

2010 FACILITY ACTION PLAN

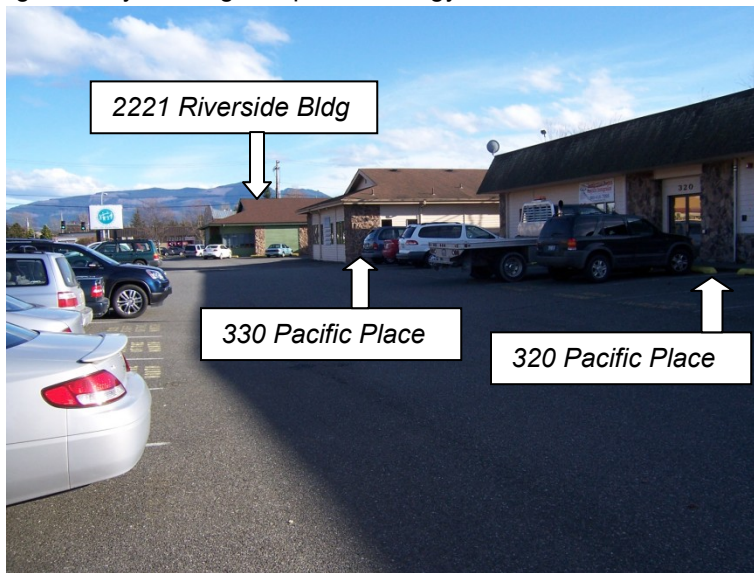
FACILITY Skagit County – Skagit Family Resource Center 320 & 330 Pacific Place and 2221 Riverside Dr., Mount Vernon		SITE ID SC-39, 39A, 39B, 39C, & 39Anx	DATE 2-11-10 DRAFT
CURRENT ENERGY USE INDEX (EUI) 75 kBtu/Sq Ft (Range from 57 to 150)	TARGET EUI TBD kBtu/Sq Ft	AVERAGE EUI (BENCHMARK) FOR THE FACILITY TYPE TBD kBtu/Sq Ft	
NEXT REVIEW OF PLAN Review and update annually.	FACILITY RCM TEAM MEMBERS (NAME AND POSITION) 1. Ric Boge, SCOG RCM 2. Ross Bailey, Skagit County Facility Operations Manager 3. Tony Bachman, SCCAA Facility Maintenance Supervisor		
WALK THROUGH SUMMARY AND PHOTOS	DATE AND TIME OF WALK THROUGH 1-12-10 & 1-14-10		

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

The Skagit Family Resource Center is comprised of three buildings totaling 24,646 square feet and hosting multiple human-service agencies. The largest building, 11,617 square feet at 320 Pacific Place, hosts Catholic Community Services, Head Start, and SPARC day care for special needs children. The next largest building, 7,434 square feet at 330 Pacific Place, hosts multiple programs administered by Skagit County Community Action Agency (SCCAA). The third building, 5,595 square feet at 2221 Riverside Drive and also managed by SCCAA, hosts Literacy, Americorps, WorkFirst, Housing Authority, and Ombudsman.

Approximately 85 people work at the Center. 320 Pacific Place is open 8 am to 6:30 pm. M-F. The other two buildings are open from about 8-5, M-F. Three HVAC units service 320 Pacific Place, four service 330 Pacific Place, and four heat pumps service 2221 Riverside Dr. Multiple utility accounts service the Center (see attached sheet).

In 2008 the Center used 308,690 KWh of electricity and 8,009 Therms of natural gas for a total cost of \$37,665, making it the fifth highest Skagit County building complex in energy cost for 2008.



Key findings from the Resource Conservation Audit are:

1. The Center has significant and complex energy inefficiency problems that can be best addressed by an Energy Service Company (ESCO) in an Energy Saving Performance Contract with the State of Washington.
2. Challenge agency directors to reduce energy usage to preserve their limited funds for better purposes.
3. Initiate an internal campaign with staff to raise awareness and change wasteful habits with utility usage at work.
4. Save on monthly electricity bills by installing additional switches so occupants have more control over lighting turned on/off.
5. Save on monthly energy bills by maintaining strict control of thermostats, allowing for only temporary overrides.
6. Save on monthly electricity bills by retrofitting the overhead T-12 fluorescent lighting with more efficient T-8.
7. Save on monthly electricity bills by retrofitting older Exit Signs with more efficient LED-lit Exit Signs.
8. Save on monthly electricity bills by installing controls on vending machines to reduce electricity use during periods of unoccupancy.

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. Hire an Energy Service Company via an Energy Savings Performance Contract through the State's Office of General Administration. Concerns to address include:



Some thermostats control registers in diverse spaces with different heating/cooling needs, such as this one at 320 Pacific Pl. for an office area, conference room & bathroom.



Occupants sometimes cover registers to keep rooms from getting too warm/cold, such as this one at 330 Pacific Place.



No insulation under ground floor of 2221 Riverside Dr.

Funding: Budget Neutral

Staff: Agency Directors & Skagit County Officials

Schedule: Immediate action.

Note: The scope and complexity of energy efficiency issues at the Center require a professional evaluation. Efficiency could be best addressed by an Energy Savings Performance Contract through the Washington State General Administration's Performance Contracting program. A pre-qualified energy efficiency consultant will thoroughly audit the facilities and make recommendations. Implementing the recommendations can be paid from a loan from the GA's Office financed from annual energy utility savings.

In some cases, the heating, cooling and lighting systems originally installed for buildings at the Center are no longer working well for the comfort of the occupants or for energy efficiency. A professional energy audit will address issues such as occupant spaces disconnected from thermostats and lighting that control those spaces, lack of insulation, lack of reliable controls on night time setbacks and exterior lighting, retrofitting T-12 overhead fluorescents for the newer and more efficient T-8, and more.

Another concern:



There is a night setback timer for HVACs at 330 Pacific Place, however Facility Maintenance staff were unsure how to use it and all pins controlling the timers were removed.

2. Some thermostats were set too high:



74 degrees in occupied offices at 2221 Riverside Dr.



72 degrees in occupied offices at 330 Pacific Place.

Funding: Budget Neutral

Staff: as assigned by Agency Directors

Schedule: Immediate Action

Note: Two thermostats pictured to the left of eight that are evenly split between 2221 Riverside Dr. and 330 Pacific Place. Some are labeled 'do not adjust', but some were set too high, apparently due to occupant adjustments. (One not pictured was set to 76 degrees at 2221 Riverside Dr.)

Maintain strict control of thermostats utilizing PSE suggested set points shown in chart on page 9.

3. Some doors and windows lack shades.



East-facing door and window at 2221 Riverside Dr.

Funding: Operating Budget / Capital Budget

Staff: as assigned by Agency Directors

Schedule: Immediately, or as budget allows

Note: Window coverings can help retain heat in the winter and block unwanted solar heat gain in the summer. Consider one or more of the following options for each glass window or door:

- Roll-up sun shades on windows subject to unwanted heat gain from sunlight
- Roll-up window blinds to minimize unwanted heat loss or gain
- Cellular shades to minimize unwanted heat loss or gain.

ELECTRICAL & LIGHTING

1. Replace the linear T-12 fluorescent lighting with more efficient T-8.

Funding: Operating Budget / Capital Budget / PSE grant assistance

Staff: as assigned by Agency Directors

Schedule: Immediate action.



T-12 fluorescents in hallway at 2221 Riverside Dr.



T-12 fluorescents in reception area at 330 Pacific Place

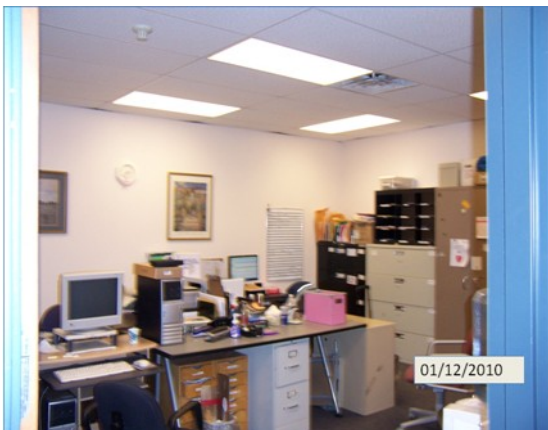
Note: Compared to T-12s, T-8s use 20% less electricity, put out more light, and last longer. PSE's custom grant program for business efficiency retrofits could provide up to 50% of the cost on the retrofit. Application and prior-approval by a PSE Energy Management Engineer is required.

- 2. Add reminder 'turn off the lights' labels or install controls in rooms with lighting switches in the room.

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

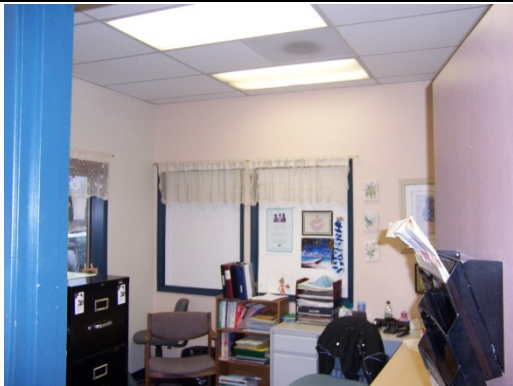
Staff: as assigned by Agency Directors

Schedule: Immediate action.



Unoccupied office at 320 Pacific Place with overhead lighting turned on.

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.)



Unoccupied office at 330 Pacific Place with overhead lighting turned on.



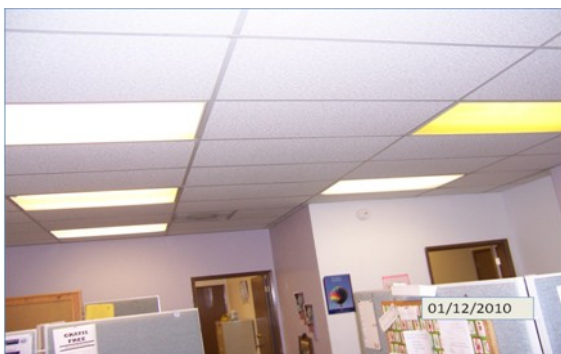
Unoccupied Men's restroom with overhead and vanity lighting turned on at 330 Pacific Place.

Also consider 'day-light harvesting' ballasts for artificial lighting in areas often subject to natural lighting, such as the area shown in the photo below. These ballasts will dim down the artificial lights when sufficient daylight is available.



Reception area for one of the entrances to 2221 Riverside Dr. sometimes has abundant natural lighting.

3. Add switches in areas with limited switches for overhead lighting.



Many overhead lights, such as these at 2221 Riverside Dr., are controlled by a single switch, sometimes in another room.

Funding: Operating Budget / Capital Budget

Staff: as assigned by Agency Directors

Schedule: Immediate action or as budget allows

Note: Adding switches gives occupants more control over just the lighting needed for the space occupied.

3. Retrofit all Exit Signs to LED-lit Exit Signs.

Funding: Budget neutral. Utility incentive will cover entire cost of replacement, including labor.

Staff: as assigned by Agency Directors

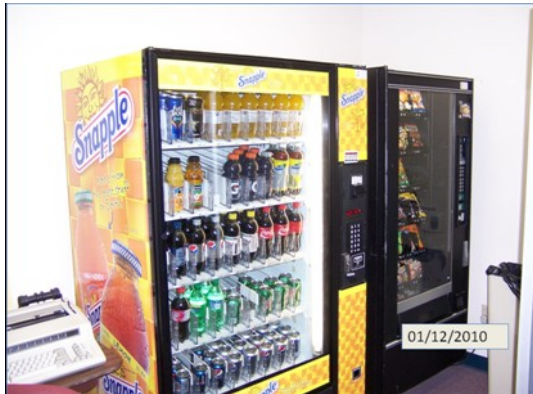
Schedule: Immediate action.



Apparent non-LED Exit Sign at 2221 Riverside Dr.

Note: LED EXIT lights use about 1/2 the energy of fluorescent signs and 1/5 the energy of incandescent signs.

4. Install occupancy controls on vending machines.



Vending machines at 330 Pacific Place.

Funding: Budget Neutral / Operating budget / PSE Rebate

Staff: as assigned by Agency Directors

Schedule: Immediate action.

Note: PSE has an \$80 rebate for a vending machine controller to cut its energy use during unoccupancy. In some instances PSE will even come install a controller themselves, with no cost to the customer: call (425) 827-0330 and ask to speak with Robert Blue.

5. *Replace incandescent bulbs with CFL bulbs.*



Incandescent bulbs above vanity in Men's restroom at 330 Pacific Place.

Funding: Budget neutral / PSE rebate

Staff: as assigned by Agency Directors

Schedule: Immediate Action.

Note: PSE has instant rebates to replace incandescent bulbs with Compact Fluorescent Lights. Contact:
 All Phase
 321 East Sharon Avenue
 Burlington, WA 98233
 360-755-0831
 Ask to participate in PSE's instant rebate for CFLs.



Incandescent lighting in hallway at 330 Pacific Place.



Incandescent outside lighting at 2221 Riverside Dr.

6. Re-view with Facility Maintenance staff how to use timer controls for outside lighting so it shuts off exterior lighting during daylight. Repair controls if necessary.



Timer for exterior lighting controls at 330 Pacific Place was set to shut off lighting at 8:30 am. However, much exterior lighting was still on at 10 am (see photo to right).

Funding: Operating Budget / Capital Budget.

Staff: Agency Directors & Facility Maintenance Staff

Schedule: Immediate action or as budget allows.

Note:



Lights on above entrance to 330 Pacific Place at 10 am

7. Use only *Energy Star* rated appliances.



Break room appliances did not have the Energy Star label.

Funding: Operating Budget / Capital Budget.

Staff: as assigned by Agency Directors

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

<p>1. Keep the water heater servicing washrooms set not to exceed 120°F.</p>	<p>Funding: Budget neutral</p> <p>Staff: as assigned by Agency Directors</p> <p>Schedule: Immediate Action</p>
<p>2. Use only toilets and urinals with sufficient flow control capability to conserve water usage in new construction or renovation projects.</p>	<p>Funding: Operating budget.</p> <p>Staff: Outside contractor / vendor.</p> <p>Schedule: Budget contingent / write into bid specs for new construction and renovation projects.</p>
<p>3. Report building plumbing and irrigation equipment leaks immediately. Investigate and repair as soon as possible.</p>	<p>Funding: Budget neutral</p> <p>Staff: All staff report leaks.</p> <p>Schedule: Ongoing</p>
<p>4. 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)</p>	<p>Funding: Operating budget or new construction / capital project.</p> <p>Staff: Measure should be written into bid specs for new projects.</p> <p>Schedule: As needed.</p>
	<p>Note: Ongoing water leaks can add up to a big waste of money!</p>
	<p>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.</p>

SOLID WASTE & RECYCLING

1. Renew the recycling effort at the Center.	<p>Funding: Budget neutral.</p> <p>Staff: as assigned by Agency Directors / SCOG RCM can assist as desired.</p> <p>Schedule: Immediate action.</p>
	<p>Note: Encourage steps to increase recycling by ensuring adequate recycling containers are easily available and that staff and any volunteers are fully educated on what they can recycle and where the containers are.</p>
2. Investigate composting for food wastes.	<p>Funding: Budget neutral.</p> <p>Staff: as assigned by Agency Directors / SCOG RCM can assist as desired.</p> <p>Schedule: Immediate action.</p>
	<p>Note: Call the Skagit County Recycling/Composting Educator, 336-9400.</p>
3. Practice double-sided printing and copying, and waste reduction as much as possible, such as using both sides of paper before recycling.	<p>Funding: Budget neutral.</p> <p>Staff: All staff and any volunteers.</p> <p>Schedule: Immediate action.</p>
	<p>Note:</p>

PSE Suggested Temperature Settings

Area	Occupied Set Points		Unoccupied Set Points	
	Heating	Cooling ^[1]	Heating	Cooling
Offices	69	74	55	85
Meeting Rooms & Libraries	69	74	55	85
Staff Break Rooms	69	74	55	85
Work & Copy Rooms	67	74	55	85
Computer Labs	67	73	55	77
Gyms	67	73	55	85
Restrooms	65	75	55	85
Hallways & Common Areas	65	75	55	85
Storage Rooms	62	78	55	85

Acceptable temperature deviation from set points is +/- 2°F by using local thermostat overrides or central control system overrides, where available. Some variations may be allowed by the Agency Director based on specific heating/cooling system and facility needs.

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 Agency Directors 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. Agency Directors, Assigned Staff, County Staff as appropriate, 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 local Officials.

2. Agency Directors, Assigned Staff, County Staff as appropriate, 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. Agency Directors, Assigned Staff, County Staff as appropriate, 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).