



By

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Buenaventura
Sustainability Team Guidelines

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MISSION: EFFICIENCY, INNOVATION, & PASSION

To make sustainability an integral part of the organization across all departments through research, measurement, engagement, education, and implementation. It is a commitment to the environment, but more importantly, to the health and well-being of our residents, employees, and community. The Sustainability Team will work to meet the needs of the present generation without compromising the needs of future generations to come.

PURPOSE

• **Research**

- The Sustainability Team will research new strategies and best practices for implementing various sustainability projects and initiatives.
- Examples include:
 - Energy and water efficiency rebates, incentives, and funding sources
 - Best practices from other affordable housing agencies (what works and what doesn't?)
 - Developing a standard list of energy and water efficient appliances (think Energy Star rated and Water Sense labeled) to be used in new construction and rehabs

• **Measurement**

- The Sustainability Team will continue to measure progress and report results after projects and programs are implemented. Measurement is especially important to see if our projects and programs are working.
- Examples include:
 - Utility data tracking and measurement in WegoWise – monitor usage for unusual spikes in consumption, energy/water savings after retrofits and reduction plans, etc.
 - Waste reduction after recycling/compost implementation - measure and record reduction in amount of waste produced (usually recorded in lbs.)

• **Engagement**

- The Sustainability Team will continue to engage employees and residents whenever appropriate. Sustainability initiatives work best with more people involved/engaged; it's impossible for this to be a one person job.

- Having the Sustainability Team members engaged is a great start, but true sustainability engagement doesn't stop there. A truly successful sustainability plan will work to engage employees, residents, and other stakeholders outside the Sustainability Team.
- More on employee and resident engagement can be found on page 12 and 15, respectively.

• Education

- The Sustainability Team will continue to educate employees and residents on environmental issues as well as what initiatives the agency will be taking to mitigate those issues. It is essential that these initiatives be publicized.
- Examples include:
 - Issue – Drought/water restrictions
 - Mitigation – Educate residents on the severity of the drought and why we need to decrease or eliminate outdoor irrigation for non-essential turf; convert to drought tolerant landscaping with drip irrigation; install low flow water fixtures (showerheads, aerators, toilets, etc.)
 - Issue – Tenant utility data acquisition
 - Mitigation – Educate residents on why we are asking for this information. If they know that we are trying to gather full-building energy data in order to track overall usage, make improvements, and prevent energy waste, then it will feel less intrusive to them.
- Implementation is ultimately the essential step. However, education is key. In order to be successful, residents and employees must know what we are doing and why we are doing it.

• Implementation

- The Sustainability Team will continue to implement sustainability projects as they are needed. Some projects, such as energy management/tracking (WegoWise) and resident education, will be on-going.
- Implementation is the next step after planning and it is arguably the toughest step. It takes cross-departmental coordination and cooperation and it requires funds. But without implementation, progress would not be made. It will be the Sustainability Team's responsibility to push these projects and programs to be implemented and to work with the necessary employees outside the team to get them approved.
 - For this reason, it is essential that the Sustainability Team be cross-departmental. Many of these projects will involve executive staff, development, accounting/finance, maintenance, property management, and capital funds.

THE TEAM

- The Sustainability Team should be a cross-departmental, diverse group and should consist of 4-6 members.
- The Sustainability Team will meet biweekly (every other week) to discuss ongoing projects, issues, old/new business, any green opportunities for the agency, etc.
- One member will be responsible for sending out meeting invites and agendas, and for organizing the team and overseeing progress.
- Members
 - Susan Everett, Development / Capital Funds
 - Fred Swaney, Maintenance / Warehouse
 - Ricky Sood, Resident Services
 - Letty Ortiz, Property Management
 - Nick Birck, Section 8 / Policy and Community Affairs
- New Sustainability Team members may join the team at any time with approval and/or appointment from the CEO.
- Remember, the Sustainability Team is not part of your official job description, and therefore, should not interfere with your current work. For this reason, the team will only meet every other week for an hour (additional meetings may be called if needed, but will not be mandatory). Sustainability Team work will be done on company time, but will not interfere with your main job responsibilities.



Goals & Responsibilities

ENERGY MANAGEMENT

• Purpose

- To help reduce HACSB's energy use and carbon footprint
- To meet our Better Buildings Challenge goal
- To save money on utility costs

• Better Buildings Challenge

- In 2014, HACSB became a Better Buildings Challenge Multifamily Partner. The Better Buildings Challenge (BBC) is a national program run by the U.S. Department of Energy.
- As a BBC Partner, we pledge to reduce the energy intensity on our non-public housing units by 20% by 2020. We plan to achieve this through RAD, Low Income Housing Tax Credits, and local energy efficiency rebates.
- More information on the BBC can be found [here](#).
- HACSB's BBC profile can be found [here](#).
- Requirements:
 - Energy benchmarking and tracking
 - WegoWise
 - See graph on page 8 for WegoWise report
 - Continue to collect tenant authorization forms
 - See "Green Lease" section on page 15 for more on collecting tenant authorization forms.
 - Current tenant forms collected: 46%
 - Goal: 100% collected by end of 2016

During the fiscal year 2013-2014, HACSB spent over \$293,000 on energy costs; \$216,142 on electricity and \$77,084 on gas (this does not include tenant-paid utilities or water).

• Energy Efficiency

- According to the U.S. Department of Energy, "energy efficiency is one of the easiest and most cost effective ways to combat climate change, clean the air we breathe, improve the competitiveness of our businesses, and reduce energy costs for consumers."

- When appliances and/or buildings are energy efficient, it means that they use less energy to accomplish the same service or task. For instance, an LED bulb is more energy efficient than an incandescent bulb because it uses 6 watts of energy to give off the same amount of light as a 40 watt incandescent.
- Energy efficiency checklist for retrofits and new construction (in order):
 - Tight building envelope
 - Before upgrading appliances and going solar, obtaining and maintaining a tight envelope is key (it is also cheapest).
 - This includes insulation, weatherization, and dual-pane windows, etc.
 - Energy Star appliances and LED lighting
 - Once the building is properly insulated, the next step is to increase the energy efficiency.
 - This includes purchasing energy star rated appliances and energy efficient lighting, such as LED.
 - Rebates
 - Once the appliances are purchased and installed, apply for rebates to help offset the cost and to create a quicker payback period.
 - Multifamily energy efficiency rebate programs:



Energy Upgrade California	<u>Multifamily rebates for Southern CA</u>
Southern California Edison Multifamily Energy Efficiency Program	<u>Refrigerators, electric water heaters, clothes washers, AC & heat pumps, dual-pane windows, ceiling fans, LED</u>
Southern California Gas Company	<u>Natural gas water heating (boilers, storage, central system), attic & wall insulation, natural gas furnaces, tankless water heaters</u>

• Solar

- Once building envelope and energy efficiency upgrades have been taken care of, and there is extra funding, the next step in energy management is to go solar!
- **Solar Thermal**
 - Used to assist in hot water heating
 - Significantly reduces gas bill
 - Quicker payback period than PV, but does not generate electricity; the solar energy is used to help heat domestic water and offset natural gas use.
 - Current properties with solar thermal installed:
 - The Palms (Vista Del Mar Commons)
 - Mission Park (Vista Del Mar Commons)
 - Buena Vida Senior Building
- **Solar Photovoltaic (PV)**
 - Used to generate electricity and feed back into the grid
 - Significantly reduces electric bill
 - Longer payback period, bigger upfront cost/investment
 - Current properties with Solar PV:
 - Encanto Del Mar
 - Santa Clara
- **Multifamily/Affordable Housing Solar Programs & Incentives**
 - [MASH \(Multifamily Affordable Solar Housing\)](#)
 - [Everyday Energy](#)
 - [California Solar Initiative Program Handbook](#)

WegoWise building upgrade report - 34% energy savings after RAD conversion

Effect of RAD Conversion - the Palms - Energy Savings (May 5, 2014)

[View all upgrades](#) | [View & manage documents](#)

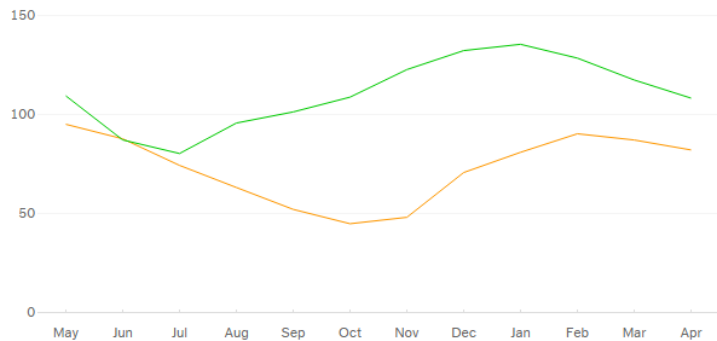
Total energy use in **Btu** per square foot

Graph Table ☆

Date Range	Full-Year Sum	
May 14 - Apr 15	26.5K	✓
May 13 - Apr 14	40.2K	✓

Detailed data per month

Click & drag to zoom in



Before: Old/Inefficient Building Envelope, Appliances, HVAC, Boiler, and Deteriorating Plumbing

After: Improvements: Led Lighting, Replaced Plumbing, Energy Star Appliances, HVAC, High-Efficiency Boiler, Low-Flow Toilets, Faucets, and Shower Heads, Insulation and Windows

Cost: \$0.00

Expected Savings: 21%

Actual Savings: 34% (13,710 Btu / sqft)

WATER MANAGEMENT

• Purpose

- To help reduce HACSB's water consumption
- To do our part and help save our most precious resource during this drought
- To save money on utility costs

• Better Building Challenge

- In 2016, the Better Buildings Challenge will expand to include water savings in addition to energy savings.
 - As an organization and as California residents, we should look into expanding our partnership commitment to include water savings.
- Track and benchmark water utility data in WegoWise
 - All data is currently updated in WegoWise
 - Monitor usage for unusual spikes in consumption and for reduced consumption after retrofits and reduction measures.

• Drought Restrictions

- Keep up to date on drought and water restrictions and make sure HACSB is complying

- [Ventura Water Drought Resources](#)
- [State of CA Drought Updates](#)

• Turf Replacement

- City of Ventura launched a “[Water WiSe Landscaping](#)” incentive program in the summer of 2015.
- Research to see if turf replacement program is feasible/cost-effective
 - How much money is available for each rebate?
 - How many square feet of lawn can be replaced?
 - What are the water savings?
 - What is the payback period?

During the fiscal year 2013-2014, HACSB spent over \$444,000 on water costs; this includes offices, units, common areas, and landscape irrigation.

• Ventura Water Survey

- Ventura Water conducts free water surveys at any property
 - Inspect irrigation controls and sprinkler systems
 - Inspect faucets and shower heads
 - Go over water bill
 - Suggest easy fixes and opportunities for water savings
- These should be scheduled at HACSB properties whenever necessary
 - Preferably before retrofits so we can see where improvements are needed.

• Water Efficiency

- When appliances and fixtures are water efficient, it means that they use less water to accomplish the same service or task.
 - For instance, a water efficient shower head will use 1.5 gallons per minute (gpm) and a standard showerhead will use 2.5 gpm. Similarly, a water efficient clothes washer will use 20 gallons of water per full load, whereas a standard washer will use 40.
- Just like the Energy Star label on electronic appliances, EPA has a Water Sense label for fixtures that use at least 20% less water than the standard fixtures on the market without sacrificing performance.
 - Look for Water Sense products when purchasing new water appliances and fixtures in retrofits and new construction
 - Showerheads, faucets and aerators, toilets, landscape irrigation controllers, etc.



- <http://www.epa.gov/watersense/>

• **Sub-metering**

- Research sub-metering technologies to better track water usage at more specific levels and to see where water is being consumed.
- Currently, HACSB does not sub-meter any water meters. Because of this, it is difficult to pinpoint where exactly the usage is coming from and it makes it difficult to see what water saving techniques are bringing in the most savings.

GREEN OPERATIONS & MAINTENANCE

• **Purpose**

- To make sure that HACSB's maintenance and property operations run as they are expected to: safely, smoothly, and efficiently.
- To do our part to conserve resources, such as energy and water.
- To provide a safe and more comfortable living environment for our residents and a safer working environment for our employees.
- To save money on utility costs.

• **Commissioning**

- Commissioning is the process of testing a building's systems after installation to ensure they are installed, calibrated, and performing as expected.
- It is very important to identify malfunctions or improper installations early on.
 - It is cheaper than waiting for system failure
 - It is still under warranty
- Commissioning process should be filmed so that maintenance can look back on footage and so that new employees can watch as well.

• **Unit Inspections**

- Unit inspections, routine or turnover, are a great opportunity to make sure all the systems and appliances are working correctly, efficiently, and that the unit is a safe and healthy place to live.
- Here is a [green inspection checklist](#) for inspections and/or unit turnover.

• **Property Management**

During the fiscal year 2013-2014, HACSB spent over \$737,000 on total utility costs; this includes all owner-paid electricity, gas, and water

- Property managers arguably have the most potential to drive sustainable behavior at the resident level.
- Because they interact with the residents and are at the properties every day, they are most equipped to monitor behavior and suggest potential solutions (i.e. making sure lights and other appliances are turned off in unoccupied areas).
- Property managers should monitor the water and energy usage for their properties on WegoWise at least once a month.

- **Maintenance**

- Maintenance staff have great potential to drive sustainable initiatives, such as energy and water efficiency.
- Maintenance staff is most familiar with the buildings, its systems, and how they work. Because of this, they are most equipped to monitor building systems for leaks or other malfunctions.
- Maintenance staff should continue to look out for malfunctions, leaks, or any other problems in our buildings and its systems.
- They are also responsible for making sure water is being conserved
 - Only watering grass twice a week, just before dawn, for 5-10 minutes
 - Make sure sprinklers are not running off on pavement or any hardscape
 - All outdoor spigots should be capped off

- **Credential for Green Property Management**

- At least one staff member at HACSB should hold a Credential for Green Property Management (CGPM), which is given by National Affordable Housing Management Association (NAHMA)
- Purpose
 - CGPM will give HACSB more points on many funding applications and will therefore make us more competitive.
 - CGPM will give us more knowledge on topics, such as green operations and maintenance, energy efficiency, water efficiency, integrated pest management, indoor environmental air quality, resident engagement, etc.
- Requirements for certification
 - Application fee: \$150
 - Annual renewal fee: \$125
 - 4 hours of continuing education (annually) – can be done online

CREDENTIAL FOR GREEN PROPERTY
MANAGEMENT



- 16 hours of training
 - At least 8 hours (cumulatively) of any of these topics:
 - Green Building
 - Energy Efficiency
 - Water Efficiency
 - Integrated Pest Management
 - Indoor Air Quality
 - Green Operations and Maintenance
 - Plus an additional 8 hours in any of the 6 topics above or:
 - Green Landscaping
 - Green Building Systems
 - Alternative Energy Sources
 - Energy Star and Water Sense
 - Recycling and Waste Reduction
 - Resident Green Education
- All training can be done online or on-site
- More information can be found [here](#)

EMPLOYEE ENGAGEMENT

• Purpose

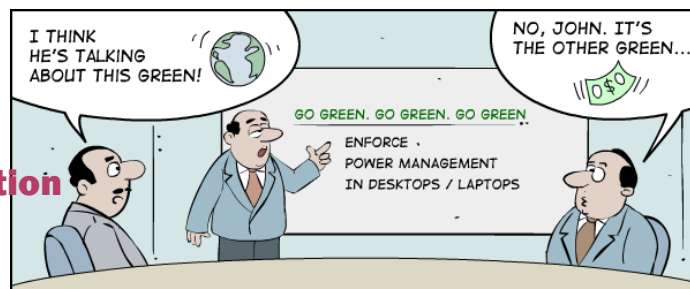
- To continue to instill sustainable practices into the agency.
- To engage employees in environmental awareness and sustainable behavior at the office, and to spread our sustainability goals throughout the agency.

• Energy Conservation

- It is important that HACSB employees are aware of various ways to conserve energy at the office. Employees should help us in our efforts to reduce our energy consumption as part of our Better Buildings Challenge goal.
- Energy savings methods at the office:
 - Turning off lights in any unoccupied room/area
 - Board room, kitchen, storage rooms, bathrooms, offices, mail room/hallway

- Try to encourage employees to get into the habit of turning off lights in their office when leaving for more than 5 minutes.
- Turning off computers
 - Every computer in the office should be fully shut down when leaving for the night.
 - Computers should be put on “sleep mode” when an employee is away from his/her desk for more than 30 minutes.
 - Power management feature can be set so that computers will enter sleep mode after 30 minutes of not being touched.
 - When running, computers use about 20-30 watts of power. When in standby/sleep mode, they use about 1-2 watts (energystar.gov).
 - By activating power management features, we will save up to \$50 per computer per year (energystar.gov). With approximately 60 employees, that is \$3,000 saved per year, just by turning your computer off when not in use.
- Using “smart” power strips
 - Many electronics, such as computers, printers, fans, space heaters, continue to draw power even when they are turned off or not being used.
 - Timer-equipped power strips can be used to reduce these plug loads. Devices plugged into these power strips can be scheduled to automatically turn off or on at a designated time of day or night.
 - Space heaters use 1,000 watts of power while on and 3 watts while turned off, but still plugged in. This costs approximately \$46 a year per space heater (epa.gov).
 - A combination printer/copier will still use 10 watts of power while in standby mode, making it a perfect device for a smart power strip (epa.gov).
 - Assuming devices would otherwise be left on 24/7, the simple payback of a smart power strip is 10 weeks (epa.gov).

• **Waste Reduction**



- **Purpose:** to reduce HACSB’s environmental impact by reducing waste at our offices and events.
- **At the office**
 - The sustainability team will continue to ensure that waste is diverted through recycling (both in the kitchen and around the office).
 - When waste is collected at desks by maintenance staff, two bins should be used (one for trash, one for recyclables)
 - Recycling bins should be provided at every desk, copier/printer, in conference rooms, and in the kitchen
 - The dish rack in the kitchen should be used to reduce paper towel use
 - This has helped us cut our paper towel use in half at the Riverside office
- **At HACSB events**
 - Recycling bins should be provided at all HACSB events such as:
 - Resident meetings, events, BBQs
 - Groundbreaking and grand opening ceremonies
 - Employee meetings, events, potlucks

• **Sustainability Events**

- **Purpose:** to keep employees engaged and aware of green initiatives in a fun, interactive, and informal way.
- **Event examples:**
 - Earth Day Potluck
 - Celebrate Earth Day (April 22nd) with a potluck!
 - Everyone brings in their favorite organic, all-natural, or eco-friendly recipe.
 - Sustainability Team presentations
 - The team can present initiatives, programs, and progress to the rest of the staff
 - See “Employee Green Training” below



• **Employee Green Training**

- **Purpose:** to inform employees of sustainable practices at the office, as well as at home and in everyday life.
- **Potential training topics:**



- Energy efficiency
- Reducing waste/recycling
- Water conservation
- Indoor air quality
- Incentives
 - It is never a bad idea to provide food and/or prizes for employees who attend these trainings
 - Get creative with the prizes (low flow shower heads, green cleaning supplies, reusable water bottles, etc.)
- Ask employees (outside the team) for their input
 - What ideas do they have?
 - What types of sustainability initiatives would they like to see?

RESIDENT ENGAGEMENT

• Purpose

- To continue to educate HACSB residents on environmental awareness and how to live healthier, more sustainable lives.
- To engage employees in environmental awareness and sustainable behavior, especially as it relates to energy and water conservation, and indoor air quality.

• Training, Workshops, and Events

- Potential training topics:
 - Public Health / Indoor Air Quality (as it relates to climate change and greenhouse gas emissions)
 - Efficiency Energy Use
 - Water Conservation
 - Community Gardening / Composting
- Remember to provide incentives for the residents to increase attendance
 - Food
 - Giveaways (green products, gift cards, raffle prizes, certificates of completion)
- Make sure the residents understand why the trainings are important and why they apply to them
 - Save money on utility costs

- Live more comfortably (i.e. thermal comfort, greater indoor air quality)

GOING FORWARD

- **Purpose**

- To continue to promote sustainable practices at HACSB and to create a better life for current and future generations of our residents and employees.

- **Green Lease**

- Green leases are created to align financial and energy incentives of building owners and tenants so they can work together to save money, conserve resources, and ensure the efficient operation of buildings.
- In addition to the reasons listed above, a green lease can ensure that tenant authorization forms are also signed, along with the green lease agreement, bringing the Sustainability Team closer to obtaining 100% of the those authorization forms signed by 2016.
- The Sustainability Team will work with Denise Wise (CEO) and Chris Beck (General Counsel) to implement Green Lease into standard HACSB protocol.
- More information can be found at the [Green Lease Library](#).

- **Ongoing Procedures**

- Always welcome feedback from employees and residents
- Continue to develop trainings/workshops for residents and employees as needed

