

# Rapp Road Landfill Eastern Expansion

**Fourth Supplemental  
Draft Environmental Impact Statement (SDEIS)  
City of Albany, New York**

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*CHA Project Number: 12206*

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# **RAPP ROAD LANDFILL**

## **EASTERN EXPANSION**

### **Fourth Supplemental Draft Environmental Impact Statement (SDEIS) City of Albany, New York**

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**November 7, 2008**

**SECTION 1.0**  
**EXECUTIVE SUMMARY**

## 1.1 INTRODUCTION & BACKGROUND

The need to expand the City of Albany's Rapp Road landfill was first discussed with the NYS Department of Environmental Conservation (NYSDEC) late in 2005, as it became apparent that the proposed C-2 landfill in the Town of Coeymans would not move forward in a timely fashion due to federal and State wetland permitting issues. The City investigated a number of alternatives for the expansion of the facility that would continue to provide relatively low cost, reliable and environmentally sound solid waste disposal for the residents of the Capital District. These alternatives include the following and are illustrated on SDEIS Figure 1-1:

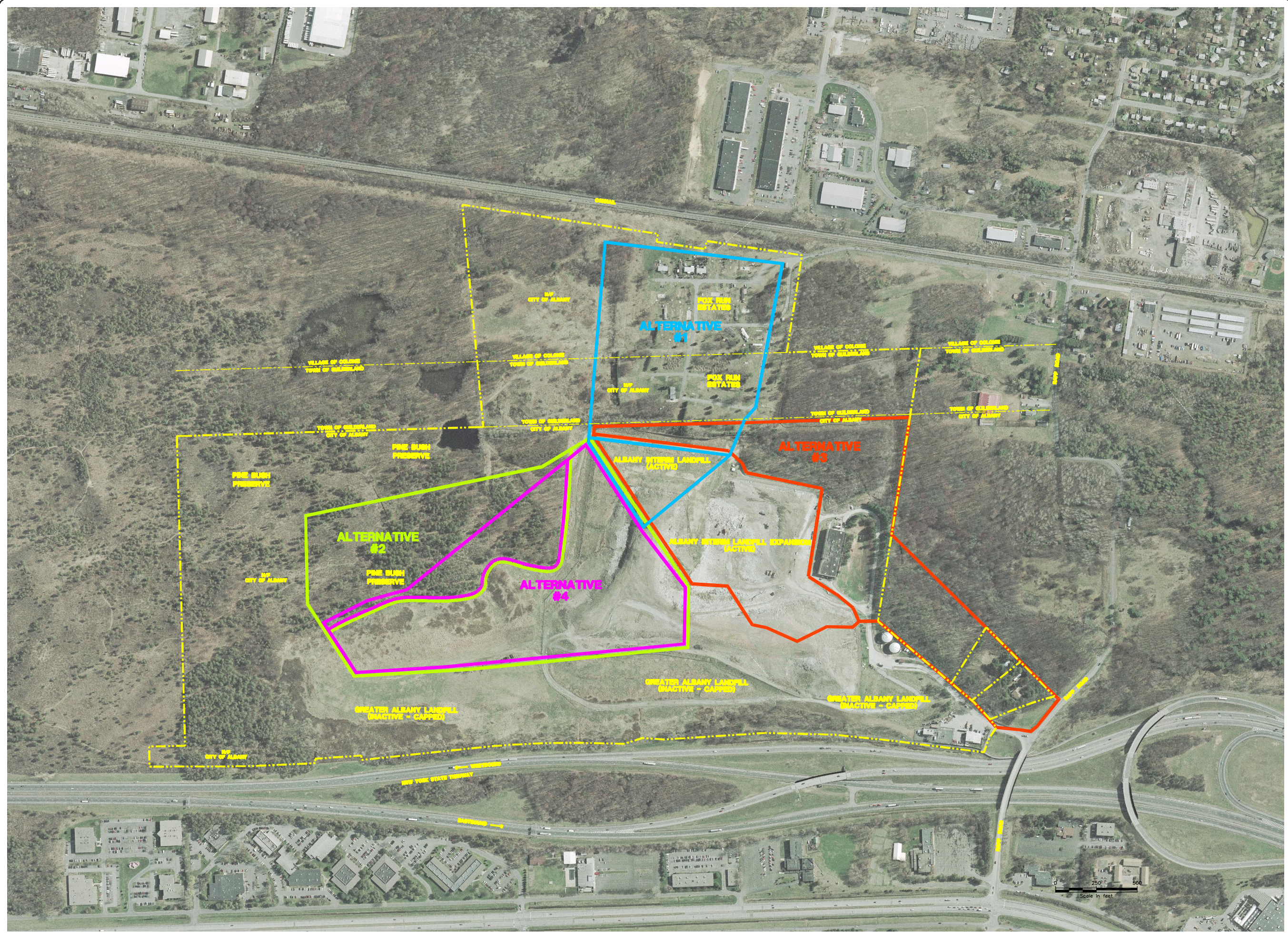
**Alternative 1** – expansion of the landfill northward onto the Fox Run Mobile Home Park property, which was owned by the City. Utilization of the mobile home park would provide the City approximately 8 years of additional capacity beyond the current projected capacity of the existing landfill.

Once a conceptual plan was developed for this alternative, the City sought input from NYSDEC and other stakeholders. However, because many groups had expressed concern about this expansion alternative, the City agreed to consult with the stakeholders, specifically, the Albany Pine Bush Preserve Commission and The Nature Conservancy, in order to discuss the matter. These groups both felt that the expansion would further fragment the Pine Bush. In addition, since the lands were ultimately intended to be dedicated to the Pine Bush, they felt it would not be appropriate to have a landfill on this property.

As a result of the concerns expressed, the City investigated additional alternatives for the expansion of the landfill. These alternatives included potential expansions on both the western and eastern sides of the landfill.

**Alternative 2** - included a western expansion footprint of approximately 24 acres of new landfill area and an over fill of previously landfilled area. The new 24 acre area was selected so there was consistency with Alternative 1. While Alternative 2 would provide for approximately 15 years of landfill capacity and was entirely on City owned lands, it was readily apparent that the potential loss of 24 acres of lands that had been dedicated to the Pine Bush could result in a significant environmental impact.





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RAPP ROAD LANDFILL  
 EASTERN EXPANSION  
 EXPANSION ALTERNATIVES

Issue Date: 7/07    Project No.: 12206    Scale: AS SHOWN

Figure 1-1



**Alternative 3** was then considered which involved an eastern expansion of approximately 13 acres of new landfill area and the over fill of previously landfilled area. The overfill portion of this proposal currently contains existing landfill infrastructure including a transfer station structure used for the collection of recyclables, a stormwater management basin, several landfill leachate pumping stations and associated piping, the landfill equipment fueling depot, a landfill gas flare, and the landfill cover material mixing equipment. All of these facilities would require relocation to accommodate the expansion in this area, which required additional lands. Initially it was determined that this alternative would require the City to obtain a small portion of a larger parcel of property owned by New York State just east of the landfill property for various landfill related infrastructure. The State-owned land is known as the “Ice Age Associates Property” and was obtained by the State in a land swap with a local developer. (NOTE: It was later determined that the new expansion could be designed without the need for landfill infrastructure to be located on the State-owned land.)

The City met with The Nature Conservancy and the Albany Pine Bush Preserve Commission (APBPC) in December, 2005, to discuss the three Alternatives. During the meeting, a question was raised about Alternative 2, and whether the City could “live with less land” on the western side of the landfill. No resolution of this issue was reached during the meeting, and in a letter dated January 9, 2006, The Nature Conservancy indicated that while they were sympathetic to the City’s needs, they could not support any of the alternatives discussed during the December meeting.

**Alternative 4** - As a result of the meeting and The Nature Conservancy’s letter, the City proposed Alternative 4, which included only approximately 10 acres of new landfill area and an over fill of previously landfilled area. The City made a presentation of this alternative at the Pine Bush Commission’s March 16, 2006 meeting. Initial reactions seemed positive, although there were concerns expressed regarding the precedent of “undedicating” the land, and the value of the land as Pine Bush habitat. The City subsequently obtained from the Pine Bush Commission a Temporary Revocable Permit to allow for the preliminary investigations to begin in an around the area of Alternative 4, upon condition that it undertake an identical investigation of Alternatives 1 and 3.

Alternative 4, including the new 10 acre landfill footprint and the overfill of previously landfilled area, would provide the City approximately 8 years of additional landfill capacity. This capacity is consistent with the capacity that could be obtained from Alternative 1. As the investigations proceeded, it became obvious that viable pine barrens habitat would either be directly or

indirectly impacted by this alternative and that both APBPC and The Nature Conservancy would likely oppose the expansion.

**Preferred Alternative** – Given the potential significant impacts of a northern or western expansion, the City decided to re-evaluate Alternative 3. The initial proposal for Alternative 3 called for the relocation of the landfill infrastructure onto an approximately 10-acre portion of the Ice Age Associates parcel immediately adjacent to the landfill’s eastern boundary. However, following further investigation, it was determined that none of the land would be required to accommodate facilities. All of the infrastructure that would require relocation would fit on the residential parcels to the east of the landfill, closer to the landfill entrance on Rapp Road. This made the alternative more realistic although no less costly.

The relocation of the facilities is anticipated to cost the City an additional \$6 million beyond the normal construction costs for a landfill expansion of this size. Despite this, the City recognized this alternative (referred to as the Eastern Expansion) as the most reasonable and environmentally sound solution to manage solid waste while alternatives are being evaluated in a Solid Waste Management Plan Update and the City and other communities within the Albany New York Solid Waste Energy Recovery System (ANSWERS) Solid Waste Management Planning Unit prepare for the costs associated with a future without landfill capacity at Rapp Road. The following summarizes factors which lead to this conclusion:

- Expansion area includes only City-owned land that has not been dedicated to the APBPC.
- Expansion area consists of generally disturbed communities that do not provide habitat for rare species known to occur in the Pine Bush.
- Expansion area was not identified in the APBPC Management Plan as viable pine barrens and was identified only as suitable for buffer.
- Discussions with APBPC staff suggest that the expansion area is a much better solution than the other alternatives; although it is noted that APBPC has not endorsed any alternative, neither have they opposed this alternative to date.
- It will cost the City an additional \$6 million to relocate infrastructure and the life of the expansion will be reduced to approximately 6.5 years (as opposed to 8+ years for other alternatives) as a result of efforts to eliminate the need for the Ice Age parcel and to protect other sensitive lands to the east of the expansion area. However, the expansion should provide the critical time necessary to address the future solid waste management needs of ANSWERS.

- Understanding that the expansion would occur adjacent to Preserve lands and that the revenues would provide an opportunity to help APBPC achieve a critical need to reconnect pine barrens to the west with areas to the east, especially as it relates to Karner blue butterfly management (a State and federally listed endangered species), the City recognized an opportunity to enhance Pine Bush habitat utilizing the expertise of a nationally recognized ecological restoration design firm. This effort comes at a cost of \$15-20 million.

The ecological enhancement and restoration work thus becomes an integral component of the landfill expansion project, since the expansion effort provides the financial means to accomplish such an ambitious habitat restoration project and the fact that the landfill itself will be part of the restoration, helping to re-establish the desired ecological links. Discussions and working sessions with APBPC and staff as well as the regulatory agencies have provided very positive feedback on the restoration concepts. None of these entities have publicly endorsed the restoration plans and are unlikely to do so until they have had the opportunity to review the detailed plans and specifications.

The Eastern Expansion as now proposed clearly presents a win-win alternative for the City and ANSWERS communities, APBPC, The Nature Conservancy, regulatory agencies, environmental groups, and residents of the State of New York who enjoy and support the Albany Pine Bush Preserve. The benefits are summarized below:

- A critical link will be re-established between viable pine barrens communities to the west with those to the east that have been fragmented over the years by the industrial park to the north of the landfill, construction of the mobile home park, the landfill itself, and other development both north and south of the landfill. Fragmentation is a common theme within the Pine Bush Study Area and the landfill along with the City's dedication of the mobile home park to the north provide the only meaningful opportunity to link habitat in this area.
- Habitat enhancement and restoration concepts were created cooperatively with APBPC staff and facilitated by Applied Ecological Services (AES) who have extensive experience in restoration of pine barrens habitat with particular expertise in restoration of landfills, along with Clough Harbour & Associates.
- Detailed enhancement and restoration plans have been prepared and will be the blueprints for the project.



- The City is committed to utilizing either the current AES/CHA project team for the construction of the habitat plan or a firm with equivalent expertise and level of experience to ensure success of the plan.
- The Eastern Expansion provides the means to financially support this \$15-20 million habitat project and the City is committed to the construction and short term maintenance and monitoring of the project in accordance with the design plans. It should be noted that this effort goes far beyond any established guidance and precedents regarding mitigation for environmental impacts. It is a genuine effort on the part of the City to provide ecological enhancement to achieve the APBPC goals for habitat reconnection encompassing approximately 250 acres of land, recognizing that the costs of such efforts could not be supported by the current APBPC funding sources. The habitat plan itself is a direct result of the City's commitment to the project, created by the City's ecological consultants specifically to meet the needs and goals of APBPC for this area and in concert with sound ecological restoration practices.
- As further evidence of the above, the expansion itself will impact a 13-acre parcel of City-owned land, 5.05 acres of which is forested wetland that is not identified as viable pine barrens habitat (recommended for protection as buffer only) and is not dedicated to APBPC. The land is degraded from past agricultural activities and is not habitat suitable for rare, threatened or endangered species. The overall habitat plan includes creation of the following:
  - Riparian Forested Wetland (in restored drainage channels) – 19.57 acres (almost 4:1 replacement of wetland in kind and enhanced)
  - Bog – 1.14 acre (rare community that historically occurred in Pine Bush)
  - Sedge Meadow – 0.44 acre
  - Biofilter Wetland – 0.69 (ecological approach to stormwater management)
  - Forested Wetland Enhancement (repair hydrology & remove invasives) – 25-30 acres
  - Restored and enhanced stream channel – Approximately 3,500 linear feet
  - Approximately 200 acres of pine barrens and pitch pine/oak forest restored out of disturbed lands (mobile home park, adjacent disturbed sands area, landfill, and degraded upland communities).
- The Eastern Expansion allows the City to continue to provide a portion of the tipping fees, as currently negotiated, that support maintenance and educational programs within the Pine Bush for another 6+ years.

- The expansion has ensured the planned expansion of the landfill gas to energy facility that will use 100 percent of the methane captured by the gas collection system to take advantage of a historically untapped resource and reduce the burden for power generation through traditional means, such as fossil fuels.
- The expansion will provide uninterrupted solid waste management for the ANSWERS communities while providing the critical time necessary to plan for and implement future solid waste management alternatives.
- The City's commitment to deed over all City-owned lands to the north and west of the landfill to the State or Nature Conservancy ensure the end of any future landfill expansions, further supported by the habitat plan will includes the conversion of the landfill (all areas except those serving current and future waste to energy facilities and other landfill buildings and infrastructure) to Pine Bush habitat. Following closure of the Eastern Expansion, the City will not be accepting solid waste for landfilling at the Rapp Road Landfill. As a potential alternative for future solid waste management, the City may accept solid waste as a transfer station.

From this evaluation and all the plans and studies included in this SDEIS, the Eastern Expansion provides benefits that far exceed the minor environmental costs of the project. This is coupled with the City's clear objective to establish and implement a Solid Waste Management Plan Update before the capacity of the Eastern Expansion is fully consumed.

The City of Albany recognizes that, although predictable disposal capacity for the planning unit is important, a new and more aggressive focus on waste reduction and recycling is needed for the entire Planning Unit. The expansion is the economic engine that can provide the funding for more technical staff to assist member communities, and funding for increased enforcement and public education efforts, as well as expanded recycling programs. The decision by NYSDEC to require a SWMP modification, prior to a completeness determination, as opposed to later in the process as was past practice, came late in discussions with the Department (Fall of 2007). Nevertheless, the City agreed with this policy change and found a way to move the project schedule off by 1 year to provide time for this initiative in the permitting process.

## **1.2 PROJECT DESCRIPTION**

The proposed project involves the expansion of the existing City of Albany Rapp Road Landfill onto City-owned lands located east of the existing landfill (Eastern Expansion) in order to continue to meet the solid waste disposal needs of City residents and businesses as well as the



communities that make up the ANSWERS Solid Waste Management Planning Unit, and the Capital Region as a whole. ANSWERS is comprised of a consortium of communities that include the cities of Albany, Rensselaer and Watervliet, the towns of Berne, Bethlehem, Guilderland, Knox, New Scotland, Rensselaerville, and Westerlo, and the Villages of Green Island and Altamont.

The Eastern Expansion came about through considerable investigation and analysis of alternatives sites and expansion scenarios. Since the early 1990's, the City investigated a site in the Town of Coeymans for a long-term landfill solution. The results of the investigation and subsequent discussions with regulatory agencies revealed that permitting of the site could take 10-20 years due to a condition that mitigation for wetland impacts would be constructed, monitored and deemed successful prior to issuance of the permit.

The capacity of the P-4 Expansion is expected to be exhausted by November 2009, based on the current rate of disposal (approximately 1,050 tons per day). As a result, the pursuit of the Coeymans site would not meet the current needs of the ANSWERS communities and the region. Therefore, several on-site expansion alternatives were considered. This included a northern expansion into the adjacent mobile home park, two western expansion alternatives, and the proposed Eastern Expansion. The Eastern Expansion was initially the City's last choice due to the added costs of relocating landfill facilities and infrastructure and purchasing additional lands. However, each of the remaining alternatives presented ecological issues of major concern to the involved State agencies and other parties interested in the Albany Pine Bush Preserve.

The Eastern Expansion of the landfill involves an overfill of approximately 23 acres of the existing landfill and a lateral expansion of approximately 15 acres that includes 2 acres within the existing landfill operations area (disturbed/developed lands) and 13 acres within undeveloped City-owned property directly to the northeast. The Eastern Expansion has been redesigned to avoid the need to use three acres of state-owned land on the parcel known as the Ice Age Associate parcel. The City proposes to relocate existing landfill infrastructure including offices, the recycling building, and other accessory uses to several privately-owned parcels totaling approximately 3.5 acres located directly east of the landfill entrance road off of Rapp Road.

An integral part of the Eastern Expansion proposal is a habitat restoration plan. There is a significant opportunity to re-establish linkages from west to east in the Albany Pine Bush Preserve through the existing mobile home park property and over portions of the closed landfill. Implementation of the plan would be an ongoing process, beginning with wetland mitigation and

stream restoration on the mobile home park property and demonstration plots on the existing landfill; and continuing with habitat restoration efforts on closed portions the existing landfill as well as surrounding areas of currently degraded habitat. It is envisioned that the landfill can be blended into the Albany Pine Bush Preserve landscape, providing critical habitat for rare ecological communities and threatened and endangered species.

The restoration plan is also designed to address other influences on the natural communities within the Pine Bush, unassociated with landfill activities, past or present. These influences include the mobile home park and the grading and sand mining that removed Pine Bush habitat and changed the ecology and landscape in that area, the relocation and ditching of natural streams that are tributary to Lake Rensselaer, and the draining and ditching of large wetland areas for past agricultural purposes, all of which contribute to poor water quality and the loss of natural/native Pine Bush communities.

The Eastern Expansion provides the financial means to restore and enhance approximately 250 acres of land. With limited State and local funding sources, the ability of the Albany Pine Bush Preserve Commission (APBPC) to achieve the goals of the Restoration Plan is significantly diminished if not impossible. The intent of the City is to make this win-win scenario a reality. The restoration plan is discussed in greater detail in Section 2.8.

## **1.3 POTENTIAL IMPACTS & MITIGATION**

A thorough discussion of the potential environmental impacts of the proposed project and the mitigation measures proposed to eliminate or alleviate the impacts is provided in Section 3.0. Below is a brief summary of the major issues.

### **1.3.1 NATURAL RESOURCES**

Expansion of the Rapp Road Landfill in accordance with the plans for the Eastern Expansion alternative would transform approximately 13 acres of undeveloped forested upland and wetland into landfill. As a result, the natural landscape and ecology of the site will be unavoidably eliminated. Additionally, the new landfill edge may lead to ecological impacts into Preserve lands through runoff, increased light penetration into forested areas, and blowing trash (primarily plastic bags). The “edge effect” of the landfill is evident in places along the existing landfill edges. Without the proper treatment of runoff from the landfill slopes, there can be physical and



chemical modifications of the adjacent soils that promote less desirable species, including invasive species such as common reed that is prevalent along existing slopes.

Intensive investigations of the Expansion Area and the adjacent private properties revealed that the natural communities have been degraded through development activity on the private properties and past agricultural activity within and adjacent to the Expansion Area. No threatened and endangered species or other species of concern were identified in these areas during site investigations nor is the habitat for these species present or of sufficient quality to warrant use by these species.

The proposed Habitat Restoration, Enhancement & Mitigation Plan (Habitat Plan) will re-establish historic stream corridors; recharge wetlands on State lands to the east, degraded by ditching and draining, to cease the decomposition of organic soils; and create new wetlands; all of which will contribute to improved water quality. Additionally, the conversion of the mobile home park to stream and wetland corridors and pine barrens habitat will reduce the peak stormwater runoff from existing conditions, despite construction of the Eastern Expansion. Other ecological benefits of the Restoration Plan include the conversion of the landfill to pine barrens habitat. The following summarizes the project impacts and the benefits of the Plan:

- Approximately 13 acres of primarily forest land that includes 5.05 acres of wetland and 1,680 linear feet of channelized, degraded stream will be impacted by the Eastern Expansion. Another 0.45 acre of degraded wetland will be graded and filled to accommodate biofilters and stream corridors in the proposed habitat restoration area.
- A total of approximately 53 acres of wetland will be restored and enhanced. This will include the creation of more than 19 acres of forested, riparian wetland, almost a 4:1 replacement ratio.
- Approximately 3,500 linear feet of stream corridor will be created.
- Approximately 200 acres of disturbed lands (mobile home park, adjacent disturbed sands area, landfill, and degraded upland communities) will be restored to pine barrens and pitch pine/oak forest.

At a cost of \$15-20 million, this will be a very significant effort that will provide lasting results and meet important APBPC habitat goals that would otherwise require funding not readily available to the Commission.

### 1.3.2 SOCIAL-CULTURAL RESOURCES

In addition to the potential impacts to natural resources, there are aspects of the proposed Eastern Expansion that may impact the human environment. These are issues that are important to consider in light of the fact that the landfill is located within a developed area that includes residential, business, and public uses.

Eliminating land use conflicts is a powerful planning tool that can effectively reduce or eliminate the impacts of a project. However, the landfill is located in an area where four communities meet (City of Albany, Village of Colonie, Town of Colonie, and Town of Guilderland). The resulting mix of uses and zoning have resulted in residences and businesses in close proximity to the landfill.

Potential impacts identified in Section 3.0 of this SDEIS are primarily limited to noise and odor. In general, noise is not a significant impact since the ambient noise levels in the vicinity of the landfill are dictated by traffic noise from the Thruway. A noise analysis was prepared for the proposed Eastern Expansion that identified four locations that may result in a noise impact. Under the existing land uses, two of these residential areas would be converted to other uses based on the proposed land use conditions for the project. The first location includes the three adjacent residential lots located near the intersection of Rapp Road and the landfill entrance. These parcels are proposed for acquisition as part of the landfill's infrastructure. The second location is the Fox Run Estates mobile home park to the north. This facility has been dedicated to the Albany Pine Bush Preserve Commission (APBPC) and is proposed for habitat restoration.

The third location is northwest of the landfill along a trail within the Albany Pine Bush Preserve, and the fourth is a residence / horse farm on Rapp Road. Sound suppression packages are recommended for the landfill equipment to reduce the engine noise and minimize the impacts. However, due to their proximity to the proposed expansion, these locations may experience noise levels 7 decibels above existing levels. However, these noise levels will only be experienced when landfill operations occur in the area closest to the receptor and when all equipment is operating. Other mitigation measures, including noise barriers, were considered, but would be ineffective at further reducing noise levels.

Air quality impact was evaluated based on emissions from the landfill surface and emissions from combustion sources that include the flares and the gas engines associated with the waste to energy facility. The evaluation procedures included both computer modeling and an air



sampling program. The model results indicate no significant impacts (below the National Ambient Air Quality Standards) associated with gasses dispersing from the landfill surface or from the combustion sources. It also demonstrates that the emissions of potential odor-causing compounds should remain below detection thresholds, indicating that there will be no nuisance odors as required by 6 NYCRR Part 211 and 6 NYCRR Part 360. Methane concentrations at the landfill surface are monitored using a portable analyzer that meets the instrumentation specifications in Section 3 of Method 21 of 40 CFR 60 Appendix A, as noted in 40 CFR 60.755(d).

A comprehensive landfill gas collection and control system is currently in place at the Albany Landfill. The system will be progressively expanded on the site as landfilling occurs in areas that are currently permitted, and in the proposed Expansion Area.

There has been a history of odor complaints by residents and businesses in the vicinity of the landfill that has prompted these air quality and odor investigations. Similar to the air quality modeling and sampling previously discussed, odor modeling and sampling was also conducted. The results of this analysis indicated that the maximum concentrations of all six odor-causing compounds are predicted to remain below detection thresholds and will be in compliance with the applicable standards of 6 NYCRR Part 211 and Part 360. Methane concentrations at the landfill surface are monitored using a portable analyzer that meets the instrumentation specifications in Section 3 of Method 21 of 40 CFR 60 Appendix A, as noted in 40 CFR 60.755(d).

Odor sampling occurred on quarterly basis over the past year with the first sampling event on May 3, 2007 and the fourth and final test conducted on January 31, 2008. The purpose of testing on a quarterly schedule was to identify the existence of any seasonal variations. All monitoring events were scheduled when odor and air quality impacts from the Albany Landfill were expected to be maximized based on meteorology, which included a persistent wind direction with light to moderate wind speeds and falling atmospheric pressure over the course of the test. In addition, staggering tests over an annual period allowed for testing during different stages of typical landfill operations. Landfill operations included, routine maintenance of landfill gas capture and control equipment, installation of landfill gas collection wells, management of leachate, waste placement and movement, capping and closure of landfill sections, etc. Testing was also performed during different times of the day including during normal business hours and when the landfill complex was closed. This was necessary to determine if odor levels differed

based on time of day/night, as well as, to determine if diurnal meteorological conditions impacted local odor levels.

The results of the testing revealed the following:

- The landfill's odor impacts on the surrounding community were minimal based on the data obtained from each test. Further, downwind impacts decreased rapidly with distance from the landfill property.
- Maximum odor levels were observed during the second test event (August 1, 2007). Reasons for the high concentrations may be attributed to one or more of the following; landfill operations, meteorology and nighttime testing.
- Odor impacts from the landfill decreased over the course of the testing program. This was primarily due to several operational and management corrective actions taken by the City of Albany and its consultants over the course of the program.

Several practices/policies have been instituted at the Rapp Road Landfill in order to minimize impacts due to odor. These include placement of daily cover, placing impermeable capping on filled/closed areas, and temporarily eliminating the acceptance of processed construction and demolition wastes used as Alternate Daily Cover (ADC). These wastes typically can contain drywall. As it decomposes, drywall can produce hydrogen sulfide (H<sub>2</sub>S) gas, a known odor-causing pollutant. Since ending acceptance of this material, there has been a significant decrease in H<sub>2</sub>S. More importantly, there has been a decrease in the number of logged complaints. Details are provided in SDEIS Section 3.8. Use of processed construction and demolition wastes as ADC in the future would only occur if the material does not contain drywall, which would have to be verified.

The landfill has also established an odor hotline for use in reporting any odor complaints. These complaints will be investigated and logged to provide insight into causes of specific odors and methods to better address them.

These measures should produce long term results that should significantly limit odor incidents in the future. Expansion of the landfill would create a greater volume of waste and would therefore create the potential for gas production and increased odors. However, the same measures currently being employed for the active portion of the landfill will be employed for the expansion area. As a result, it is anticipated that the expansion will not increase odor incidents and that overall the number of incidents will decrease in the future. Should odors occur with these measures in place, an evaluation of the landfill operations and landfill gas collection and

control systems will be performed to determine the source of odor and identify the necessary remedial actions (refer to SDEIS Section 3.8.2.2).

The remaining potential impacts to social-cultural issues are not anticipated to be significant. There will be views of the landfill, some filtered and some direct, depending on season. However, the Eastern Expansion will only increase the top elevation of the landfill by 10 feet, which will be imperceptible, as identified in the Visual Impact Assessment (VIA) provided in SDEIS Appendix H and further discussed in SDEIS Section 3.6.

Traffic coming to and from the landfill (125-150 trucks per day) will not increase above current conditions since the permitted daily waste disposal will not exceed the current 1,050 tons per day. Lastly, the small pre-contact archeological site found on the adjacent residential properties proposed to be used for landfill infrastructure will be avoided by the project and a 100 foot buffer placed around the site. The avoidance plan was submitted to the NYS Office of Parks, Recreation and Historic Preservation for their concurrence and a letter dated October 2, 2008 was received indicating that the project will have No Adverse Effect (SDEIS Appendix B).

## **1.4 ALTERNATIVES**

The evaluation of alternative sites and layouts and the eventual selection of the Eastern Expansion as the preferred alternative are based on the needs and objectives of the City of Albany to continue to provide landfill space to serve the ANSWERS communities and the greater Capital District. More specifically, it is anticipated that the existing P-4 Expansion will reach capacity by November 2009. As discussed in this section and in Section 5.0, efforts to develop a new landfill, including sites within the City, as a long term solution have been unsuccessful. This has left the City with limited choices, including the identification of a suitable expansion option and closing the landfill with the transport of wastes to a regional landfill.

The following provides an evaluation of the various alternatives considered both in the past and present. However, the City's primary focus is to provide a short term solution that can be up and running by the time capacity is reached in P-4 in order to continue to provide a reasonable solid waste management solution for the region, providing the time needed to look more closely at future options through preparation of a new ANSWERS Solid Waste Management Plan (SWMP).

The NYSDEC has requested that the Planning Unit prepare a Solid Waste Management Plan (SWMP) Modification concurrent with the Part 360 Application for the Eastern Expansion. The SWMP Modification will provide for the necessary adjustments and improvements to the current solid waste management system that can be made over the near term period during which time a Long Term or New SWMP will be prepared. Once the SWMP Modification is completed, the City will begin preparing the New SWMP. The NYSDEC has indicated that an approvable SWMP Modification is required for completeness of the permit application package.

The New SWMP will define the key elements of the future solid waste management program for the region, for a minimum 10 year period from 2013 and beyond. It will include all the components of a full solid waste management plan, including but not limited to:

- identification of the quantity and types of solid waste that are being generated in the planning unit;
- identification of proposed or existing solid waste management facilities;
- projections of future population, waste generation, changes to the planning unit, and special conditions that may affect any of these characteristics;
- a comprehensive recycling analysis;
- evaluation of the alternative solid waste management technologies, individually and in combination, and alternative institutional arrangements for implementation; and
- selection of an integrated solid waste management system for managing each of the various types of solid waste along with an implementation timetable and the preferred administrative structure.

The evaluation of alternatives will be one of the most critical aspects of the process. It will also require close coordination with the City, NYSDEC, and other stakeholders. It will include an evaluation of commercially proven waste management technologies and their potential application or continued use in the planning unit. Proven waste management technologies would include, for example, MRF, mass burn WTE, and landfill. The evaluation will also include an assessment of new and emerging technologies and their suitability for implementation in the planning unit. Institutional alternatives will also be evaluated, such as disbanding or expansion of the Planning Unit to determine how future facilities and programs will be owned and operated. The issues of Flow Control and the creation of an authority as an implementing agency will also be evaluated.



Because of the broad scope of issues and the complexity of the analysis, the preparation, review and approval of the New SWMP will be a time-consuming process, and is expected to take 2 to 3 years. The present schedule anticipates final approval could be achieved by 2011.

Several alternatives were considered in the process of identifying a preferred alternative. They include an alternative sites analysis that was initiated in the late 1980's and last revised for the P-4 Expansion project. The analysis has been updated for this SDEIS (Appendix K) and includes 10 sites within the City of Albany. Although some of the site contained prohibited siting criteria as specified in the Part 360 regulations, the primary concern for most of the sites is the fact that they are surrounded by development, much of it residential.

Consideration has also been given to Site C-2 in the Town of Coeymans. This site has been evaluated for several years and remains a potential long term option, but it will not serve the needs of the ANSWERS communities for the short term, when landfill space for the P-4 Expansion runs out in November, 2009. Given the extent of wetland impact associated with the Site C-2 project, it could be many years before approvals are in place and it is possible that the project might not meet the standards for permit issuance.

As previously mentioned, alternative expansion scenarios were considered by the City and shared with various permitting and interested agencies. Each of these alternatives were considered viable by the City, two of which would have provided much greater capacity than the proposed Eastern Expansion. However, with the exception of the Eastern Expansion, each of the alternatives were strongly opposed due to impact on Albany Pine Bush Preserve lands and lands dedicated to the APBPC for future linkages.

Alternatives were also included to address avoidance and minimization requirements for State and federal wetland permitting. They included an avoidance alternative that would involve overfill of previously disturbed landfill property (no wetland impacts), a potential avoidance or minimization alternative that would involve a deeper cut into the groundwater requiring special technology to prevent groundwater impacts, and a minimization alternative that avoids some high quality habitat located outside of the Expansion Area.

The avoidance alternative was determined not to be viable since it does not provide sufficient landfill life to provide the City with ample time to address long term solid waste management solutions through the New SWMP and adjust the City's budget to avoid a major loss of services. The deep excavation alternative is not technically feasible due the presence of high permeability

soils. A pore pressure relief system would be required and is only effective when the underlying site soils are of low permeability and excess pore pressure can be relieved in a passive manner by a higher permeability drainage layer. Likewise, overflow of the old landfill (GAL) is not technically prudent due to the high potential for failure of both the leachate collection and liner systems that would result in very costly repairs (excavation and re-installation of failed systems).

The minimization alternative would reduce landfill capacity by a small amount in order to preserve (avoid) important habitat to the east. Any reduction in capacity is contrary to the City's needs and objectives. Nevertheless, based upon discussions with the Department of Environmental Conservation, the City has agreed to evaluate this alternative as the preferred alternative. On-site wetland savings from this alternative are not significant but the avoidance of impact to higher quality wetlands and vernal pools to the east warrants the consideration of this alternative. These areas would be impacted by the need to relocate a stream that currently flows through the Expansion Area.

Lastly, consideration was given to source reduction, recycling and off-site transport. As part of the SWMP Modification the City of Albany and the member municipalities of the Planning Unit will undertake a number of improvements and enhancements to existing waste reduction and recycling programs. Among these are the City's requirement that, as a condition of continued use of the landfill, member municipalities and commercial haulers must ensure that recyclable material collection is provided on a mandatory basis to all sectors (commercial, institutional, and industrial, in addition to residential).

Another notable element of the SWMP Modification is the provision of a Planning Unit Recycling Coordinator who will be responsible for advancing waste reduction and recycling efforts in all of the member municipalities.

Off-site transport is a potential long-term solution. In the short term, this option would require a quick but major budget adjustment in the City of Albany that would have ramifications for many programs. The City will need some time to find alternative sources for funding important programs. ANSWERS municipalities, including the City, would face increased financial burdens on the order of several millions of dollars annually, and adjustments to fiscal budgets and taxpayer contributions would be necessary. Heavy costs imposed upon local municipalities make the offsite transport of solid waste an undesirable short term alternative to the proposed Eastern Expansion.

The no-action alternative would result in closing the Rapp Road Landfill by November 2009, most likely requiring the transport of wastes to a distant, perhaps out-of-state, regional landfill. The financial implications of the off-site transport alternative as a short term solution are discussed in SDEIS Section 5.5.