2009 FACILITY ACTION PLAN

FACILITY	SITE ID	DATE
Skagit County Ovenell Transfer Station Complex 14104 Ovenell Road, Burlington	SC-43	1-19-10 DRAFT

CURRENT ENERGY USE INDEX (EUI)	TARGET EUI	AVERAGE EUI (BENCHMARK) FOR THE FACILITY TYPE
85 kBtu/Sq Ft	TBD kBtu/Sq Ft	TBD

NEXT REVIEW OF PLAN	FACILITY RCM TEAM MEMBERS (NAME AND POSITION)
Review and update annually.	1. Ric Boge, SCOG RCM 2. Kevin Renz, Solid Waste Div. Manager (unavailable the day of the Audit)
WALK THROUGH SUMMARY AND PHOTOS	DATE AND TIME OF WALK THROUGH 1-12-10

OVERVIEW OF THE SITE VISIT AND OPPORTUNITIES FOR RESOURCE CONSERVATION IN THE FACILITY

The Skagit County Ovenell Transfer Station Complex was converted from a solid waste incinerator to a solid waste transfer station about 15 years ago. Plans are underway to construct a new, state-of-the-art, transfer station at this location in 2011. Therefore, some recommendations in this FAP may not apply, unless the timeline is set back for the new transfer station.

The 20,000 square foot Complex is comprised of 1) a scale house, 2) a hazardous waste collection & shipment building, 3) a maintenance shop building, 4) a small 'staff trailer' in the public waste and recycling receiving area, and 5) the primary building that houses the administrative offices, locker room, sweeper storage room, main tipping floor for commercial waste, and crane operator area for loading waste with a grapple into a large compactor to prepare for trucking in shipping containers to a landfill. The site, open daily 6 am to 6 pm, has 18 employees, about 10 of which are on site at any one time. A rooftop York HVAC unit services the administrative area. A small Fujitsu heat pump services the crane operator room. Other buildings are served by electric wall, space and baseboard heaters. No other artificial cooling except a small portable unit in the public use "staff trailer" and window mounted units put in the scale house and hazardous waste building office during the summer. In 2008 this Complex used 463,389 KWh of electricity and 1285 Therms of natural gas for a total cost of $43,923, making it the third highest County Complex in energy cost for 2008.

Two PSE accounts service the Complex: #436-094-100 (shop meter/rate Z001264542/24-E-C & main bldg meter/rate #Z004701035/25E-C-KV), and #765-606-100 (public use area meter/rate #A091659348/24E-C). One Cascade Natural Gas account services the Complex: #029-0071-3 (main bldg meter/rate #693577/505). Water service is provided by Skagit PUD account #11436-3 (meter #1223542). Sewer service is provided by City of Burlington account #325.

Ovenell Transfer Station - Commercial Waste Receiving Area

Key findings from the Resource Conservation Audit are:

1. Retrofit T-12 linear fluorescent lighting throughout the Complex with more efficient T-8 linear fluorescents.
2. Control lighting left on in unoccupied spaces by posting reminders or installing motion sensors.
3. Replace York thermostat in the administration area with a programmable thermostat to save energy.
4. Seal air leaks around outside doors to heated areas.
5. Clean fiberglass skylight panels in Maintenance Shop roof will allow free, natural light into the Shop.

POTENTIAL CONSERVATION MEASURES, OPERATIONAL IMPROVEMENTS, OR MODIFICATIONS	
MEASURE SUMMARY (*ORDERED FROM HIGHEST TO LOWEST POTENTIAL ENERGY REDUCTION MEASURES*)	**FOLLOW UP ACTIONS** DISPLAYED TO THE RIGHT OF EACH MEASURE

HEATING/VENTILATION/AIR CONDITIONING (HVAC)

1. Replace York thermostat in the administration area with a programmable thermostat. 	**Funding:** Operating Budget **Staff:** Solid Waste Division Manager **Schedule:** Immediate Action **Note:** Programmable thermostats allow for restricting occupant control to temporary overrides and enable consistent, reliable control over settings during periods of unoccupancy such as nighttime and holidays.
2. Replace portable AC unit in the public-use area 'staff trailer' with a portable fan. 	**Funding:** Operating budget **Staff:** Solid Waste Division Manager **Schedule**: Immediate action. **Note:** It appeared that staff spends limited time, primarily for breaks, in this trailer. Therefore, to prevent wasting energy on AC for space of limited use, replace the AC unit with a fan that staff can turn on to help cool down when in the trailer on hot days.

ELECTRICAL & LIGHTING

1. Replace the linear T-12 fluorescent lighting throughout the Complex with more efficient T-8. 	**Funding:** Operating Budget / Capital Budget / PSE grant assistance **Staff:** Solid Waste Division Manager **Schedule:** Immediate action. **Note:** Compared to T-12s, T-8s use 20% less electricity, put out more light, and last longer. PSE's custom grant program for business efficiency retrofits could provide up to 50% of the cost on the retrofit. Application and prior-approval by a PSE Energy Management Engineer is required.

2. Add reminder or install controls to ensure interior lighting is turned off when rooms are unoccupied.

Lighting left on in unoccupied break-room.
(natural lighting may be fully sufficient at times)

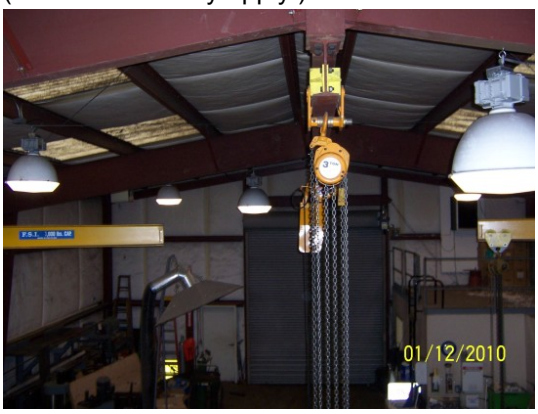
Linear fluorescent overhead lighting left on in unoccupied Sweeper storage room.

Funding: Budget neutral / Operating budget / possible PSE rebates.

Staff: Solid Waste Division Manager

Schedule: Immediate action.

Note: Several unoccupied spaces had lighting left on. Besides adding reminder labels next to switches, consider lighting controls such as timers or motion sensors to areas infrequently occupied so lights automatically shut off when not needed. (PSE rebates may apply.)



This is especially important where there are several 400W overhead lights turned on, such as the Maintenance Shop.

(Consider day-lighting ballasts for artificial lighting in areas often subject to natural lighting. These ballasts will dim down the artificial lights when sufficient daylight is available.)

3. Clean the fiberglass panel skylights in the Maintenance Shop to let in more natural lighting.

Natural lighting has the potential to reduce use of some artificial lighting.

Funding: Budget neutral

Staff: Existing staff, Solid Waste Division Manager

Schedule: Immediate action.

Note: Clean skylights will allow free, natural lighting into the non-windowed Maintenance Shop.

4. Replace electric wall and baseboard heaters in the smaller offices and rooms with infrared radiant heat panels.

Baseboard heaters in Haz. Waste Bldg Office.

Electric wall heater in Scale House

Baseboard heater in Maint. Shop Office

Funding: Capital Budget

Staff: Solid Waste Division Manager

Schedule: Immediate action, or when due for replacement.

Note: Infrared radiant heating is up to 50% more efficient than electric wall and baseboard heaters. It heats 'objects', such as people, rather than the air.

Try it out in an area to see if it can work for some smaller, heated spaces at the Transfer Station.


Example of infrared radiant heat panel under desk.


Example of infrared radiant heat panels on ceiling in office area.

5. Use only *Energy Star* rated appliances.  Break room appliances did not have the Energy Star label.	**Funding:** Budget neutral. **Staff:** Solid Waste Division Manager **Schedule:** When replacement is due. **Note:** Energy Star is a rating given by the Environmental Protection Agency to appliances guaranteed to use less energy than the average of similar, non-Energy Star appliances.

WATER & SEWER

1. Keep the water heater servicing washrooms set not to exceed 120ºF.	**Funding:** Budget neutral **Staff:** Solid Waste Division Manager **Schedule:** Immediate Action **Note:**
2. Use only toilets and urinals with sufficient flow control capability to conserve water usage in new construction or renovation projects.	**Funding:** Operating budget. **Staff:** Outside contractor / vendor. **Schedule:** Budget contingent / write into bid specs for new construction and renovation projects. **Note:**
3. Report building plumbing and irrigation equipment leaks immediately. Investigate and repair as soon as possible.	**Funding:** Budget neutral **Staff:** All staff report leaks. **Schedule:** Ongoing **Note:** Ongoing water leaks can add up to a big waste of money!
4. Limit use of irrigation on existing lawn.	**Funding:** Budget neutral **Staff:** Existing staff **Schedule:** Immediate action **Note:** Ensure that irrigation is scheduled to minimize evaporation.

5. Landscaping should utilize drought tolerant design and native plants whenever possible. These areas will not need irrigation once established. (Native trees will need minimal irrigation)	**Funding:** Operating budget or new construction / capital project. **Staff:** Measure should be written into bid specs for new projects. **Schedule:** As needed.
	Note: Some estimates indicate that if an acre of lawn is converted to natural area, it could save as much as $90,000 over 20 years.

RESOURCES REQUIRED FOR IMPLEMENTATION OF CONSERVATION MEASURES

OCCUPANT/EMPLOYEE TRAINING, DETAILED ENERGY USE ANALYSIS, CAPITAL IMPROVEMENTS, HVAC ADJUSTMENTS, ETC.

RESOURCE	FOLLOW UP BY
1. **Communication** • Frequent communication with occupants on viability of these conservation measures to secure and maintain 'buy-in' and to make minor modifications as needed. • Periodically, post energy usage and cost reports on this facility for occupants to see any impacts from the conservation measures • Consistent feedback to staff from Solid Waste Division Manager regarding the implementation of action plan initiatives. • Include SCOG RCM in review of any renovation or new construction projects to ensure conservation measures are built in from the get-go.	**1.** Solid Waste Div. Mgr., Assigned Staff, SCOG RCM assistance as appropriate.
2. Education and Training • In order to maximize behavioral or operational changes, education is critical. Education can include informational emails, brochures, and/or a newsletter by interested staff with assistance from the SCOG RCM as deemed appropriate. • Reward success and good conservation-at-work behavior with awards or formal recognition by the Board of County Commissioners.	**2.** Solid Waste Div. Mgr., Assigned Staff, SCOG RCM assistance as appropriate
3. Funding • Interact with utility companies to determine applicability of custom grant or prescriptive rebate funding for specific energy efficiency upgrades.	**3.** Solid Waste Div. Mgr., Assigned Staff, SCOG RCM assistance as appropriate
4. Utility Use Data – see attached	4. Additional and detailed usage data for energy and other utilities is available from the SCOG RCM (Ric Boge).