0.01-acre of ephemeral features, 1,473.1-linear feet of intermittent channel, and 431.3-linear feet of perennial channel will be impacted by the proposed 25-30 year build out landfill expansion project. To offset these impacts, prior to implementing any jurisdictional impact the applicant will purchase 2.35 wetland credits and 8,677.07 stream credits from Bannister Creek Mitigation Bank



(Section 8.0 herein). The aforementioned chosen mitigation bank is an approved bank with a primary service area covering the project area and is located less than 1-mile from southern project boundary.

PROJECT PHASING

This project will be phased in over time and represents a 25-30 year plan for maximizing landfill operations by obtaining the necessary authorizations for the expansion plan proposed herein. The existing landfill operation consists of 19 permitted waste disposal cells. The expansion would add an additional 13 waste disposal cells for a total of 32 cells at full capacity. The construction of all 13 additional waste disposal cells, and the necessary additional infrastructure, will not be completed all at one time. There will be phasing of cell construction and infrastructure, as existing cells are nearing capacity, to insure there is sufficient cell space to avoid interruption of landfill operations. Therefore the total proposed impacts to wetland and streams will not be realized all at once. As additional cells and infrastructure are constructed any impacts associated with those cells will be completed. It is probable that the impacts proposed for landfill expansion will be spread throughout the 25-30 year anticipated life of the project; however for ease of regulatory project tracking the applicant will complete all Section 404 compensatory mitigation requirements upfront and prior to any jurisdictional impact is implemented, as proposed herein.

ADVANCED DISPOSALS SERVICES PROJECT MISSION

It is the mission of ADS to construct additional waste disposal cells and complete the necessary infrastructure to insure that safe and efficient landfill operations can continue for the projected 25-30 years. This will enable ADS to serve its existing customers and provide the necessary space to secure new customers/accounts within this highly developing area north of Atlanta.

PURPOSE AND NEED

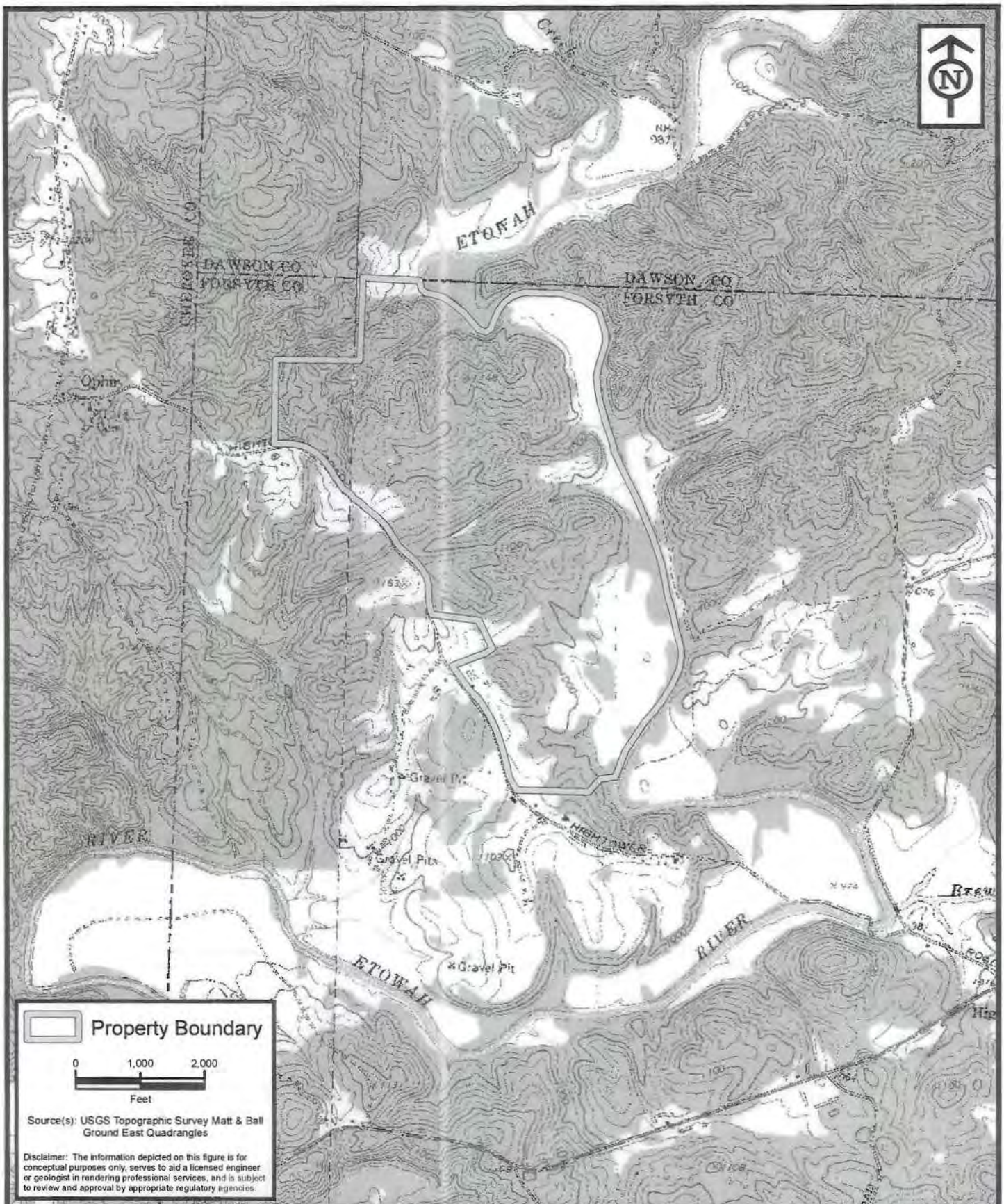
To expand the Eagle Point MSW and C&D Landfill in order to accommodate the proper handling of waste and debris for an additional 25-30 years.

As with any commercial enterprise, the purpose of this project is to expand the existing operational capacity, in terms of waste handling and processing, to enable the applicant to meet customers waste collection needs for the next ± 25 years. Having a proper place to dispose/handle waste is also in the public interest by helping to curb illegal dumping/littering, reduce pollution and assist in maintaining a certain aesthetic quality to the landfill's entire service area. The project's expansion will allow for a minimum of 20 million cubic yards of waste capacity while maintaining a 1-6% increase in tons of waste received per year. This results in the landfill being able to fulfill between 1.2 and 2.3 million tons of



waste per year over the life of this facility. The proposed expansion will allow for another 25-30 years of uninterrupted service with closure projected sometime between years 2037-2042, accounting for the herein assumed tonnage increases.

The need for this project is rooted in the continuous production of waste materials by the residential, commercial, municipal, and industrial sectors of the Greater Atlanta geographic areas. The continuous generation of waste precipitates the need for properly designed waste management/disposal sites. The need is ongoing and ever apparent in our everyday lives. Given a large portion of the population in Georgia lives in and around Atlanta, the need continues to grow in the areas serviced by the EPL. Current trends illustrate an increased need for waste handling services that does not appear to diminish in the next 10-20 years. Additionally, public and regulatory sentiment prefers that existing solid waste facilities are expanded whenever possible as opposed to development of new landfill sites.



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Topographic Map
Eagle Point Landfill Expansion
Forsyth County, Georgia

Project: ES11031.00

Date: Nov. 2011

Drwn/Chkd: TS/BS

Figure: 2



3.0 SITE SELECTION

The most critical evaluation criteria for the applicant in the site selection process included the *size, location, accessibility, adjacent property use and zoning, and environmental conditions*, for the property.

The proposed project would expand an existing landfill facility. In order to meet the project purpose and need, the applicant has indicated that a new stand-alone facility would require a property to be approximately 800-acres in size (for landfill, office, scale, borrow pits, and stormwater ponds) and meet several requirements to be considered a viable location. An expansion property would have to minimally be ± 250 -acres to suffice for an expansion project that provides the scope of capacity increase required for this Greater Atlanta waste handling service area.

Similarly the applicant constrained the site selection to minimize impacts to the environment. When considering possible sites, the applicant evaluated environmental concerns such as: (1) minimal wetland and other Waters of the U.S. coverage; (2) that the project not jeopardize federally listed endangered or threatened species; (3) have a low potential for archaeological and/or historic resources; and (4) be devoid of hazardous material contamination concerns.

Location of the proposed facility is one of the most limiting factors for this project. The disposal of waste material has a cost to benefit ratio that is easily rendered unfavorable by high transportation costs, particularly recently with the exceedingly high cost of diesel fuel. Additionally, proximity to the population base serviced by the landfill is directly linked to the amount of use such a facility will generate. The closer and more *accessible* the landfill is, the more likely the general public is to use the facility as opposed to trespassing and illegally dumping material. Commercial hauling contracts utilizing the landfill is also predicated on proximity as a significant portion of the total cost to dispose of waste is the transportation thereof from point of discard to landfill. Given this project is an expansion of an existing, financially proven and well utilized landfill, the location of the expansion project was largely predetermined to be within lands currently under applicant ownership and other nearby parcels that theoretically could also satisfy the location site selection criterion. The planned area for expansion also has to adhere to all State, County, and adjoining County mandates including but not limited to legality of landfill construction as a whole, property line buffers, and waste disposal area footprint limitations. Expansion projects are also constrained by the existing infrastructure and routing procedure, which can be equally as limiting as the physical landfill location.



Accessibility to and from the facility by road and to applicant's customers geographic area is vital to the economic feasibility of the entire project. Given the volume and corresponding mass of the waste needing to be transported to the landfill, access to roads that are capable of handling these hauls are required. The expansion of the existing landfill will allow for the continued use of current truck routing plans currently used by the applicant and affords new customers the same affordable access.

Adjacent property use is a major consideration when siting a suitable location for a new facility of this type or even an expansion of an existing facility. However EPL has been in operation since 2002 on this site and the overall existing landfill property line will not change as a result of the expansion project. Furthermore immediately northwest of the EPL property boundary in the extreme northwestern corner of Forsyth County, is the closed Forsyth County Landfill. The county landfill operated for many years prior to the construction of the EPL. So adjacent property use has co-existed with landfill operations for 20+ years and there are no foreseeable problems/issues with expansion on lands already owned by ADS. Given there is an existing 200-foot buffer off of the ADS property line that will continue to exist with the expansion plan, a natural visual and noise buffer exists for the adjacent property users. None of the existing land uses would preclude this property from continued or expanded use as a landfill.

Zoning is a continuation of *adjacent property use* and can be a driving factor when siting landfill operations. Landfill operations are only permitted in areas with zoning designations of heavy industrial or similar, or are grandfathered in as an existing use. So lands with this designation reduce one of the many hurdles in establishing a landfill facility. Many municipalities and counties in an attempt to better prepare for both near and long term trends/needs, develop future land use plans that will include or preclude landfill operations. These plans outline a strategy for sustained economic growth while attempting to keep the cultural and aesthetic qualities of the area uncompromised to the greatest practical degree. During the landfill siting process, the applicant accessed all of the available future land use plans for Forsyth, Cherokee, and Dawson Counties (see Appendix 2). It should be noted that there are no landfill or waste management designated areas within the Dawson County future land use map. By expanding an existing landfill operation, within areas that are already currently zoned properly to account for landfill operations, a site selection criterion that commonly eliminates a property from potential use is avoided altogether.

Environmental conditions of the site needed to accommodate the proposed use and stay within the confines of federal, state and local environmental regulations. As requested by the applicant, ESI



evaluated all potential sites for: wetland/stream locations and extents, threatened/endangered species, cultural resources, soil suitability, and potential for hazardous materials. As is common in north Georgia potential stream impacts for the proposed project were usually the most restrictive environmental condition encountered during alternative analysis evaluations.

Upon completion of the site analysis, and in consideration of the applicant's criteria related to the project, it is the opinion of the applicant and their consultants that the defined preferred alternative is the best suited for the proposed expansion project.



6.0 ALTERNATIVE ANALYSIS

The following discussion provides details for eight alternatives, five offsite and three onsite design alternatives. Please find in Appendix 3 the Hodges, Harbin, Newberry & Tribble, Inc. (HHNT) offsite alternative analysis conducted as part of this project during the planning phase. Located in Appendix 1, Figures 4-5 show the location and associated impacts of the five offsite alternatives investigated. Also located in Appendix 1, Figures 6-8 outline the three onsite design alternatives (A-C) that were evaluated. The offsite alternatives would have to be within the general vicinity surrounding the existing EPL in order for it to be considered a feasible expansion alternative. The utilization of existing infrastructure utilized by the EPL is the only feasible option for the proposed expansion and represents the least land consuming and public disturbance option available. It should also be noted that EPL is in the process of constructing a landfill gas to energy project. This project will use captured methane gas that is usually flared or burned up onsite to generate renewable electric energy to the power grid. This enables increased efficiency of onsite power consumption operations and reduces the landfill's environmental carbon footprint during operational life and post-closure. Infrastructure for the landfill gas reclamation to energy facility is extremely specialized and is required to be in close proximity to gas production to justify the capital expenditure and reduce the environment impact of the gas project itself.

All of the proposed onsite and offsite alternatives propose the same type of facilities; however some of the offsite alternatives were significantly limited in size and scope due to property sizes and other site selection criterion constraints that will be further discussed below. The orientation of the necessary features and infrastructure was placed within each alternative to maximize the efficiency of landfill operations and to minimize environmental impacts to the greatest extent practicable.

The information below regarding the offsite alternatives is a summation of an alternative analysis report compiled by HHNT on behalf of the applicant (report located in Appendix 3). This report used a minimum of eighteen parameters to evaluate all offsite alternative locations identified on Figures 4-5. The below text is a brief summary of the offsite alternatives report located in Appendix 3.

Offsite Alternative A: This alternative (601.79-acres) is the property that shares the opposite side bank (eastern) of the Etowah River with the existing EPL (western bank). Offsite alternative A is located directly east of the EPL (Appendix 1, Figure 4). For this alternative to connect to current landfill operations a bridge over the Etowah River would have to be constructed, suitable for heavy industrial traffic. This alone would create another permitting scenario that would involve more wetland and stream



impacts to address and add tremendous costs to the project. This parcel is not owned by EPL, is not zoned heavy industrial (A1, agriculture), is not accessed from Old Federal Road, does not have existing infrastructure suitable for landfill operations, geologic suitability is unknown, and Etowah River setbacks would reduce usable area. Furthermore, the proximity of this alternative to the Dawson County line is not in accordance with provisions set forth in GA law O.C.G.A. 12-8-25. The future land use plan for Forsyth County also plans for low density residential zoning designation into year 2025. Offsite alternative A is also bordered to the east by the Monclair Community Subdivision. If this parcel was used for landfill operation the landfill gas reclamation to energy facility proceeding on the existing EPL would require significantly more design and expenditures; thereby rendering it economically unfeasible for use on the proposed expansion operations. To properly access this parcel a new entrance would have to be constructed on Nicholson Road thereby increasing heavy truck traffic on an existing residential road. In order to accommodate the truck traffic and their associated loads, Nicholson Road would have to be completely upgraded thereby further increasing the cost of this alternative.

The wetland and stream impacts necessary for proposed development of the landfill expansion involves the construction/relocation of a scale house, maintenance shops, haul/facilities maintenance roads, stormwater management areas and structures, borrow area expansion, associated side-slope fill, and waste disposal cells would be more than those proposed at the preferred site (Appendix 1, Figure 5). In comparison to the preferred alternative, Offsite Alternative A would require $\pm 8,530$ linear feet of stream impact (4.5 times that of preferred alternative). Offsite Alternative A was found to be unacceptable due to the necessary amount of stream impacts (including the additional permitting scenario and impacts associated with the bridge crossing over the Etowah River, necessary to efficiently link the two parcels together), land acquisition cost, zoning issues, dramatically higher infrastructure costs, and required Nicholson Road improvements. Despite the fact that Offsite Alternative A provides for double the available airspace for waste disposal as the preferred alternative the aforementioned limiting factors preclude this alternative from being a viable and realistic option.

Offsite Alternative B: This alternative, comprised of 225.15-acres, is bisected by Old Federal Road and abuts the very southern tip of the existing EPL (Appendix 1, Figures 4-5). Offsite Alternative B is owned by Forsyth County and is reserved as green space thereby making this parcel virtually unattainable for the proposed use of this property. Alternative B has existing zoning (A1, agriculture), size, and usable waste disposable area (significantly lower volume/acre than the preferred alternative) that is not congruent with being able to achieve the project purpose and need. Furthermore, no infrastructure currently exists for this parcel and its' use would necessitate the closing or re-routing of Old Federal Road, both of which



makes this alternative economically unfeasible. If this parcel was used for landfill operation the landfill gas reclamation to energy facility proceeding on the existing EPL would require significantly more design and expenditures; thereby rendering this ongoing waste to energy project economically unfeasible for use on the proposed expansion operations. Due to all the aforementioned issues and environmental constraints being somewhat equal to that of the preferred alternative, geologic unknowns, and zoning as green space by the County, all result in Offsite Alternative B being unacceptable for the proposed landfill expansion project. Offsite Alternative B in conjunction with all of the aforementioned site limitations will achieve volume/acre of waste capacity 85% below that of the preferred alternative.

Offsite Alternative C: This alternative, comprised of 96.59-acres, directly abuts Old Federal Road, and the Cherokee/Forsyth/Dawson County line (Appendix 1, Figure 4). It is located approximately 1.30-miles northwest of the existing entrance to the EPL in Cherokee County. This parcel is not owned by EPL, is not zoned heavy industrial (currently zoned agricultural and landfill operations are not allowed in this zoning in Cherokee County), does not have existing infrastructure suitable for landfill operations, geologic suitability is unknown requiring additional testing, three county line setbacks of ½-mile would render this whole parcel unusable (unless all three counties would grant approval for a variance), and has a smaller footprint and a lower volume/acre than the preferred alternative. The airspace that this alternative would allow is significantly below project needs and results in financial returns to the applicant that would not cover project costs. The future land use plan for Cherokee County also states this area is to be zoned as rural places (to promote light agricultural/residential uses) in keeping with existing conditions. If this parcel was used for landfill operation the landfill gas reclamation to energy facility proceeding on the existing EPL would require significantly more design and expenditures; thereby rendering it economically unfeasible for use on the proposed expansion operation. To properly access this parcel a new entrance would have to be constructed on Old Federal Road thereby increasing heavy truck traffic further into Cherokee County and requiring improvements to the roadway to accommodate the heavy truck traffic in this area.

The wetland and stream impacts necessary for proposed development of the landfill expansion involves the construction/relocation of a scale house, maintenance shops, haul/facilities maintenance roads, stormwater management areas and structures, borrow areas, associated side-slope fill, and waste disposal cells would be more than those proposed at the preferred site. In comparison to the preferred alternative which is 646-acres in size versus the 96.59-acre Offsite Alternative C, this alternative would require more stream impacts, even taking into account property size comparisons (Appendix 1, Figure 5). Offsite Alternative C would require ±2,840 linear feet of stream impact (49% higher than preferred alternative).



Offsite Alternative C was found to be unacceptable due to its' smaller size thus greatly reducing the volume/acre far below the preferred alternative, the amount of stream impacts necessitated, zoning issues, land acquisition costs, increased infrastructure needs/costs, and overall economic unfeasibility. Furthermore, the three county line setbacks the parcel would be subjected to nearly single-handedly make this parcel impractical to develop as a landfill according to Georgia Solid Waste Management Regulations; all while achieving a volume/acre of waste capacity 73% below the preferred alternative.

Offsite Alternative D: This alternative, comprised of 281.64-acres, directly abuts the Cherokee/Forsyth/Dawson County line (Appendix 1, Figure 4). It is located in Dawson County north of the preferred alternative. This parcel is not owned by EPL, is not zoned heavy industrial (currently zoned residential-agricultural, there is **no zoning distinction in Dawson County that permits a MSW landfill**), does not have existing infrastructure suitable for landfill operations, geologic suitability is unknown requiring additional testing, three county line setbacks of ½-mile would render this whole parcel unusable (unless all three counties would grant approval for a variance), and has a smaller footprint and a lower volume/acre than the preferred alternative. The future land use plan for Dawson County plans for rural residential for this tract. As stated above there are no areas within Dawson County that have a zoning distinction allowing for landfill/waste disposal operations. If this parcel was used for landfill operation the landfill gas reclamation to energy facility proceeding on the existing EPL would require significantly more design and expenditures; thereby rendering it economically unfeasible for use on the proposed expansion operation. To properly access this parcel roads leading to the site would have to be improved to accommodate heavy/industrial traffic as well as construct a new entrance off of River Bend Gun Club Road, thereby increasing heavy/industrial truck traffic further into Dawson County.

The wetland and stream impacts necessary for proposed development of the landfill expansion involves the construction/relocation of a scale house, maintenance shops, haul/facilities maintenance roads, stormwater management areas and structures, borrow areas, associated side-slope fill, and waste disposal cells would be more than those proposed at the preferred site (Appendix 1, Figure 5). In comparison to the preferred alternative which is 646-acres in size versus the 281.64-acre Offsite Alternative D, this alternative requires more stream impact and significantly more wetland impacts than the preferred alternative. Offsite Alternative D requires ±2,240 linear feet of stream impacts (18% higher than preferred) and ±10.49-acres of wetland impact (26 times that of preferred alternative). Offsite Alternative D was found to be unacceptable due to the necessary amount of wetland and stream impacts, land acquisition costs, increased infrastructure needs/costs, lack of zoning in Dawson County that permits a



MSW landfill, and the property is subjected to same three county line setback issue as previously described; all while achieving a volume/acre of waste capacity 44% below the preferred alternative.

Offsite Alternative E: This alternative is comprised of 350.26-acres and is located in Forsyth County on the west side of Old Federal Road adjacent to the preferred alternative (Appendix 1, Figure 4). This parcel is not owned by EPL, is not zoned heavy industrial (currently approximately half is zoned residential and the other portion is zoned agricultural), does not have existing infrastructure suitable for landfill operations, geologic suitability is unknown, there is a Cherokee County line setback that would render a good portion of this parcel unusable, and it has a smaller footprint and a lower waste volume/acre than the preferred alternative. The future land use plan for Forsyth County also plans for a medium density residential zoning designation into year 2025. If this parcel was used for landfill operation the beneficial landfill gas reclamation to energy facility proceeding on the existing EPL would require significantly more design and expenditures; thereby rendering it economically unfeasible for use on the proposed expansion operation. To properly access this parcel a new entrance road would need to be constructed off of Old Federal Road to the west.

The wetland and stream impacts necessary for proposed development of the landfill expansion involves the construction/relocation of a scale house, maintenance shops, haul/facilities maintenance roads, stormwater management areas and structures, borrow areas, associated side-slope fill, and waste disposal cells would be more than those proposed at the preferred site (Appendix 1, Figure 5). In comparison to the preferred alternative which is 646-acres in size versus the 350.26-acre Offsite Alternative E, this alternative requires vastly more stream and wetland impacts than the preferred alternative. Offsite Alternative E requires double the stream impacts (2.1x) at $\pm 3,945$ linear feet of stream impact and ± 5.76 -acres of wetland impact (over 14 times that of preferred alternative). Offsite Alternative E was found to be incompatible with project needs due to the necessary amount of stream/wetland impacts, improper zoning for landfill operations, a county imposed property line setback reducing available lands, land acquisition cost, and increased infrastructure needs/costs; all while achieving a volume/acre of waste capacity 38% below the preferred alternative.

Onsite Alternatives: All of the onsite alternatives propose the same type of facilities, those necessary for the proper handling and containment of solid waste. However the onsite alternatives still have to fit within the existing operational flow and current buffers off of the property and county lines. These onsite constraints limit the feasible number of onsite alternatives while still accommodating the intended goal of this expansion project. The orientation of the necessary features and infrastructure were placed within



each alternative to maximize the efficiency of landfill operations and to minimize environmental impacts to the greatest extent practicable while maintaining a safe and efficient operation.

Onsite Alternative A: This design alternative (Appendix 1, Figure 6) included a larger boundary of landfill expansion than the preferred alternative, by expanding further to the north and south increasing the footprint of the waste disposal areas thus increasing the waste volume/acre potential. This waste area expansion to the north resulted in encroachment of the Dawson County ¼-mile waste buffer, which virtually precludes this aspect of the alternative. The extent of the borrow areas in the northwestern portions of the tract, necessary for operations, were also larger than those proposed on the preferred alternative design. The expanded footprints for both the waste disposal and borrow areas also increased the amount of infrastructure necessary to accommodate landfill operations. This site plan also encroaches upon a culturally significant site that was located and preserved during initial landfill construction, and a conservation easement area also enacted during initial landfill construction adjoining the Etowah River. Onsite Alternative A has an increased waste volume/acre than that of the preferred alternative; however in doing so significantly increased stream impacts to 2,842 linear feet (49% higher than preferred) and necessitated the same wetland impacts as the preferred alternative (Appendix 1, Figure 6). This alternative also would require 10.1-acres of conservation easement area to be impacted, 1.4-acres of preserved cultural resource site to be impacted, and 741 linear feet of ephemeral channel to be impacted (3.4 times than preferred alternative). The preferred alternative does not impact any conservation easement or cultural resources site. Onsite Alternative A was determined to be unacceptable due to expansion and operational footprint extending into the aforementioned conservation easement areas and the ¼-mile Dawson County line buffer zone, and substantially larger stream impacts required versus that of the preferred alternative.

Onsite Alternative B: This design alternative (Appendix 1, Figure 7) comprised of a re-design of the expansion and operational waste disposal footprint. This footprint reduced the size and waste volume/acre capacity of the landfill in its' northern reaches, thereby eliminating the Dawson County ¼-mile buffer encroachment issue described in the Onsite Alternative A discussion above. The encroachment into the aforementioned preserved cultural resource site and its' associated buffer in the northern third of the property, and encroachment into the conservation easement area along the Etowah River were eliminated. In this footprint reduction, intermittent stream impacts were further reduced versus Onsite Alternative A. This reduction still necessitated borrow areas be constructed in the north portion of the property resulting in a total alternative impact of 2,564 linear feet of stream and 741.3 linear feet of ephemeral channel (Appendix 1, Figure 7). This second alternative was a significant step in



the Section 404 (b)(1) process by reducing stream impacts and foregoing the need to disturb any conservation easements or preserved cultural resource sites. However, the total impacts associated with Onsite Alternative B still necessitated identical wetland impacts, 35% more stream impacts and 3.4 times the ephemeral channel impacts as the preferred alternative. Onsite Alternative B was found to be unacceptable due to stream impacts and their associated mitigation requirements.

Onsite Alternative C: This design alternative (Appendix 1, Figure 8) comprised a total design shift to avoiding borrow area impacts in the northern property area and concentrated on waste landfill expansion capacity further south towards the extreme southern property boundary. In doing so the landfill footprint expansion zone now impacted a stream and wetland system in this area that was previously not impacted by the existing landfill, would encroach upon a different wetland preservation conservation easement adjoining the Etowah River, and would directly impact a different preserved cultural resource site in this area that was recorded from initial landfill development. Onsite Alternative C has an increased waste volume/acre than that of the preferred alternative; however in doing so significantly increased stream and wetland impacts. As illustrated in Appendix 1, Figure 8, this design alternative necessitated stream impacts totaling 5,628 linear feet (2.95 times that of the preferred alternative) and drastically more wetland impacts of 10.3-acres (21.5 times that of the preferred alternative). This alternative also would require 31.7-acres of conservation easement area to be impacted, 1.0-acres of preserved cultural resource site to be impacted, and 1,735.7 linear feet of ephemeral channel to be impacted (8 times than preferred alternative). The preferred alternative does not impact any conservation easement or cultural resources site. Onsite Alternative C was determined to be unacceptable due to expansion and operational footprint extending into the aforementioned conservation easement areas and substantially larger wetland and stream impacts required versus that of the preferred alternative.

Preferred Alternative: This *Preferred Alternative* site plan (Appendix 1, Figure 3) is the culmination of diligent design and redesign efforts that were outline above in the eight other on and offsite alternatives evaluated for this landfill expansion project. In order to further reduce impacts, Onsite Alternative A and B were modified by fine-tuning the expansion zone footprint and altering the position and extent of the borrow areas. By doing so further reduction in wetland/stream impacts and no encroachment into protected areas was accomplished with acceptable reduction in waste volume/acre capacity. In order to make sure opportunities for further impact minimization did not exist in the southern portion of the landfill property, Onsite Alternative C was developed. However this effort was fruitless due to significant increases in both wetland and stream impacts resulting, and furthermore two protected areas would also be negatively encroached upon. As described throughout this Section of the application, this represents a



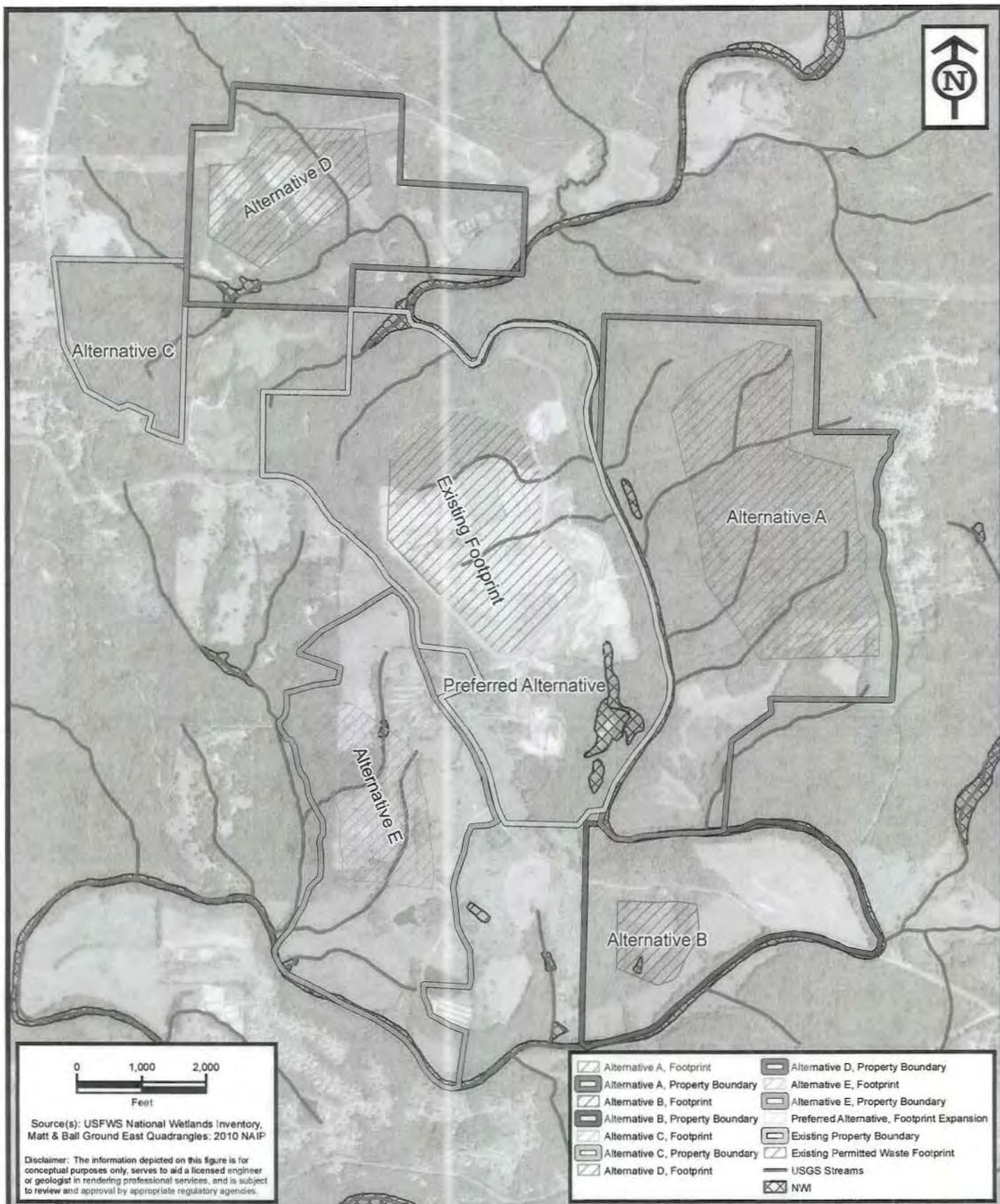
significant reduction in the amount of impacts versus all on and offsite alternatives. All onsite alternatives outlined above represent larger functional alternatives creating more waste volume/acre and/or available borrow material for the purposes of landfill operations for the applicant. However, impacts to ecological and currently protected areas (conservation easements and cultural resource sites) were too high in the opinion of the project team and the *Preferred Alternative* was developed. The *Preferred Alternative* will require the impact of: 217.4-linear feet (0.01-acre) of ephemeral channel, 1,473 linear feet of intermittent channel, 431.3 linear feet of perennial stream, and 0.48-acre of jurisdictional wetland.

The *Preferred Alternative* results in significantly less ecological and cultural resource impacts than those needed for the previously described alternatives. In consideration of the operational practices, safety, financial, and environmental reasons discussed above, the *Preferred Alternative* proposed herein represents the best option for the applicant and for the surrounding environment.



7.0 AVOIDANCE & MINIMIZATION OF IMPACTS

As discussed in the preceding Section 6.0, the applicant has performed an extensive alternative analysis that included a proactive evaluation of stream and wetland impacts at each alternative and for numerous configurations the of onsite design plans feasible for this landfill operation. Given the commonality of streams and associated wetlands within northern Georgia, particularly streams, it was quickly determined that avoiding stream and wetland impacts for an expansion of an existing operation of this type and magnitude was not feasible. Therefore, the applicant dedicated themselves to minimizing stream and wetland impacts, as outlined in Section 6.0 of this application. As outlined herein, the project team believes that they have complied with the conditions of Section 404(b)(1) of the Clean Water Act.



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Offsite Alternatives
Eagle Point Landfill Expansion
Forsyth County, Georgia

Project: ES11031.00

Date: Feb. 2012

Drwn/Chkd: TS/SB

Figure: 4



| Onsite Alternative | Waste Footprint | Waste Disturbance Limit | Stormwater Ponds | Soil Borrow | Impacts | | | | | |
|--------------------|-----------------|-------------------------|------------------|-------------|----------------|-------------------|----------------|--------------|----------------------------|-------------------------|
| | | | | | Ephemeral (ft) | Intermittent (ft) | Perennial (ft) | Wetland (ac) | Conservation Easement (ac) | Cultural Resources (ac) |
| A | 121.2 | 377.9 | 12.0 | 42.7 | 741.3 | 1,950.7 | 891.3 | 0.48 | 10.09 | 1.36 |
| B | 90.3 | 348.1 | 12.7 | 42.7 | 741.3 | 1,673.0 | 891.3 | 0.48 | 0.00 | 0.00 |
| C | 130.0 | 394.5 | 16.8 | 38.2 | 1,735.7 | 5,033.0 | 594.7 | 10.29 | 31.74 | 0.97 |
| Preferred | 60.3 | 350.2 | 12.4 | 38.1 | 217.4 | 1,473.0 | 431.3 | 0.48 | 0.00 | 0.00 |



- Property Boundary (±646-ac)
- Existing Conservation Easement (±105.2-ac)
- Cultural Resources Site (±2.4-ac)
- Waste Disturbance Limit
- Existing Waste Footprint
- Proposed Waste Footprint
- Stormwater Management Pond
- Proposed Soil Borrow Area
- Impacted Ephemeral Stream
- Impacted Intermittent Stream
- Impacted Perennial Stream
- Impacted Conservation Easement
- Impacted Cultural Resources Site
- Impacted Jurisdictional Wetland

0 500 1,000
Feet

Source(s): 2010 NAIP Aerial, HHNT ACAD-EP-2011 Conceptual

Disclaimer: The information depicted on this figure is for conceptual purposes only, serves to aid a licensed engineer or geologist in rendering professional services, and is subject to review and approval by appropriate regulatory agencies.



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Onsite Alternative A
Eagle Point Landfill Expansion
Forsyth County, Georgia

Project: ES11031.00
Date: Feb. 2012
Drwn/Chkd: TS/SB
Figure: 6



| Onsite Alternative | Waste Footprint | Waste Disturbance Limit | Stormwater Ponds | Soil Borrow | Impacts | | | | | |
|--------------------|-----------------|-------------------------|------------------|-------------|----------------|-------------------|----------------|--------------|----------------------------|-------------------------|
| | | | | | Ephemeral (ft) | Intermittent (ft) | Perennial (ft) | Wetland (ac) | Conservation Easement (ac) | Cultural Resources (ac) |
| A | 121.2 | 377.9 | 12.0 | 42.7 | 741.3 | 1,950.7 | 891.3 | 0.48 | 10.09 | 1.36 |
| B | 90.3 | 348.1 | 12.7 | 42.7 | 741.3 | 1,673.0 | 891.3 | 0.48 | 0.00 | 0.00 |
| C | 130.0 | 394.5 | 16.8 | 38.2 | 1,735.7 | 5,033.0 | 594.7 | 10.29 | 31.74 | 0.97 |
| Preferred | 60.3 | 350.2 | 12.4 | 38.1 | 217.4 | 1,473.0 | 431.3 | 0.48 | 0.00 | 0.00 |



- Property Boundary (±646-ac)
- Existing Conservation Easement (±105.2-ac)
- Cultural Resources Site (±2.4-ac)
- Waste Disturbance Limit
- Existing Waste Footprint
- Proposed Waste Footprint
- Stormwater Management Pond
- Proposed Soil Borrow Area
- Impacted Ephemeral Stream
- Impacted Intermittent Stream
- Impacted Perennial Stream
- Impacted Jurisdictional Wetland

0 500 1,000
Feet

Source(s): USFWS National Wetlands Inventory,
Matt & Ball Ground East Quadrangles: 2010 NAIP

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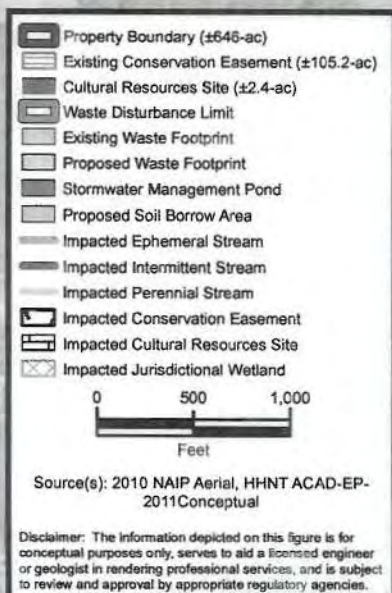
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Onsite Alternative B
Eagle Point Landfill Expansion
Forsyth County, Georgia

Project: ES11031.00
Date: Feb. 2012
Drwn/Chkd: TS/SB
Figure: 7



| Onsite Alternative | Waste Footprint | Waste Disturbance Limit | Stormwater Ponds | Soil Borrow | Impacts | | | | | |
|--------------------|-----------------|-------------------------|------------------|-------------|----------------|-------------------|----------------|--------------|----------------------------|-------------------------|
| | | | | | Ephemeral (ft) | Intermittent (ft) | Perennial (ft) | Wetland (ac) | Conservation Easement (ac) | Cultural Resources (ac) |
| A | 121.2 | 377.9 | 12.0 | 42.7 | 741.3 | 1,950.7 | 891.3 | 0.48 | 10.09 | 1.36 |
| B | 90.3 | 348.1 | 12.7 | 42.7 | 741.3 | 1,673.0 | 891.3 | 0.48 | 0.00 | 0.00 |
| C | 130.0 | 394.5 | 16.8 | 38.2 | 1,735.7 | 5,033.0 | 594.7 | 10.29 | 31.74 | 0.97 |
| Preferred | 60.3 | 350.2 | 12.4 | 38.1 | 217.4 | 1,473.0 | 431.3 | 0.48 | 0.00 | 0.00 |



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Onsite Alternative C **Eagle Point Landfill Expansion** Forsyth County, Georgia

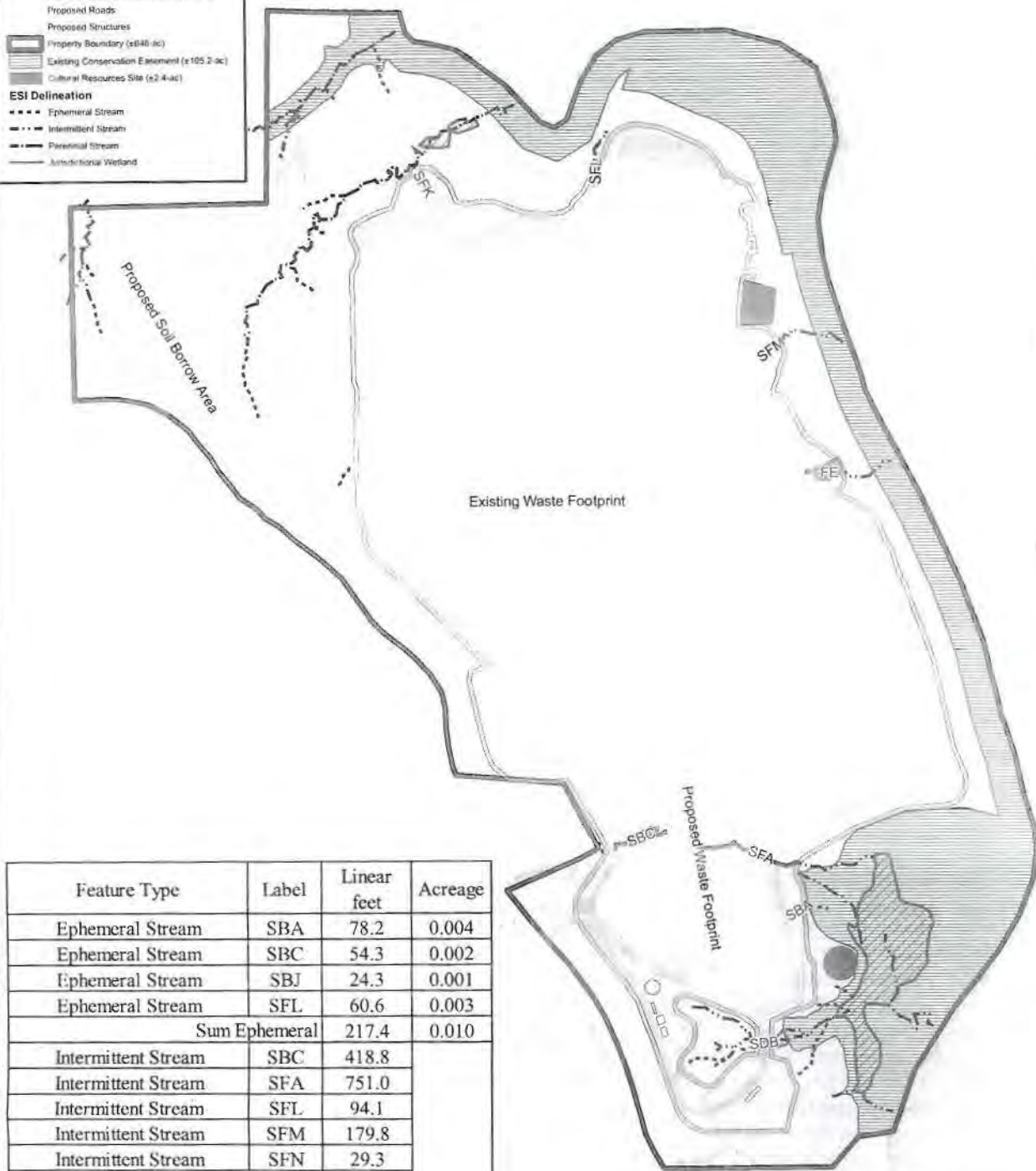
Project: ES11031.00
Date: Feb. 2012
Drwn/Chkd: TS/SB
Figure: 8

Proposed Impacts

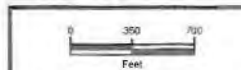
- Impacted Ephemeral Stream
- Impacted Perennial Stream
- Impacted Jurisdictional Wetland
- Proposed Disturbance Limit (±350.2-ac)
- Existing Waste Footprint (±163.7-ac)
- Proposed Waste Footprint (±390.3-ac)
- Proposed Soil Borrow Area (±38.1-ac)
- Stormwater Management Pond (±12.4-ac)
- Proposed Roads
- Proposed Structures
- Property Boundary (±846-ac)
- Existing Conservation Easement (±105.2-ac)
- Cultural Resources Site (±2.4-ac)

ESI Delineation

- Ephemeral Stream
- Intermittent Stream
- Perennial Stream
- Jurisdictional Wetland



| Feature Type | Label | Linear feet | Acreage |
|----------------------------|-------|-------------|---------|
| Ephemeral Stream | SBA | 78.2 | 0.004 |
| Ephemeral Stream | SBC | 54.3 | 0.002 |
| Ephemeral Stream | SBJ | 24.3 | 0.001 |
| Ephemeral Stream | SFL | 60.6 | 0.003 |
| Sum Ephemeral | | 217.4 | 0.010 |
| Intermittent Stream | SBC | 418.8 | |
| Intermittent Stream | SFA | 751.0 | |
| Intermittent Stream | SFL | 94.1 | |
| Intermittent Stream | SFM | 179.8 | |
| Intermittent Stream | SFN | 29.3 | |
| Sum Intermittent | | 1,473.0 | |
| Perennial Stream | SDB | 114.0 | |
| Perennial Stream | SFK | 317.3 | |
| Sum Perennial | | 431.3 | |
| Jurisdictional Wetland | FB | 273.3 | 0.061 |
| Jurisdictional Wetland | FE | 568.8 | 0.363 |
| Jurisdictional Wetland | BA | 379.6 | 0.059 |
| Sum Jurisdictional Wetland | | 1,221.7 | 0.483 |



Source(s): 2010 NAD Aerial, 199NT 6/2/2011 (ACD-EP-2011 Conceptual)

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Proposed Wetland & Stream Impacts Eagle Point Landfill Expansion Forsyth County, Georgia

Project: ES11031.00
Date: Feb. 2012
Drawn/Chkd: TS/BS
Figure: 3