The Palo Alto landfill is scheduled to close in 2011. This report discusses the solid waste activities that are currently available in Palo Alto and provides a recommendation for the long-term management of the City’s solid waste. This report includes a recommendation for development of a comprehensive Environmental Service Center (ESC) in Palo Alto that will include a compost facility, a recycling drop-off and processing center, a permanent household hazardous waste facility, a material recovery facility/mini-transfer station (MRF/TS), a bin storage area, and an inert solids storage area for on or off-site recycling. Proposed renderings have been developed as requested by the Planning and Transportation, Public Art, and Parks and Recreation Commissions. The report also includes alternatives to building a comprehensive ESC and includes ramifications of continued long-term use of the Sunnyvale Material Recovery and Transfer (SMaRT) Station. The use of dedicated parkland to construct an ESC is addressed with proposals to acquire adjacent lands to be dedicated as parkland and to obtain voter approval to change the land-use designation.
RECOMMENDATION
Staff requests that the Policy and Services Committee recommend to the City Council:

1. That the current programs for solid waste in Palo Alto continue in the City;

2. Approval to pursue the concept of a comprehensive ESC, which would include environmental review, pursuing voter approval to change the land-use designation of the proposed area, permitting and advanced design of the facility.

3. Approval of the draft scope of services for an environmental impact report (EIR).

BACKGROUND
The Palo Alto landfill is scheduled to reach capacity in 2011. It is a 137-acre landfill, with 126 acres permitted for waste disposal. Over 75 acres have already undergone final closure. Staff has been reviewing solid waste alternatives for residents, City crews, businesses, institutions and contractors once the landfill is closed. The current programs operating at the landfill site are described below. All figures are based on 2002 activity, as those are the latest figures to be reviewed and updated by the State of California Integrated Waste Management Board (CIWMB). Unless otherwise noted, the tonnage numbers have been taken from the Annual Landfill Performance or Recycling Reports.

Solid Waste Disposal and Diversion
In 2002, the City disposed of a total of 78,272 tons of refuse (38,841 tons to Kirby Canyon Landfill, 27,244 tons to the Palo Alto Landfill, and 12,187 tons to other landfills located throughout California). A total of 139,416 vehicles visited both the City landfill/composting operation (65,115 vehicles) and the recycling center (74,301 vehicles). These visitors included residents, non-residents, businesses, City crews and contractors working on behalf of the City.

Palo Alto Sanitation Company (PASCO) also collects and delivers refuse to the Sunnyvale Material and Recovery Transfer (SMaRT) Station. The SMaRT Station is a materials recovery and transfer station that began operation in October 1993 on 10 acres in Sunnyvale. It was built through a partnership with the cities of Sunnyvale, Mountain View and Palo Alto, although Sunnyvale retains ownership and final operational decision-making over the station. The term of the agreement is through 2021. The SMaRT Station has a capacity to process 1,500 tons of solid waste per day. It is currently operated under contract by Green Team/Zanker of San Jose.

The SMaRT Station is approximately 10 miles south of Palo Alto. Although the City enjoys very active participation in residential and commercial recycling programs, there is still a sizable amount of recyclable materials that can be recovered through the SMaRT Station operation. At the SMaRT Station, waste is processed mechanically and through
hand sorting to recover remaining recyclable materials. In 2002, the SMaRT Station received 48,682 tons of waste from the Palo Alto community and was able to recover 9,841 tons of recyclables from this waste stream.

The remaining waste from the SMaRT Station is trucked 27 miles to the Kirby Canyon Landfill (operated by Waste Management, Inc. (WMI)) in Coyote Valley at the south end of San Jose for ultimate disposal. Palo Alto’s agreement with Kirby Canyon is also good through 2021.

**Curbside Recycling and Recycling Drop-off Center Program**

A drop-off recycling center was opened to residents at the entrance to the landfill in 1971. The center accepts metal cans, glass bottles and jars, newspaper, mixed paper, blueprints, cardboard, scrap metal, plastics (#1 - #7), polystyrene, plastic bags, milk and juice cartons, motor oil, oil filters, antifreeze, appliances, scrap metal and household and auto batteries. The curbside recycling program was expanded to serve all single-family homes in 1980 and most small- to medium-sized apartment buildings. The commercial/industrial recycling program began in 1986, with the City providing free consulting services to large businesses on ways to decrease waste. By 1989-90, the City actively promoted recycling to businesses of all sizes. In 2001, the City added cathode ray tubes (CRT, e.g. computer monitors and televisions) recycling to the Palo Alto landfill as a drop-off service. In 2002, the recycling program collected 14,177 tons of materials.

**Composting Program**

This program started as a composting drop-off program in July 1979 and allowed residents to bring yard trimmings to the City’s landfill. The program expanded in 1987 with a pilot yard trimmings collection program that went into a full-scale curbside collection program in 1990. The composting facility currently processes over 16,000 tons of yard trimmings each year. Today, the processed product is sold to local nurseries and retail customers, netting revenues of approximately $100,000 annually. Compost is also utilized on City projects and is made available to residents five times per year at compost give-away events held at the City landfill. The City also operates a “chip and ship” program whereby yard trimmings are ground and transported off-site and applied to farmland applications.

**Household Hazardous Waste Collection Program**

The Household Hazardous Waste (HHW) Collection Program began in 1983 and collects approximately 270 tons of hazardous waste per year through drop-off events and at the recycling center. HHW includes products such as paint and paint products, solvents and fuels, household cleaners, pesticides and herbicides, hypodermic needles, mercury wastes, fluorescent lighting tubes, and pool and photographic chemicals. The City currently holds 14 one-day events per year in a temporary location at the Palo Alto Regional Water Quality Control Plant (RWQCP). Hazardous waste such as used motor oil, oil filters, auto and household batteries and antifreeze are accepted at the recycling
center on an ongoing basis. Businesses generating small quantities of hazardous waste can also participate in the program for a fee. HHW is also extracted from the refuse going to the landfill through the landfill load-checking program.

When the California Integrated Waste Management Act of 1989 (AB 939) was enacted, one of its requirements was that each City develop a Household Hazardous Waste Element (HHWE) outlining how the city would handle its HHW. Palo Alto included plans for a permanent collection facility in its HHWE. The HHWE was approved by Council in 1991 (CMR:307:91).

The County of Santa Clara Integrated Waste Management Program currently heads a countywide HHW Collection Program that is utilized by all Santa Clara County cities except for Palo Alto. At the time of its inception, Palo Alto was already operating collection events on a more frequent basis than what would have been available through the County program. Also, the inconvenience to residents of having to travel to collection sites outside of the City limits made the Palo Alto program even more attractive. Currently, the County Program’s annual participation rate for HHW Collection is approximately three percent and Palo Alto’s participation rate is between 10 – 13 percent.

Palo Alto Landfill Salvage Program
This program began in 1993. Loads delivered to the City’s landfill are inspected for dirt, gravel, bricks, metal, tires, large appliances, computer monitors and televisions which, when found, are pulled and recycled. In 2002, over 21,700 tons of materials were collected.

Inert Solids Recycling Program
In July 1991, the Palo Alto landfill stopped accepting inert solids (e.g. Portland cement concrete, asphalt, aggregate base rock, etc) from City contractors and required that they take these materials to a recycling facility. Landfill staff also required City maintenance crews to separate inert solids and the materials were stockpiled at the landfill until a sufficient quantity was accumulated to minimize the cost of recycling the materials. In 2002, 4,874 tons of inert solids were collected at the Palo Alto landfill for recycling.

The Council will be considering adoption of a construction and demolition debris ordinance that requires a minimum level of recycling for inert solids generated from public and private construction projects.

Public Education
Key to all of the solid waste diversion programs is providing education to the public. Solid Waste Program staff provide outreach to residents, schools and businesses through print media such as newsletters, newspaper ads, utility bill inserts, and through interactive means such as workshops, school assemblies, and special events.
Landfill Closure
State law and regulations require the City to divert waste from the landfill by recycling, and to treat and dispose of household hazardous waste generated by households. In order to comply with these State mandates, and in light of the following defining events occurring, it is urgent that a decision be made about long-term solid waste management in Palo Alto:

1. The landfill will reach capacity in 2011;
2. The composting facility and recycling drop-off center at the Palo Alto landfill need to be relocated by early 2005 and 2007 respectively, to make room for refuse disposal prior to final closure;
3. The current landfill filling plan requires moving the fill areas to stay under the revised landfill grading plans by early 2005;
4. Staff will need time to revise the landfill closure plans and obtain the proper permits if an ESC facility is approved.
5. The HHWE approved by Council in June 1991 assumed a permanent HHW facility.

A decision for long-term solid waste management is necessary by early 2005 to provide a transition for residents, City crews and businesses once the landfill is closed.

Palo Alto has a Memorandum of Understanding with Sunnyvale and Mountain View to use the SMaRT Station and with WMI to use the Kirby Canyon landfill until 2021 with a potential 10-year extension. As previously indicated, the City of Sunnyvale maintains full ownership and operational control of the SMaRT Station and WMI retains full control of the Kirby Canyon landfill. Palo Alto is required to pay Sunnyvale a host fee, which, in 2002 was $3.23 per ton. Based on the 48,682 tons of waste sent through the SMaRT Station, a total of $157,243 was paid in 2002 to Sunnyvale to use its facility. Although Palo Alto currently maintains an excellent rapport with Sunnyvale and WMI, future decisions regarding long-term solid waste management for Palo Alto and Sunnyvale may not always be in agreement. For example, Palo Alto has taken a recommendation to Council to change curbside recycling collection from the crate system to single stream, whereby all recyclables (other than yard waste) would be collected in one wheeled cart. Sunnyvale has opted to go to split-cart collection, in which paper waste is collected in the same container as other recyclables, but the container is split in two. Palo Alto staff believes that single stream collection is preferable since there is less potential for contamination and capital costs to initiate the program would be less expensive. However, in future years Palo Alto may be subject to final decisions made by the City of Sunnyvale.

In 1999, the City contracted with Brown, Vence & Associates (BVA), who prepared a cost-benefit analysis and conceptual design for development of a permanent recycling center and transfer station (Attachment A). The primary objective was to assess options to handle waste after closure of the City’s landfill. BVA concluded that a comprehensive
Environmental Services Center allowing Palo Alto to consolidate its solid waste operations, upgrade the public drop-off and curbside processing facilities, continue to increase diversion of waste from disposal, and efficiently transfer non-recyclable waste to a disposal facility would be the preferred option. The results of the cost-benefit analysis indicated that the construction and operation of a transfer station and material recovery facility in Palo Alto was less expensive than relying on the SMaRT Station to handle all refuse and recyclables. Based on the BVA report, it was estimated that the cost savings of processing materials through the City’s ESC versus processing materials through the SMaRT Station would be over $1 million per year. If the cost of self-haul and City vehicles were included in those calculations, the savings could be as much as $1.8 million.

In July 2001, staff met with the Finance Committee (CMR 297:01) to gain conceptual approval to construct an ESC and was directed to meet with the Public Art Commission, Parks and Recreation Commission and Planning and Transportation Commission for input prior to any further Council actions.

Although no actions were taken at the commission meetings, many issues were raised regarding what aesthetic impact an ESC would have to the “park experience.” Because of the diminishing acreage of parkland in Palo Alto, the commission members questioned whether building an ESC was appropriate given the land-use designation of the area and if voter approval would be necessary to change the land-use designation. Commissioners also queried how construction of an ESC complied with the Baylands Master Plan.

Many of the commissioners’ questions had to do with the size of the facility and they asked that some visual materials be prepared so that they and the public could have a better understanding of the proposed project size and its impact to the neighboring park.

In response, staff has prepared a recommended option and alternate options for long-term management of solid waste for consideration by P & S and Council.

**DISCUSSION**

**Recommended Option: Build a Comprehensive ESC in Palo Alto**

This scenario requires utilizing approximately 19 acres adjacent to the RWQCP to build an ESC in Palo Alto. The proposal would include replacing the existing recycling center with an integrated and multi-functional facility consisting of a compost facility, a recycling drop-off and processing center, a permanent household hazardous waste facility, a material recovery facility/mini-transfer station (MRF/TS), a bin storage area, and an inert solids storage areas for on or off-site recycling (Attachment B). The comprehensive ESC can be operational prior to the final closure of the landfill and would remain in operation indefinitely following the closure of the landfill.

Staff believes that the comprehensive ESC facility provides many long-term benefits and is the most complete solution to the future solid waste needs of the community. The
facility would allow for the seamless continuance of current programs, and also provide the necessary infrastructure and resources to develop and implement future programs.

One component of the ESC would be a permanent HHW facility. The permanent HHW facility would be open and available three to five mornings each week for use by residents, in contrast to the current monthly HHW collection event. There is potential for this service to generate revenue for the City, since Palo Alto could market this service to other cities in the County.

Another benefit to locating the ESC facility at the landfill is the continuance of the composting facility and operation within Palo Alto. Compost give-away days would still be available to residents. Revenue would be generated from the sale of the finished compost (approximately $100,000 annually) and the expense to chip and ship the material would be minimized (approximately $200,000 in additional expenses would be avoided).

In addition, all the solid waste services for Palo Alto residents, City crews, businesses, and institutional organizations that now occur at the landfill would be available through the ESC MRF/TS and recycling drop-off facilities. The City could continue collecting user fees, which currently totals approximately $2,000,000 annually. The City would retain control of waste diversion, marketing collected recyclable materials, and be able to add programs as necessary to maintain and increase the landfill diversion to comply with State mandates. This is an important aspect of the program since, as indicated previously, if Palo Alto continued utilizing the SMaRT Station, any final decisions regarding marketing of materials and expanding programs would be the final decision of the City of Sunnyvale. Cost savings would be realized through avoided transportation to Sunnyvale and environmental concerns such as air pollution due to longer drives and increased vehicles on the road would be minimized. This could be a substantial benefit to the environment given that over 139,416 vehicles visited the landfill/composting operation and recycle center in 2002.

Without an ESC in Palo Alto, the percentage of solid waste diverted by the community potentially could be jeopardized. In 2002, the waste generated in Palo Alto was 173,937 tons. The State has mandated that every city divert 50 percent of its waste stream; Palo Alto currently diverts 55 percent. While diversion tonnage collected by Palo Alto Sanitation Company (PASCO) would presumably not be affected, the inconvenience incurred by waste generators and recyclers traveling to the SMaRT Station is also an important consideration since it could lead to an increase in illegal dumping. The diversion tonnage delivered by residents, businesses and contractors could end up at various disposal sites or as illegal dumping, and would therefore not be counted toward the total Palo Alto diversion. The City could potentially be out of compliance with the State mandate and would be subject to fines of up to $10,000 per day.
Constructing a comprehensive ESC would require voter approval to change the land-use designation of dedicated parkland for approximately 19 acres. While staff understands the importance of conserving parkland and the visual aspects of developing an area near parkland, the proposed location for the ESC is next to the existing RWQCP and would be shielded from the future Byxbee Park through use of landscaping hillocks and berms.

In order to comply with commissioners’ request for visual materials, renderings of the proposed ESC were developed. The renderings are based on preliminary layouts and designs and are provided to show, in concept, the architectural type, colors and size of building that might be constructed and how it may appear visually against the backdrop of Byxbee Park. The building design will promote features that integrate with the park environment and exhibit sustainability and green building concepts.

**Advantages of the comprehensive ESC proposal include:**

- Convenience to residents, City crews, businesses, and institutions since all programs would be available within city limits
- Long-term cost savings
- Rent of $1.9 million paid to General Fund annually
- City control of materials markets
- City control of program changes and expansion
- Environmental benefits through decreased number of trips to Sunnyvale
- Reduction in HHW mobilization costs
- A Palo Alto showcase of sustainability through green building practices
- Continued involvement/leadership in refuse/solid waste/recycling policy and legislative issues
- Creates a plan to handle solid waste and waste reduction programs past 2021.

**Disadvantages:**

- Capital costs may require rate increase
- Opportunity cost or benefit of lost parkland

**Alternative 1: Build a Reduced-Scale ESC**

This scenario would require approximately six acres of land on the landfill footprint and would include all of the components of the comprehensive ESC, except for the inert solid and composting operations. The facility components of this option are: a recycling center, a HHW facility, self-haul disposal, and a “chip and ship” facility for yard waste in lieu of a composting area (Attachment C). The recycling center would allow for curbside and drop-off processing of recyclables. A reduced-scale ESC would accommodate self-haul waste for residents, City crews, businesses, and institutions/organizations. Under the reduced-scale ESC option, reduced transportation costs and air pollution would likely be similar to the comprehensive ESC option. This option would also require voter approval to undedicate six acres of parkland.
The limitations of this option are that it does not include a full composting operation, only a “chip and ship” operation. Because of the competition for markets and the susceptibility of the materials to disease, it can be difficult to market the “chip and ship” material. This could potentially affect the waste diversion percentage and jeopardize the City’s ability to maintain the State mandate of 50 percent diversion. When the City begins to chip and ship all materials, it will impact net revenue to the Refuse Fund by $300,000 annually, due to the loss of composting revenues and additional transportation costs. Compost give-away events would also be discontinued.

The inert storage facility component would be eliminated which would further reduce the diversion percentages. Since it would be inconvenient for self-haul customers, many would opt to dispose of the material as refuse.

Advantages:
- Utilizes six acres versus nineteen acres of parkland
- Convenience of recycling and HHW drop-off, self-haul within City limits
- Reduction in HHW mobilization costs

Disadvantages:
- Compost give-away days would be discontinued for residents
- An additional $300,000 net annual revenue/loss with the loss of compost sales and additional transportation expenses to operate a chip and ship operation.
- “Chip and ship” products are susceptible to restrictions based on the condition of the green waste materials and are not as easily marketed on the open market.
- Limits program expansion and local control of materials marketing.
- Capital costs may require rate increase.
- General Fund revenues would decrease with the reduction of current landfill rent payments.
- Opportunity cost or benefit of lost parkland

Alternative 2: Build a Recycling and HHW Area
This scenario would encompass approximately three acres of land that is not currently on the landfill footprint and would only include the curbside and drop-off recycling processing and HHW collection programs (Attachment D). All other materials and waste, including self-haul by residents and businesses, would need to be taken to the SMaRT Station or other regional waste disposal facilities. This option severely limits future program expansion and the City’s ability to sustain its programs. Having only recycling and HHW area would increase transportation costs and contribute to environmental concerns related to air pollution due to longer drives and an increased number of vehicles on the road. This option would require voter approval to undedicate three acres of parkland.
Although this alternative is alluded to in the Byxbee Park Master Plan, it is the least desirable of the Palo Alto options as it severely limits recycling and eliminates self-haul of waste in Palo Alto for residents, businesses and institutions.

Advantages:
- Would only utilize three acres of parkland
- Reduction in HHW mobilization costs

Disadvantages:
- Environmental and economic impacts would occur due to additional transportation to and from the SMaRT Station from self-haul, City crews, and city contractors
- Limits program expansion and local control of materials marketing
- The City will not have a long-range plan to handle solid waste and composting components beyond 2021.
- General Fund revenues would decrease with the reduction of current landfill rent payments.
- Opportunity cost or benefit of lost parkland
- Compost give-away days for residents would be discontinued for residents.
- Additional net revenue/loss of $300,000 would occur with the loss of compost sales and additional transportation expenses due to chip and ship operation.
- Potential for increase of illegal dumping

Alternative 3: Use the SMaRT Station
Once the landfill is closed, recyclable materials and garbage that is collected curbside, drop-off recycling and yard waste would have to be taken to the SMaRT Station for processing. Self-haul customers would be required to take all waste to the SMaRT Station or other regional waste disposal facilities. Another site would need to be found to build a HHW facility. Waste diversion amounts for composting and inert solids would drop significantly and could potentially put Palo Alto’s diversion out of compliance with State mandates. Relying on the SMaRT Station would mean that the City would lose control over recyclable materials markets and would lose its ability to control development of new diversion programs. There would be an increase in transportation costs by PASCO since all collection vehicles would have to travel to Sunnyvale to dump their loads, as well as the inconvenience to residents and businesses of having to travel to Sunnyvale with waste or recycling drop-off. Currently, an average of 25 to 30 garbage trucks per day travel to the SMaRT Station. If Palo Alto were to haul waste directly to Kirby Canyon landfill using transfer trucks, there would only be approximately 6 to 8 trucks per day on the road. This would result in a 75 percent decrease in the number of garbage trucks traveling on the highway. The City would need to discontinue programs such as those for polystyrene and blueprint recycling since those programs are not available through the SMaRT Station. Although not a regular occurrence, the SMaRT Station has had several occasions in which labor disputes have impacted operations. In the event that a labor dispute leads to a work stoppage or closure of the SMaRT Station,
Palo Alto would be forced to take its trash directly to Kirby Canyon Landfill. This would significantly increase operating and transportation costs and have a negative environmental impact due to the number of vehicles on the road for a longer period of time. Recently, the Recycling and Waste Reduction Commission of Santa Clara County, comprised of elected officials from various cities throughout the County, has become concerned with the diminishing number of local recycling facilities available in the County as cities begin to merge programs. The Recycling and Waste Reduction Commission would like to ensure that recycling remains readily available and convenient to users and recommends that communities provide more local recycling facilities versus consolidating facilities on a regional basis.

This option would negatively impact the solid waste programs and would conflict with the City’s policy of fostering a sustainable community.

Advantages:
- No capital costs

Disadvantages:
- Loss of City control of program expansion and materials marketing.
- Diversion amounts could drop significantly and potentially put Palo Alto out of compliance with State mandate of 50 percent diversion.
- Host fee payments to Sunnyvale would increase.
- Elimination of programs that are not available at SMaRT.
- Finding a site for a permanent HHW facility.
- Increased transportation costs by PASCO to Sunnyvale of approximately $1.2 million per year.
- Environmental and economic impacts would occur caused due to additional transportation to and from the SMaRT Station from self-haul, City crews, and City contractors.
- Limits program expansion and local control of materials marketing
- The City will not have a long-range plan to handle solid waste and composting components beyond 2021.
- General Fund revenues would decrease with the elimination of current landfill rent payments.
- Opportunity cost or benefit of lost parkland.
- Compost give-away days for residents would be discontinued.
- Net revenue loss of $300,000 would occur with the loss of compost sales and additional transportation expenses due to a chip and ship operation.
- Potential for increase of illegal dumping.

Alternative 4: Use the Los Altos Treatment Plant Site for Recycling and HHW Area
The Los Altos Treatment Plant (LATP) site at the east end of San Antonio Road consists of 13.26 acres that is contiguous with the Baylands. Palo Alto currently owns one-half of
the property, with the town of Los Altos owning the remaining half. The parcel was designated as Public Facility Zoning District [PF(D)]. In March 2000, Council adopted a resolution (CMR:161:00 Resolution 7930) for a Comprehensive Plan Map Amendment that changed it to Public Owned Conservation Land and Major Institution/Special Facilities. Without changing land use, 4.5 acres could be available for the recycling and HHW facility. However, even the 4.5 acres has requirements for mitigation. If this option were selected, the City would have to accelerate negotiations with the Town of Los Altos to purchase its one-half interest in the site. In the last meeting with Los Altos, staff could not come to an agreement over the price of the site. Initially Palo Alto offered over $3.3 million for the site, Los Altos countered with $6.4 million. The current offer to Los Altos is just over $4 million.

**Advantages:**
- Land is contiguous with the Baylands
- Easy access to Highway 101
- Not in residential area

**Disadvantages:**
- Refuse Fund would have to purchase Los Altos one-half interest in property
- Space is being considered for other uses
- Property has U.S. Army Corps of Engineers jurisdictional areas that require mitigation

**Replacement of Parkland Acreage**
In an effort to maintain the number of acres of parkland in the City, staff has investigated two alternatives that include acquiring acreage next to the Baylands that could be designated as parkland. The first alternative involves acreage at the ITT Property that is contiguous with the Baylands. The City currently owns this property (36.5 acres) but the former owners, KFS World Communications, Inc. (KFS), maintain an easement for the site for ship to shore communications. The City entered into an agreement with KFS to purchase its easement in 1993 for $370,000 (CMR 462:93). The date of purchase was contingent upon KFS receiving FCC approval to relocate its transmitters. To date, this approval has not been received. Staff from Administrative Services Department has been in contact with KFS to determine its progress. Technically this might not be considered a replacement of parkland, since the Baylands Master Plan provided for the ITT site to become parkland once the towers and easement for the site were no longer being used. The idea is that the Refuse Fund could pay KFS for the easement and make it happen now. This remains an option.

The second alternative involves the 13.26 acres at the LATP as described above. This scenario would involve a land swap, with the LATP site offered for parkland in order to use the additional acreage at the landfill.
In the event that one of these land swap options was selected, there would be recreational opportunities in these areas, through the addition of nature trails and in the case of the LATP, conversion of the land to a wetlands habitat.

**RESOURCE IMPACT**

Based on the 1999 BVA study, the estimated cost for building the comprehensive ESC would be approximately $12 million, funded by the Refuse Enterprise Fund. The attached table (Attachment E) is a summary of the capital and operating costs for each option. The annualized capital costs were calculated assuming that bond financing costs are approximately 15 percent of the total capital costs, the financing rate is six percent and the financing term is 20 years. It is important to note that the rent cost has been updated from the BVA study and that the rent will be paid to the General Fund based on the most recently appraised value of $100,188 per acre.

**Recommended Option: Comprehensive ESC**

For the Comprehensive ESC, the capital cost would be $11,920,400. The annual operating costs ($6,673,572) include labor, maintenance of facilities, equipment and rolling stock, equipment replacement, utilities, consumables, fuel, administration, insurance, green waste processing costs, and a 15 percent contingency. The revenue ($2,310,000) generated through the comprehensive ESC would include both the sale of recyclable materials and sale of compost. The operation of a full composting facility was not included in the BVA study, therefore $100,000 is included for the sale of compost. The capital costs for the comprehensive and reduced scale ESC would be the same except for the addition of the compost facility for the comprehensive ESC.

**Alternative 1: Reduced Scale ESC**

The capital cost of the reduced scale ESC is $11,413,000. The capital cost for the reduced scale ESC does not provide for a full composting program, rather only a chip and ship operation for yard trimmings. It also does not include inert solids recycling or bin storage for PASCO. The annual operating cost including operations and maintenance and rent would be $5,391,166. While the operations and maintenance costs and the annual revenues appear to be the same for the comprehensive ESC and the reduced scale ESC, the reduced scale ESC cost and revenue offset each other and are not included in the study.

**Alternative 2: Recycling and HHW Area**

The capital cost would be $5,191,000. The annual operating costs would be $1,804,564 and annual revenues would total $571,000.

**Alternative 3: SMaRT Station**

Although the SMaRT Station is already constructed, the capital cost shown on the attached table ($9,914,498) includes the debt service that Palo Alto pays to Sunnyvale. In 2003, Sunnyvale refinanced the bonds that reduced Palo Alto’s obligation to
$6,230,227. The operating costs ($3,508,203) do not include composting of yard trimmings, as Sunnyvale does not currently operate a composting program.

Alternative 4: Los Altos Treatment Plant
This option would be the same as Alternative 2—a recycling and HHW area. The capital cost would be impacted, since Palo Alto would need to purchase Los Altos’ one-half interest in the property. Also, under this scenario, there would be no rent paid to the General Fund as the Refuse Fund would purchase the property.

Currently, over $2 million in revenue is received through the landfill tollbooth. This revenue will be lost once the landfill is closed. After the landfill is closed, rent paid by the Refuse Fund to the General Fund would no longer be required. The Refuse Fund currently pays $4.7 million per year for rent. Revenue for rental of the land to the General Fund of $1.9 million would be derived if a comprehensive ESC is constructed.

Whether or not an ESC is constructed, the Refuse Fund will have ongoing costs once the landfill is closed, as staff will be required to monitor and maintain post-closure activities for 30 years for the gas and leachate systems. Funds are currently available in the Capital Improvement Fund for initial development of the ESC and any environmental studies and in the Refuse Enterprise Fund for closure and post-closure maintenance. As part of the EIR process, an updated cost/benefit analysis will be developed.

**TIMELINE**
Attached is an abbreviated timeline showing a number of milestones that need to be met in order to construct the ESC prior to the landfill closure (Attachment F). The timeline may change based on Council’s decision regarding the construction of the ESC.

**POLICY IMPLICATIONS**
If Council approves any of the ESC options, a change to the land-use designation of parkland would be required. This would involve voter approval to undedicate parkland as required by City Charter.

The Baylands Master Plan developed in 1978 and the 1980 Byxbee Park Master Plan and the 1991 revised Byxbee Park Plan provide that when the landfill is closed it will become a pastoral park. In the 1980 Byxbee Park Plan, the recycling center was to be relocated near the RWQCP during an interim phase of park development and removed from the park at completion, with the interim recycling center site converted to a parking lot. The Byxbee Park Master Plan updated in June 1991 indicates that is recycling center site on the southeast side of the RWQCP may be utilized for a permanent recycling center. The 1991 Byxbee Park Plan also anticipates future use of the proposed SMaRT Station.

It is important to note that at the time the original Baylands Master Plan (1978) and the Byxbee Park Master Plan (1981) were approved, State diversion mandates were not in place and these plans could not foresee the changing requirements mandated by the State.
Once State mandates were established that made waste prevention and HHW programs a more viable means of solid waste management, the City incorporated them into its long-range plans, including the possibility of a recycling center to remain in Byxbee Park and providing policies supporting recycling in the 1998 Comprehensive Plan.

The City’s Comprehensive Plan that was adopted in 1998 contains some ambiguities relating to long-term planning of solid waste management. The City’s Comprehensive Plan indicates that after landfill closure, all of the City’s waste will go to the SMaRT station. Staff believes that recyclable materials are not “waste” and therefore would not fall under this Comprehensive Plan goal.

Many of the programs listed in the Comprehensive Plan may be consistent with the objectives of an ESC. On the other hand, many of the Comprehensive Plan land use, natural environment, and park policies may not be consistent with locating an ESC facility in the Baylands.

Solid waste policies that may be consistent with the objectives of an ESC:

Natural Environment
N-48 Continue sponsoring a regular household hazardous waste collection event.

N-52 Improve City composting practices and continue promoting a household composting program.

N-53 Continue to develop source separation programs for recyclable solid waste materials for all waste generators.

N-54 Continue to develop long-term solid waste management programs that include safe and environmentally sound disposal methods such as the SMaRT Station.

N-55 Maintain and expand the use of the Recycling Center at the City’s refuse disposal area.

Policies that may not be consistent with location of an ESC in the Baylands:

Land Use and Community Design Element
L-4 With adoption of the Baylands Master Plan in 1978, urban uses were limited to approximately 200 acres of existing development along Embarcadero Road and East Bayshore Road. The remaining 1700 acres were dedicated for recreation and restoration of marshland wildlife habitat.”

L-1 Continue current City policy limiting future urban development to currently developed lands within the urban service area…Retain undeveloped Baylands northeast of Highway 101 as open space.
Map L-2, Urban Service Area. The landfill site is located outside the urban service area.

Natural Environment
N-1 Palo Alto’s foothills and baylands will continue to be conserved as open space over the term of this Plan.

Policy N-1 Manage existing public open space areas...in a manner that meets habitat protection goals, public safety concerns, and low impact recreation needs.

Policy N-8 text. The 1987 Baylands Master Plan identified the baylands as a special resource warranting conservation and preservation as open space.

Community Services and Facilities
C-26 Maintain and enhance existing park facilities.

The following documents also support the construction of a recycling center within City limits:

Palo Alto Municipal Code (5.20.270)
The City will maintain within the City’s territorial limits a recycling center that accepts from residents and non-residents the delivery of recyclable materials.

Palo Alto Sustainability Policy
Related sustainability objectives include:
- Implement source reduction, reuse, recycling and composting programs that reduce waste.
- Manage hazardous waste in a safe manner with a priority of using recycling and energy extraction methods first and landfilling methods last.
- Eliminate, if practical and feasible, waste generated within the community.
- Eliminate, if practical and feasible, the use of hazardous or toxic materials that, when used, generate hazardous waste.

ENVIRONMENTAL REVIEW
In 2003, the City issued a mitigated negative declaration (MND) for a conceptual ESC. The City received comments and questions regarding the project from the Regional Water Quality Control Board and the Integrated Waste Management Board. Based on their comments, the project and alternatives have been revised to incorporate additional mitigation. However, after discussions with staff and community leaders, it was determined that a further and more extensive review would be required because of the need to resolve City policy issues as set forth in the Master Plan and the long-term solid waste program impacts for this project or any project alternatives. Staff is requesting Council approval to issue an RFP (Attachment G) for consulting services to prepare an EIR for the Environmental Services Center facility and Byxbee Park Landfill Plan.
revision. The EIR will need to be certified prior to any requests for voter approval of land-use designation changes.

ATTACHMENTS
Attachment A: BVA Cost-Benefit Analysis Table
Attachment B: Site Plan for Comprehensive ESC
Attachment C: Site Plan for Reduced-Scale ESC
Attachment D: Site Plan for Recycling and HHW Area
Attachment E: Capital and Operating Costs Table
Attachment F: Timeline
Attachment G: Draft Scope of Services

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