

City of Lake Oswego Sustainability Advisory Board

Proposed City Council Sustainability Action Goals and SAB
Work Plan Goals for 2011



January 13, 2011

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To the City Council:

The members of the Sustainability Advisory Board offer the following goal recommendations for the upcoming year, 2011. These goals include Action Goals for the Council and Work Plan Goals for the SAB. While the goals for the coming year are considered short term they need to be considered within a much larger goal context. The SAB has adopted four overarching goals (mega-goals) which we see as imperative to maintaining the long term quality of life in Lake Oswego and by reflection, the rest of the world. These long term goals may take another 40 to 50 years to realize or perhaps longer, but if the city's annual goals help move us, step by step, towards these ends we may actually get there. Every year we wait will make the journey that much more difficult and painful. 40 or 50 small steps will be much more attainable and will make the required changes we will all have to make, more tolerable. The SAB will propose a series of short terms goals (action goals) that will address at least one of these mega-goals, but it is more likely they will address more than one if not all. Some of these goals will be recommended to the Council and others will be folded into the scope of the SAB.

Mega-Goal Number 1 - Lake Oswego has a Net Carbon Footprint of Zero.

This goal will effect a multitude of decisions, strategies, actions, and policies. It will require carbon emissions to be a part of virtually every conversation. It is obvious that every action of the City will not be carbon free. That will mean other actions will have to be restorative to balance out the equation. The City has already taken action to this end; a carbon baseline calculation is already funded and in the works. When we know the current carbon footprint for Lake Oswego, then planning the journey to Net Zero Carbon will be clearer.

Mega-Goal Number 2 - Lake Oswego Water Consumption is Nature Neutral

The long term goal is to achieve a pre-development water cycle state. Rain falls from the sky and moves through and is utilized by the natural and built environment; eventually flowing into our rivers and on to the sea. We will no longer need to pull water from our rivers or aquifers to meet our water needs. The current annual water consumption in Lake Oswego is approximately 2+ billion gallons per year. The average annual rain fall is approximately 6 billion gallons per year.

It should be noted that this mega-goal has a direct impact on mega-goal number 1. One half of the city's electrical consumption is directly related to water treatment and distribution.

Mega-Goal Number 3 - Lake Oswego Produces Zero Waste

The long term goal is to send no waste to a land fill. Human use and consumption are redefined as a circular process not a linear process. Reduce, reuse, recycle applies to everything. Much of the foundation for this goal has been built, the structure above just needs to be built. Lake Oswego's new Commercial Composting Pilot Program will help to define that structure. Elimination of waste will also have a significant effect on mega-goal number 1. True waste is not just a waste of material but a tremendous waste of energy.

Mega-Goal Number 4 - Lake Oswego is a Toxin Free Environment

The long term goal is to eliminate harmful toxins from our environment. Actions in this area will need to be both remedial to remove existing toxins and preventative to keep new toxins from entering the environment. Actions in this area also relate to Mega-goal Number 3

Action Goals - 2011

Council Action Goal Number 2011-1: Life Cycle Costs - Living Building Challenge

Set public policy that all new Lake Oswego public buildings utilize full life cycle cost analysis when considering new public building expenditures and endeavor to meet the Living Building Challenge as created by the Cascadia Chapter of the USGBC (United States Green Building Council).

With multiple projects on the horizon, it is imperative that the City be leaders, not followers. Designing buildings today that can withstand the natural resource and energy challenges of the future will save Lake Oswego tax payers a significant amount of money in the long term and return great value on our community investment.

Budget Considerations:

If a fundamental criteria is established that all new public buildings be designed and constructed for a minimum 50 year life span then the cost for that building must be viewed over the 50 life. The initial cost, **plus** the cost to own and operate the building over its entire lifespan, must be the decision metric versus just the initial cost. Green

buildings that currently meet LEED Certification criteria can have upfront cost premiums that range from 0% to 6% depending on the LEED level targeted (Certified, Silver, Gold or Platinum) but the life cycle cost benefits can be significant, primarily through energy and water savings. A good local example is the OHSU Center for Health and Healing (LEED Platinum) which saves over \$500,000/yr in energy and water costs over a code compliant baseline.

Today, Living Building certification is an upfront increase over a LEED Gold base building and a Gold certified building is about a 2-3% increase over an non-green building. The Living Building increase varies depending on the type of building, the use, and the location. While Living Buildings have six key components (Site, Energy, Materials, Water, Indoor Air Quality, and Beauty and Inspiration) the zero net energy and zero external water components can produce significant financial savings for the building. For comparison purposes, the OHSU-CHH energy and water consumption is approximately 50% below the code compliance baseline versus a Living Building which would have zero net energy and water consumption. Once energy and water savings "payback" the initial expenditure, the remaining life of the building will produce significant savings for the City, year after year. In addition, there is growing data that Indoor Air Quality and access to daylight and views, which are both key green building criteria, can improve employee productivity and job satisfaction.

The City is a long term property holder so taking the full building life-cycle approach is completely logical and legitimate. It is safe to assume that Living Building costs will come down as more buildings are built to this criteria and energy and water costs will rise in the future. The attached matrix was prepared by the Cascadian Chapter of the USGBC and provides a good sense of the construction cost increases related to Living Buildings and this point in time. In addition, we have attached an overview of the Living Building Challenge.

Council Action Goal Number 2011-2 : Expanded Water Conservation Incentive Program

Expand the existing water conservation incentive program 5X. Currently, the City has a successful, albeit limited, water conservation incentive program. The City has allotted \$30,000 the last two years to support incentives for toilet conversions to low flow units. In addition, the city funds water audits and conservation give-a-ways in the form of low flow shower heads, aerators, leak detectors, and irrigation aids. Citizens have taken advantage of the program both years with this year's allowance well on its way to full utilization. The water savings from just this modest investment is between 5 and 6 million gallons annually. Although this sounds like a lot, it is less than 3/10's of 1% of our annual water use. To make a significant dent in water consumption, the incentives need to be increased significantly. In addition, Board recommends the scope of the water

conservation program be expanded to include alternative water supply pilot installations of residential rain harvesting systems.

Budget Considerations:

The current \$30,000 incentive fund works out to less than 1 penny per CCF (748 gallons). If a household utilizes up to the maximum for the Second Rate Tier (25 CCF) per bimonthly billing period, that is only 25 cents (12.5 cents per month). Considering a typical household bi-monthly combined bill is probably well in excess of \$100, 25 cents is negligible. If a water conservation surcharge of 5 cents per CCF is added to the water rate, the revenue dedicated to conservation incentives could be increased significantly (from \$30,000 to \$150,000) with minimal financial impact on the rate payer; literally 4 to 5 pennies per day. An alternative is to reallocate an additional 4 cents of the current water rate to water conservation for a total of 5 cents per CCF.

The payback for rate payers can be significant. If a family of 4 swaps out an old 5 gpf toilet with a new dual flush toilet, their yearly savings could range from \$45 if they are typically a Tier 1 water rate household to \$67 in Tier 2 and \$137 in Tier 3 and that is at current 2010-2011 rates (assumes 20 household flushes per day)

The City's annual electric bill to treat and distribute our water is about \$750,000. If you work that back to a City savings per toilet rebate, it is about \$8+ energy savings per year. That translates to about a 13 to 14 year payback on a fixture that will easily last 50+ years.

SAB Work Plan Goal Number 2011-1: Model Green Home

SAB Member Matt Briggs has volunteered to open his home as a model for green home renovation in Lake Oswego. The SAB will integrate tours and other informational avenues into our public outreach efforts, most notably, Sustainability Action Month.

Budget Considerations:

Only modest staff time which is already allotted to Sustainability Action Month.

SAB Work Plan Goal Number 2011-2 : Green Businesses Practices

Provide SAB support to 2011 Lake Oswego Commercial Composting Pilot Program and fold Lake Oswego businesses into Sustainability Action Month events.

Budget Considerations:

None

SAB Work Plan Goal Number 2011-3 : Green Chemistry Building & Vehicle Maintenance

SAB will create a liaison position with City maintenance personnel to promote a conversion to Green Chemistry based maintenance practices

Budget Considerations:

Budget impact is negligible. Green chemistry based products are plentiful in the marketplace and typically there is no premium for these products or practices.

SAB Work Plan Goal Number 2011-4 : Pesticide/Herbicide Free Public Space.

SAB will promote phased reduction of toxic chemicals in public space maintenance via existing Parks and Recreation Advisory Board liaison position.

Budget Considerations:

None

SAB Work Plan Goal Number 2011-5 : Zero Waste Public Events

Members of the SAB along with volunteers and collaborations with other organizations such as Master Recyclers and Zero Waste Alliance shall continue to work and promote reduction of waste to the land fill generated at Lake Oswego public events. This effort already has successful event including the Lake Oswego Summer and Holiday picnic/parties

Budget Considerations:

Negligible as most of the effort comes from volunteers. There will likely be some minor staff time utilization that was already allocated to the event.

SAB Work Plan Goal Number 2011-6: Neighborhood Recycling Pilot Program

Create a pilot program for a neighborhood recycling center. Currently, there are many items that do not qualify for curb-side recycling; certain plastics, motor oil, hazardous materials, etc. By creating a convenient neighborhood centric recycling model for

these items it is likely that more will be kept out of the landfill and/or less will accumulate in households. Given the space requirements, schools may be the best potential test location. With the potential loss of the city's current recycling center in the Foothills as this area is redeveloped, the time is opportune to consider and try another pedestrian friendly model.

Budget Issues:

If SAB works with Allied Waste, Metro, Lake Oswego School District and other non-profit organizations, there should be zero cost to the City.

SAB Work Plan Goal Number 2011-7 : Neighborhood Association Sustainability Summit

Establish an annual Neighborhood Association Sustainability Summit to expand awareness, foster cooperation, and stimulate action within and between neighborhoods.

Budget Issues:

Assuming public facilities are used, there may be minor costs associated with event set up and break down, etc. In addition, a modest amount of staff time will be needed in the planning and execution of the event. It is likely that this may fall primarily under the umbrella of the SAB with its members and staff. The intent is to create it as a Sustainability Action Month event

Thank You

SAB Members

Grant Watkinson - co-chair
Bruce Brown - co-chair
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