



## **Action Plan for a Sustainable Clackamas County**

Submitted to the Board of County Commissioners from the Sustainable Clackamas County Advisory Task Force

November 13, 2008

## Preface

The Sustainable Clackamas County Task Force was appointed in April 2008 to develop a three- to five-year action plan to set the County on a path toward a more ecologically, socially and economically sound future. The Task Force chose this vision for the County's work: *Clackamas County is a model for applications of sustainable living*. Sustainability means using, developing and protecting resources at a rate and in a manner that enables people to meet their current needs and also provides that future generations can meet their own needs. Sustainability requires simultaneously meeting environmental, economic and community needs.<sup>1</sup>

Sustainability is concerned with our long-term quality of life. In striving for sustainability we are confronted with numerous choices that affect many facets of our daily life. At present, the Task Force recognizes many of our resources are at risk of decline from unsustainable uses, including water, energy, forestland, agricultural land, fisheries, and other natural ecosystems and resources that we rely upon. Unsustainable resource use further results in significant additional threats to our economy and health, including but not limited to climate change resulting in part from human greenhouse gas emissions, energy insecurity, the buildup of waste materials and toxins, environmental inequity, and loss of recreation or livelihoods.

To frame its work, the Task Force reviewed the *Resolution for a Sustainable Clackamas County* passed by the Board of County Commissioners in February 2008. The Task Force acknowledged Clackamas County's legacy and sustainability initiatives to date, and recognized the unique cultural and economic value of the County's natural resources. It also acknowledged the Board's commitment to "meet or exceed global targets for mitigating climate change" and the importance of adaptation to environmental change in ensuring a sustainable county. Greenhouse gas emissions, including but not limited to carbon dioxide, are an important barometer for sustainability because of the centrality of energy use to our economy, and because of the many links between climate change and the resources we intend to sustainably use, develop and protect.

The Task Force emphasized a theme of integration - of working and natural systems, for example, and urban and rural assets, new practices and existing operations. The Task Force also recognized the importance to sustainability of local businesses and assets, as well as strategies for energy and resource independence.

These are demanding times, with rising energy and commodity prices, and economic change throughout our state, our region, our country and our world. Concurrently, Clackamas County is growing and is challenged to absorb more people into existing communities and urban growth areas.

In recognition of the additional challenges posed by growth, the financial limitations resulting from the eventual reduction and loss of federal timber payments and economic slowdown, and the inherently more sustainable results when many are involved, the Task Force recommends that, where possible, the County take actions that align with partner organizations, utilize existing resources and show a positive rate of return within a reasonable timeline. The County should consider actions to influence the activities of others and "fill gaps" where other organizations are not taking or can not take the lead.

The following action plan framework includes seven goals for 2050 with associated actions and tasks for the next three to five years. Subsequent to the Board's approval of the framework, County staff will develop an initial prioritization and establish metrics to measure performance. Those tasks that focus on efficiency and reduction of resource use should have a high priority. Also subsequent to Board approval, County staff will identify the actions and tasks for which the County can and should serve as a lead entity, and which tasks and actions are more properly led by other entities and which the County should seek to catalyze, stimulate, or join if already underway. For action items where the County is the lead, County staff will also assess the likely costs and available resources. Preliminary proposed partner organizations are listed.

The Task Force emphasizes that all the 2050 Goals are essential elements of a sustainable society and recommends the action plan be revisited annually. The Task Force affirms the County Commissioners' decision to use the Natural Step framework in guiding the strategic development of this plan and evaluating our progress. Further, the Task Force affirms the resolution of the Board that sustainability shall guide County policy now and in the future, acknowledging that consistent consideration of sustainability will give this plan the context it needs to succeed and will ensure that County decisions and policies not addressed specifically in this document are not counterproductive to the Action Plan. The Task Force recommends that the Board and County Administrator clarify how they will ensure that sustainability is consistently taken into account.

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<sup>1</sup> Oregon's 2000 Sustainability Executive Order 00-07, and reflected in Clackamas County definitions.  
Sustainability Action Plan 08\_11\_01.doc

2050 Goal	Actions	Tasks (2008-2013)	County as Lead Agency	Currently Underway	Potential External Partners
1. Become carbon neutral. <sup>2</sup>	1.1 Reduce human-caused greenhouse gas (GHG) emissions 80% by 2050.	a. Develop a GHG baseline for county operations and the county-wide community. b. Emphasize resource efficiency and conservation in all county operations. c. Work with other local governments and Metro to develop a regional GHG baseline (e.g., participate in task forces in the region). d. Set interim goals and reduction strategies for 2012 and 2020. e. Consider sustainability as a key element in decision-making. f. Participate in the Energy Star Challenge campaign.	X  X  X X X	X  X   X	<ul style="list-style-type: none"> <li>• Portland General Electric (PGE)</li> <li>• Northwest Natural</li> <li>• Heating oil suppliers</li> <li>• ICLEI Local Governments for Sustainability</li> <li>• Water districts</li> <li>• Metro</li> <li>• Cities</li> <li>• Environmental Protection Agency (EPA) Energy Star</li> <li>• State of Oregon</li> </ul>
	1.2 Decrease use of fossil fuels 15% below 1995 levels by 2015 by reducing vehicle miles traveled and vehicle petroleum use.	a. Develop a plan to measure and achieve reductions. <ul style="list-style-type: none"> <li>i. Inventory county-wide and county operational emissions annually or bi-annually.</li> <li>ii. Participate in regional and national campaigns to reduce emissions.</li> <li>iii. Work with TriMet and other local transportation groups to improve alternative transportation opportunities within Clackamas County including transit, carpools and car sharing, biking and walking (recognizing the need to support increased use of alternatives through land use policies such as higher density along corridors and hubs and bike lanes, and other informational tools).</li> <li>iv. Reduce fossil fuel use by county staff and citizens visiting county offices.               <ul style="list-style-type: none"> <li>• Model trip reduction by implementing incentives and developing alternatives to the normal 40-hour workweek (e.g. bus passes, flex schedule, telecommuting, staggered start times, carpools) for county employees.</li> <li>• Implement internal customer service practices that decrease the need for customers to visit county facilities (e.g. on-line permitting).</li> <li>• Consider adopting County preferences for alternative powered vehicles.</li> <li>• Organize County supply deliveries so that there are fewer trips per week (once or twice a week rather than daily).</li> </ul> </li> </ul> b. Support higher CAFE <sup>3</sup> standards for all new vehicles, and other efficient and low-carbon vehicle technologies by lobbying Congress and the state legislature, and by leading by example in purchases of county vehicles.	X  X   X  X  X  X	X  X X      X  X  X	<ul style="list-style-type: none"> <li>• EPA</li> <li>• National Association of Counties (NACo)</li> <li>• TriMet</li> <li>• Clackamas Regional Center Transportation Management Association (CRC-TMA)</li> <li>• County vendors</li> <li>• Chambers of Commerce</li> <li>• Cities</li> <li>• Metro</li> <li>• Oregon Department of Environmental Quality (DEQ)</li> </ul>

<sup>2</sup> Carbon neutral is defined as a state in which the County makes no net contribution to atmospheric greenhouse gas concentrations. To achieve this goal, gross GHG emissions must be balanced by GHG sequestration or sinks within the County or for which the County can take responsibility. While carbon dioxide is the largest contributor to atmospheric warming potential, several other gases including methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFC's), perfluorocarbons (PFC's), and sulfur hexafluoride (SF<sub>6</sub>). Ultimately the County may seek to be 'carbon negative' such that it contributes to a net reduction of atmospheric greenhouse gas concentrations.

<sup>3</sup> Corporate Average Fuel Economy: [www.nhtsa.dot.gov/CARS/rules/CAFE/overview.htm](http://www.nhtsa.dot.gov/CARS/rules/CAFE/overview.htm)

2050 Goal	Actions	Tasks (2008-2013)	County as Lead Agency	Currently Underway	Potential External Partners
	1.3 Become a zero-waste community by minimizing waste, reducing consumption, maximizing recycling and supporting products that are made to be reused, repaired or recycled back into nature or the marketplace	<ul style="list-style-type: none"> <li>a. Collect food waste and non-recyclable paper waste for composting from commercial businesses and institutions.</li> <li>b. Assure adequate outdoor storage space for collection containers for organics and other recyclables.</li> <li>c. Review solid waste collection fees for methods to incentivize waste reduction.</li> <li>d. Promote home composting.</li> <li>e. Support producer responsibility programs, longer-lasting products and environmentally preferable packaging.</li> <li>f. Consider mandatory recycling or disposal bans for specific items.</li> <li>g. Enhance existing opportunities for low-income households to recycle and properly dispose of waste.</li> </ul>	<ul style="list-style-type: none"> <li>X</li> <li>X</li> <li>X</li> <li>X</li> <li>X</li> </ul>	<ul style="list-style-type: none"> <li>X</li> <li>X</li> <li>X</li> </ul>	<ul style="list-style-type: none"> <li>• Cities</li> <li>• Developers</li> <li>• Franchised collectors</li> <li>• Metro</li> <li>• DEQ</li> <li>• Chambers of commerce</li> </ul>
	1.4 Provide information to residents, businesses and students on reducing greenhouse gas emissions and becoming carbon neutral.	<ul style="list-style-type: none"> <li>a. The Office of Sustainability should become a resource center for individuals and businesses.</li> <li>b. Distribute a sustainability publication twice a year.</li> <li>c. Promote weatherization opportunities for low-income residents</li> <li>d. Hold an Energy Star Challenge Campaign.</li> <li>e. Hold an anti-idling campaign to include both county operations and the general public.</li> <li>f. Participate in the National Association of Counties (NACo) DriveSmarter campaign.</li> <li>g. Support Oregon Green Schools program incorporation of sustainability measures; help children be sustainability ambassadors.</li> <li>h. Partner with chambers of commerce, school districts and educational institutions to provide information to businesses and students.</li> <li>i. Pursue partnerships with schools so that they can be used as on-site living laboratories.</li> <li>j. Develop County web pages with links to resources.</li> <li>k. Work with other groups to develop and promote a speaker series.</li> <li>l. Provide information booths at the County Fair and other local events.</li> </ul>	<ul style="list-style-type: none"> <li>X</li> <li>X</li> <li>X</li> <li>X</li> <li>X</li> <li>X</li> <li>X</li> <li>X</li> <li>X</li> <li>X</li> <li>X</li> <li>X</li> </ul>	<ul style="list-style-type: none"> <li>X</li> <li>X</li> <li>X</li> <li>X</li> <li>X</li> <li>X</li> <li>X</li> <li>X</li> <li>X</li> <li>X</li> </ul>	<ul style="list-style-type: none"> <li>• EPA Energy Star</li> <li>• Energy Trust of Oregon</li> <li>• NACo</li> <li>• Cities</li> <li>• Counties</li> <li>• Oregon Environmental Council (OEC)</li> <li>• Oregon Refuse &amp; Recycling Association (ORRA)</li> <li>• Clackamas County Refuse and Recycling Association (CCRRA)</li> <li>• Metro</li> <li>• Chambers of commerce</li> <li>• Clackamas Community College (CCC)</li> <li>• K-12 schools</li> </ul>

2050 Goal	Actions	Tasks (2008-2013)	County as Lead Agency	Currently Underway	Potential External Partners
	1.5 Retain the tree canopy, both urban and rural.	a. Assess the current tree canopy in the urban and rural county lands and develop future goals. b. Develop a tree conservation ordinance within the urban growth areas of the County that focuses on preserving these critical elements of our urban ecosystems. Initiate a task force to address this in 2009. c. Ensure that codes require adequate space and soil for newly planted street trees to become fully mature canopy trees. d. Develop mitigation requirements for the removal of trees within the urban area over a certain size. e. Develop a list of acceptable canopy trees for street trees in accordance with International Society of Arboriculture (ISA) standards.	X X X X X	X	<ul style="list-style-type: none"> <li>• Cities</li> <li>• International Society of Arboriculture (ISA)</li> </ul>
	1.6 Model sustainable practices in Clackamas County operations and activities.	a. Form an employee team to recommend and implement actions. b. Formalize partnerships with Clackamas County education providers (K - higher education) to provide sustainability-related education to employees and the public, sharing county successes.	X X	X	<ul style="list-style-type: none"> <li>• Schools</li> <li>• CCC</li> <li>• Marylhurst University</li> <li>• Oregon Institute of Technology (OIT)</li> </ul>
	1.7 Support and promote sustainable energy planning and investment.	a. Identify strategies with County staff, prioritizing locally-based sustainable energy resources. b. Identify opportunities to use local energy projects to improve energy affordability (e.g. solar, small wind and hydro, district heating, geothermal and heat pumps, combined heat and power/cogeneration).	X		<ul style="list-style-type: none"> <li>• OIT</li> <li>• Energy Trust</li> <li>• Cities</li> </ul>
2. Ensure and communicate progress through citizen involvement, outreach, reporting and alignment of financial incentives with sustainability.	2.1 Review and report progress annually.	a. Form or charge a citizen advisory commission to guide and ensure implementation of recommendations. b. Develop and/or consolidate existing metrics to measure performance for both County operations and the community.	X X	X	<ul style="list-style-type: none"> <li>• ICLEI</li> <li>• Cool Counties</li> </ul>
	2.2 Reach a high level of public familiarity with sustainability programs and initiatives.	a. Seek out or create opportunities to publicize sustainability initiatives and results through talks and presentations, news stories and web content, alongside other points of contact with Clackamas County citizens and other creative communication strategies.	X	X	<ul style="list-style-type: none"> <li>• Media</li> <li>• Cities</li> </ul>
	2.3 Establish recognition programs for cities, businesses, schools, farmers and land owners.	a. Establish standards for best practices or performance that will qualify these entities for recognition (available to any entity meeting the standards). b. Establish awards for outstanding and exceptional entities.	X X		<ul style="list-style-type: none"> <li>• Schools</li> <li>• Chambers of commerce</li> <li>• Cities</li> </ul>

2050 Goal	Actions	Tasks (2008-2013)	County as Lead Agency	Currently Underway	Potential External Partners
	2.4 Align taxes and incentives to support sustainable behaviors.	a. Review taxes and incentives currently in place, and consider revenue-neutral changes that discourage unsustainable activities and encourage sustainable activities. b. Integrate sustainability into County human resources policies including recruitment and hiring, retention, professional development and performance reviews.	X  X		
3.Support energy efficiency and increase the share of renewable energy (non-fossil fuel [coal, oil, natural gas] including solar, wind, biomass, wave, geo-thermal, and micro- and low-impact hydro).	3.1 Pursue efficiency and conservation alongside renewables.	a. Pursue funding from federal energy efficiency block grants, as available. b. Promote the purchase of high efficiency appliances in businesses, residences and county operations, and research the feasibility of initiatives to increase the percentage of appliances and electronics that are energy efficient. c. Educate citizens about energy efficiency and renewables. d. Bolster low-income energy efficiency programs, seek out grant funds and develop policies or programs for energy efficiency in multi-family and rental housing. e. Encourage performance-based contracting and other contract mechanisms that can promote energy efficiency. f. Promote industrial and commercial scale cogeneration/combined heat and power, and use of waste heat.	X X  X X  X	X	<ul style="list-style-type: none"> <li>• Local energy performance contractors</li> <li>• Energy Trust of Oregon</li> <li>• Utilities</li> <li>• Climate Communities</li> <li>• Media</li> </ul>
	3.2 Develop and provide incentives to build or retrofit every residence/ building to be capable of producing its own energy.	a. Provide informational kiosks to demonstrate the availability and usage of cutting edge renewable energy technology. b. Promote and share information about tax credits for solar and other renewable energy projects. c. Install solar panels on county buildings with a goal to provide 10% of energy needs through on-site generation. d. Encourage solar or other alternative energy systems on new commercial and residential buildings.	X X X X	X	<ul style="list-style-type: none"> <li>• Bonneville Environmental Foundation (BEF)</li> <li>• Sierra Club</li> <li>• Energy Trust</li> <li>• State of Oregon</li> <li>• PGE</li> <li>• NW Natural</li> </ul>
	3.3 Increase use of renewable energy by purchasing 25% of energy in Clackamas County (and 100% of energy by County government) from renewable sources by 2025.	a. Challenge local businesses and residents to purchase and create renewable energy. b. Twenty-five percent of County energy should be from renewable sources by 2010. c. Localize energy systems (point of demand production; distributive systems). d. Link with land use. e. Require geographically dispersed charging stations for electric vehicles in Clackamas County. Consider co-locating with public transit stations. f. Give priority to local businesses and contractors when looking at Power Purchase Agreements. Keep social goals in mind.	X  X  X		<ul style="list-style-type: none"> <li>• Energy Star</li> <li>• Chambers of commerce</li> <li>• PGE</li> <li>• Renewable NW Project</li> <li>• Energy Trust</li> <li>• State of Oregon</li> <li>• Portland Office of Sustainable Development (OSD)</li> <li>• Technology manufacturers</li> </ul>

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4. Support and encourage green standards for development, planning and infrastructure.	4.1 Provide incentives and guidelines in the County Comprehensive Plan and Zoning and Development Ordinance (ZDO).	<ul style="list-style-type: none"> <li>a. Convene a stakeholder advisory group to support the county's efforts to review the County Comprehensive Plan and ZDO; staff to draft revisions by 2009.</li> <li>b. Amend the Comprehensive Plan and the ZDO by 2010 to assure future development occurs in a sustainable manner.</li> <li>c. Use system development charges (SDCs) to support and/or fund sustainable solutions.</li> <li>d. Offer incentives for green building practices in 2009, e.g. Floor Area Ratio (FAR),<sup>4</sup> pilot Transfer Development Rights<sup>5</sup>.</li> <li>e. Purchase density from environmentally sensitive and protected areas, and bank it to use elsewhere.</li> <li>f. Develop a bike commuting system, both urban and rural, to include paths and signage (<i>Share the Road</i> campaign).</li> <li>g. Build sustainability into the County Planning Division's pre-application meetings with developers.</li> <li>h. Update the Planning Division's pre-application materials, including the guidebook.</li> <li>i. Protect wildlife corridors for biodiversity.</li> <li>j. Provide a mechanism for adopting additional certification programs (beyond LEED) as they become available.</li> </ul>	<ul style="list-style-type: none"> <li>X</li> <li>X</li> <li>X</li> <li>X</li> <li>X</li> <li>X</li> <li>X</li> <li>X</li> <li>X</li> <li>X</li> </ul>	X	<ul style="list-style-type: none"> <li>• American Planning Association (APA)</li> <li>• Cities</li> <li>• Counties</li> <li>• US Green Building Council (USGBC)</li> <li>• Bicycle Transportation Alliance (BTA)</li> <li>• League of Oregon Cities (LOC)</li> <li>• Association of Oregon Counties (AOC)</li> </ul>
	4.2 Incentivize sustainable redevelopment and development practices (from construction through occupancy) through the permitting process.	<ul style="list-style-type: none"> <li>a. Expand upon the incentives piloted in FY 2008-2009 that encourage green building practices for both residential and commercial buildings.</li> <li>b. Emphasize green building in remodeling and rehabilitation of current structures. For the small builder include programs (Earth Advantage<sup>6</sup>, etc.) that might have lower certification costs than LEED.<sup>7</sup> Do not promote self-certification.</li> <li>c. Share knowledge about the benefits of third party certification and commissioning.</li> <li>d. Provide schools and other large projects with a dedicated reviewer.</li> <li>e. Provide expedited review for green projects.</li> <li>f. Research feasibility of initiatives to increase the percentage of renovation that meets high-efficiency standards.</li> </ul>	<ul style="list-style-type: none"> <li>X</li> <li>X</li> <li>X</li> <li>X</li> <li>X</li> <li>X</li> </ul>		<ul style="list-style-type: none"> <li>• Earth Advantage</li> <li>• Homebuilders Association (HBA)</li> <li>• Remodelers Association</li> <li>• Architects</li> </ul>

<sup>4</sup> FAR: ratio of floor area to the area of a lot, bonus could allow a taller building

<sup>5</sup> Transfer Development Rights: exchange of zoning privileges from areas with low population needs, such as farmland, to areas of high population needs, such as downtown areas. These transfers allow for the preservation of open spaces and historic landmarks, while giving urban areas a chance to expand and experience continued growth

<sup>6</sup> Earth Advantage: certification standards of energy efficiency, indoor air quality, resource efficiency and environmental responsibility; [www.earthadvantage.com](http://www.earthadvantage.com)

<sup>7</sup> Leadership in Energy and Environmental Design: a third-party certification program; [www.usgbc.org/leed](http://www.usgbc.org/leed)

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	4.3 Work with the state to update building codes that allow and encourage emerging practices in the green building field.	<ul style="list-style-type: none"> <li>a. Participate with the City of Portland’s effort to develop a Green Building Code that is more effective than the state code.</li> <li>b. Work with the State and other local jurisdictions to remove barriers to green building practices.</li> </ul>	<ul style="list-style-type: none"> <li>X</li> <li>X</li> </ul>	<ul style="list-style-type: none"> <li>X</li> <li>X</li> </ul>	<ul style="list-style-type: none"> <li>• Portland OSD</li> <li>• State of Oregon</li> </ul>
	4.4 Provide education to encourage sustainable development, redevelopment and building occupancy practices.	<ul style="list-style-type: none"> <li>a. Develop displays and educational materials for use in the County’s permit lobby and public buildings.</li> <li>b. Provide education on these practices for developers, builders and building occupants.</li> <li>c. Educate employees in sustainable development and building practices to help the public understand sustainable building practices.</li> <li>d. Sponsor public workshops and tours.</li> <li>e. Be a resource center to the community.</li> <li>f. Continue meeting at least LEED silver standards for County buildings. (Acknowledge long-term savings). Educate building users on best operational practices to maximize the building efficiencies.</li> <li>g. Model new building techniques on County buildings including “living building” techniques – to include water conservation and reuse.</li> </ul>	<ul style="list-style-type: none"> <li>X</li> <li>X</li> <li>X</li> <li>X</li> <li>X</li> <li>X</li> </ul>	<ul style="list-style-type: none"> <li>X</li> <li>X</li> <li>X</li> </ul>	<ul style="list-style-type: none"> <li>• USGBC</li> <li>• Cascadia Green Building Council</li> <li>• HBA</li> <li>• AIA</li> <li>• Irrigation districts</li> <li>• Realtors</li> <li>• Earth Advantage</li> <li>• Cities</li> <li>• Institutions of higher education</li> <li>• Oregon Community Development Collaborative</li> <li>• Enterprise Community Partners</li> </ul>
	4.5 Maintain historic structures and recognize the embodied energy in existing buildings.	<ul style="list-style-type: none"> <li>a. Pilot incentives to retrofit existing structures with solar, insulation, green roofs and other green building practices.</li> <li>b. Research funding methods to assist property owners with retrofits.</li> <li>c. Educate owners of historic structures as to the most effective ways to increase the energy efficiency of the building while maintaining the historic value.</li> <li>d. Develop incentives to deconstruct the original building in cases where a replacement structure will be built.</li> </ul>	<ul style="list-style-type: none"> <li>X</li> <li>X</li> <li>X</li> <li>X</li> </ul>		<ul style="list-style-type: none"> <li>• Clackamas County Historic Review Board</li> <li>• Oregon Historical Society</li> <li>• National Trust</li> <li>• State Historic Preservation Office</li> </ul>
	4.6 Explore and invest in technology that will enable on-line permitting and electronic plan review.	<ul style="list-style-type: none"> <li>a. Implement an on-line process for applying for permits and scheduling inspections.</li> <li>b. Develop and implement an electronic process for plan reviews.</li> </ul>	<ul style="list-style-type: none"> <li>X</li> <li>X</li> </ul>	<ul style="list-style-type: none"> <li>X</li> </ul>	

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5. Identify, protect and restore lands, water and air in Clackamas County that support important natural systems and eco-logical functions and values.	5.1 Assess and prioritize the protection, restoration and stewardship of public and private lands, including surface and groundwater.	<ul style="list-style-type: none"> <li>a. Establish a process to develop/update a comprehensive inventory of resources including water, flora, fauna (especially threatened and endangered species), wildlife corridors, air and soil resources.</li> <li>b. Develop a prioritized list of actions to assure long-term viability of our natural systems.</li> <li>c. Identify and secure a long-term funding mechanism for prioritized actions.</li> <li>d. Research, evaluate and expand the county's Geographic Information Systems (GIS) capabilities.</li> <li>e. Build on the watershed planning that WES (Water Environment Services) is undertaking in 2008-2009.</li> </ul>	<ul style="list-style-type: none"> <li>X</li> <li>X</li> <li>X</li> <li>X</li> <li>X</li> </ul>		<ul style="list-style-type: none"> <li>• Oregon Department of Fish and Wildlife (ODFW)</li> <li>• Metro</li> <li>• Other local, state and regional inventories</li> <li>• Higher education interns</li> <li>• Clackamas County Water Environment Services (WES)</li> </ul>
	5.2 Restore, preserve and enhance riparian areas and other sensitive habitat areas and ecosystems.	<ul style="list-style-type: none"> <li>a. Form partnerships with ongoing natural resource projects.</li> <li>b. Restore and protect river/stream riparian environments.</li> <li>c. Continue to support the County's culvert replacement and repair program for fish passage.</li> <li>d. Establish and protect wildlife corridors.</li> <li>e. Join efforts to eliminate invasive species.</li> </ul>	<ul style="list-style-type: none"> <li>X</li> <li>X</li> <li>X</li> </ul>	<ul style="list-style-type: none"> <li>X</li> <li>X</li> </ul>	<ul style="list-style-type: none"> <li>• Metro</li> <li>• ODFW</li> <li>• Oregon Department of Forestry (ODF)</li> <li>• Soil &amp; Water Conservation District (SWCD)</li> <li>• SOLV</li> <li>• K-12 and higher education</li> <li>• Basin and watershed councils</li> </ul>

2050 Goal	Actions	Tasks (2008-2013)	County as Lead Agency	Currently Underway	Potential External Partners
	5.3 Recognize that water, including groundwater, is a public good to be conserved, reused and recycled.	<ul style="list-style-type: none"> <li>a. Support and connect existing efforts of water providers and agencies to educate industry and citizens on the value of water.</li> <li>b. Develop an integrated water resource management plan, to include encouraging the state to map the aquifers and monitor water extraction to create increased transparency for potential land purchasers and members of the public.</li> <li>c. Evaluate the feasibility of a watershed protection trust fund.</li> <li>d. Assess risks of groundwater depletion or contamination.</li> <li>e. Take actions to be a watershed stewardship convener.</li> <li>f. Work with water providers to promote conservation and to provide incentives for users to find and report leaks.</li> <li>g. Develop a water use and reuse cycle.</li> <li>h. Provide incentives for green roofs and pervious surfaces. Model on public buildings and properties.</li> <li>i. Address both storm water and grey water for reuse and recycling.</li> <li>j. Involve local companies in creating products and services that promote conservation, reduce stormwater runoff and recharge aquifers, such as rainwater harvesting and pervious pavers.</li> <li>k. Develop strategies for a sustainable water supply</li> <li>l. Incentivize nature-scaping and xeri-scaping, efficient irrigation system design and efficient irrigation practices/ technologies.</li> <li>m. Research and evaluate the need to lobby the state on aquifer storage and recovery (ASR) systems; research possibilities for a regionalized storm water detention facility (new water resource).</li> <li>n. Research issues connected to exempt wells.</li> <li>o. Participate with state and local partners on a drug take-back program.</li> <li>p. Ensure a secure water supply, especially regarding quality and availability for all.</li> </ul>	<ul style="list-style-type: none"> <li>X</li> <li>X</li> <li></li> <li></li> <li>X</li> <li>X</li> <li></li> <li>X</li> <li>X</li> <li></li> <li>X</li> <li>X</li> <li></li> <li>X</li> <li>X</li> <li></li> <li>X</li> <li>X</li> </ul>	<ul style="list-style-type: none"> <li></li> <li></li> <li></li> <li></li> <li>X</li> <li>X</li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> </ul>	<ul style="list-style-type: none"> <li>• Service providers</li> <li>• Developers</li> <li>• K-12 school districts</li> <li>• CCC</li> <li>• Oregon Water Resources</li> <li>• Metro</li> <li>• Cities</li> <li>• Irrigation associations</li> <li>• SWCD</li> <li>• Oregon Landscape Contractors Association</li> <li>• Riverkeepers</li> <li>• Oregon Farm Bureau</li> <li>• Local granges</li> </ul>
	5.4 Minimize resource depletion by maximizing waste prevention and reuse.	<ul style="list-style-type: none"> <li>a. Encourage materials exchange between businesses so that the waste of one business becomes feedstock for another, reducing the need for use of virgin resources.</li> <li>b. Continue educational partnerships with other local governments and end users of materials.</li> </ul>	<ul style="list-style-type: none"> <li></li> <li>X</li> </ul>	<ul style="list-style-type: none"> <li>X</li> <li>X</li> </ul>	<ul style="list-style-type: none"> <li>• Metro</li> <li>• CCRRA</li> <li>• DEQ</li> <li>• Local processors (mills, etc.)</li> </ul>

2050 Goal	Actions	Tasks (2008-2013)	County as Lead Agency	Currently Underway	Potential External Partners
	5.5 Restore and preserve a productive forest land base and forest resource industry.	a. Work with the Soil & Water Conservation District (SWCD) to connect growers and developers/builders/architects (demonstrate the local demand for certified lumber). b. Pilot a program on a County-owned forest plot to produce FSC-certified wood. c. Support local mills for value-added products (e.g., mill in Mulino). d. Evaluate the County's participation in conservation stewardship councils with an eye to the impact on county funds and natural resources.	X X X		<ul style="list-style-type: none"> <li>• SWCD</li> <li>• Small woodlot owners</li> <li>• Mills</li> <li>• Architects</li> <li>• Builders</li> <li>• Forestry councils</li> <li>• Western Wood Products Association (WWPA)</li> </ul>
	5.6 Explore opportunities to participate in the creation or expansion of financial incentives for land stewardship, better land use management and practices (e.g. payments for ecosystem services and carbon credits).	a. Convene a Clackamas County work group on this subject/strategy/opportunity area.	X		<ul style="list-style-type: none"> <li>• Climate Trust</li> <li>• OEC</li> <li>• BEF</li> <li>• WCI</li> <li>• Cities</li> <li>• Willamette Partnership</li> </ul>
	5.7 Increase awareness and understanding of Clackamas County natural resources and ecosystems.	a. Continue and enhance the outreach efforts of the Parks Department, WES and the Office of Sustainability. b. Research the feasibility of a nature center for environmental education. c. Work with volunteer organizations to match citizens and businesses with needed natural system restoration. d. Educate residents and businesses about non-point source pollution <sup>8</sup> and practices that can help prevent it.	X X X	X	<ul style="list-style-type: none"> <li>• Oregon State University (OSU) Extension</li> <li>• SWCD</li> <li>• CCC</li> <li>• Environmental Education Association of Oregon (EEAO)</li> <li>• K-12 schools</li> <li>• Metro</li> <li>• Cities</li> <li>• Future Farmers of America (FFA)</li> </ul>

<sup>8</sup> NPS pollution is caused by rainfall or snowmelt moving over and through the ground. As the runoff moves, it picks up and carries away natural and human-made pollutants, finally depositing them into lakes, rivers, wetlands, coastal waters, and even our underground sources of drinking water.

2050 Goal	Actions	Tasks (2008-2013)	County as Lead Agency	Currently Underway	Potential External Partners
6. Support an economy of businesses that sustain and restore natural, economic and social systems.	6.1 Promote, through education and other means, the growth/integration of local businesses that provide employment opportunities with living wages to residents of the county and that have positive environmental and social impacts.	<ul style="list-style-type: none"> <li>a. Explore opportunities and development expertise for renewable energy development in the County (Green Ribbon Committee [GRC] recommendations).</li> <li>b. Develop a Sustainability Center/Complex business plan and implementation strategy (GRC) that includes a link to the regional Food Innovation Center.</li> <li>c. Support Clackamas Community College (CCC) and Oregon Institute of Technology (OIT) training programs for clean manufacturing and alternative energy.</li> <li>d. Partner with business, industry and academic partners to educate the public on sustainable business practices.</li> <li>e. Promote on-line waste exchanges/clearinghouse, import substitution and local value-added processing where possible.</li> <li>f. Use public, high-traffic educational opportunities such as booths, kiosks and other presentations.</li> </ul>	<ul style="list-style-type: none"> <li>X</li> <li>X</li> <li>X</li> <li>X</li> <li>X</li> <li>X</li> </ul>	<ul style="list-style-type: none"> <li>X</li> <li>X</li> <li>X</li> </ul>	<ul style="list-style-type: none"> <li>• OIT</li> <li>• PGE</li> <li>• Oregon Department of Energy</li> <li>• Energy Trust</li> <li>• Oregon Economic and Community Development Department (OECD) <ul style="list-style-type: none"> <li>• Institutions</li> <li>• Non-profit organizations</li> <li>• Industry</li> <li>• CCC</li> <li>• Oregon Natural Step</li> <li>• Northwest College of Construction</li> <li>• Chambers of commerce</li> <li>• Metro</li> </ul> </li> </ul>
	6.2 Retain, grow and recruit businesses in the recycling and waste reduction sectors, keeping jobs and dollars local.	<ul style="list-style-type: none"> <li>a. Include an economic development strategy for recycling and reuse industry, including building materials (GRC), in the update of the County's Economic Development strategic plan currently underway.</li> <li>b. Review current county code and policies to assure that they do not disadvantage locally-owned solid waste collection companies, regardless of size.</li> </ul>	<ul style="list-style-type: none"> <li>X</li> <li>X</li> </ul>		<ul style="list-style-type: none"> <li>• CCC</li> <li>• Economic Development Commission (EDC)</li> <li>• Chambers of commerce</li> <li>• Other business groups</li> <li>• OSU Extension</li> </ul>
	6.3 Support a metro region 'foodshed' for healthy local and organic foods.	<ul style="list-style-type: none"> <li>a. Connect local producers with markets and delivery systems.</li> <li>b. Increase the pool of food producers.</li> <li>c. Make good agricultural land available for growing food through tax deferrals and other incentives for small growers and others; participate in rural reserve efforts.</li> <li>d. Support year-round farmers markets, Community-Supported Agriculture (CSA) and related businesses.</li> <li>e. Assure food production is an allowed use in urban areas.</li> <li>f. Identify and promote green catering/local food producers. (e.g. a green caterers list for county-funded events).</li> <li>g. Work towards elimination of persistent toxic herbicides and pesticides in crop production, residential landscapes, nurseries and horticulture.</li> </ul>	<ul style="list-style-type: none"> <li>X</li> <li>X</li> <li>X</li> <li>X</li> </ul>	<ul style="list-style-type: none"> <li>X</li> </ul>	<ul style="list-style-type: none"> <li>• Multnomah Foodshed Council</li> <li>• SWCD</li> <li>• Farmers markets</li> <li>• OSU Extension</li> <li>• Oregon Tilth</li> <li>• Portland OSD</li> <li>• Oregon Department of Agriculture</li> <li>• Friends of Family Farmers</li> <li>• Community-supported agriculture (CSA) organizations</li> <li>• Tri-County Farm Fresh Produce Guide</li> </ul>

2050 Goal	Actions	Tasks (2008-2013)	County as Lead Agency	Currently Underway	Potential External Partners
	6.4 Support partnerships to model sustainable businesses and to green all businesses where possible.	<ul style="list-style-type: none"> <li>a. Create a recognition program for businesses that model sustainable practices.</li> <li>b. Provide education and outreach on green business practices and waste reduction; peer-to-peer learning.</li> </ul>	X X	X	<ul style="list-style-type: none"> <li>• Chambers of commerce</li> <li>• Metro</li> <li>• Cities</li> <li>• Energy Trust</li> <li>• Water providers</li> <li>• Oregon Natural Step</li> <li>• School districts</li> <li>• Higher education</li> </ul>
	6.5 Support the renewable energy, agriculture, forestry and recycling sectors as clusters.	<ul style="list-style-type: none"> <li>a. Support the use of locally-produced building materials.</li> <li>b. Promote businesses that develop or use sustainable technologies (e.g., sustainable transportation solutions).</li> <li>c. Research feasibility of small woodlots becoming FSC-certified.</li> <li>d. Cultivate the opportunity for small business in the restoration of lands.</li> </ul>	X X		<ul style="list-style-type: none"> <li>• SWCD</li> <li>• Small woodlot owners</li> <li>• Higher education and extension</li> <li>• OECD Commission</li> <li>• WWPA</li> <li>• Forestry councils</li> </ul>
	6.7 Build tourism that protects local ecosystems and economies, and build the viability of local agritourism <sup>9</sup> so that small businesses and landowners can produce, market and showcase goods on-site.	<ul style="list-style-type: none"> <li>a. Work with the Economic Development Commission (EDC) and the new tourism development coordinator with the Business and Economic Development Team (BEDT) to define strategies and actions.</li> <li>b. Make sure the County Zoning and Development Ordinance (ZDO) does not prohibit these activities.</li> </ul>	X X	X	<ul style="list-style-type: none"> <li>• Clackamas County Tourism Development Council (TDC)</li> </ul>
	6.8 Encourage and model eco-industrial park design to minimize material usage and have co-generation capacity.	<ul style="list-style-type: none"> <li>a. Connect producers and suppliers.</li> <li>b. Link businesses with waste material to those able to use material as inputs.</li> </ul>	X X		<ul style="list-style-type: none"> <li>• Zero Waste Alliance</li> </ul>

<sup>9</sup> The practice of the public visiting local agriculture sites to learn about and participate in farm and forest activities

2050 Goal	Actions	Tasks (2008-2013)	County as Lead Agency	Currently Underway	Potential External Partners
7. Build community health, vibrancy, and resiliency.	7.1 Strengthen our cultural fabric and promote an equitable society.	<ul style="list-style-type: none"> <li>a. Continue to participate in the annual regional City/County Diversity Conference and continue to work with new employees through “Building Connections” workshops.</li> <li>b. Integrate arts and culture into the community; build on the work of the Clackamas County Arts Alliance.</li> <li>c. Research current and past bid documents for opportunities to integrate specific equity and opportunity objectives; develop model language and scoring criteria.</li> <li>d. Encourage the state to change state law to allow a Best Value Contracting process which looks at more than just the financial bottom line.</li> </ul>	X  X  X	X	<ul style="list-style-type: none"> <li>• Multnomah County</li> <li>• City of Portland</li> <li>• Clackamas County Arts Alliance</li> <li>• Local cities</li> </ul>
	7.2 Create green pathways out of poverty.	<ul style="list-style-type: none"> <li>a. Provide opportunities for job training in green industry and services with focused outreach to low-income and other disadvantaged populations.</li> <li>b. Expand local demand for workers in family wage jobs that address the environmental challenges of the country.</li> </ul>			<ul style="list-style-type: none"> <li>• CCC</li> <li>• K-12</li> <li>• Workforce Investment Council of Clackamas County (WICCO)</li> <li>• Diversity Council</li> </ul>
	7.3 Provide safe neighborhoods.	<ul style="list-style-type: none"> <li>a. Continue to work with neighborhoods to reduce crime.</li> <li>b. Provide after-school recreational opportunities for K-12 children.</li> <li>c. Address crime prevention by environmental design.</li> <li>d. Research incentives to encourage community gardens on vacant or underutilized private and public lands.</li> <li>e. Support the work of Community Organizations Active in Disaster (COAD) in training the public to work collaboratively.</li> </ul>	X  X X  X	X    X	<ul style="list-style-type: none"> <li>• TriMet</li> <li>• Cities</li> <li>• K-12</li> <li>• CC Arts Alliance</li> <li>• OSU Extension</li> <li>• Master Gardeners</li> <li>• Clackamas County Community Planning Organizations (CPOs)</li> <li>• Clackamas County hamlets and villages</li> <li>• Community Organizations Active in Disaster (COAD)</li> </ul>
	7.4 Avoid actions that place inequitable burdens on any one community or socioeconomic sector.	<ul style="list-style-type: none"> <li>a. Continue the edible food donation program.</li> <li>b. Work to assure affordable housing is located near transit and near employment centers (requires adequate zoning and opportunities for zone changes near jobs).</li> <li>c. Employ sustainable practices in Community Development projects, such as green buildings and green streets.</li> <li>d. Community Development will work to develop incentives within its housing rehabilitation loan program to encourage clients to purchase energy star appliances; prepare and provide an educational packet to encourage this action.</li> </ul>	X  X  X	X   X	<ul style="list-style-type: none"> <li>• Metro Fork It Over</li> <li>• Oregon Food Bank</li> <li>• Growing Gardens</li> <li>• Plant a Row for the Hungry</li> <li>• Oregon Community Development Collaborative</li> <li>• Enterprise Community Partners</li> </ul>

2050 Goal	Actions	Tasks (2008-2013)	County as Lead Agency	Currently Underway	Potential External Partners
	7.5 Work to improve air quality for all residents.	<ul style="list-style-type: none"> <li>a. Participate in the regional Portland Air Toxics Solutions program.</li> <li>b. Encourage smoke-free multi-family housing; model in county subsidized housing; research feasibility of a smoke-free county campus.</li> <li>c. Work with schools and colleges to tighten smoking policies and remove references to tobacco use on campus.</li> <li>d. Encourage diesel retrofits to reduce emissions from vehicles and heavy stationary equipment, both county and private.</li> <li>e. Investigate efforts to phase out two-stroke engines for landscape maintenance equipment.</li> </ul>	X X X X X	X X X	<ul style="list-style-type: none"> <li>• DEQ</li> <li>• Local governments</li> <li>• Industry</li> <li>• Local hospitals/medical groups</li> </ul>
	7.6 Reduce use of toxics.	<ul style="list-style-type: none"> <li>a. Partner with other jurisdictions and the health community to educate the public about bio-accumulation and other hazards of toxic products.</li> <li>b. Educate the public and businesses on alternatives to toxics and on non-point source pollution.</li> <li>c. Model reduction of toxics in County practices.</li> <li>d. Participate with Metro and Department of Environmental Quality (DEQ) household hazardous waste prevention projects.</li> </ul>	X X	X X	<ul style="list-style-type: none"> <li>• DEQ</li> <li>• Water providers</li> <li>• K-12</li> <li>• CCC</li> <li>• OEC</li> <li>• Kaiser Permanente</li> <li>• Providence Health System</li> <li>• Health care providers</li> </ul>
	7.7 Inventory and promote sustainability education to employees, students, residents and businesses.	<ul style="list-style-type: none"> <li>a. Inventory existing K-12 programs.</li> <li>b. Develop resources to supplement curriculum.</li> <li>c. Assess community programs and partnerships.</li> <li>d. Hold a sustainability fair and sponsor guest speakers.</li> </ul>	X X		<ul style="list-style-type: none"> <li>• CCC</li> <li>• K-12</li> <li>• Marylhurst University</li> <li>• OIT</li> <li>• Energy Trust</li> <li>• OEC</li> <li>• Oregon Natural Step</li> <li>• Northwest Earth Institute (NWEI)</li> </ul>
	7.8 Promote mechanisms to protect historic resources and thereby improve cultural and economic vitality.	<ul style="list-style-type: none"> <li>a. Promote federal, state and local resources for historic preservation.</li> <li>b. Develop a policy to protect historic structures from demolition.</li> <li>c. Develop a policy to prevent demolition by neglect, which would allow the county/city to require a property owner to maintain their historic buildings.</li> </ul>	X X X		<ul style="list-style-type: none"> <li>• State Historic Preservation Office</li> <li>• Cities</li> </ul>
	7.9 Cooperate with cities, hamlets, villages and Community Planning Organizations on creating healthy community strategies.	<ul style="list-style-type: none"> <li>a. Discuss strategy at Clackamas County Coordinating Council (C-4: cities, county, special district elected officials), Committee for Citizen Involvement (CCI) and quarterly CPO leadership meetings.</li> </ul>	X		<ul style="list-style-type: none"> <li>• Clackamas County Coordinating Council (C-4)</li> <li>• Clackamas County Committee for Citizen Involvement (CCI)</li> </ul>

## Acronyms

AOC	Association of Oregon Counties	ICLEI	Local Governments for Sustainability
APA	American Planning Association	ISA	International Society of Arboriculture
ASR	Aquifer storage and recovery		
BEDT	Business & Economic Development Team (Clackamas County)	LEED	Leadership in Energy and Environmental Design
BEF	Bonneville Environmental Foundation	LOC	League of Oregon Cities
BTA	Bicycle Transportation Alliance	NACo	National Association of Counties
		NWEI	Northwest Earth Institute
C-4	Clackamas County Coordinating Council	ODF	Oregon Department of Forestry
CAFÉ	Corporate Average Fuel Economy	ODFW	Oregon Department of Fish and Wildlife
CC	Clackamas County	OEC	Oregon Environmental Council
CCC	Clackamas Community College	OECD	Oregon Economic and Community Development Department
CCI	Clackamas County Committee for Citizen Involvement	OIT	Oregon Institute of Technology
CCRRA	Clackamas County Refuse and Recycling Association	ORRA	Oregon Refuse & Recycling Association
COAD	Community Organizations Active in Disaster	OSU	Oregon State University
CPO	Community Planning Organization		
CRC-TMA	Clackamas Regional Center Transportation Management Association	PGE	Portland General Electric
CSA	Community-supported agriculture	SWCD	Soil & Water Conservation District
DEQ	Oregon Department of Environmental Quality	TDC	Tourism Development Council (Clackamas County)
EDC	Economic Development Commission (Clackamas County)	USGBC	US Green Building Council
EEAO	Environmental Education Association of Oregon		
EPA	United State Environmental Protection Agency	WES	Water Environment Services (Clackamas County)
FFA	Future Farmers of America	WICCO	Workforce Investment Council of Clackamas County
FSC	Forest Stewardship Council	WWPA	Western Wood Products Association
GHG	Greenhouse gas		
GRC	Green Ribbon Committee (Clackamas County)	ZDO	Zoning and Development Ordinance (Clackamas County)
HBA	Homebuilders Association		