



# Environmental Sustainability at Legacy Health

## 3 Year Strategic Plan

### Introduction

First do no harm. Beyond healthcare to health. Population health.

These are all phrases we've heard in various communications from leadership as we progress towards our goal of disease prevention in place of disease treatment. Environmental sustainability programs are an important support system for our collective work to improve the health of our staff, our patients and our communities.

It's clear that the links between diet and nutrition are well established and we have goals in place to improve the food and beverages offered in our cafeterias, however there are many other aspects of our healthcare environments that can influence health in our employees, patients and visitors that do not yet have specific agreed upon improvement goals.

A few facts that were shared at this year's CleanMed conference; the largest annual conference focused on the links between environmental sustainability and health in hospitals and healthcare institutions:

- 50% of men and 33% of women are likely to develop cancer; most triggered by environmental causes.
- North Americans spend 87% of their time indoors; there are many sources of toxic emissions within buildings.
- An estimated 10-25% of adult onset asthma is related to occupation.
- The #1 employee category of workers susceptible to adult onset asthma diagnosis: janitor/housekeeping staff; the #2 group is nurses. Most frequently reported exposure source - indoor air pollutants from cleaning chemicals, building materials and furnishings.

### Environmental Sustainability Program Vision

Legacy Health will be widely recognized as a world-class leader in applying the principles of environmental sustainability (sustainability) to the mission of improving human health.

### Environmental Sustainability Program Mission

Recognizing the connection between environmental contributors to disease and the need to transform healthcare from the current approach (treatment of disease) to the future (prevention of disease) Legacy's sustainability program shall contribute to our mission to improve health by providing access to best-practice approaches to reduce toxins in our built environments, reduce our energy consumption and carbon emissions and to ensure we consider environmentally preferable criteria in all significant product and service sourcing/selection activities.

### Proposed Strategies

The current sustainability program at Legacy Health is built around the Healthier Hospitals Initiative (HHI) model which includes six areas of focus: engaged leadership, healthier food, leaner energy, less waste, safer chemicals and smarter purchasing. In addition we have added commute trip reduction as a discrete category to the Legacy program as both Oregon and Washington have ordinances in place that require employers to have commute trip reduction plans in place.

While there are existing sustainability programs in place that have made progress in a number of important areas we don't have sufficient resources available to achieve a consistent level of oversight, reporting and ongoing planning/goal-setting for system-wide sustainability initiatives.

Examples of existing continuous improvement work include:

- Commitment to the HHI Healthier Food pledge by the food and nutrition departments at each hospital.
- Commitment to energy efficiency by the facilities operations staff at each hospital.
- Commitment to waste reduction and efficient waste stream management by the environmental waste department within the safety and security department.
- Commitment to environmentally preferable purchasing considerations by the various resource councils and the supply chain management department.

Even though significant progress is being made in each of the above program areas we haven't yet implemented a system-wide robust, reliable and consistent method to gather data related to all of this work within the context of environmental sustainability. A more developed capability to capture program performance data will allow us to be far more effective in identifying gaps in our current performance vs. best practices and to more effectively manage the ongoing planning and goal setting process.

Below are recommended actions and goals proposed to implement an environmental sustainability strategic plan with a 3 year planning horizon.

The actions and goals are organized into the HHI categories and describe actions to implement improvements in areas not addressed by current program activities.

### Engaged Leadership

Demonstrate the importance we place on environmental sustainability by engaging leadership in the work. We have an executive sponsor (Milrose Mercado, VP of Supply Chain Management), the program would be enhanced significantly by designating a clinical champion to assist with validation of health benefits associated with various program goals.

| Year 1 Actions  | Benefits   |
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| Add 1 FTE (sustainability coordinator) to create capacity for program improvement while maintaining focus on energy efficiency and energy procurement.  | <ul style="list-style-type: none"> <li>• Increase capacity for research and educational activities related to sustainability and allow improvement in areas not currently addressed. (reporting, creation of standards, etc.)</li> </ul>   |
| Assign a clinical leader to role of clinical champion   | <ul style="list-style-type: none"> <li>• Provides guidance for evaluation of health benefits of various program goals.</li> </ul>  |
| Draft and implement an environmental sustainability policy or commitment statement  | <ul style="list-style-type: none"> <li>• Provides guidance and establishes priority.</li> </ul>  |
| Establish environmental sustainability program budget (see attachment)  | <ul style="list-style-type: none"> <li>• Assures funding availability for program.</li> </ul>  |
| Use report from Practice Greenhealth award application to identify gaps in performance and establish goals for improvement.   | <ul style="list-style-type: none"> <li>• Access to benchmarks and data comparing Legacy to other healthcare institutions.</li> <li>• Ability to identify opportunities that will produce \$ savings.</li> <li>• Structured approach to goal setting for continued improvement.</li> <li>• Increase likelihood of winning awards in future years and gaining recognition as a leader in improving health through environmental sustainability.</li> </ul> |
| Implement data collection and reporting solution to support analysis (possibilities include 3 <sup>rd</sup> party solutions from Scope5, Key Green, etc.), track progress towards goals (in all sustainability program areas) and develop additional goals for improvement. | <ul style="list-style-type: none"> <li>• Efficient, reliable and consistent data to monitor year-to-year progress.</li> <li>• Automatic population in future year Practice Greenhealth award applications.</li> </ul>  |

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|   | <ul style="list-style-type: none"> <li>Additional source of benchmark data comparing Legacy's performance to other healthcare institutions.</li> </ul>   |
| Begin education and awareness program to provide overview of environmental sustainability programs to all departments at staff meetings or other opportunities. | <ul style="list-style-type: none"> <li>Assures consistent understanding of links between environmental sustainability and health.</li> </ul>   |
| <b>Year 2 Actions</b>   | <b>Benefits</b>  |
| Continue education and awareness program with departments.  | <ul style="list-style-type: none"> <li>Continued progress toward goal to educate all staff.</li> </ul>   |
| Develop ePlus module for environmental sustainability program information.  | <ul style="list-style-type: none"> <li>Allows on-demand refresh of information for interested staff.</li> <li>Provides method to catch up for anyone that misses presentation at department meetings.</li> </ul> |
| Develop environmental sustainability dashboard for public viewing.  | <ul style="list-style-type: none"> <li>Improves community awareness of environmental sustainability work that provides benefit to the community.</li> </ul>  |
| Implement Operations Council annual review of program performance.  | <ul style="list-style-type: none"> <li>Accountability</li> <li>Feedback on progress</li> </ul>   |
| Implement Operations Council annual review and approval of goals.   | <ul style="list-style-type: none"> <li>Ability to confirm goals support other key Legacy strategies.</li> </ul>  |
| <b>Year 3 Actions</b>   | <b>Benefits</b>  |
| Implement Legacy sustainability awards (CEO involvement and support?)   | <ul style="list-style-type: none"> <li>Recognition for achievement</li> <li>Establish importance and priority of sustainability programs.</li> </ul>   |
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## Healthier Food

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| <b>Year 1 Actions</b>   | <b>Benefits</b>   |
| Work with food and nutrition staff to implement consistent reporting for progress towards sustainability goals.                               | <ul style="list-style-type: none"> <li>Allows for monitoring or progress; identification of barriers.</li> <li>Provides consistency across hospital sites.</li> <li>Provides data for award applications.</li> </ul>  |
| Use report from Practice Greenhealth award application to identify gaps in performance and establish goals for improvement.                   | <ul style="list-style-type: none"> <li>Access to benchmarks and data comparing Legacy to other healthcare institutions.</li> <li>Structured approach to goal setting for continued improvement.</li> <li>Increase likelihood of winning awards in future years and gaining recognition as a leader in improving health through environmental sustainability.</li> </ul> |
| Re-implement seasonal farm stands at each hospital site.  | <ul style="list-style-type: none"> <li>Restore a valued method for community members to access healthier food in their neighborhoods.</li> </ul>  |
| Work with food and nutrition staff commit to goal of reducing meats produced with use of non-therapeutic antibiotics.                         | <ul style="list-style-type: none"> <li>Protects availability of effective antibiotics for treatment.</li> </ul>   |
|   | <ul style="list-style-type: none"> <li></li> </ul>  |
| <b>Year 2 Actions</b>   | <b>Benefits</b>   |
| Work with food and nutrition staff to increase purchase of locally produced foods (local = within 250 miles); initial goal to increase by 5%. | <ul style="list-style-type: none"> <li>Supports local sustainable food production; reduces GHG associated with long-distance transport.</li> </ul>  |

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| Reduce % of spend on sugar sweetened beverages by 20% (increase % of healthy beverages)   | <ul style="list-style-type: none"> <li>• Role modeling to community; Demonstrates commitment to reduce impact of beverages on chronic health problems.</li> </ul>                      |
| <b>Year 3 Actions</b>   | <b>Benefits</b>  |
| Increase purchase of locally produced foods an additional 5%  | <ul style="list-style-type: none"> <li>• Supports local sustainable food production; reduces GHG associated with long-distance transport.</li> </ul>                                   |
| Further 5% reduction in spend on sugar sweetened beverages with increase offering of healthy beverages.   | <ul style="list-style-type: none"> <li>• Role modeling to community; Demonstrates commitment to reduce impact of beverages on chronic health problems.</li> </ul>                      |
| Investigate possibility of providing educational opportunities to community on topic of healthy food and beverages; possibly in partnership with farm stands/farmers markets. | <ul style="list-style-type: none"> <li>• Role modeling to community; Demonstrates commitment to reduce impact of poor food and beverage choices on chronic health problems.</li> </ul> |

## Leaner Energy

| <b>Year 1 Actions</b>  | <b>Benefits</b>  |
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| Work with facilities operations management to establish energy use intensity reduction goal at all legacy sites (excluding clinics and leased space).  | <ul style="list-style-type: none"> <li>• Reduces operating expenses</li> <li>• Formalizes process of goal setting for each year based on remaining opportunity.</li> <li>• Provides consistency across large sites.</li> <li>• Provides data for award applications.</li> <li>• Annual savings have averaged \$650k (energy efficiency) and \$330k (energy procurement)</li> </ul> |
| Work with facilities operations management to develop plan for transition of monthly energy use review to site energy champion.  | <ul style="list-style-type: none"> <li>• Assures persistence in gains made in energy efficiency by fully integrating responsibility for energy efficiency with on-site facilities staff.</li> </ul>  |
| Use report from Practice Greenhealth award application to identify gaps in performance and establish goals for improvement.  | <ul style="list-style-type: none"> <li>• Access to benchmarks and data comparing Legacy to other healthcare institutions.</li> <li>• Structured approach to goal setting for continued improvement.</li> <li>• Increase likelihood of winning awards in future years and gaining recognition as a leader in improving health through environmental sustainability.</li> </ul>      |
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| <b>Year 2 Actions</b>  | <b>Benefits</b>  |
| Work with facilities operations management to certify eligible sites for Energy Star recognition.  | <ul style="list-style-type: none"> <li>• Demonstrates commitment to energy efficiency and reduction of environmental impact (emissions) that contribute to respiratory illness.</li> <li>• Provides visibility of commitment to community.</li> </ul>  |
| Work with facilities operations management to transition additional energy efficiency related tasks to site energy champion (ongoing access to energy efficiency best practices, new techniques, evolving technologies). | <ul style="list-style-type: none"> <li>• Assures persistence in efficiency gains and expense reductions.</li> <li>• Annual savings have averaged \$650k (energy efficiency) and \$330k (energy procurement)</li> </ul>   |
| Work with facilities operations management to establish water conservation plan; establish goals and metrics.  | <ul style="list-style-type: none"> <li>• Annual savings potential at 3% of current spend = \$54,000</li> </ul>   |
| <b>Year 3 Actions</b>  | <b>Benefits</b>  |
| Begin to work with LMG clinics on energy efficiency opportunities.   | <ul style="list-style-type: none"> <li>• Annual savings have averaged \$650k (energy efficiency) and \$330k (energy procurement)</li> </ul>  |

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| Work with facilities operations management to reduce water/sewer charges a further 3% | <ul style="list-style-type: none"> <li>Additional annual savings potential with further 3% reduction = \$52,000</li> </ul>       |
| Investigate opportunities to implement additional onsite energy production (solar PV) | <ul style="list-style-type: none"> <li>Potential to further reduce energy expense by .05% of current spend (\$30,000)</li> </ul> |

## Less Waste

| Year 1 Actions  | Benefits  |
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| Use report from Practice Greenhealth award application to identify gaps in performance and establish goals for improvement.                                     | <ul style="list-style-type: none"> <li>Access to benchmarks and data comparing Legacy to other healthcare institutions.</li> <li>Structured approach to goal setting for continued improvement.</li> <li>Increase likelihood of winning awards in future years and gaining recognition as a leader in improving health through environmental sustainability.</li> </ul> |
| Work with environmental waste manager to conduct waste stream audits at each source. Focus on high payback opportunities (RMW, hazardous).                      | <ul style="list-style-type: none"> <li>Estimated potential for 3%-5% savings (\$40k-\$66k)</li> </ul>   |
| Develop educational presentations and information based on findings of audits.  |   |
| Deliver educational presentations to departments and staff where sorting improvements can be made.  | <ul style="list-style-type: none"> <li>Potential to increase \$ savings through use of most cost-effective waste stream.</li> <li>Demonstrates commitment to reduce potential for toxic emissions from landfill waste and hazardous waste.</li> </ul>   |
| Work with supply chain management and surgical services/OR staff to establish goals for increased use of reprocessed single use medical devices.                | <ul style="list-style-type: none"> <li>Supply chain savings estimate for year 1: \$400k</li> </ul>  |
| Work with supply chain management and surgical services/OR staff to audit OR surgery packs and identify remaining opportunities to eliminate waste.             | <ul style="list-style-type: none"> <li>Identify additional cost savings available from elimination of waste in surgery packs.</li> </ul>  |
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| Year 2 Actions  | Benefits  |
| Continue work with supply chain management and surgical services/OR staff to establish year 2 goal for increased use of reprocessed single use medical devices. | <ul style="list-style-type: none"> <li>Supply chain savings estimate for year 2: \$700k</li> </ul>  |
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| Year 3 Actions  | Benefits  |
| Continue work with supply chain management and surgical services/OR staff to establish year 3 goal for increased use of reprocessed single use medical devices. | <ul style="list-style-type: none"> <li>Supply chain savings estimate for year 3: \$1,000k</li> </ul>  |
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## Safer Chemicals

| Year 1 Actions  | Benefits   |
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| Use report from Practice Greenhealth award application to identify gaps in performance and establish goals for improvement. | <ul style="list-style-type: none"> <li>Access to benchmarks and data comparing Legacy to other healthcare institutions.</li> <li>Structured approach to goal setting for continued improvement.</li> </ul> |

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|  | <ul style="list-style-type: none"> <li>• Increase likelihood of winning awards in future years and gaining recognition as a leader in improving health through environmental sustainability.</li> </ul>   |
| Work with facilities/design and construction management, supply chain management and self-insured loss prevention committee to document healthy building standards for new construction and major remodel projects.  | <ul style="list-style-type: none"> <li>• Demonstrates commitment to healthy building interiors; manages risk associated with potential health issues of building occupants.</li> <li>• Provides more consistent guidance to architects and design professionals regarding our goals for healthy/sustainable building design.</li> </ul> |
| Update environmentally preferable purchasing policy to require all vendors to identify which of their products that we buy contain chemicals of concern.   | <ul style="list-style-type: none"> <li>• Demonstrates commitment to healthy building interiors; manages risk associated with potential health issues of building occupants</li> </ul>   |
| Work with supply chain management and environmental services departments to establish goal for increased % of spend on Green Seal or UL/EcoLogo certified cleaning products. Consider HHI Challenge goal of 90% of purchases with Green Seal or EcoLogo.                             | <ul style="list-style-type: none"> <li>• Demonstrates commitment to healthy building interiors; manages risk associated with potential health issues of building occupants</li> </ul>   |
| <b>Year 2 Actions</b>  | <b>Benefits</b>   |
| Work with supply chain management and environmental services departments to establish goal to eliminate DEHP and PVC from at least two product categories.   | <ul style="list-style-type: none"> <li>• Demonstrates commitment to improve health by eliminating toxins from clinical care products.</li> </ul>  |
| Work with EOC and self-insured loss prevention committee to verify mercury-free status at all sites.   | <ul style="list-style-type: none"> <li>• Demonstrates commitment to improve health by eliminating toxins from clinical care products and the built environment.</li> </ul>  |
| <b>Year 3 Actions</b>  | <b>Benefits</b>   |
| Work with self-insured loss prevention committee, environmental services and facilities operations staff to audit our Integrated Pest Management (IPM) implementation. Use results to establish goals to address any gaps in implementation.   | <ul style="list-style-type: none"> <li>• Demonstrates commitment to improve health by eliminating toxic pesticides from our landscapes and building interiors.</li> </ul>   |
| Work with self-insured loss prevention committee, environmental services and central sterile staff to audit our use of chemicals and gases in sterilization processes; establish goals for reduction of certain high risk chemicals and/or gases (glutaraldehyde and ethylene oxide) | <ul style="list-style-type: none"> <li>• Demonstrates commitment to improve health by reducing and where possible, eliminating, high risk chemicals and/or gases from our sterilization processes.</li> </ul>   |

### Smarter Purchasing

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| <b>Year 1 Actions</b>   | <b>Benefits</b>   |
| Use report from Practice Greenhealth award application to identify gaps in performance and establish goals for improvement.                       | <ul style="list-style-type: none"> <li>• Access to benchmarks and data comparing Legacy to other healthcare institutions.</li> <li>• Structured approach to goal setting for continued improvement.</li> <li>• Increase likelihood of winning awards in future years and gaining recognition as a leader in improving health through environmental sustainability.</li> </ul> |
| Work with supply chain management to audit compliance with existing environmentally preferable policy (EPP); identify any areas requiring action. | <ul style="list-style-type: none"> <li>• Demonstrates commitment to work with all suppliers of products and services to ensure we are prioritizing environmentally preferable products.</li> </ul>  |

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| Work with supply chain management and information services staff to develop energy efficiency criteria for IS equipment purchases. (Energy Star, EPEAT, etc.)   | <ul style="list-style-type: none"> <li>Provides additional reduction in energy costs due to increase energy efficiency of equipment.</li> <li></li> </ul> |
| <b>Year 2 Actions</b>   | <b>Benefits</b>   |
| Work with information services staff to investigate energy efficiency opportunities related to Legacy's data centers. If appropriate (ie: if in-sourced vs. out-sourced) establish data center energy efficiency goals. | <ul style="list-style-type: none"> <li>Potential to provide additional reduction in energy costs</li> </ul>   |
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| <b>Year 3 Actions</b>   | <b>Benefits</b>   |
| Conduct compliance audit (EPP); Provide refresh training to all supply chain management staff (if needed).  | <ul style="list-style-type: none"> <li>Demonstrates commitment to ensure EPP remains a priority in supply chain management.</li> </ul>                    |
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### Commute Trip Reduction

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| <b>Year 1 Actions</b>   | <b>Benefits</b>   |
| Use results from bi-annual surveys to establish site-specific goals with each CAO or designee.  | <ul style="list-style-type: none"> <li>Demonstrates compliance with state ordinance</li> <li>Demonstrates commitment to improve community health through improved air quality.</li> </ul> |
| Designate a site representative at each hospital, System Office and Holladay Park sites to join a system-wide commute trip reduction planning committee | <ul style="list-style-type: none"> <li>Establishes priority and commitment.</li> </ul>  |
| <b>Year 2 Actions</b>   | <b>Benefits</b>   |
| Work with site CAO's or site representatives to reduce single occupant cart trips at each site by at least 5%.  | <ul style="list-style-type: none"> <li>Demonstrates compliance with state ordinance</li> <li>Demonstrates commitment to improve community health through improved air quality.</li> </ul> |
| <b>Year 3 Actions</b>   | <b>Benefits</b>   |
| Work with site CAO's or site representatives to reduce single occupant cart trips at each site by an additional 5%.                                     | <ul style="list-style-type: none"> <li>Demonstrates compliance with state ordinance</li> <li>Demonstrates commitment to improve community health through improved air quality.</li> </ul> |

### Energy Procurement

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| <b>Year 1 Actions</b>   | <b>Benefits</b>   |
| Monitor regulatory environment in Oregon and Washington to identify additional opportunities for direct access/market based cost savings potential (electricity and natural gas)                    | <ul style="list-style-type: none"> <li>Potential for additional cost savings</li> </ul>   |
| Work with site CAOs and facilities operations management to establish goals to increase % or renewable power purchases.   | <ul style="list-style-type: none"> <li>Demonstrates commitment to minimize air quality issues caused by Legacy's energy consumption.</li> </ul> |
| <b>Year 2 Actions</b>   | <b>Benefits</b>   |
| Work with utilities, public utility commissions and external consultants (NWIGU, ICNU) to determine if additional opportunities to aggregate electricity or natural gas load to provide lower cost. | <ul style="list-style-type: none"> <li>Potential additional cost savings.</li> </ul>  |
| <b>Year 3 Actions</b>   | <b>Benefits</b>   |
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