

RESOURCE CONSERVATION & SUSTAINABILITY PLAN



Providing Homes, Creating Community, Changing Lives

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OVERVIEW

For Boulder Housing Partners (BHP), the concept of sustainability is directly tied to the performance and comfort of our affordable housing units. In this context, sustainable housing can be thought of as housing in which whole systems (energy, heating/cooling, water, social), durable products, and energy and water saving devices are integrated into each newly developed or renovated property, allowing it to function long into the future with lower operating costs. These housing units will use resources efficiently and provide cost savings, and in general will be nicer places to live, for longer.

Utility costs are a significant and growing expense for BHP and our residents, and there is an ongoing need to understand and analyze resource use and consumption. Funding will be needed to finance improvements over time, and finding partner organizations to work with or using innovative financing mechanisms (e.g. low interest loan) may be necessary in the absence of large government grants. In addition, collaboration among staff and departments will be needed in order to effectively address resource use and other sustainability issues. Investing in resident education will help further reduce operating costs at properties where BHP pays for utilities, and will empower residents to know how to better manage living expenses.

BHP and the Board of Commissioners promote policies and practices that facilitate long-term fiscal, social, and environmental responsibility. In 2009, the Board set forth a goal challenging BHP to become the first net zero housing authority in energy usage for the public housing portfolio. Since then, BHP has made impressive progress towards greening its portfolio and operations.

BHP completed the installation of extensive energy and water conservation measures at all eight public housing properties through an Energy Performance Contract (EPC) with Johnson Controls, Inc. as the Energy Service Company (ESCO). At Canyon Pointe using a HUD Green Retrofit Program grant, BHP made similar investments as in the public housing properties installing new windows, lighting, carpeting, siding, ventilation systems, and a brand new solar system on the roof, all of which should save water and energy and improve the health and safety for our residents. Furthermore, with all property renovations and unit turns, BHP makes an effort to choose energy and water efficient fixtures and appliances as well as to use low VOC products.

With 652 kW of solar installed on a total of eleven properties, BHP has made great progress to decrease the net energy use of those properties. The solar production will go a long way to reduce the energy bills for BHP and our residents especially in the face of future rising energy costs.

Furthermore, BHP has the opportunity to implement additional energy and water conservation measures during planned property renovations over the next few years, including several work force properties and the entire public housing portfolio if BHP receives approval to dispose of those units from the Department of Housing and Urban Development's (HUD's) public housing designation.

In order for BHP to reach its net zero goal and further the organization's efforts to be more sustainable, each department will need to make a concerted effort. Putting this all together, with this resource conservation and sustainability plan we can become a proactive leader in Boulder, Colorado by reducing energy and resource use in the multi-family housing sector, building more sustainable housing, educating residents on resource conservation, and in general, minimizing our effects on climate change.

PURPOSE

The purpose of this resource conservation and sustainability plan is to:

1. Document BHP and its departments' best practices;
2. Plan for future policies and investments;
3. Track relevant regulations and funding opportunities; and
4. Inform BHP staff and the public.

MAINTENANCE

RESPONSIBILITIES

The maintenance department and its staff are primarily responsible for the daily upkeep and maintenance of all BHP units and properties. Maintenance incorporates sustainability in the procurement of products and fixtures, routine maintenance of properties, waste and pest management strategies, employee training requirements and hazardous material storage.

MAINTENANCE SUSTAINABILITY BEST PRACTICES

- Replace dishwashers, refrigerators and laundry equipment with Energy Star rated appliances;
- Replace front loading laundry equipment in BHP managed laundry facilities whenever possible to minimize water consumption;
- Replace old cabinets with durable plywood box models to decrease frequency of replacement and minimize waste;
- Replace carpet that is worn or damaged with luxury vinyl tile in order to reduce the frequency of flooring replacement and minimize waste sent to the landfill;
- Replace furnace and boilers with products that minimize life cycle cost, are easily repaired by maintenance staff, and meet or exceed a minimum 80% efficiency rating;
- Replace roofing that is worn out or damaged is replaced with light colored dimensional shingles with a minimum 40 year rating;
- Replace existing T-12 lights with more efficient T-8 models upon burn-out;
- Use CFLs in all compatible light fixtures in common areas and rental units; and
- Clean property common areas with Simple Green and stock with unbleached paper towels and single ply toilet paper to minimize environmental impact.

In order to ensure equipment is operating with maximum levels of efficiency, the maintenance department performs the following checks:

- Examine and ensure proper operation all HVAC mechanical systems including: plumbing, electrical, heating, and air conditioning;
- Inspect the integrity of building envelope;

- Verify that solar panel monitors are functioning (green light);
- Check under solar panels and remove any evidence of pests;
- Trim branches away from buildings that could allow pest access to the roof; and
- Conduct periodic inspections of irrigation system components throughout the watering season.

WASTE MANAGEMENT

- Recycle light bulbs, copper, aluminum, scrap metal, cardboard, wood, appliances, cabinets, and any other materials whenever possible; and
- Store hazardous and potentially hazardous materials in accordance with material safety and data sheet (MSDS) guidelines and other instructions required by Maintenance Director.

PEST MANAGEMENT

- Educate residents and BHP staff about prevention for pest infestations;
- Use the most environmentally friendly techniques of pest eradication when possible; and
- Explore non-chemical or reduced chemical treatment methods where chemical sensitivity issues exist.

TRAINING STANDARDS

- Conduct a generalized green training session for all the maintenance technicians once a year; and
- Encourage training for new energy or water saving devices or strategies.

DATA

- Complete regular checklists upon unit turnover and on a regular basis at the property level; and
- File completed checklists as a record of property.

ASSET MANAGEMENT

RESPONSIBILITIES

Asset Management staff are primarily responsible for planning and executing capital improvement projects for existing BHP owned assets. This is done in a way that:

- Makes properties more energy and water efficient as well as aesthetically beautiful; and
- Improves the sense of place and pride for the residents of our properties.

ASSET MANAGEMENT BEST PRACTICES

CAPITAL IMPROVEMENTS

When procuring services for capital improvement projects, asset management will follow these guidelines:

- Use green products with low or no VOC content whenever possible;
- Replace carpeted surfaces with more durable, luxury vinyl tile surface;
- Install Energy Star® appliances;
- Install water conservation devices;
- Seal building envelope—including windows, doors, siding and sheathing, roofing;
- Add insulation to attic and walls whenever possible;

- Tune and balance mechanical systems;
- Install air conditioning to improve indoor air quality and enhance resident comfort; and
- Seal crawl spaces to mitigate infiltration of radon.

RESIDENT EDUCATION

Asset Management desires to provide residents with education opportunities and signage so the residents understand the benefits of new green improvements at their property.

TRAINING STANDARDS

Staff is encouraged to attend and report back on conferences or conference sessions related to sustainability topics.

DATA

- Update BHP’s utility tracking database to determine impact and cost effectiveness of BHP’s sustainability programs; and
- Track efficiency improvements from renovations at the property level.

DEVELOPMENT

RESPONSIBILITIES

New development projects endeavor to expand on BHP’s existing stock of low-income, affordable, and market rate properties in a way that furthers BHP’s commitment to environmental, social, and financial sustainability and efficiency.

DEVELOPMENT BEST PRACTICES

The Development staff seeks cost effective ways to meet and exceed regulatory requirements for sustainability and energy efficiency in all new BHP properties through capitalizing on a wide variety of potential funding streams. For every new development project, staff ensures that the scope of work meets or exceeds the Boulder Green Points, and the Enterprise Green Communities program requirements.

TRAINING STANDARDS

Staff is encouraged to attend and report back on conferences or conference sessions related to sustainability topics.

RESIDENT SERVICES

RESPONSIBILITIES

SENIORS

Resident Services works to ensure BHP senior residents are able to safely age in place while supporting residents in their efforts to maintain independence and quality of life. The staff accomplishes this by addressing the following issues:

- Housing stability
- Health and wellness
- Financial stability
- Community life

FAMILIES

Resident Services aims to support BHP resident families in their efforts to reach and improve self-sufficiency. The staff attempts to achieve these goals by working to support residents in the following ways:

- Financial stability
- Housing stability
- Education
- Health and wellness
- Community participation

RESIDENT SERVICES SUSTAINABILITY BEST PRACTICES

Resident Services is currently focused on social sustainability, and attempts to achieve this by providing access to community and BHP run support services for BHP residents based upon individual resident circumstances and needs.

TRAINING STANDARDS

Staff is encouraged to attend and report back on conferences or conference sessions related to sustainability topics.

ADMINISTRATION

RESPONSIBILITIES

The Administration staff facilitates operating efficiency at BHP’s office and works to promote BHP best practices by sharing information with the residents, partnership organizations, and general public in the newsletters, on the website, and through social media outlets.

ADMINISTRATION SUSTAINABILITY BEST PRACTICES

Administration currently monitors printing (color and B&W) data and settings, uses compostable or reusable in kitchens and at meetings/events, encourages staff to power down computers at night, and provides eco passes as well as a work “pool bike” and “pool car” for employees to use. In addition, BHP is a member of the [City of Boulder 10 for Change](http://www.10forchange.net/index.php)¹ program, which is implemented by the administration team.

TRAINING STANDARDS

Staff is encouraged to attend 10 for Change networking events.

¹ <http://www.10forchange.net/index.php>

ORGANIZATION GOALS

SHORT-TERM GOALS (1-5 YEARS)

- Educate residents on energy efficiency, including cross departmental effort to create educational materials, deliver information, and implement a resident reward program;
- Continue implementation of a comprehensive tracking system for overall energy performance;
- Explore sub metering sites for water/sewer consumption as well as creating a pilot program to monitor individual unit usage and possibility of having residents pay for their household's water/sewer costs;
- Implement office conservation measures including a lighting audit and signage for energy efficiency;
- Educate property managers about sustainability features of properties for the purposes of providing additional education to new and existing residents;
- Reinvigorate BHP Green Team;
- Evaluate the potential for organization Green Fund;
- Evaluate Green Lease structures;
- Implement portfolio-wide green checklist for annual property maintenance check using Canyon Pointe checklist as a template;
- Improve tracking of property renovation and maintenance data; and
- Ensure all BHP events employ reusable or compostable dishes and utensils.

LONG-TERM GOALS (5-10 YEARS)

- Cut down on turf and replace with xeriscaping whenever possible;
- Replace grass with AstroTurf in high wear areas at family sites to cut down on maintenance and water costs;
- Make composting service available at all BHP properties;
- Increase availability of community garden plots;
- Increase solar generation capacity where possible by installing PV panels at more BHP owned properties;
- Identify opportunities for purchase and redevelopment or renovation of existing buildings to increase number of BHP owned units. ; and
- Reach net-zero status for the public housing portfolio.

RELEVANT REGULATIONS

All large-scale renovation and new development projects must comply with the requirements of the City of Boulder's SmartRegs and Green Building Points programs. If low income tax credit financing is used to execute the project, the buildings must also meet Enterprise Green Communities standards.

SMART REGS

In 2010 the Boulder City Council modified the city ordinances to include stricter energy efficiency standards for rental properties. This program, known as SmartRegs, mandates all remodels exceed the International Energy Conservation Code (IECC) minimum energy efficiency standards, and requires all

other rental units built before 2001, to achieve a SmartRegs score of 100 or greater or a Home Energy Rating (HERS) score of 120 or less.²

GREEN BUILDING POINTS

In addition to the SmartRegs requirements, all remodels in the City of Boulder are subject to the efficiency and conservation standards of the Green Points program. This program requires environmentally friendly practices relating to design, construction, operations, recycling, and deconstruction, and includes provisions designed to conserve energy, water, and other natural resources.³

ENTERPRISE GREEN COMMUNITIES

Green upgrades must also be sufficient to ensure the properties meet the newly revised Enterprise Green Communities standards. Additionally, new construction projects must attain a minimum of 35 optional points, and rehabilitation projects must achieve 30 optional points to meet Low Income Housing Tax Credit financing requirements.⁴⁵ Enterprise Green Communities currently offers grants to fund a design charrette and other planning efforts to promote the consideration of sustainability strategies and technologies early on in project design.

² See City of Boulder SmartRegs Guidebook and the Rental License Handbook for full iteration of requirements.

³ See City of Boulder Green Building and Green Points Guideline Booklet

⁴ See Section 8 of the Colorado Housing and Finance Authority Low Income Housing Tax Credit Allocation Plan 2012 for a full explanation of requirements.

⁵ See 2011 Enterprise Green Communities Criteria and 2011 Enterprise Green Communities Criteria Addendum for Moderate and Substantial Rehabs for complete listing of mandatory and optional upgrades.

APPENDIX A: CANYON POINTE GREEN RETROFIT CHECKLIST

Canyon Pointe Green Retrofit Plan – Goals & Checklist

Year _____

Check + Initials

Maintenance

Q1 Q2 Q3 Q4

- Check in and follow goals outlined in BHP Sustainability Plan
 - CFLs, Energy Star, High efficiency appliances, Low/NO VOC Products, Increase ventilation and indoor air quality, Achieve 60 % diversion rate, Explore composting

- Check in with Tom quarterly to confirm the products we are buying are on the list of OAHP’s acceptable Green Products green products including low/no VOC caulks, glues, sealants, and cleaning fluids, paints, carpets & cabinets in new renovations
 - See GO&M Toolkit and Buyer’s Guide for specifications
 - Ensure all chemicals are stored in a well-ventilated room at 4800 or on-site with ventilation to a non-occupied area

- Recycle all CFLs, and old appliances and fixtures whenever possible at local hardware store, recycle yard, or waste disposal

- Continuing training for maintenance on green maintenance best practices from employees with Green Property Management certification, outside consultants or green product specialist

- New staff/employees will be given green product orientation and overview of BHP Energy Conservation & Sustainability Plan within 60 days of hire

- Make sure all trash disposal locations specifically state what should & should not be recycled or disposed of

- During yearly PMs, ensure IPM adherence to prevent infestations and make sure that there are no leaks or entry points for pests, that vegetation will be limited around the building, that trash collection is made regularly, and that the use of pesticides is limited and only applied in spot-treatments

- Use pest contractor at Canyon Pointe who follows IPM protocol (ie EnviroPest)

Q1	Q2	Q3	Q4

