2011 SWANA Transfer Station Excellence Award

Sun Street Transfer Station Application

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Executive Summary

The Salinas Valley, located in Monterey County, California, is known for its innovation in agriculture and is the source of the world’s food crops. In 2004 the Salinas Valley Solid Waste Authority, a joint powers agency, purchased an old produce packing shed in order to construct the Sun Street Transfer Station (SSTS) to service the public and Republic Waste Services, the City of Salinas’s local franchise hauler. SSTS was designed to accommodate the growing solid waste and resource recovery needs of the over 150,000 residential, commercial and industrial customers in the heart of the City of Salinas.

In 2005, when SSTS initially opened, operation services were provided by a private contractor but by 2007 the Authority realized that it could operate the transfer station more efficiently and at a lower cost per ton with its personal. In 2008, the Authority took over the operation of SSTS and immediately increased productivity; the amount of recyclable materials processed and improved the customer service. By the end of 2010, SSTS surpassed all expectations by doubling productivity while maintaining low operating costs. Though the physical facility maybe humble, SSTS continues to have an outstanding safety record and performs as a State-of-the-Art facility through innovation.
1. Design of the Facility

**Design & Merits of Sun Street Transfer Station**

The Salinas Valley Solid Waste Authority (Authority) is a Joint Powers Agency located in Monterey County, California. Its Board of Directors includes City Council representatives from Gonzales, Greenfield, King City, Salinas, Soledad, and two representatives from Monterey County Board of Supervisors. The agency owns three closed landfills (Jolon Road landfill, Lewis Road landfill, Crazy Horse landfill) and one open landfill (Johnson Canyon landfill) and two transfer stations: Jolon Road Transfer Station near King City and Sun Street Transfer Station in Salinas.

One year after the Authority was formed in 1997, the Authority began to explore a location for a transfer station in the City of Salinas (population 144,000). In 2002 the Authority completed a Regional Environmental Impact Report and one of the elements of the report studied various sites in the City for the construction of this transfer station since the only option for the City of Salinas’s hauler (Republic Services) and large commercial customers was Crazy Horse landfill, located seven miles north of the Salinas area. Adding a transfer station within the City of Salinas would not only benefit Republic due to increased efficiency, but it would also serve as the transfer point of refuse to Johnson Canyon landfill since Crazy Horse only had a few years of capacity left. The location selected for constructing the transfer station in Salinas was an empty packing shed in an industrial yet central zone of the City on a 6 acre–cylindrical shaped lot. The property had historically been used for processing vegetable produce from the Salinas Valley and as a hub for shipping to distribution centers. At its peak, the site housed one of the largest packing operations in the City of Salinas. In 2003, the Authority purchased the property for $3.73 million and spent approximately $650,000 on site improvements.

Phase 1 of the Sun Street Transfer Station (SSTS) project was to initially design a facility to process 100 tons of solid waste and recycling materials, and accept 229 vehicles per day, as long as the Crazy Horse landfill remained opened. In addition, a permanent Household Hazardous Waste (HHW) Facility was also included in the design plans. The small transfer station and HHW facility was designed using existing buildings, available paved space, and a small steel push wall with no other major modifications except aesthetics; such as landscaping and fencing.

A rectangular paved area of 60’ by 100’ in front of the main building was selected as the work area of the transfer station. A solid metal push wall was installed to assist with handling waste received from Republic, commercial and self-haul customers as they unloaded their waste at the facility. This 6,000 sq.ft. pad is divided into 2 areas, commercial/franchise vehicles and self-haul vehicles.

The property also included an unpaved area of approximately three acres were green waste, construction and demolition material, and metal are stockpiled and processed.
1. Design of the Facility (cont.)

Due to the anticipation of the closure of Crazy Horse landfill and the need to meet the solid waste needs of its North County and City of Salinas residents, Phase 2 of the project required a new state-of-the-art transfer station to be constructed at the site and designed to process 1,300 tons of refuse and recyclable materials and 1,138 vehicles per day. However, Phase 2 of the design was postponed because the Transfer Station was located in one of the City’s Redevelopment Zones. Discussions began about the possible relocation of the Transfer Station due to the redevelopment activities and given the political and economic climate, the Authority held-off on Phase 2 of the design and instead revised the permit to operate the transfer station at 300 tons of solid waste and 100 tons of recycling until the issues could be resolved.

In 2005 Sun Street Transfer Station operations began after the Authority hired a private contractor to run the operation including the scale house. In 2007, SSTS processed 43,581 annual tons under the direction of the private contractor. However in 2008 the Authority assumed the operations and was able to drastically increase its processed tonnage. By 2010, SSTS had more than double the annual tonnage processed to 88,630 tons. In addition, the Authority developed the Material Recovery Center (MRC) that allowed all customers to drop off source-separated recyclable materials, and universal and electronic waste at no cost before going over the scales to dispose of their refuse. Due to the MRC at SSTS, the amount of diverted materials increased from 5,725 in 2007 to 14,111 in 2010, a 146% increase!

Unique Aspects of the System
The Longman Dictionary of Contemporary English defines “repurpose” as, “if something such as equipment or a building is repurposed so that it is used in a new way that is different from its original use, without having to be changed very much”. What makes the Sun Street Transfer Station unique is its “repurpose” features. Unlike a brand new transfer station, typically designed with adequate traffic flow routes, ample unloading areas under a tall roof structure and modern engineering and architectural design which may include green building (LEED) features, SSTS converted a property that was previously used for food production into a new integrated waste management facility.

SSTS was designed under very difficult lay-out restrictions thus requiring the Authority to be innovative and create a system that is not your typical transfer station and definitely different from the rest. SSTS differs from other transfer stations because of the challenges faced for the operations. All of the functions have to be conducted outdoors and conform to the existing geometry of the site in addition to incoming/outgoing traffic which is controlled by two small arterial streets, a challenge for our large transfer trucks. The Sun Street Transfer Station operates under all weather conditions and circumstances and still processes an average of 142 incoming vehicles per day. Given the limited size of the tipping pad, confined MRC & HHW areas, the facility has been able to manage the high volume of traffic with no incidents or accidents. Despite the physical challenges encountered the customers are able to unload all materials in a safe, efficient manner.
2. Environmental Controls/Regulatory Compliance

Environmental Protection
The Sun Street Transfer Station accepts waste that is permitted by regulation from residential, commercial and franchised haulers. Spotters are trained to conduct load-checks for hazardous materials before refuse is unloaded. If unacceptable waste is detected, a trained hazardous waste technician from our on-site Household Hazardous Waste (HHW) Facility will remove and properly recycle or dispose of the material. If the hauler of the abandoned hazardous material is identified, HHW staff reports it to Monterey County Environmental Health Bureau to proceed with the proper enforcement and education of the hauler.

In 2009, a local maintenance shop unloaded a roll-off box containing hazardous waste. The load was isolated and reported to Monterey County Environmental Health who in turn, reported the incident to the Monterey District Attorney for prosecution.

A subsequent investigation of the maintenance shop’s business was expanded to include a review of the training of employees in dealing with hazardous waste. The final settlement was a fine of $375,000 but more importantly, the company agreed to provide its employees with specific training for the care and handling of hazardous waste materials, therefore improving the protection of the environment, the safety of the workers at the maintenance shop, the SSTS, and the general public.

Environmental Quality, Resource Conservation, Compatibility with Environment
In the fall of 2009, a Materials Recovery Center (MRC) which consists of drop boxes, 2 yard collection containers and concrete bunkers was constructed and assemble to assist with increasing recycling levels and providing a free recycle drop off to our customers prior to crossing over the scales. To assist with the center, the Authority partnered with HOPE Services, an organization that provides a range of employment and job training programs for individuals with developmental disabilities throughout Monterey County and the greater Bay Area. The HOPE Services partnership allowed the expansion of the materials recovery effort, provided additional customer service to the public and increased conservation of natural resources by removing valuable materials from the waste stream that would otherwise have been sent directly to the landfill.

The MRC has been a huge success as it provides SSTS customers with a free drop off for appliances, metal, ridged plastics, porcelain, concrete, electronic waste, CRT’s, clothing, news paper, cardboard, glass, aluminum, and plastic bottles. Customers can reduce the volume of their load prior to entering scale thus reducing their disposal cost and assisting with the SSTS’s diversion efforts. This recovery effort has led to increased revenue from the sale of these materials and operational cost savings.

In addition, the western portion of the property which consists of a class 2 recycle base-rock pad received a total of 12,242 tons of recyclable materials in 2010. All materials collected are transferred to recycling facilities for processing. The materials included 3,721 tons of construction and demolition material, 7,512 tons of green waste, and 1,009 tons of metal.

HOPE Services Staff Assist Customers at the MRC
Environmental Compliance- Integrated System

Similar to other integrated solid waste management systems, the SSTS is inspected monthly by the Local Enforcement Agency (LEA) – Monterey County Environmental Health. The agency acts as an extension of CalRecycle, the state agency responsible for overseeing landfills, composting facilities and transfer stations. Between 2005-2007, SSTS Facility inspections by the LEA generated thirteen violations but between 2008-2010 while under the Authority’s operation, only two violations were generated, –a 77% improvement. As of calendar year 2010 the SSTS has received no violations from the LEA.

Hazardous Materials Management

SSTS’s Household Hazardous Waste (HHW) Facility is open year round and accepts HHW material for free from all residential customers living within our service area that covers an estimated 2,500 square miles. The program has been successful in reducing the amount of potential HHW that could end up being illegally dumped on roadsides, or in the landfill, storm drains, and abandoned properties. The program has successfully accepted 1,601 tons of HHW material from our service area over the past six years.

The HHW facility must maintain certifications from the Certified Unified Program Agency (CUPA) of the Monterey County Environmental Health Bureau. The CUPA conducts an annual extensive inspection that includes: record keeping, documentation, requirements for container tank management, labeling, employee training, and preparedness and prevention. The HHW facility must also maintain an up-to-date business response plan. The HHW has operated with no violations and perfect inspections for the past six years.

Storm Water

The storm water management program is regulated by the State of California Water Resources Control Board and the City of Salinas’s National Pollutant Discharge Elimination System (NPDES) Storm Water Program. Since the tipping area of the Sun Street Transfer Station is outdoors, two water collectors were installed in order to run the leachate to the City of Salinas’s water treatment facility. Appendix A shows the NPDES Site Plan. The storm run-off from the rest of the property discharges into a three stage clarifier. Storm water must be tested twice during the rainy season for PH, Total Suspended Solids, Specific Conductance and Total Organic Carbon, and metals. An annual report is prepared for the State of California Water Control Board. The City of Salinas NPDS Storm Water Program conducts an annual inspection of the site to primarily identify levels of potential water pollution exposure and ensure the Storm Water Pollution Prevention Program contains the necessary Best Management Practices to mitigate any high level of water pollution exposure. The Sun Street Transfer Station has never received a citation from either of the two responsible agencies.

Awards, Letters, Inspection Data

In 2010, the Authority received the Public/Private Economic Development Partnership Award from the Monterey County Business Council for our partnership at SSTS with HOPE Services. The Authority has also received a Certificates of Recognition for this same partnership with HOPE Services from the California State Senator Jeff Denham, the California Legislature Assemblywoman Anna Caballero, and a Certificate of Special Congressional Recognition from US Congressman Sam Farr.
3. Program Planning

Facility Planning Process & Effectiveness
The Salinas Valley Solid Waste Authority was establish as an organization dedicated solely for the purpose of managing all of the solid waste programs in the Salinas Valley. Prior to the formation of the Authority, the City of Salinas owned and managed the Crazy Horse landfill located north of Salinas. The County of Monterey owned and managed the Jolon Road, Johnson Canyon and Lewis Road landfills. The Authority’s services area covers the entire Salinas Valley which includes the city of Gonzales, Greenfield, King City, Salinas, Soledad and the unincorporated eastern portion of Monterey County. The service area consists of over 300,000 residents and covers approximately 2,500 square miles.

The majority of the Authority’s service area population is located in the City Salinas and the Northeastern Unincorporated Monterey County area. These service areas make up approximately 68% of the Authority’s waste. The recent closures of the Lewis Road landfill located in Northern Monterey County in 2002 and the projected closure of the Crazy Horse landfill, located North of Salinas, between 2007-2009, required a transfer station be located in the Salinas area to service customers in this region. The construction of the SSTS was to function as the collection point for waste from the unincorporated Northern portion of Monterey County and the City of Salinas which would then be transferred to the Johnson Canyon Landfill, the only remaining active landfill in operation in the Authority’s jurisdiction which is located east of the City of Gonzales.

Several sites were explored as possible locations for a transfer station, including the existing Madison Lane Transfer Station owned by Waste Management, Inc. (WM). Unfortunately negotiations between WM and the Authority did not lead to an agreement and Madison Lane Transfer Station was removed from the list of options for transfer stations sites. The Sun Street property was eventually chosen by the Authority as the best available option. The initial phase included a scale house, a household hazardous waste collection facility, a small, limited recycling drop-off area, and an outdoor unloading concrete pad for the local hauler, commercial and self-haul customers as part of the initial basic design. The initial permitted tonnage was 100 tons per day and 229 vehicles. Within a year of the initial start up the permit for the facility was re-permitted by CalRecycle (formerly the California Integrated Waste Management Board) for 300 tons of refuse and 100 tons of recycling.

Though the planning process is still in effect for the second and third phases of the project to expand beyond the current capacities, the planning thus far has been very effective given the space and size restrictions of the site. The SSTS has limited down time due to the continuous delivery of solid waste, greenwaste, C&D, and recyclables by Republic Services and self-haul customers, as well as the constant processing and loading of those materials for transport to the end processor.
4. Performance, Economics & Cost Effectiveness

Operation Efficiency

When the Sun Street Transfer Station initially opened in 2005 the operations were assigned to a private company with extensive experience in the waste industry but after three years, the contract was not renewed and the complete operation was taken over by the Authority due in part to:

- The contract did not allow the addition of new diversion programs without lengthy contract negotiations and revisions.
- A large portion of the contractor fees were leaving the City of Salinas therefore not contributing back to the local economy.
- The contractor had below-standard customer service and did not promote the mission of the Authority.
- An internal analysis demonstrated that the Authority could perform the operational activities at a lower cost per ton.
- The Authority—after observing the operational functions and performance of the private contractor, realized that with some changes in procedures the Authority could increase the productivity of the site.

In August of 2007, the Authority’s Board of Directors approved the hiring of a lead operator, two operator-drivers, and two diversion workers along with an operating budget. In 2009, after the Crazy Horse landfill closed the SSTS facility had an increase in customers, tonnage and recycling, requiring two additional drivers and one diversion worker.

Table 1 shows the percent change in total operational performance since 2007.

This increase in tonnage acceptance at the SSTS allowed the local franchise hauler, Republic Waste Services to reduce and/or eliminate the direct hauling cost to Johnson Canyon Landfill located 17 miles south of Salinas. This created a savings in operational cost to Republic, while reducing Greenhouse Gases (GHG) emissions.

The productivity of the SSTS has consistently grown and it is only limited due to its operating permits. The performance of the Sun Street Transfer Station has far exceeded the goals and expectations set at all levels given its simple design and humble facility.
**Operation Efficiency (cont.)**

Table 2 highlights the increase performance once the Authority assumed control of the operations of SSTS from the Contractor. The leveling out in 2009 and 2010 was due to the depressed economy and decreases in total tonnages received.

Table 3 demonstrates the emphasis of one of the elements of the Authority’s mission: to manage solid waste as a resource. From 5,725 tons of diverted materials in 2007, Authority staff diverted 14,111 tons in 2010. Authority staff achieved a 146% increase in materials.

**Customer Service**

Not only did the SSTS experience significant performance benefits after the Authority Staff assumed complete control but it also allowed the agency to foster customer service by:

- Integrating all of the functions at the transfer station into a single management unit.
- Improving communication between scale house operations and the rest of the operations at the site.
- Creating a representative of the Authority who could better represent the Authority’s customer service values to our customers.
- Facilitating the implementation of ideas to improve customer service or deal more effectively with customer inquiries or complaints.

In February of 2010, a bilingual customer survey was conducted at the SSTS to document the origin of the customer base as well as to assess the quality of service provided by the Authority and the frequency of services used. Surveys were used as a tool to collect the data and then the results were used to improve customer service and assist with the design of future programs to help meet the community’s needs.
Customer Service (cont.)
Through the survey, the Authority was very surprised to learn that the majority of our customers heard about the SSTS from a friend. As a result, this year we will launch a more aggressive customer outreach that will include door to door hangers and inserts in the local refuse bill. The Authority was also able to identify which of the six City of Salinas Council Districts customers resided in. Results showed more than 50% of customers come from two of the six districts: each of these two districts is adjacent to each other. This information will be incorporated into this year’s customer outreach.

More importantly, the survey results indicated that 99% of the customers surveyed were pleased with the services provided. All SSTS staff receive on-going training in customer service and are bilingual in order to more effectively communicate with the public.

Economic Impact
As shown in Table 4, in 2008, staff operated at 65% below the cost of the private contractor. In 2009 the closure of the Crazy Horse Landfill required the addition of staff, an additional truck and trailer and redirecting waste to the Johnson Canyon Landfill resulting in a increase to the previous year’s operational cost, yet still performing 49% below the previously hired private contractors cost. In 2010 the Authority operated at 46% below the cost of 2007.

The Sun Street Transfer Station is one of two significant contributors to the financial revenue system for the Authority. The other revenue center is the Johnson Canyon landfill. The rate per ton is a universal rate across all revenue centers. As highlighted in Table 5 below, the Sun Street Transfer Station provides an essential revenue contribution to the Authority’s financial system.

<table>
<thead>
<tr>
<th></th>
<th>Recology 2007</th>
<th>SVSWA 2008</th>
<th>SVSWA 2009</th>
<th>SVSWA 2010</th>
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<tr>
<td>Tonnage</td>
<td>43,580</td>
<td>70,385</td>
<td>82,575</td>
<td>88,630</td>
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<tr>
<td>Expense</td>
<td>$880,956</td>
<td>$550,444</td>
<td>$815,064</td>
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<tr>
<td>Net Cost/ton</td>
<td>$20.21</td>
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Table 4

<table>
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<tr>
<th>Year</th>
<th>Tonnage</th>
<th>Expense</th>
<th>Rate/ton</th>
<th>Revenue/ton</th>
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<td>2006-07</td>
<td>$2,336,814</td>
<td>$3,285,569</td>
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<td>2007-08</td>
<td>$4,601,122</td>
<td>$5,110,280</td>
<td>$63.00</td>
<td>$57.65</td>
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Table 5- Sun Street Transfer Station Revenue
5. Utilization of Equipment, Systems & Technology

Equipment and Effectiveness
The SSTS operates a 950G CAT loader, five Peterbilt tractors with walking floor trailers, one Volvo roll off truck and a 210 John Deere skip loader. The equipment consumes about 66,000 gallons of diesel annually. Though the 950G CAT loader is on the replacement schedule in the FY 11-12 budget, it is essential to the efficiency of the SSTS. The new loader is expected to further performance as well as increase cost efficiencies in the operations.

The most recent tractor truck purchased includes a Cummings engine approved to run on B20. B20 is a blend of 20% biodiesel and 80% regular diesel. In June of 2010 the Authority submitted a grant application to the Monterey Bay Unified Air Pollution Control Board (MBUAPCB) for the purpose of operating the entire equipment using diesel with B20. The grant included a partnership with the City of Salinas Fleet Maintenance Department which operates street sweepers, dump trucks, and sewer trucks. The City of Salinas consumes 44,000 gallons of diesel per year.

In September of 2010, the Authority received the grant from the MBUAPCD for $61,340 to pay for the purchase and installation of a B20 fuel tank to be located at the Sun Street Transfer Station. A total of thirty-two grant applications where submitted of which, the Authority’s received the highest ranking due to its immediate environmental benefits of reducing GHG emissions. As of March 2011 the Authority has started the initial phase of converting its transfer truck fleet to B20 bio-diesel.
Worker Health & Safety

In December of 2007, the Authority hired the services of an environmental and health consulting company in order to create an Illness and Injury Prevention Program specific to SSTS. A few weeks before Authority staff began operating the transfer station, the workers received the following training from a Health and Safety officer: Blood Borne pathogens, Right to Know, Hazardous material information, chemical and physical hazards, spill response and disposal, exposure and first aid, fire and explosion, mixing and storing hazardous materials, and Household Hazardous Waste Facility.

In addition, safety training is conducted each month by the site supervisor. Topics discussed revolve around day to day issues from “Basics of Spotter Safety” to “Hazards in the Waste Stream”; to “Handling Difficult Loads”. In addition, the HHW technicians undergo annual 40-hour HAZWOPER recertification training.

<table>
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<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>Total</th>
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<tr>
<td>Labor Hrs:</td>
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<td>Labor Hrs: 16,280</td>
<td>Labor Hrs: 16,820</td>
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<tr>
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<td>Miles:</td>
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<td>Miles: 155,200</td>
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<tr>
<td>Vehicle Accidents:</td>
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<td>Vehicle Accidents: 0</td>
<td>Vehicle Accidents: 0</td>
<td>Total: 0</td>
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The Safety Record Table above demonstrates an excellent safety record. A total lost time of 48 hours due to one injury and three minor accidents in 2009 is the only year with lost time. Still, 48 hours represents 0.10% of the total hours worked.

The Authority’s drivers have an impeccable safety record with no accidents. This also helps to answer why management has not installed GPS or governors to monitor and control the drivers: Authority’s workers perform at a continuous level of excellence.

HOPE Services Crew in Safety Gear—Hard hat, Reflective Safety Vest and Steel-toe boots
7. Public Acceptance, Appearance, & Aesthetics

Appearance and Cleanliness
The SSTS vehicles, facility and yard are properly maintained and cleaned on a daily basis. All loading of waste for transport is stopped an hour before closing to allow HOPE Services to clean the loading ramp and any remaining waste on the tipping area is pushed and covered with water-proof tarps. HOPE Services also provides daily litter abatement services throughout the entire facility. All recyclable materials collected at the MRC are loaded into containers for overnight storage. During periods of windy weather, the paper recycling rolloff in the MRC is covered with a heavy-weight tarp to prevent litter. A street sweeper is also brought in three times a week to sweep all paved areas. In addition, the HOPE Services crew is dispatched daily to pick up litter throughout the surrounding areas and as many times as necessary during windy days. A street sweeper also cleans adjacent streets three times per week or as needed.

In the summer months, the transfer trucks are washed two to three times per month. The trucks are washed at a local, off-site certified truck wash facility. In the winter months, the trucks are washed as weather permits.

Public Relations
The future development of the phase 3 full-scale transfer station at Sun Street Transfer Station is still undergoing revisions because the location of the transfer station is scheduled to become part of a new redevelopment project: The Alisal Market Place. Currently the Authority is exploring three different sites in order to continue to operate a state-of-the-art Transfer Station within the city limits of Salinas. Until the final site is selected and built, changes to the SSTS traffic flow and an increase in the permitted tonnage must to occur to keep up with the demands. Thus the Authority is working with the Salinas City Council and the Salinas United Business Association (SUSA) to create an advisory committee to address on-going concerns and issues.

Good Neighbor
The Authority continually strives to be good neighbors especially since no one wants a transfer station in their backyard or next door to their business. Recently SSTS experienced a large influx of Sea Gulls. The gulls start heading inland between October and March. They became a nuisance to the facility and also neighboring businesses.

The seagulls were soiling local business building and also local used car dealerships inventory. The Authority’s management acted quickly and went door to door explaining the situation and informing neighbors of the steps the Authority was taking to mitigate the issue.

In the winter of 2010, Authority staff engineered and constructed a litter abatement/bird netting at the SSTS. The project was taken on by the Authority’s staff after the cost proposals came in at over $100,000 for the project. Staff spent numerous weeks working on the task which also improved the containment of windblown debris on site and minimized the number of seagulls that were on site. The project consisted of a perimeter of 25’ tall litter fences, three layers of light plastic cables to confuse birds. Additional series of misters lines where added along the overhead bird netting to spray deodorized water for odor and also to be used as a dust control. The project’s completion reduced the number of seagulls to a handful and at the same time the total expense was kept below $20,000, saving the Authority over $80,000.
Appendix A

NPDS SITE PLAN