

Staff Report City of Manhattan Beach

TO: Honorable Mayor Tell and Members of the City Council

THROUGH: David N. Carmany, City Manager

FROM: Jim Arndt, Public Works Director

Sona Kalapura, Environmental Programs Manager

DATE: October 4, 2011

SUBJECT: Consideration of Recommendations for Program Goals (Energy Efficiency and

Water Conservation) from the Environmental Task Force

RECOMMENDATION:

Staff recommends that the City Council discuss and approve the recommendations from the Environmental Task Force establishing goals and programs to improve energy efficiency and water conservation in the City of Manhattan Beach.

FISCAL IMPLICATION:

Recommended programs have adequate funds budgeted for 2011/2012.

BACKGROUND:

2011 Environmental Work Plan and Environmental Task Force

On January 18, 2011 the City Council adopted the 2011 Environmental Work Plan and appointed the 2011 Environmental Task Force to continue the City's environmental efforts with a focus on community engagement. These goals include three primary areas for the City's environmental programs, the first two of which are currently being pursued by the Environmental Task Force:

- Energy Efficiency and Renewable Energy,
- Water Conservation and Sustainable Landscaping, and
- Zero Waste.

The mission of the Environmental Task Force is: "To unite the community in a comprehensive effort to promote sustainable living in the City of Manhattan Beach." To meet this mission the Environmental Task Force is working through the goals identified in the Environmental Work Plan, and has developed overall targets and outreach programs to meet these goals. To review the Environmental Work Plan, please see Attachment B, page 17.

Agenda Item #	•
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The City is making an effort to reduce greenhouse gas emissions, and has endorsed the U.S. Mayors Climate Protection Agreement. In 2007, the City of Manhattan Beach along with hundreds of other local governments made a commitment to reduce greenhouse gas emissions within municipal operations and throughout the community 7% below 1990 levels by 2012. In 1990, the City emitted 325,320 tons of carbon dioxide equivalent emissions, as shown in Table 1. The goal is to reduce the emissions level to 287,893 metric tons by 2020.

The City has taken steps towards reducing municipal operations' impact on the climate by implementing various energy efficiency measures, such as replacing existing traffic signals with LED lighting; replacing street lighting with energy-efficient induction and LED lighting; replacing existing vehicles with low-emission vehicles where feasible; adopting a Sustainable Building Standards Ordinance; Green Code Amendments for Zoning and Public Rights-of-Way; a Green Purchasing Plan; a Climate Action Plan; and conducted a Level III energy audit to identify how best to make municipal buildings and facilities more energy efficient.

Efforts to Conserve Water

The City enacted a water conservation ordinance to help the community adhere to "Stage 2" drought restrictions enacted by the Metropolitan Water District to meet last year's California drought. As the past winter's rain season provided an abundance of water and snow, the Governor officially declared an end to the drought in April 2011. Accordingly, the City's Stage 2 Drought Restrictions, limiting landscape watering to two days a week, were lifted. However, the Permanent Water Conservation Requirements in the City's Water Conservation Ordinance still remain active. It is critical that the community continue to monitor water consumption in order to comply with statewide requirements to meet a water consumption reduction target of 20% per capita by the year 2020. That goal represents a water usage of 5,397 acre-feet by 2020. Through the City's implementation of the Water Conservation Ordinance, the community has met the initial 20% target within the first year of program implementation. However, with the lifting of the drought restrictions the City has seen a drop of approximately 5% in water conservation.

DISCUSSION:

In an effort to further the City's environmental commitment, staff received input from the inaugural Environmental Task Force, and feedback incorporated from City Council to develop the 2011 Environmental Work Plan.

The 2011 Environmental Task Force developed program goals and program recommendations in: Energy Efficiency and Renewable Energy; and Water Conservation and Sustainable Landscape.

Recommendations to Promote Energy Efficiency and Renewable Energy

Setting a Goal to Reduce Community-wide Greenhouse Gas Emissions

Goal: Reduce community-wide greenhouse gas emissions 15% below 2005 levels by 2020 **Community-wide Emissions Target** = 287,893 metric tons of CO2e

The City's current greenhouse gas emissions inventory, including community-wide data provided by the South Bay Environmental Services Center is shown in Table 1. Table 1 below shows the greenhouse gas emissions levels by source: gasoline, electricity, natural gas, etc., as well as the

share each source contributes to overall emissions in Manhattan Beach. For example, in 2009 emissions from electricity and natural gas comprise 47% of the community-wide emissions total, as do emissions from gasoline. The community-wide emissions data for 2009 is currently being developed by the South Bay Environmental Services Center, and is expected for delivery this Fall.

The South Bay Environmental Services Center is assisting cities in the region set emissions reduction goals, and suggests aligning previous greenhouse gas reduction efforts with the statewide goal of 15% below 2005 emissions levels by 2020. Increased awareness and outreach programs to the community will aid in the reduction of energy consumption and lowering of greenhouse gas emissions. The City will need to focus implementation on new efficiency measures and educational awareness programs that could reduce emissions at least 5% to meet the 2020 goal. These potential new measures can include the following to help reduce emissions related to energy consumption:

- electric car charging stations,
- building energy efficiency upgrades,
- solar installations,
- measures to reduce water consumption,
- new planning and permitting rules, and
- community outreach and education programs.

Table 1: City of Manhattan Beach Community-wide Emissions by Source

Source (in metric tons CO2e)	1990	2005	2007	% of 2007 total
Gasoline	171,342	159,992	154,841	47%
Electricity	79,890	99,092	97,171	29%
Natural Gas	51,739	59,148	60,311	18%
Diesel	10,305	11,492	11,322	3%
Solid Waste	12,016	8,910	8,306	3%
Total	325,320	338,698	332,021	100%

The Environmental Task Force recommends that the City align its emissions reduction commitment to meet the State target of a 15% greenhouse gas emissions reduction by 2020. This would bring the community-wide emissions reduction target to 287,893 metric tons of carbon dioxide equivalent emissions (CO2e) by 2020.

Agenda Item	#:
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Energy Efficiency and Renewable Energy Program Recommendations

The Environmental Task Force working group has developed three proposals to reduce greenhouse gas emissions. They include the following three programs to reduce greenhouse gas emissions.

- 1. Neighborhood Energy Conservation Contest
- 2. Green Business Challenge
- 3. Solar Display at Metlox

Note: Evaluation of each program is based on Program Cost, Program Value to the Overall Goal, and Sustainability of the Program

1. **Neighborhood Energy Conservation Contest:** A residential program to educate and engage the community in the environmental and economic benefits in reducing energy consumption. The goal of the contest is to educate the community and raise awareness on the measures that can be implemented to reduce residential energy. Households can reduce electricity use 50% through energy efficiency measures. Households use an average of 18,000 kWh each year. If 100 Manhattan Beach families participate in the Energy Conservation Contest, that could lead to a total reduction in energy consumption of 900,000 kWh, or 621 metric tons of carbon dioxide equivalent emissions. While this may not be a significant amount when compared to the overall greenhouse gas emissions reduction target, the potential to "lead by example" is important. The Energy Conservation Contest serves to educate the community in implementing energy efficiency improvements that will reduce greenhouse gas emissions.

For more details on the Neighborhood Energy Conservation Contest, please refer to Attachment C, page 32, and to the Program Evaluation table below.

Table 2: Program Evaluation of Neighborhood Energy Conservation Contest

Program Cost	Program Value to Overall Goal	Sustainability of the Program
Advertising = \$1,000 Brochure and workshop materials = \$500 Awards/prizes = \$500 (seek donations/other "free" prizes) Staff time = 5 hours/week	Total reduction in energy consumption = 900,000 kWh (621 metric tons of CO2e) based on participation of 100 families Primary Values = Educational awareness and civic	The conservation contest is designed as a one-time program. If the City wishes to continue the program, it can be run by City staff, and/or coordinated with regional partners and potentially with other volunteer groups to help gather program participants
These costs are currently available in the FY11-12 budget	engagement to encourage reductions in energy consumption	and monitor program results

Process for Participation

The Environmental Task Force has a goal of recruiting 100 Manhattan Beach households to participate in the energy conservation contest in order to educate the community on measures to reduce energy consumption, save money, and reduce greenhouse gas emissions. The contest will

Agenda Item #	•
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also encourage the schools in the community to promote the program to students and families in order to spread the conservation message and win prizes for schools with the most participants. One school will be determined the winner based on the number of participating families. The contest will feature families that are able to achieve the greatest reduction in electricity consumption, and select the lowest overall electricity user in the community as the winner.

Residents interested in entering the contest will be required to complete the Southern California Edison Home Energy Efficiency Survey, and submit the resulting report with their entry to staff. The Environmental Task Force will review each application, and will serve as points of contact to answer questions the residents may have as they proceed through the contest.

The Environmental Task Force will also make use of the City's existing partnership with the Sage Steps program to provide an easy-to-use online portal where residents can enter and monitor monthly consumption data and review tips and suggestions on how to reduce their energy consumption. The Environmental Task Force has also made initial contact with the South Bay Environmental Services Center, and the local utilities to determine if these regional partners can assist in promoting the Neighborhood Energy Conservation Contest, provide resources to educate residents how best to reduce energy consumption, and offer any incentives or prizes to reward those that are successful in reducing consumption. Should City Council approve this program, the Environmental Task Force will begin outreach to the public and schedule community workshops to provide more information.

Energy Conservation Workshops will be held in partnership with the South Bay Environmental Services Center in late October and November to give interested residents more information on the contest, as well as tips and resources to begin making the necessary changes in their energy use. Residents will need to make the necessary improvements, and begin monitoring their energy bills during the months of January – March 2012. At the close of the contest, families will submit their bills, along with historic billing from the same months in 2011 so the Environmental Task Force can compare consumption levels.

City Council Action

If City Council approves the program, the winner of the Neighborhood Conservation Contest will be announced during the Earth Day Celebration in April 2012. This timeframe will require a few months extension of the Environmental Task Force's one-year term of service in order to see the most benefit of this program. The Environmental Task Force is seeking Council's approval on the Neighborhood Energy Conservation Contest in order to move forward with the planning, outreach, and implementation of the program.

2. **Green Business Challenge:** A commercial program to recognize Manhattan Beach businesses that are actively trying to reduce their environmental impact, and educate businesses that want to understand the economic and environmental benefits of conserving energy and water, and reducing waste. The goal of the challenge is to seek participation of the business community in an effort to raise awareness on changes to business practices that can be made to make each business more economically and environmentally sustainable.

Businesses that invest strategically in energy efficiency measures can reduce utility costs and greenhouse gas emissions 30%, without sacrificing service, quality, style, or comfort. Small retail stores and offices account for more than half of all small business energy use in California. Small

retailers spend on average \$1,000 each month on electricity costs. Given the presence of numerous small businesses in Manhattan Beach, the Environmental Task Force will target 30 businesses to participate in a 6-month pilot of the Green Business Challenge. The average small business in Manhattan Beach consumes approximately 18,000 kilowatt hours each year, and by tracking energy consumption and implementing efficiency measures each business could see an energy savings of 5,400 kilowatt hours per year, or \$3,600 each year. If 30 businesses participate in the program this would result in an energy savings of 112 metric tons of carbon dioxide equivalent emissions to the community. This is the equivalent of saving the greenhouse gas emissions from 12,523 gallons of gasoline. While this may not be a significant reduction when compared to the overall emissions target, involving the business community is a key step in bringing about a change in behavior and showing the community that the private sector can be a leader in environmental stewardship as well.

For more information on the Green Business Challenge, please refer to Attachment C, page 34, and to the Program Evaluation table below.

Table 3: Program Evaluation of Green Business Challenge

Program Cost	Program Value to Overall Goal	Sustainability of the Program
Advertising = \$1,000 Brochure and workshop materials = \$500 Awards/certificates = \$500 Staff time = 3 hours/week These costs are currently available in the FY11-12 budget	Total reduction in energy consumption = energy savings of 30%. This would result in an energy savings of 112 metric tons of CO2 to the community Primary Values = Educational awareness and engagement of the private sector to reduce energy consumption	The green business challenge can be run as a 6-month pilot to determine interest and participation. If the City wishes to continue the program, it can be run by City staff, or coordinated with regional partners and potentially with the business associations to help gather program participants and monitor program results

Process for Participation

To participate in the Green Business Challenge, each interested business will complete a scorecard (see Attachment C) which surveys their current sustainable business practices. Participating businesses will be ranked into two tiers (Certified or Best-in-Class) reflecting the total points scored for environmental actions taken to improve their business. A "certified" business will have achieved 50% of the available points in their business category, while a "Best-in-Class" ranking means the business has achieved 70% of the available points in their category and has undergone an onsite visit by the Environmental Task Force. Every business that participates in the Green Business Challenge program and is ranked into one of the two tiers will receive a certificate and window decal from the City to acknowledge the businesses' environmental efforts.

The Environmental Task Force will encourage participating business to measure and track energy consumption and begin to implement efficiency measures to reduce overall consumption. Examples of recommended practices include:

- Turning off lights and equipment when not in use
- Purchasing energy-efficient products like ENERGY STAR qualified office equipment
- Installing lighting occupant sensors in proper locations
- Tune-up heating/air-conditioning (HVAC) system with an annual maintenance contract
- Regularly change or clean HVAC filters and install a programmable thermostat
- Replacing incandescent light bulbs with Energy Star qualified compact fluorescent light bulbs (CFLs) wherever appropriate
- Installing light-emitting diode (LED) exit signs

In addition to a reduction in operating costs, an intangible benefit of the program will be increased patronage from environmentally conscious consumers, resulting in other businesses participating in the ranking program. The Environmental Task Force has made initial contact with the Chamber of Commerce and business associations, to gather support and participation for this program. The Chamber and business districts will also partner to distribute program information to its members to help recruit business participation. The Environmental Task Force has an initial listing of businesses to contact and seek participation through the existing Clean Bay Certification program, Cash for Kitchens program, and the newly initiated Bike/Walk-Friendly business partnership.

City Council Action

If City Council approves the program, the business participants that complete the scorecard and are ranked in one of the two program tiers, will be announced during the Earth Day Celebration in April 2012. This timeframe will require an extension of the Environmental Task Force's one-year term of service in order to see the most benefit of the program. Should City Council choose to approve the Green Business Challenge, the Environmental Task Force will begin outreach to the business community through mailings and announcements at business association meetings. The Environmental Task Force is seeking Council's approval on the Green Business Challenge in order to move forward with the planning, outreach, and implementation of this program.

3. Solar Display at Metlox: An educational solar

powered display in a public area to increase awareness on the benefits of renewable energy. The goals of the program are two-fold, first to showcase an aesthetically pleasing solar array that can fit in with the architectural elements of the Metlox plaza, while serving as a high-performing bifacial solar system (A bifacial solar system utilizes glass on both sides of the panel in order to collect energy from both sides of the solar panel, which increases efficiency of the panel). Though in this case the benefit of bifacial panels will be



minimal, the bifacial panels offer an attractive architectural element, demonstrating potential design options that designers may incorporate in their own projects.

The second goal of the solar display project is to provide an electronic educational display on an LCD screen powered by the solar array to expose the community to the benefits of renewable energy, including how much solar power the system is generating. Proposed display content will include general information, real time metrics regarding power production, and sample power use equivalents. In addition to the LCD display, a wireless option is being explored, whereas the

instructional content can be streamed and businesses within range can display the information remotely.

The solar display project is a small solar system that is not designed to take the Metlox area and surrounding businesses "off the grid." However, the project will reduce greenhouse gas emissions by 126 tons of CO2 over the 25-year life of the project. This is the equivalent to providing an offset of enough greenhouse gas emissions equivalent to driving a medium-sized car 228,545 miles.

For more information on the Solar Display at Metlox proposal, please refer to Attachment C, page 41, and to the Program Evaluation table below.

Table 4: Program Evaluation of Solar Display at Metlox

Program Cost	Program Value to Overall Goal	Sustainability of the Program
Solar equipment, installation, and monitoring = \$30K (Financial support from interested businesses will be solicited) Staff costs to develop educational message (2 hours/month); maintenance staff time to ensure panels are kept clean (4 times/year) Funding for these costs is	The project will reduce greenhouse gas emissions by 126 tons of CO2 over the 25-year life of the project Primary value of the project = to increase awareness on the benefits of renewable energy and promote the use of solar power in the community	The solar display is a one-time project recommendation to install a permanent renewable energy feature in a public space Regular cleaning will be required, and the system is warrantied for 10 years
available in the FY11-12 budget		

Process to Install the Solar Display

The Environmental Task Force has coordinated with the Public Works Department and the businesses surrounding Metlox Plaza to discuss the concept of the project, and has received the support of the parties involved. The project would involve the installation of a 4.7KW bifacial solar photovoltaic system in the area above the escalators leading to the Metlox parking garage. The system will generate enough power to offset a portion of the energy consumption from the escalators, the City's weekly Farmers Market, and plaza lighting.



City Council Action

If City Council approves the project, the Environmental Task Force will reach out to the businesses in the Metlox plaza and surrounding areas to seek financial support for the educational solar

Agenda Item #:	
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display. If the project is approved by Council, staff will release an RFP for construction of the solar array to be completed this calendar year in order to make the most of state rebates currently available (California Solar Initiative rebate is approximately \$4,700). The Environmental Task Force is seeking Council's approval on Solar Display at Metlox in order to move forward with the planning and implementation of this program.

Recommendations to Promote Permanent Water Conservation Practices 20% Reduction in Community-wide Water Consumption

Goal: Community-wide water consumption not to exceed 5,397 acre feet by the year 2020

The City needs to meet the statewide conservation guidelines outlined in Senate Bill X7-7 to reduce water consumption 20% by 2020. The goal is an important one because of the instability of water resources. The City experienced an average 20% reduction in water production after the successful implementation of the City's Water Conservation Ordinance in 2010, resulting in significant water savings.

Table 5 below highlights the City's water production and conservation levels when compared to the Baseline Annual Water Use. As the graphic shows, water consumption in the community is again on the rise in 2010/11, and water conservation has dropped an average of 5%. This may be attributed to the "end of drought" messaging and the community's reversal of water conserving habits. However, even with this decline in conservation, the City's water consumption is still close to the 20% reduction target level of 5,397 acre feet per year to comply with the stated community-wide goal.

Table 5: Manhattan Beach Water Use and Conservation Targets

1995 - 2004 Average Base Line Water Use Target (BLWUT)	Community-wide Goal 20% of BLWUT by 2020	2009/2010 Water Use	2010/2011 Water Use
6746 Acre Feet	5397 Acre Feet	5280 Acre Feet	5553 Acre Feet
Conservation Effort	20%	22%	18%

Water Conservation and Sustainable Landscape Program Recommendations

The Environmental Task Force has developed four proposals to raise awareness on efficient water consumption. With the above water conservation target as a goal, the Environmental Task Force recommends the following four programs to reduce water consumption and implement sustainable landscaping practices.

- 1. Landscape Sustainability Audit
- 2. Community Mulch Pilot Program
- 3. Post Office Demonstration Project
- 4. Efficient Water Use Slogan and Logo Contest

Note: Evaluation of each program is based on Program Cost, Program Value to the Overall Goal, and Sustainability of the Program

1. **Landscape Sustainability Audit:** A program to assist residents in identifying the aspects of their landscaped property that can be changed to conserve water, reduce runoff, and maintain landscapes that are California-friendly. Resident will be provided with a list of approved landscape contractors who have gone through a landscape audit developed by the Environmental Task Force to promote principles of sustainable landscaping (see Attachment D, page 45). The contractors will be required to meet qualification criteria to participate in the program, including maintaining the proper licenses and insurance, certifications, and additional experience in sustainable landscape projects. Any default on the criteria, or negative feedback from residents will result in removal from the program.

The Environmental Task Force has also developed the sustainability audit that approved contractors will perform and provide to each interested homeowner. The goal of the audit is to provide the resident with information pertaining to California-friendly landscaping, including reducing turf to 20% of overall landscaped areas; water-efficient irrigation systems and rain sensors; rainwater retention and harvesting; composting and growing an organic vegetable garden, etc.

60 households will be targeted to participate in the pilot program as part of an initial effort to gauge interest in receiving information on sustainable landscaping. Because sustainably landscaped properties are estimated to use up to 40% less water than traditional landscapes, each resident that implements recommendations from the landscape audit could save an average of 31,400 gallons of water per year (0.1 acre foot), and a \$157 cost savings in reduced water bills. With 60 participants, the Landscape Sustainability Audit would result in an estimated water savings of 1.9 million gallons (6 acre feet).

For more information on the Landscape Sustainability Audit, please refer to Attachment D, page 43, or to the Program Evaluation table below.

Table 6: Program Evaluation of Landscape Sustainability Audit

Program Cost	Program Value to Overall Goal	Sustainability of the Program
Advertising = \$1,000 Brochure and workshop materials=\$500	The program is expected to draw 60 participants a year, which would result in a total water savings of 1.9 million gallons (6	The pilot program will result in several households with completed sustainability audits. Should the City wish
Staff time: 5 hours/week	acre feet)	to continue this program, it can vet contractors with the
These costs are currently available in the FY11-12 budget	Primary value = provision of an actionable tool to guide residents in conserving water, reducing runoff, and saving money while maintaining an environmentally sustainable landscape	assistance of City staff, the Environmental Task Force or another volunteer group such as the Manhattan Beach Botanical Garden

Process for Participation

Agenda Item	#:
\mathcal{C}	

If approved, information on the Landscape Sustainability Audit will be provided on the City's website for interested residents to review. Information will also be sent out in the City newsletter, billing statements, and through advertisements in the local media. Residents will review and select a landscaper from a list of professionals vetted by the Environmental Task Force. The landscapers chosen will espouse the principles of sustainable landscaping and will conduct an audit created by the Environmental Task Force, providing a report to the resident who can then begin to implement measures to improve the environmentally sustainability of their properties. Feedback from participating residents will be sought through an "after-audit" form, including asking for permission to monitor water billing data to determine if water consumption is being reduced as a result of participation in the program.

City Council Action

The Environmental Task Force is seeking Council's approval of the Landscape Sustainability Audit program, to begin implementation of the program. If approved, the Environmental Task Force will begin outreach to the community to solicit participation in the landscape audit program, host a workshop for interested residents to understand the program, and gather feedback from participants on the usefulness of the landscape audits and the quality of work provided by the landscaper. Program participation will be monitored following completion of the six-month pilot program.

2. **Community Mulch Pilot Program:** A program to provide citizens easy access to free organic mulch for their yards and community projects. Providing a local resource in which to easily pickup mulch will provide residents with a sustainable method of maintaining their landscapes, as opposed to the energy-intensive process surrounding store-bought mulch. Organic mulch is an essential component of a water-wise, sustainable garden and helps reduce or eliminate the need for pesticides by promoting soil health, maintaining soil moisture, and assisting in retention of water on-site.

While it will be difficult to measure exactly how many individuals are making use of the program, the Environmental Task Force estimates that at least 100 homeowners will make use of the service within the 6-month timeframe of the pilot program. Properties that use mulch on their landscaping can save up to 50% of the water used on traditional landscapes, which on average will save each residential water user 39,270 gallons per year (0.12 acre feet), or \$196 in reduced water bills. The Mulch Pilot Program is expected to draw 100 participants a year, which would result is a total water savings of 3.9 million gallons (12 acre feet). For more information on the Mulch Pilot Program, please refer to Attachment D, page 50, or to the Program Evaluation table below.

Table 7: Program Evaluation of Community Mulch Pilot Program

Program Cost	Program Value to Overall Goal	Sustainability of the Program
Advertising: newspaper, street banners, bill inserts/flyers = \$1,500 Brochures and signage materials = \$500	The program is expected to draw 100 participants a year, which would result is a total water savings of 3.9 million gallons (12 acre feet)	The program is intended as a 6-month pilot that will be monitored by City staff and the Environmental Task Force. Should the City wish

Staff time = 2 hours/week	Primary value = provision of free mulch for residents to utilize	to continue this program, it can assign the program to City staff, or seek the
These costs are currently available in the FY11-12	in sustainable landscape project, resulting in water conservation	assistance of other volunteer groups
budget	and improved soil health	groups

Process for Participation

The Environmental Task Force has contacted a list of local tree trimmers who have agreed to provide safe, organic mulch to the City at no cost. The tree trimmers have been vetted by the Environmental Task Force members and a certified arborist. The Environmental Task Force has also worked with the Public Works and Fire Department to locate an area to store the mulch, and address any safety concerns. There is a location available in the parking lot at the Public Works Yard that is large enough for truck deliveries and residential pick-up, as well as the materials and staff needed to maintain the mulch pile.

Mulch would be delivered, free of charge, to the City Public Works Yard where it would be available for residents to pick up and transport to their properties. Should residents require a larger load of mulch for their projects, the vetted list of tree trimmers will make large mulch deliveries to the homeowners, also at no charge. Environmental impacts and other issues of the project will be assessed prior, during, and after the six-month period, as well as assessing the degree of community participation.

City Council Action

If City Council approves the Community Mulch Pilot Program the Environmental Task Force will begin planning and implementation of this program. Pending Council approval, the Environmental Task Force can begin outreach of the Mulch Pilot Program during the City's October composting class at the Manhattan Beach Botanical Garden.

3. Post Office Demonstration Garden

The Environmental Task Force would like to conduct a case study project of the landscape audit on municipal property. Specifically, the landscaped area in front of the Post Office. If approved, the Environmental Task Force will assist the Public Works Department in conducting the landscape audit on this property, designing any landscape upgrades, and implementing the sustainable landscape practices identified. For more information on the Post Office Demonstration Garden, please refer to Attachment D, page 53, or to the Program Evaluation table below.

Table 8: Program Evaluation of Post Office Demonstration Garden

Program Cost	Program Value to Overall Goal	Sustainability of the Program
Design and installation, phase I: \$5,000; phase II: \$5,000	This project will save on average 68,940gallons per year (.21acre feet)	The program can be completed in two-phases, as funding permits, or can be completed as one project with

Staff time = 2 hours/week Funding for this project may be obtained from outside groups Primary value = generate awareness of sustainable landscape practices through a case study on public property the assistance of outside groups, such as Leadership Manhattan Beach and the Surfrider Foundation

Project Proposal

The Environmental Task Force recommends converting the landscape surrounding the U.S. Post Office located at 425 15th Street in Manhattan Beach, to a more water-conserving, sustainable landscape with at least 50% less lawn, environmentally appropriate plantings, a water-conserving irrigation system, mulch applied between shrubs and trees, and efficient walking paths made up of decomposed granite or mulch. The landscape surrounding the post office is primarily composed of turf and ivy. The lawn areas measures 4,381 square feet and consumes a substantial amounts of water; the irrigation system operates 3 times a week for 16 divided into two eight minute cycles during the summer months, consuming a calculated 2,274 gallons of water per week. The shrubs are many years old and are maintained by shaping into squares and circles, and there is a tree on the property that is unhealthy and dying. This landscape would benefit from a landscape update because it is on such a high-visibility corner, which is one of the reasons the Environmental Task Force believes it to be a good location for a satellite demonstration garden (similar to the project flanking the entrance to City Hall.)

City Council Action

If City Council approves this project, the Environmental Task Force has the opportunity to partner with Leadership Manhattan Beach to secure funding for the entire case study project. City Council approval of the project is required before the Environmental Task Force can approach the Leadership class for acceptance of the case study project as this year's class project. If Leadership Manhattan Beach is not able to adopt the case study project, then the Environmental Task Force will seek the assistance of other entities such as Surfrider's Ocean Friendly Garden program to move forward with the project.

4. **Efficient Water Use Slogan and Logo Contest:** A contest to engage the youth of Manhattan Beach in developing an efficient water use message with which residents can identify and feel ownership. The contest will involve any resident youth in Manhattan Beach schools interested in developing a slogan and logo that promotes the efficient use of water. The goal of the contest is to design a message that will be communicated community-wide as a statement on the need for efficient use of water as a lifestyle change to maintain the reliability and sustainability of the region's water resources.

The Environmental Task Force has made initial contact with the Manhattan Beach Unified School District Superintendent and gained support for this initiative. The Environmental Task Force has also contacted West Basin MWD to coordinate our slogan/logo contest with their existing art contest program, and would like to partner with West Basin on this initiative. West Basin has had significant problems in the past getting participation from Manhattan Beach schools with their annual water-oriented art contests. To partner with West Basin, the approval of City Council for this concept is needed.

The contest is anticipated to run for 2-months, starting in early January, 2012, after which a panel,

including Environmental Task Force members, will review applicant submissions and select a winner based on contest criteria similar to that of West Basin's program. There are no quantifiable cost savings or water reduction savings associated with this program, but the program is an effort to increase awareness and educate residents about the efficient use of water as a fundamental motivation. The winning slogan and logo may potentially be used in future water conservation outreach from the City.

City Council Action

Should City Council approve the contest, the Environmental Task Force will coordinate with West Basin MWD to develop the contest details (contest theme, rules, judging criteria), and will develop a plan to reach out to the schools in the community to encourage participation. The Environmental Task Force is seeking Council's approval of the Efficient Water Use Slogan and Logo Contest to begin planning and development of this program with West Basin MWD.

The Environmental Task Force will return to Council in the fiscal year with the specific contest details, developed jointly with West Basin, and seek approval of Council to implement the contest. An extension of the term of the Environmental Task Force will be needed to operate the slogan contest and select a winner in Spring 2012.

For more information on the Efficient Water Use Slogan Contest, please refer to Attachment D, page 55, or to the Program Evaluation table below.

Table 8: Program Evaluation of Efficient Water Use Slogan Contest

Program Cost	Program Value to Overall Goal	Sustainability of the Program
Advertising = \$1000 (or donated) Prizes = \$1000 (or donated) Staff time = 2-5 hours/week for duration of contest	There are no quantifiable cost savings or water reduction savings associated with this program Primary value = Public education and engagement of youth to develop an effective	The program is a 1-time contest that will be monitored by City staff and the Environmental Task Force Should the City wish to continue this program in the
Funds are currently available in the FY11-12 budget for this program	communication tool to promote efficient use of water as part of a permanent lifestyle change	next school year, it can assign the program to City staff

Agenda Item #:	

CONCLUSION:

The Environmental Task Force has developed a comprehensive program to promote sustainable living to the community. Staff recommends that City Council consider approval of the programs from the Environmental Task Force:

- Adoption of a community-wide greenhouse gas emissions reduction target
- Neighborhood Energy Conservation Contest
- Green Business Challenge
- Solar Display at Metlox
- Adoption of a community-wide target to maintain reduced water consumption
- Landscape Sustainability Audit, including Post Office Demonstration Garden
- Community Mulch Pilot Program
- Post Office Demonstration Garden
- Water Efficiency Slogan and Logo Contest

Attachments: A. 2011 Environmental Task Force Mission and Membership

B. 2011 Environmental Work Plan

C. Energy Efficiency and Renewable Energy Program Summaries

D. Water Conservation and Sustainable Landscape Program Summaries

cc: Robert Espinosa, Fire Chief Richard Thompson, Community Development Director Juan Price, Maintenance Superintendent Raul Saenz, Utilities Manager

Environmental Task Force Mission and Membership

The goal of the Environmental Task Force (ETF) is to make recommendations on best practices for priority issues to City Council.

ETF Mission: To unite the community in a comprehensive effort to promote sustainable living in the City of Manhattan Beach.

The Environmental Task Force was organized into two work groups to create best practice recommendations to submit to City Council for approval. The Environmental Task Force will track and report on initial progress made in meeting the identified program goals and any program recommendations developed. The Environmental Task Force will provide a year-end status report to City Council in December 2011.

Environmental Task Force City Council Co-chairs:

Councilmember Amy Howorth and Councilmember David Lesser

Environmental Task Force Members (by Work Group)

Energy Efficiency & Renewable Energy	Water Conservation & Sustainable Landscape
Andrew Cobb,	Paul Beswick,
Xero Solar	Senior Environmental Specialist, Metropolitan Water District
Audrey Judson,	Julie Gonella,
Realtor, Manhattan Beach	Vice President, Manhattan Beach Botanical Garden
	Ann Lin,
Kim Matsoukas,	Water Resource Control Engineer,
Sustainability Manager, Bentley Prince Street	LA Regional Water Quality Control Board
Daniel Salzman,	Greg Monfette,
LEED Homes AP, LEED Green Associate	City of LA Urban Forestry Division Superintendent
Student Liaison:	Gretchen Renshaw, MB Botanical Garden, co-founder;
Ryan Patel, Mira Costa High School	Instructor, UCLA Extension Gardening & Horticulture

Attachment B

City of Manhattan Beach

2011 ENVIRONMENTAL WORK PLAN



Presented to the City Council on

January 18, 2011



Mission: To unite the community in a comprehensive effort to promote sustainable living in the City of Manhattan Beach.

Executive Summary

Recent History of City Environmental Stewardship

In the fall of 2006, several local residents approached the City Council asking that they consider endorsing the United States Mayors Climate Protection Agreement, which focuses on climate change and the need for all communities to reduce greenhouse gas emissions. In 2007, the City of Manhattan Beach signed this Agreement pledging to assess and reduce its carbon dioxide and other greenhouse gas emissions 7% below 1990 levels by 2012, in line with the Kyoto Protocol.

The City's endorsement of this Agreement was the catalyst for environmental protection in Manhattan Beach, and the City Council then adopted Environmental Stewardship as a priority goal in its 2007-2008 Work Plan. In accordance, the City developed a Green Report, which is a comprehensive environmental assessment of all areas of municipal operations with options for improvements. Further to that end, in October 2008 the City created a citizen Environmental Task Force (ETF) to study and recommend programs and policies that would carry out the mission of The Green Report and move Manhattan Beach toward becoming a sustainable community.

The ETF has been highly successful in its mission, and Council has adopted every ETF recommendation it has been presented with. The inaugural ETF completed its 18 month mission with honor, and now the City is ready to move to the next level of stewardship; and that is to work with our community stakeholders to embrace and practice sustainable living.

Mission of the 2011 Environmental Task Force

Times have changed since our City initiated its environmental stewardship mission. While still a key goal for our city-by-the sea, we now must ensure that all environmental programs have a cost benefit to our city. And this is exactly how we crafted programs and goals of the 2011 Environmental Work Plan and 2011 ETF.

While the City is making incredible progress in engaging the community in environmental protection, much remains to be done. The residents, businesses, and schools in the community are very aware of the need to protect our environment and conserve our natural resources. By implementing an environmental work plan, the City can continue to work with its residents, businesses, and schools to further its commitment to enhance the environmental quality of the community.

The recommended approach is to engage the community and help each stakeholder group embrace this new culture. Success will be sustainable only if the community voluntarily and eagerly embraces environmental stewardship. To effect this change the City will be working with a new set of Environmental Task Force members, while utilizing the previous ETF members as "Ambassadors" and still continuing to engage its environmentally active citizens.

In addition, strong momentum behind a new initiative – Vitality City – is building, and several of the initiative's targets fall in line with the City's sustainability and civic engagement goals. The ETF will be buttressed by the work of the Vitality City program through the Beach Cities Health District and the Healthways | Blue Zones team. (For information on the Vitality City initiative, visit the Going Green page on the City's website: www.citymb.info.)

Environmental Work Plan

Each category below is analyzed in the work plan, and includes a project goal, the strategy to achieve that goal, and the actions that City Staff and the Environmental Task Force will complete to develop the environmental program. A key component of each of these categories is Community Outreach and Education. Educating the public will be a strong focus of any environmental program developed for the City.

The Environmental Programs Manager will work with the members of the new Environmental Task Force to research and develop the following program areas and tasks:

- Energy Conservation and Renewable Energy,
- Sustainable Landscaping and Water Conservation, and
- Zero Waste Goals

I. Energy Conservation and Renewable Energy

During 2009, the City of Manhattan Beach underwent a comprehensive review of its energy usage in municipal facilities through its Level III Energy Audit conducted by PE Consulting. The goal of this energy audit was not only to discover avenues for environmental stewardship but, equally important, to find economic efficiencies. The energy audit did just that and included a Return on Investment projection for each area recommendation. The ETF, City staff and City Council paid close attention to the economic and environmental efficiencies when selecting the following plan.

The City was presented with the results in October 2009, and the ETF completed a thorough analysis of the energy efficiency measures outlined in the audit. The ETF made several recommendations to City Council to reduce its energy consumption, and overall greenhouse gas emissions, on March 16, 2010. The City Council accepted the recommendations and referred the energy efficiency measures to the Capital Improvement Plan (CIP) process for funding. A CIP study is being developed and will be presented to City Council in February 2011.

Also included in the energy audit from PE Consulting were several recommendations that address the opportunities for solar power at municipal facilities. Because of the high-cost of implementing these solar projects, the ETF did not include them in its overall set of energy improvements. However, the ETF did review the solar projects and recommended that the City consider alternative sources of funding and leasing programs to begin implementing these projects to not only reduce GHG emissions and save on energy costs, but also to show the community that Manhattan Beach is taking a leadership role and these new technologies are indeed feasible.

City of Manhattan Beach

A. ENERGY CONSERVATION

1. Community-wide Energy Efficiency Program

Goal: An important aspect of reaching a community-wide energy-efficiency program is to educate the business and construction community about the economic and environmental efficiencies of energy efficiency measures. The City can explore incentive and education opportunities for this sector to ensure full-compliance with green building and energy efficiency codes.

a. Prioritize Implementation of Cost Effective Energy Efficiency Measures

- i. There are currently programs in place to assist the City in reaping financial benefits from the energy efficiency measures we implement. (For example, the well pump retrofit project increased energy efficiency and brought the City a \$57K rebate check through the Edison Energy Leader Program.) Examples of other measures that the City can pursue to increase the potential to receive Edison rebates include installation of occupancy sensors, lighting retrofits, collaboration with LA County and SCE on retrofits of street lighting.
- ii. The City can compile these examples of successes in implementing energy efficiency measures (cost, return on investment, climate benefits) and share with the public as a tool for residents, businesses, and schools in the community to begin implementing cost effective energy measures.
- iii. ETF Role: Review Energy Audit results, previous ETF recommendations, identify funding opportunities for implementation, and research new energy efficiency ideas to assist the City in meeting its goal to implement cost-effective energy measures. Work with City Staff to collaborate the results of project implementation into a user-friendly guide the community can use to begin implementation of these measures on their own properties.

b. Offer City-sponsored rebates to residents who implement energy efficiency measures

- i. Other cities have begun to offer additional rebates to residents to encourage energy efficient behaviors. Manhattan Beach can use existing funding, and apply for grant funds, to begin offering residents rebates for making energy efficient improvements to their homes (e.g. City of Palm Desert).
- ii. The City can work to extend its Energy Leadership partnership with Edison and the Gas Co. to include incentives for residential customers. Other cities have energy incentive programs, in which residents are selected in an opportunity to make energy efficiency improvements to their homes, funded in part through the utilities and the City (e.g. City of Long Beach).
- iii. **ETF Role:** Examine other cities' incentive programs, work with local utilities to identify other incentive opportunities, design an "Energy

Contest" for residents, and make recommendations to Council on how best to fund a program that will attract Manhattan Beach residents to participate

c. Coordinate with business and construction community to implement energy efficiency measures and standards outlined in new Cal Green codes

- i. Work with the business and building sectors to define an energy efficiency target (e.g. Architecture 2030, IECC 30% by 2012, etc.)
- ii. <u>ETF Role:</u> Research successful energy efficiency models, conduct working meetings with representatives from the business and construction community to see what is feasible, make recommendations to Council.

d. Conduct public outreach on energy efficiency

- i. Host energy efficiency and rebate workshops to show the community how they can implement energy efficiency measures to save money and reduce their carbon footprint
- ii. Host workshops for the business and construction community on the City's adoption of the new Cal Green codes, and how adherence to these codes impact energy consumption
- iii. Host energy efficiency outreach tents at Farmers Market, Earth Day, Hometown Fair
- iv. **ETF Role:** Attend workshops and outreach events, identify issue areas that need to be addressed, and encourage residents to attend. Work with staff to develop and distribute educational materials at public events and presentations.

B. RENEWABLE ENERGY

In addition to implementing energy efficient measures, the City of Manhattan Beach can begin to explore renewable energy options to help meet its goals to reduce GHG emissions, and save costs in energy use. The City has received several recommendations regarding suitable locations to install solar power on municipal facilities, and now we have to decide how to best fund these programs. Many communities are utilizing leasing programs and other viable financing tools. Several local solar companies have offered their input and ideas on how the City can structure a solar lease program on municipal facilities (e.g. 20-year solar lease programs that remove the barrier of large upfront cost).

Other renewable energy opportunities are available, and the City has already explored the possibility of implementing a pilot small-wind turbine program, and will continue to pursue this option. A local resident and founder of WindStream Technologies has proposed a pilot wind energy project that uses small-wind vertical turbines to generate power at public parks and play fields. The California Energy Commission affirms that smaller turbines can be used by homes and businesses in windy locations, such as along the coast, and that they can also be used (like solar cells) in areas where it is not feasible to run power lines because of the cost.

These opportunities need to be extended to our business and residential sectors through incentives and education so that the entire community can benefit from renewable energy measures in an effort to reduce our reliance on non-sustainable energy sources.

1. Renewable Energy Initiative

Goal: The City is currently dependent on SCE for its power generation, and while the utilities are under State mandate to increase their renewable energy portfolios, the majority of energy provided to Manhattan Beach customers does not come from renewable sources. The City can begin to complement its SCE energy with energy from renewable sources, as well as promote the use of renewable energy to its community. Several cities have adopted solar initiatives as part of their sustainability movement (e.g. State of California, City of LA, Santa Monica solar roofs campaigns). By increasing the knowledge of viable renewable energy programs through cost-effective implementation at municipal facilities, and developing partnerships with local business partners to offer incentives to the community, the City could increase the use of alternative sources of power in Manhattan Beach.

a. "Go Solar" Goal for Municipal Government

- i. The City should set a goal to convert a percentage of its existing energy sourcing to solar power. Based on current city usage and successful solar programs in other cities, Manhattan Beach could effectively adopt a goal of reducing 1% of its traditional energy use through the use of solar power (or other renewables).
- ii. The City has already evaluated the potential for solar photovoltaics and water heating systems in its own facilities, and now needs to consider how to implement these programs cost-effectively.
- iii. Identify and develop a feasible financing program for local government to make use of renewable energy
 - a. power purchase agreements solar service providers finance, build and operate the systems, while the City will pay only for the electricity at prices equal to or less than utility tariff rates
 - b. lease agreements zero down-payment options are available (with higher monthly payments), varying interest rates. Lease payment covers monitoring, maintenance and repair of solar panels.
 Minimum level of electricity generation is guaranteed by the solar company.
- iv. Work with solar retailers and utilities to define incentives and rebates available to local government (private-public partnerships, SBCCOG Energy Leader program, etc.)
- v. <u>ETF Role:</u> Research the viability of solar program goals, power purchase agreements, etc. and meet with solar companies to see how these programs can be implemented for residents, businesses, and municipality. Make recommendations to City Council on a solar target for municipal operations.

i. Offer financial incentive from the City of Manhattan Beach, in addition to information on State and other local incentive programs. The California

- Solar Initiative is still in effect, and State tax incentives on solar installations are available. These credits, along with Federal tax credits are being reduced, so promoting the community to take advantage of these programs while they can is key.
- **ii.** Coordinate with the South Bay Environmental Services Center on the availability of low-interest loans and other financial incentives available to residents and businesses through the LA Energy Upgrade program.
- iii. Partner with local businesses to offer financial incentives to install solar and other renewables on their property—the City has several developed business districts that could house viable solar projects. Discussions with local business associations and the Chamber could identify an opportunity to create solar corridors in the City, in which local businesses will reduce energy consumption (and save on energy costs) through the installation of solar panels or solar water heating on their properties. The City already offers fee waivers for solar projects, and could offer additional incentives to businesses that participate.
- **iv.** ETF Role: Research the feasibility of offering municipal incentives to those that install renewable energy, identify existing municipal programs and how they are funded, and make recommendations to Council on how to fund and adopt a successful program

c. Public Outreach on Renewable Energy

City of Manhattan Beach

- i. The community needs to understand the myriad economic and environmental benefits of renewable energy as an alternative source of power in our region. Short-term costs are vastly outweighed with long-term economic savings and environmental protection.
- ii. The City can host workshops with local utility partners and solar/renewable energy installers to work with the community of questions they have about implementing projects on their property, as well as the financial incentives available to do so.
- iii. **ETF Role:** Work with solar and other renewable energy representatives to develop a report to the community on the benefits and costs associated with renewable energy, attend local workshops and outreach events

II. Water Conservation and Sustainable Landscaping

The City strives to increase its water supply independence. As it stands, Manhattan Beach purchases eighty-four (84%) of its potable water from the Metropolitan Water District of Southern California (MWD). As we have seen in recent years, and over the course of the history of the Los Angeles desert basin, periods of drought have caused the price of our imported water to vacillate with supply. For economic as well as quality reasons, our City Council has set a goal of ultimate self-sustainability.

The City of Manhattan Beach operates its own water utility and provides nearly six million gallons of water per day to meet the needs of its total residential, commercial, and open space demand. While the overwhelming majority of the potable water used in the City is supplied by MWD (84%), two City wells supply the balance (26%) of the City's potable water needs. Water demands have remained relatively stable through the region's droughts, and additional water demands have been met by an increase in use of reclaimed water, where feasible.

Water conservation is a necessary element of sustainable water supply, and communities in California and elsewhere have been successful in achieving substantial and lasting conservation with government incentives. With this background, the City of Manhattan Beach has partnered with the West Basin Municipal Water District (West Basin) in the Water Reliability 2020 program. Water Reliability 2020 is a program to reduce dependence on less reliable imported water to coastal LA from 66% all the way down to 33% by the year 2020—a very laudable, yet achievable goal.

A variety of methods can be employed in communities to meet conservation goals. Because 70% of potable water is used for landscaping, landscaping is a key focus of any successful water use program. The City has the opportunity to introduce and educate its populace as to the variety of native and drought tolerant landscaping that will not only work toward water sustainability, but meet the aesthetic desires of its community. Water harvesting, and conservation technologies including drip irrigation and reclaimed water, are also part of the long term solution. These new approaches must be introduced and utilized for City properties, as well as residential and commercial enterprises, in order for the City to achieve a sustainable water supply and realize cost savings.

A. WATER CONSERVATION

As a result of the recommendations of the ETF, the City has adopted a water conservation ordinance, and through education and outreach experienced an average 20% reduction in water production. The reduction in water use resulted in a tremendous savings (1,370 acrefeet of water, equivalent to nearly 500 million gallons of water), all in just the first-year of program implementation. While these results are an excellent step in the right direction, the City needs to ensure that its community can sustain this achievement *over the long-term*.

1. Reduce water consumption per capita 20% by 2020

Goal: To transition from our recent water conservation trend into a permanent water conservation system, through a community-wide water conservation target. The State of California has a goal to achieve a 20% reduction in per capita water use statewide by 2020 in order to maintain the health and sustainability of water resources, and provide water for all Californians.

a. Reduce Municipal Water Consumption

i. The City can set a goal for itself in order to reduce municipal water usage, as well as the percentage of imported water that is supplied to the City. For example, the City can aim to reduce 50% of imported water usage by

- 2020, and join the cities of El Segundo and Long Beach among others who have set similar goals.
- ii. <u>ETF Role:</u> Research West Basin, MWD, WRD programs, as well as other governmental, private and NGO programs, to reduce water consumption and use of imported water, and identify the steps the City should take in terms of education, outreach, incentives and regulations.

b. Water Sustainability Incentive Program

- i. Develop water conservation incentives to encourage the community to install water saving technologies such as water efficient toilets, shower heads, faucets, appliances, landscaping tools, and other mechanisms.
- ii. <u>ETF Role:</u> Research all government, NGO and private incentive programs, and work with City Staff to design a community-wide Water Sustainability Program.

c. Public Outreach Campaign

- i. Essential to success of a Water Sustainability Program is public outreach and education.
- ii. ETF Role: Design outreach programs, host workshops with community business, residential, school senior and other special interests to educate, incentivize and assist participation in the City's Water Sustainability Program. Utilize the City's water bills, website, street banners, media ads and other mechanisms of communication. Participate in the City's outreach events including Hometown Fair, Earth Day, Farmers Market, Botanic Gardens, and more.

B. SUSTAINABLE LANDSCAPING

The City can encourage and incentivize sustainable landscaping by making use of rainwater harvesting systems, drip irrigation, permeable surfaces, and other smart-water design techniques and mechanisms. This will lead to multiple benefits, including water and energy conservation, as well as the reduction of stormwater runoff. Several other aspects of sustainable landscaping need to be considered including pesticide and herbicide use, and the public use of municipal space. The concept of community gardening is a goal of the **Vitality City initiative** as a way to promote healthy lifestyles through growing our own pesticide/herbicide-free foods, local harvesting to eliminate transportation pollution, and utilizing gardening as a social and physical activity where young and old play together (intergenerational community).

1. Sustainable & Healthy Gardens

Goal: To create public space community gardens which practice and promote sustainable landscaping and healthful foods. To further incentivize sustainable landscaping practices on public and private property as a way to conserve energy and water, while improving the quality of life of the community.

City of Manhattan Beach

a. Community Garden Project

- The City has been approached by several groups to consider installing a community garden on municipal property. Growing Great can also offer expertise on this issue, as they have created vegetable gardens in MBUSD schools. The project will correspondence with Vitality City initiative efforts.
- ii. **ETF Role:** Work with interested parties (Vitality City, Growing Great, Transition LA and Leadership Manhattan Beach) and collaborate ideas with these groups to develop the parameters of a community garden pilot project. Determine who will maintain the garden, and how it will be funded. Make recommendations to City Council on where to place a community garden, if feasible

b. Municipal Sustainable Landscaping Goal

- The City is in the process of converting two areas of landscape to California-friendly gardens to demonstrate to the public that landscaping with drought tolerant plants and utilizing water-smart technologies like drip irrigation, is feasible, and quite beautiful. The City can make a commitment to water conservation by setting a goal to convert existing landscape to drought tolerant, where feasible. The City will also see financial benefits by converting existing landscape to CA-friendly landscape due to the decrease in water and energy consumption, which will result in savings in our utility costs.
- ETF Role: Research existing landscaping practices and determine ii. recommendations that would improve the sustainability of these public spaces. Identify funding opportunities to make these changes, where feasible, and develop recommendations to City Council on which areas the City can improve. Develop outreach to the public on the financial savings that can be seen from these landscaping practices, and share this information with the community (see Outreach section below).

c. Garden Incentive Program

- The City can encourage residents and businesses to replace inefficient i. landscaping and roofing with CA-friendly plants and green roofs by providing a financial incentive. Residents who submit a site design to the City that replaces turf grass or roofing with drought tolerant plants would receive an incentive based on square footage (e.g. City of Long Beach, Santa Rosa)
- **ETF Role:** Design the parameters of this incentive program, as well as ii. how it would be funded (City funds or grant opportunities). Make recommendations to Council, and if approved, work on outreach to residents to participate in this pilot program

- i. Harmful chemicals and pollutants are washed into our drinking aquifers and into the ocean through the ubiquitous use of pesticides and herbicides. The City of Manhattan Beach has an Integrated Pest Management Policy which reduces the need for chemical pest control. However, pesticides are used on a limited, as-needed basis to maintain our public spaces for all the use. The City can re-examine this policy and determine whether a Zero Pesticide Policy is feasible and practicable for Manhattan Beach. For private use of pesticides, the City can educate the public on healthy alternatives that will reduce its burden of keeping drinking water safe and the ocean habitable.
- ii. <u>ETF Role:</u> Study how to transition from a pesticide/herbicide landscape toward healthier but effective alternative landscaping using other communities' experiences and cost models. Examine data collected from the Public Works Department from the contracted landscaper on the feasibility and costs of moving to a zero-pesticide policy. Make recommendations to City Council on whether Manhattan Beach should adopt such a policy

e. Outreach on Sustainable Landscaping

- i. The City can strengthen its partnership with the Manhattan Beach Botanical Garden, West Basin, and others to promote sustainable landscaping to the community. These partners offer funding and educational materials to the public and the City can make use of these resources and offer workshops to continue educating its residents and businesses.
- ii. **ETF Role:** Review educational materials available, attend classes and workshops and share information with the community. ETF members can develop information on the cost-savings related with sustainable landscaping through reduction in energy and water consumption, and share this information with local businesses, HOAs, resident groups (senior center, community watch, etc.), and schools.
 - a.ETF can also work with existing non-profit organizations to promote sustainable landscaping. For example, Grades of Green would like to incorporate sustainable landscaping at local schools, but may need program research or financial support to move this program forward. ETF can make recommendations to City Council on how the City should support these programs at our local schools.

III. Zero Waste Goals

City of Manhattan Beach

The concept of Zero Waste maximizes recycling, minimizes waste, reduces consumption and ensures that products are made to be reused, repaired or recycled back into nature or the marketplace. Zero Waste is a perception change. It requires rethinking what has been

traditionally regarded as garbage and treating all materials as valued resources instead of items to discard. Zero waste entails shifting consumption patterns, more carefully managing purchases, and maximizing the reuse of materials at the end of their useful life. Further, the Zero Waste concept takes into account the whole <u>materials management system</u>, from product design and the extraction of natural resources, to manufacturing and distribution, to product use and reuse, to recycling or disposal.

Recognizing the importance of reducing waste sent to the landfill (where methane and other harmful pollutants are byproducts) as part of our overall effort to reduce greenhouse gas emissions, and the need to rethink trash and consumption in terms of zero waste, the City Council adopted a Waste Reduction Plan at the conclusion of the first term of its Environmental Task Force. In addition, the Council called for a Zero Waste vision through its next solid waste contract. The City's actions are leading the way in terms of developing strategies to move our community towards zero waste, and we can continue to lead by example by declaring our future operations as zero waste, working to "green" facilities and events where feasible, work with the schools and business sectors to adopt similar goals, and emphasizing waste and consumption in terms of overall materials management. A major role of the ETF will be to assist in the public outreach and engagement of the community in zero waste principals that focus on the entire life cycle of materials utilized in our daily lives.

A. WASTE REDUCTION & ZERO WASTE PROPOSALS

The City's Waste Reduction Plan has two overall goals:

- To reduce the City of Manhattan Beach's waste output to landfills by 2,000 tons each year, with a goal of **reducing annual landfill tonnage to 13,936 by 2020.**
- To improve existing programs and ordinances, or implement new programs and ordinances, for the purpose of reducing landfill waste in the City of Manhattan Beach.

Between the years 2000 and 2008, the City reduced its landfill waste by an average of 2,557 tons per year. The 2020 goal of 13,936 tons land filled would be a 77% reduction in landfill waste from the year 2000. To achieve these goals, there is a need for further study into new ways to manage solid waste, such as composting services or anaerobic digestion, and the City's Environmental Task Force can work with City staff and the City's waste hauler to develop recommendations that will assist the City in meeting these goals.

1. Methods to Reduce Municipal Waste

Goal: The City is in compliance with State landfill diversion goals (AB939 requires a 50% solid waste diversion), and has a successful residential recycling program. The City Council has set a Zero Waste vision for its future, and has adopted goals to reduce municipal landfill waste. Implementation of its Waste Reduction Plan will encourage all sectors in the City to rethink consumption and disposal in our community. The City needs to begin thinking more in terms of material management, which goes beyond the promotion of materials recycling, and will include implementation of its Green Purchasing Plan to better manage the products purchased and disposed of in the City.

City of Manhattan Beach

- i. The City has in place several programs to reduce waste including: holiday tree recycling, e-waste collection, green waste recycling, waste-to-energy program, pharmaceutical drop off box, and battery recycling. The City can work with the ETF to define additional methods to implement in order to reduce its generation of waste to meet the goal of reducing landfill tonnage 2000 tons each year.
- ii. **ETF Role:** Work with City staff and waste hauler to research and discuss additional methods the City can implement to meet waste diversion goals, as well as revisit current programs to determine ways to increase their utilization and success. For example, study whether an increase in waste-to-energy is beneficial, or if other options exist (anaerobic digestion).

b. Tiered Rate Structure for Residents and Businesses

- i. The City will change its solid waste billing from a flat structure to a tiered-rate structure for trash carts (gray carts only). The recycling and green waste containers will be provided to residents at no additional cost. This provides a financial incentive for residents to reduce waste and increase recycling.
- **ii.** ETF Role: Conduct research into other communities with successful recycling programs to determine if there are other unique ways the City can encourage the community to recycle. Assist City staff in promoting this information to the community when needed (volunteer at public outreach events), make presentations to community groups (senior center, HOAs).

c. Incentives for Deconstruction projects

- i. The city has a construction and demolition recycling ordinance in place (50% reuse or recycling for each project). The City can consider offering a permit fee waiver as an incentive to projects that utilize deconstruction of materials for reuse.
- ii. <u>ETF Role:</u> Research other cities that may offer a permit fee waiver, or other incentives, to promote deconstruction at project sites. Work with City staff to determine the financial impacts of offering this incentive. If feasible, develop recommendations for City Council to consider

d. Waste Reduction Audit for Businesses

- School waste audits resulted in an increase in recycling and purchase of compost bins to save on waste contract costs. Business audits may see the same results if local businesses can learn how to better dispose of waste through recycling and possibly composting.
- ii. <u>ETF Role:</u> Work with local business associations to promote recycling and zero waste practices. Coordinate with the waste hauler and wasterelated nonprofits to help provide this information.

City of Manhattan Beach

2. Creating a Zero Waste Community

Goal: Research and develop the zero waste measures identified in the City's Waste Reduction Plan to help the community rethink waste. A major role of the ETF will be to assist in the public outreach and engagement of the community in zero waste principals that focus on the entire life cycle of materials utilized in our daily lives.

a. Create a Zero Waste Event Guide

- To reduce the total amount of waste sent to the landfill for disposal, the City can set a recycling goal at all City-sponsored and other large events that occur in Manhattan Beach (current requirement to provide 1 recycling container next to each trash container)
- ii. Continue and expand work with local non-profits to provide additional recycling opportunities at public events (Conservation Corps, 1 Earth Recycling, Waste Less Living, etc.)
- iii. ETF Role: Work with City staff to develop an event guide to provide to all event organizers to make them aware of zero waste and recycling goals in the City

b. Opt-in Program for Phone Book and Junk Mail Reduction Kits

- One way to easily reduce the amount of waste generated is to stop its production at the source. By offering a program where residents can opt-in to receive phone books, we can stop the wasteful production of unwanted phone books and materials.
- ii. A junk mail reduction kit would offer residents an easy way to stop receiving mailers and other notices at their homes, reducing the waste generated when these materials are printed and mailed.
- ETF Role: Research other cities with existing programs to determine how iii. to best provide this service to Manhattan Beach. Develop recommendations for City Council to consider.

c. Community-wide Composting

- The City offers free composting classes at the Manhattan Beach Botanical Garden to the community through its waste hauler. Residents can buy composting bins for their homes at a reduced rate of \$35. However, the City does not have a composting service available to its residents or businesses, and since food waste is such a large part of the waste stream that is sent to the landfill, the City can consider options for reducing this type of waste. Composting puts what we might normally consider as trash to better use by creating a natural fertilizer that can be used to create healthy soil and gardens.
- ETF Role: Research other cities that offer composting services to its ii. community to determine feasibility, costs, and any drawbacks for Manhattan Beach. Coordinate with the waste hauler and City staff to develop recommendations for City Council to consider offering composting service to the community.

d. Local Ordinances to Reduce Styrofoam and Smoking in Public Places

- iii. Plastic debris, Styrofoam, and cigarette butts are the troubling composition of trash found in our marine environment. The Los Angeles Regional Water Quality Control Board adopted a marine-trash TMDL in November 2010 to remove this type of waste from our environment.
 - a. Local municipalities that adopt ordinances to ban plastic bags, smoking in public places and single use expanded polystyrene food packaging, shall receive a three year extension of the final compliance date with the new TMDL.
 - b. The City already has a local ordinance on plastic bags under litigation, which will be heard by the CA Supreme Court in 2011.
 - c. The City Council has previously expressed interest in a polystyrene (Styrofoam) ban, but has not yet pursued the development of this ordinance.
 - d. Development of ordinances to ban these materials from our environment would assist the City in complying with regional regulations, and in moving the community towards zero waste.
- iv. <u>ETF Role:</u> Research other cities with ordinances and incentives to reduce polystyrene and smoking in public places to determine if these measures would be appealing to and feasible in Manhattan Beach. Conduct public outreach to measure business and public sentiment. If community support is evident, work with City staff and stormwater consultant on developing recommendations for City Council to consider.

Conclusion

The 2011 Environmental Work Plan lays out a roadmap for the City and the Environmental Task Force to begin implementing sustainable proposals, expand existing programs, and research and adopt new policies and measures that will assist the City in achieving its mission:

"To unite the community in a comprehensive effort to promote sustainable living in the City of Manhattan Beach."

The Environmental Work Plan is an ambitious one, and is not intended to be completed in one calendar year. It is intended to be a living document, and will expand as other ideas and programs are developed through work with the City's Environmental Task Force.



Attachment C

Neighborhood Energy Conservation Contest

<u>Contest Goal</u> – Educate the community about the economic and environmental benefits of reducing energy usage. Engaging the public through a neighborhood contest can help the City reach the goal of reducing carbon emissions 15% below 2005 levels by the year 2020.

<u>Contest Overview</u> – Receive applications from 100 households, and ask contestants to note down any school affiliation if applicable. There will be multiple household winners, and a school winner based on the most student/family participation. The family with the best conservation record will be the ultimate winner. There will be a final "crowning" and award celebration at the April 2012 Earth Day Festival.

Contest Logistics -

- 1) In order to qualify, each applicant must fill out the SCE 15 minute Online Home Energy Efficiency Survey. They must download and present their "Energy 15 Online Survey" to the MB ETF by October 15th (or some specified date pending City Council approval).
- 2) There will be a goal of 100 applicants. This will be promoted through school e-blasts, Beach Reporter notification, and the City website. Another possibility for outreach is putting out notifications door-to-door or through the water bills.
- 3) Once the applicants are received, ETF members will serve as points of contact and be available to coordinate and answer questions.
- 4) Community outreach seminars will be held to give each applicant (and whoever else would like to attend) information about how to reduce their energy consumption. These outreach seminars will be coordinated with the South Bay Environmental Services Center, and the utilities (SCE, Gas Company, and the Water District).
- 5) During the contest, residents will track energy consumption through the Sage Steps program to help monitor progress and make use of energy efficiency tips to help them reduce consumption.
- 6) The contest winners will be determined after each team member has submitted 3 months (January, February, and March) of their energy bills for the current year and they are compared to the previous year's bills. The applicant with the greatest year over year savings will be the winner.

7) Prizes will need to be solicited, and can be donated or of a non-monetary type from the City (dinner at the Fire Station, concerts in the park seating, holiday fireworks, parking permit, etc.).

During the entire process, the contest can be promoted through the Beach Reporter's "Manhattan Beach Green Corner" articles. We should be able to get sponsors to help defer the costs of the contest. The costs incurred would be related to banners, outreach seminars, and informational materials.

Manhattan Beach Energy Challenge Contest Rules

- 1) Log in to www.sce.com.
- 2) Click on "Take the Home Energy Efficiency Survey". To complete the survey, contestants must be an SCE residential customer.
- 3) Enter your name, address, e-mail address, and service account number, which can be found in the upper left hand corner of your electric bill.
- 4) Follow the steps for the *15 Minute Survey* and include your energy consumption for January, February, and March 2011.
- 5) When the survey has been completed, print out a copy of your "*Energy 15*" *Monthly Electricity Report*.
- 6) Submit your *Energy 15* report with a contest entry form which can be downloaded at www.citymb.info. All entries to be submitted to Sona Kalapura at skalapura@citymb.info no later than December 15, 2011.
- 7) If your family has children enrolled in a Manhattan Beach school, be sure to identify the school, so that your school can qualify to win <u>cash and prizes</u>. The school with the most qualified entrants will win \$1,000.
- 8) Track your energy usage by entering monthly data on the Sage Steps website (http://sagesteps.com), see where you are consuming the most energy, and review tips to help you make changes that will reduce energy consumption.
- 9) After 3 months, print an updated *Energy 15* Report that includes your energy consumption for January, February, and March 2012. E-mail, fax, or mail your report to skalapura@citymb.info no later than April 10, 2012.
- 10) Winners will be determined by the entrant who reduces their year-over-year energy consumption the most.
- 11) Winners will be announced at the Earth Day Festival, April 22, 2012.

Manhattan Beach Green Business Challenge

<u>Goal:</u> To recognize Manhattan Beach businesses that are proactively reducing their environmental impact and to provide a blueprint to businesses seeking to operate in a more sustainable manner. Energy reductions from businesses would contribute to the city's goal of reducing community-wide GHG emissions by 15% below 2005 levels by 2020.

Program Structure: The Environmental Task Force will target 30 businesses to participate in a 6-month pilot of the green business challenge, at the close of which all those that achieve certification will be recognized by the City. Businesses wishing to participate will fill out a scorecard developed by the Environmental Task Force to assess their businesses' sustainable operations. The scorecard outlines separate actions each business can take to make their business "greener." As the responses are completed, a score is generated on the scorecard.

There are 2 tiers:

- A certified business has achieved 50% of the available points in their category
- A Best in Class business has achieved 70% of the available points in their category and has undergone an onsite audit

The scorecard has 80 possible points, and to become certified, the business would need to earn 40 points. To receive the highest level of certification, the businesses have to earn 56 of the possible 80 points. The scorecard will be reviewed by the ETF and the business will be awarded a sustainable business certification based on their total score. Businesses applying for Best in Class will be audited on site by members of the ETF.

Benefits to participating businesses:

- Every business will receive a plaque or certificate which they can display to the public
- Recognition on the Manhattan Beach city website, Chamber website, newspapers
- Reduced operating costs from implementing water and energy saving strategies
- Increased patronage from environmentally conscious consumers

Suggested outreach:

- Advertisement in the Beach Reporter
- Presentations to Chamber of Commerce and other business groups
- Mailing list announcements
- Hometown fair/Earth Day

Resources Required:

- Website development
- Outreach materials- printed brochures/leaflets
- Plaques/certificates to recognize participating businesses
- Staff time to answer questions. Most of the work would be done by the ETF

Costs:

- Outreach materials
- Plaques or certificates for participating businesses
- Website section design and maintenance

Thanks for participating in the Green Business Challenge!

By taking the Challenge, you are contributing to making Manhattan Beach greener.

Being green can be easy, so we made the Scorecard as simple as we could.

The **Owner Occupied Facility Scorecard** outlines 32 separate actions you can take to make your business greener. As you fill in your responses, a score is generated. There are 74 points total and 2 levels of achievement. See below for how many points are needed per tier. Businesses applying for Best in Class will be audited on site by members of the ETF.

Certified	37
Best in Class	52

The Scorecard is designed to be used electronically, so there's no need to print it. Use a projector at your Green Team meetings instead of making copies.

Here's how it works.

There's 4 major steps, and we'll walk you through each step.

- 1) Get your starting score & submit Scorecard to skalapura@citymb.info
- 2) Make improvements.
- 3) Report back to us.
- 4) Get recognized for being green!

Before getting started, please provide your:

Name:	Website	
Company:	Type of Business	
E-mail	No. of Employees	
Phone:	Square Feet	

Click here to start

Questions or comments?

Visit: www.ci.manhattan-beach.ca.us/Index.aspx?page=1896

Email us at: skalapura@citymb.info
Call us at: (310) 802-5058

How "green" is your business? Score: Read and respond to the questions below. There's no need to type. Level: Just click the Response box and then click on the arrow to the right to get a list of choices. Name: Company: Response **Points Points** How did you achieve this strategy? Please provide a 32 Strategies to Green your Business Help Click in each cell below for a short description of the action taken. **Achieved** Available response menu. Outreach Click here. 01 Create a company "Green Team," which is 3 responsible for making "greening" fun and Then click arrow on right. managing environmental initiatives and creating green marketing promotions. 02 Use an online calculator to develop your 5 Click here. greenhouse gas (GHG) inventory. In the next 12 Then click arrow on right. months, set a goal of reducing GHG emissions by 10%. Develop a plan to meet the reduction goal. Monitor progress yearly, participate in county reporting, and adjust plan, if necessary. Refer another business to participate in the Green O3 Click here. Business Challenge. Then click arrow on right. 2 pts will be awarded for the first business referred that takes the Challenge. One additional pt will be awarded per subsequent referral that take the Challenge. **Energy** Calculate your average energy (electricity and E1 Click here. 2 Then click arrow on right. gas) use over the last 12 months Help E2 Conduct an energy audit, to determine the 2 Click here. sources of your energy usage, and generate ideas Then click arrow on right. of where you may be able to conserve E3 Set energy reduction goals of at least 10% and an 2 Click here. implementation timetable based on your usage Then click arrow on right. and reduction opportunities. Reduced lighting when daylight is sufficient. Put E4 Click here. 1 signs over light switches such as "Turn off when Then click arrow on right. leaving." E5 Replace incandescent bulbs at your business with Click here. compact fluorescent or LED lights Then click arrow on right. E6 Install lighting timers or occupancy sensors Click here. 1 Then click arrow on right. (hallways, closets, kitchens, bathrooms and Help personal work areas)

MANHATTAN BEACH GREEN BUSINESS CHALLENGE SCORECARD

32 Strategies to Green your Business		Help	Response Click in each cell below for a response menu.	Points Achieved	Points Available	How did you achieve this strategy? Please provide a short description of the action taken.
E7	Install energy-efficient exit signs	<u>Help</u>	Click here. Then click arrow on right.		1	
E8	Program your thermostat to better manage the efficiency of your heating, cooling, and ventilation system.	<u>Help</u>	Click here. Then click arrow on right.		2	
E9	Establish a policy that when replacing or adding new equipment or appliances, they will have an ENERGY STAR rating	<u>Help</u>	Click here. Then click arrow on right.		1	
E10	Change the settings on all business computers to go into sleep mode after a set time of non-use (1 pt), discontinued the use of screen savers (1 pt)	Help	Response Click in each cell below for a response menu.		3	
E11	Reduce copier/printer power consumption by using Stand By mode after 15 minutes of non-use and completely turn off all computers at the end of the day	Help	Click here. Then click arrow on right.		2	
E12	Have you purchased CO2 offsets or renewable energy credits for 10% - 25% (2 pts) or 50% - 100% (3 pts) of your business's electricity usage?	Help	Click here. Then click arrow on right.		3	
E13	Use recycled materials for commercial build outs and renovations	<u>Help</u>	Click here. Then click arrow on right.		1	
aste & Gre	en Products					
WGP1	Conduct a waste stream audit, establish a waste diversion/reduction goal of at least 50%, and assess progress against goals.	<u>Help</u>	Click here. Then click arrow on right.		3	
WGP2	Develop a green purchasing policy to procure local green products where feasible	Help	Click here. Then click arrow on right.		2	
WGP3	Clearly label recycling bins and signs throughout your facility, train your employee and custodial staff on proper recycling, and publicize the program's success	<u>Help</u>	Click here. Then click arrow on right.		2	
WGP4	Reduce paper use by employing double sided and re-using scrap paper	<u>Help</u>	Click here. Then click arrow on right.		2	
WGP5	Purchase 30% (1 pt) to 100% (2 pts) post- consumer recycled copier / printer paper (processed chlorine free, PCF, if possible)	Help	Click here. Then click arrow on right.		2	

32 Strategies	to Green your Business	Help	Response Click in each cell below for a response menu.	Points Achieved	Points Available	How did you achieve this strategy? Please provide a short description of the action taken.
WGP6	Purchase 30% (1 pt) to 100% (2 pts) post- consumer recycled paper products (i.e. paper towels, filing, envelopes, notepads, boxes, business cards, etc.) (processed chlorine free, PCF, or unbleached, if possible)?	Help	Click here. Then click arrow on right.		2	
WGP7	Unsubscribe to all junk mail (1 pt) and reduced the number of catalogs and newspapers sent to your business (1 pt)	<u>Help</u>	Click here. Then click arrow on right.		2	
WGP8	Make it business policy to circulate documents electronically instead of using paper-based memos	<u>Help</u>	Click here. Then click arrow on right.		1	
WGP9	Provide centralized recycling bins for cell phones, rechargeable batteries, used printer cartridges (1 pt) and alkaline batteries (1 pt)	<u>Help</u>	Click here. Then click arrow on right.		2	
WGP10	Donate or recycle old electronics, furniture, equipment, and building material If it's not useable, recycle it.	<u>Help</u>	Click here. Then click arrow on right.		1	
WGP11	Eliminate the use of disposable (eg styrofoam) cups, plates, bowls, utensils, and coffee stirrers. (1 pt) Purchase and use durable, reusable goods instead and encourage employees to use dishes from home (1 pt.)	<u>Help</u>	Click here. Then click arrow on right.		2	
WGP12	Implement a program to collect and compost employee food scraps. Participate in the business composting program (3 pts)	Help	Click here. Then click arrow on right.		2	
WGP13	Install a drinking water filter and eliminated use of bottled water (1 pt). Distribute refillable water bottles and/or mugs to all employees (1 pt for any type of refillable product, and 2 pts for phthalate and Bisphenol A free options)	<u>Help</u>	Click here. Then click arrow on right.		3	
WGP14	Require the use of Green Seal certified (or equivalent) green cleaners for custodial purposes	<u>Help</u>	Click here. Then click arrow on right.		2	
WGP15	Use Green Seal certified, low- or no-VOC paints when you remodel	<u>Help</u>	Click here. Then click arrow on right.		2	
Land Use						
L1	If applicable, follow sustainable landscaping practices- with native plants and group plants according to their water needs, drip irrigation, use rain sensors, and use mulch to save water	<u>Help</u>	Click here. Then click arrow on right.		1	
Water Resou	rces					
W1	Established a water usage baseline from 12 months of your water bills (1 pt). Set a goal of reducing water use by at least 10% (1 pt)	<u>Help</u>	Click here. Then click arrow on right.		2	
			Page 39			

32 Strategie	es to Green your Business	Help	Response Click in each cell below for a response menu.	Points Achieved	Points Available	How did you achieve this strategy? Please provide a short description of the action taken.
W2	Install faucet aerators with a target flow rate of a maximum of 1 gallon per minute	<u>Help</u>	Click here. Then click arrow on right.		2	
W3	Install signs near faucets to remind employees to turn water off fully and report any leaks	Help	Click here. Then click arrow on right.		1	
W4	Implement a system to detect leaking toilets, faucets and showerheads and repair immediately?	Help	Click here. Then click arrow on right.		1	
W5	Install water conserving devices on your toilets,or installed low-flow toilets or waterless urinals	Help	Click here. Then click arrow on right.		2	
W6	If applicable, maintain grease traps on a scheduled basis, to prevent overflows and emissions to the sewer and storm drain systems	<u>Help</u>	Click here. Then click arrow on right.		1	
W7	Adopt a policy that supports the purchase of water conserving appliances	<u>Help</u>	Click here. Then click arrow on right.		1	
			TOTAL	0	74	

Congratulations! You have now calculated your score. How did you do?

Once you have calculated your baseline score, please:

1) Go back to the top of the Scorecard and describe how you fulfilled each strategy for which you answered Yes (Column H). 2) E-mail your scorecard to skalapura@citymb.info

In order to improve your score, please complete the following:

- 1) Establish the tier you want to achieve next.
- 2) Determine in which areas you want to improve.
- 3) Create work groups to make these improvements.
- 4) Update the Scorecard as you complete these green practices.
- 5) If you need more information, go to the Help section by clicking below. You can also check out the Challenge's website for more information.
- 6) Once you have completed new strategies, follow the directions in the yellow box above & submit updates quarterly.

Click here to get help on improving your score

Metlox Solar System



Proposal

- Install a 4.7 KW Solar PV electric system in Metlox Common Area
- Monitoring Portal
- Purpose
 - Power escalator/ farmers market
 - Educational/awareness
 - Community relations
- Financial
 - Funded by Private donations
 - No net costs for City
 - City manages all funds
- Next Steps
 - Approval from City Council
 - Interconnection and Permits
 - Submit work for RFP
 - Complete before end of 2011 to received available rebates

Details

- System
 - Install 24 x Sanyo Bifacial BIPV 195 Wp modules
 - DC/AC inverter and tie in lower level garage
 - Monitoring and display/communication portal
- Progress
 - Fundamental design completed in collaboration with City Eng Mgr.
 - Rough estimate prepared
 - Verbal commitments for donations achieved



Financial Costs

Solar Equipment:	~ \$19,000
Awning racking/support:	~ \$ 7,500
Installation:	~ \$ 2,000
Design/Engineering:	~ \$ 1,000
Monitoring:	~ \$ 5,500
CA CSI Rebate:	~(\$ 4,700)
Total:	~ \$30,300

Benefits

- Energy
 - Generate ~ 6,500 kWHr/year of energy for 25 + years
 - Value of \$1,300 in year one (at 20 ¢/kWHr)
- Environmental Benefits
 - Green House Gas emissions reduction of 126 tons of CO2 over 25 years
- Educational Benefit to the community through increased visibility of messages
- Support of the business community

The renewable energy the solar system will generate is equivalent to the greenhouse gas emissions of a:

Attachment D

Landscape Sustainability Audit: Pilot Program

Goal: To reduce water consumption in Manhattan Beach by raising community awareness of sustainable landscape principles.

Proposal: To provide a means for citizens to obtain a free home landscape check-up audit by a licensed landscape contractor. Vetted contractors would evaluate home landscapes for climate appropriate vegetation, water conserving irrigation equipment, and various practices such as the use of mulch.

I. Contractor

- A. Criteria for selection In order to participate in the program, landscape contractors must comply with the following:
 - Hold a valid and active C27 landscape contractor's license from the California State Contractor License Board (CSCLB), and have up-to-date Workman's Compensation Insurance
 - 2. Hold a Manhattan Beach business license, and comply with the Municipal Codes of the City of Manhattan Beach in all areas of work within the City.
 - 3. Present a positive portfolio evaluation that focuses on sustainable landscape practices: (awards and honors; degrees and certifications; member in good standing of trade organizations; etc.)
 - 4. Provide three work locations, including at least one in Manhattan Beach, which showcases Sustainable Landscape Practices. (Or completion of a Sustainable Landscape design course by an accredited organization.
- B. Process for vetting contractors
 - 1. ETF will vet the first applicants with some help from City personnel, evaluating criteria compliance and creating the initial list of approved landscapers
 - 2. City will review criteria for new applicants
- C. Acquiring contractors ETF members will contact and invite landscape contractors with up-to-date licenses and at least one reference of a sustainable landscape earning the Seal of Approval from MB Botanical Garden to apply.
- D. Quality control
 - 1. Check work reference during vetting process
 - 2. The resident will receive from the city or the contractor a mail-back evaluation/feedback form of the contractor's performance.
- E. Maintenance of contractor list City staff will update list annually by checking license renewals and community feedback.

II. Resident

- A. 10 point, 3 page audit check-up list see document titled Manhattan Beach Landscape Sustainability Audit
- B. Process to get contractors residents go on the City's website (Going Green section) and find the handout which describes the program and contains a list of recommended landscape contractors. They choose a contractor and make an appointment for a free audit. Program handouts would also be available at city hall, the library, etc.
- C. Feedback from residents The resident will receive by the city or the contractor, a mail-in evaluation/feedback form of the contractor's performance and of the program.
- D. Incentive residents might earn a free gift when turning in evaluation at city hall.

III. City

- A. Set up program info on website
- B. Advertise program possible banner, inserting flyer in water bill, flyers at city hall, library, etc.
- C. Printing descriptive program flyer, audit check-off list, and feedback/evaluation form
- D. Measure success check the website for number of hits for program and monitor feedback forms.

Costs:

- I. The landscape contractors will provide free audits to residents, so no City costs
- II. The ETF will vet the first set contractors, the City will review criteria with new applicants (20-30 minutes per new applicant)
- III. The City will pay for website page development
- IV. The City will pay for PR of the program \$1,000
- V. ETF will help create the description flyer of program, audit check-off list, and feedback/evaluation form
- VI. Include flyer of program in water bill
- VII. The City will print the above paperwork (100 of each document to start)

Manhattan Beach Landscape Sustainability Audit

This check-up form is for Landscape contractors to use while they are walking the property performing the Sustainable Landscape Audit. Use this form to rate the sustainability of a residential landscape and then present the findings to the resident as an informative and educational document. $\{15-20 = Excellent, 10-14 = Good, 0-9 = Poor\}$

1) **Plants on site** - Sustainable plants are well adapted to local climate, soil, and rainfall patterns, requiring less summer watering than conventional landscape plants. They are California-friendly and thrive without ecticides or extensive fertilizer application. For more information on plant selection visit Garden Spot at:

	<u>www.bewaterwise.com</u>	nformation on plant selection visit Garden Sp
	Place a +1, or a -1, for each criteria listed below, and	then add up the total for the Total Plant Sco
	+1 For Appropriate Plants Watered 2x a week Watered only 1x a week Plants have proper growing space to reach full size.	 -1 For Inappropriate Plants Watered more than 2x/week Plants use lots of fertilizer (i.e. Gardenia) Plants need pesticides (i.e. Hibiscus, Eugenia)
		Total Plants Score
2)	of the most water-intensive plants in your landscape. The needs make it a time-consuming, expensive option. Check www.socalwatersmart.com for rebates and information	he high water use and frequent maintenance ck MWD website on turf removal and more.
	Place a +3 for less than 25% turf or a +1 for less than	50% turf, and then add to Turf Score:
3)	<u>Irrigation</u> – It is important to review your irrigation systequipment is up-to-date and monitoring for leaks or over measures.	
	Updated irrigation systems will score the highest point run each of the zones on the system. If any of the belo score the "+1" for the whole irrigation system. If any in any zone score the "-1" one time for the whole system.	w listed "water savers" occur in any zone of the below listed "water wasters" occur
	+1 Water Savers Drip irrigation Rotary sprinklers Smart controller Rain sensor Hand watering Irrigation off during winter Turf grass zone & beds separate	-1 Water Wasters "Fogging" sprinklers Leaks Overspray on paved areas Microspray emitters Water does not soak in, rather runs off during irrigation

4	Wildlife – Provide for migrating and resident birds and butterflies. Flowering nectar and seed-producing plants are essential food sources. Shrubs serve as cover, while a small fountain or large moving-water feature supply a drink and a bath.
	Place $a+1$ if you identify plants and shrubs that are supportive of wildlife, and $a+1$ if you provide water. Then add up your Wildlife Score:
	Plants with nectar and seedsShrubs that provide cover and protectionFresh-water source
	Wildlife Score
5)	<u>Water Retention</u> – Prevent water run-off to promote clean oceans, and maintain our ground water supplies by directing irrigation and rain water where it can percolate down, in your permeable landscape. Or collect rain water for later use. Learn about rainwater harvesting and more at the Office of Sustainability and the Environment at http://www.smgov.net/Departments/OSE/categories/content.aspx?id=3847
	Place a +1 if any of the following apply, and then add to Retaining Rainwater Score:
	 The use of rain slopes or grading that direct water flow to flowerbeds One or more rain barrels A rain-water harvesting and retention system Use of permeable paving material on site
	Retaining Rainwater Score
6)	<u>Pesticides</u> - Little or no use, including "Rose Systemic" "Weed and Feed", "2 in 1 Protection", "All in Once" and herbicides such as Roundup, help to keep the environment healthy and thus sustainable. Learn integrated pest management techniques at www.ipm.ucdavis.edu .
	Place a +2 if there is little or no use on site, and then add to Pesticide Use Score:
	Pesticide Use Score
7)	<u>Fertilizers</u> – Use limited to no more than 2x/year with slow release fertilizer is preferable. No "Weed & Feed" or "All in One", or "Miracle Grow".
	Place a +2 if there is little or no use on site, and then add to Fertilizer Use Score:
	Fertilizer Use Score

8)	Organic Mulch at least 2" deep – <i>Non-decomposed</i> garden waste such as leaves, bark, twigs, woodchips, pine needles and nutshells improve soil heath as they break down. Apply a 2"-4" layer to impede weed growth and erosion, promote beneficial insects, maintain a steady soil temperature and reduce water evaporation. Keep mulch 2" from small plants, 6" from shrubs and at least 12" from tree trunks.
	Place $a+2$ if there is the proper use of mulch on the site, and then add to Organic Mulch Score:
	Organic Mulch Score
9)	<u>Vegetables and/or fruits-</u> Growing your own fruits and vegetables reduces energy consumption by keeping the supply local. To maintain sustainability, these should be grown pesticide-free.
	Place a +2 if there is a pesticide-free vegetable garden on site, and then add to Food Production Score:
	Food Production Score
10]	Compost bin – Compost is <i>decomposed</i> nutrient-rich organic material that can be worked into the soil or left on the surface like mulch. Combine 50% greens such as fruit and vegetable scraps, grass, plant trimmings, or bread with 50% browns such as nut shells, rinsed eggshells, coffee grounds and tea bags, woodchips, sawdust, tissue and paper towels. DO NOT ADD meat, fish, dairy, bones, diseased plants, invasive weeds or weeds that have gone to seed. Keep moist, but not soggy (like a wrung out sponge) by applying water when needed. To purchase a bin, contact Waste Management Inc. at 310 830-7100.
	Place a +1 if there is a compost bin on site:
	Composting Score
	Total the score from above to determine your total score: {15-20 = Excellent, 10-14 = Good, 0-9 = Poor}
	Total Sustainable Landscape Audit Score

Feedback Form for Landscape Sustainability Audit

We want to know what you think about this sustainability audit program. Please submit the following information to the City of MB. Please circle your answer then mail to or hand deliver to:

City of Manhattan Beach 1400 Highland Ave Manhattan Beach CA 90266

- 1) (YES)(NO) Through this audit I learned more about what makes a landscape a sustainable landscape.
- 2) (YES)(NO) I used a contractor from the list provided by the City of Manhattan Beach.
- 3) (YES)(NO) The contractor was professional and courteous.
- 4) (YES)(NO) I am planning to make some upgrades to my irrigation system as recommended by this audit.
- 5) (YES)(NO) I am planning to undertake a landscape project that will include the installation of one of the following: permeable paving, rainwater harvesting, or other "hardscape".
- 6) (YES)(NO) I am planning on replacing some of my plantings with "California Friendly" plants.
- 7) (YES)(NO) I am going to use mulch from the City that my landscaper or I can pick up for free at the City maintenance yard on Bell Ave.
- 8) (YES)(NO) I will use one of the contractors from the list provided by the City to do my upgrades.
- 9) (YES)(NO) My score was already "Excellent", so I am not planning on doing anything.
- 10) (Yes) (No) This item is optional:

I authorize the City of Manhattan Beach to deteri	mine how much water I
am saving by looking at my water bill records. T	his information will be
used only to evaluate program effectiveness and	will not be published or
released for use by anyone by City staff and the E	Environmental Task
Force. My address is:	

ther Comments:		
	 	

Community Mulch Pilot Program

GOAL: To raise awareness on sustainable landscape principles including the use of mulch to aide water conservation and soil health.

- A. **Reduce water consumption** Applied properly, mulch retains soil moisture by impeding evaporation and can reduce water consumption needs via irrigation by 25%.
- B. **Reduce energy consumption** Store-bought organic mulch comes from the lumber industry, often traveling hundreds of miles to reach customers. The process of bagging and transporting consumes large amounts of energy. The goal is to provide locally (Los Angeles) obtained mulch.
- C. Increase sustainability Organic mulch promotes soil health by attracting beneficial organisms as it breaks down, thus reducing or often eliminating the need for chemical pesticides and fertilizers. Vetted local tree trimmers have offered to provide and deliver good quality mulch for free to the city and our citizens.

PROPOSALS: (6 month pilot program)

- A. To provide a resource list of local tree trimmers, vetted by a certified arborist and the ETF, that citizens can refer to in order to obtain large amounts (a truckload) of mulch when needed.
- B. To provide a source for obtaining small amounts of mulch that citizens can pick up on their own, and at their own risk, from the city yard located on Bell Avenue.

COSTS:

- A. ETF members have compiled the list of tree trimmers at no cost.
- B. Mulch delivery would be free.
- C. City personnel (yard staff)

- 1. Would need to answer residents questions. (mulch hotline?) (1½ hour /week)
- 2. The mulch pile site would need to be monitored, with debris during delivery and pick-up swept up, and the pile possibly turned with the on-site backhoe. (1 hour/week)
- 3. Would need to call for replenishment when needed from the list above. (½ hour /week)
- D. Advertisement would be the main cost.
 - 1. Add program to the city's website (4 hours)
 - 2. An announcement could be added to an energy bill (15,000 inserts @ \$1,520)
 - 3. Announcements could be made at the City's composting classes (no cost)
 - 4. A banner (GOT MULCH? Pick up free from city yard....) might also be considered. (\$700 for a 3'x30' color, double sided)
 - 5. Handouts available at city hall and around town. (Bill insert can double as Handout)
 - 6. MBBG, VOICE, Grades of Green and other environmental groups could also promote. (no cost)
 - 7. Signs at site (\$250 quote for 24"x24" sign, plus post, hardware)

GOT MULCH?

Obtain FREE mulch thanks to the City's new Community Mulch Program!

What is organic mulch? Plant material that was once living such as leaf litter, bark, twigs and woodchips.

Benefits to a sustainable garden?

- MULCH attracts beneficial insects which guard against disease
- MULCH promotes soil health, creating a natural fertilizer as it breaks down
- MULCH acts as an overcoat in the winter and an umbrella in the summer, helping maintain the soil's temperature
- MULCH acts as a sunblock to help retain soil moisture and deter weed growth
- MULCH prevents slope erosion and water-runoff during rain or irrigation

How is mulch applied? Spread 2"-4" deep in the garden. To promote plant health, keep mulch 2" from small plants, 6" from shrubs and at least 12" from tree trunks. To smother a lawn, apply approximately 7" deep over targeted area.

Where can citizens pick up small loads? Public Works Yard at 3621 Bell Avenue, north of Sand Dune Park just off Rosecrans Ave. Takers must use their own vehicles and tools, collecting what they need at their own risk. Mulch may be picked up from sunrise to sunset every day. Call (310) 802-5300 for more information.

How do residents obtain a truckload for home delivery? Choose from one of the firms below. Request when ordering that the load contains tree trimmings, no grass or other garden waste AND confirm there will be no charge for delivery. Note: When ordering a truckload of tree trimming mulch, know the trucks are very large and will deliver enough to cover an entire front AND backyard.

Sometimes neighbors will join together to request a load.

• Dave's Tree Service (310) 351-4015

• Tree Masters: Steve (310) 540-4297

• Travers Tree Service: (310) 530-3920

American Garden: Staff (310) 523-4678

Affordable Tree Care: Louis Limon (877) 310-8733
American Arbor Care: Stephanie (424) 903-4001

Post Office Demonstration Garden

Background: The landscape surrounding the post office in downtown Manhattan Beach is decades old and is slated for an upgrade. The area is composed of ivy and a traditional sod lawn which consume large amounts of water, old shrubs that are maintained by shaping into squares and circles, and a tree that is nearly dead with another far-leaning and possibly posing a hazard. In addition, the irrigation system is outdated and inefficient. Because this property is on such a high-visibility corner, it is thought to be a good location for a satellite demonstration garden analogous to the one flanking the entrance to city hall.

Proposal: Convert landscape surrounding the U.S. Post Office located at 425 15th Street, to a water-conserving, sustainable landscape with at least 50% less lawn, climate appropriate plants, a zero-runoff water conserving irrigation system, mulch applied between shrubs and trees to further enhance water conservation, and efficient walking paths composed of either decomposed granite or mulch.

Goal: Create a demonstration garden showcasing the principles of the Landscape Sustainability Audit Pilot Program and the Pilot Mulch Program, generating awareness of sustainable landscape practices.

Project Outline

Design: Board members of the Manhattan Beach Botanical Garden, including landscape designer Mimi Andersen of Garden Magic Company, evaluated the landscape surrounding the Post Office. This is also the same team that designed and monitored the installation of the satellite garden flanking the entrance to city hall.

Design Element Ideas

Paths: photo of Aviation garden paths



- a. "Circulation paths" linking common destinations the corner of 15th and Valley cutting through the grass to the post office entrance.
- b. Use decomposed granite mulch is a tripping hazard, color of DG compliments stone on building.

Rose Box Garden: photo of rose box garden



a. Replace 2 or 3 white roses with "Pink Iceberg" roses. They are drought-tolerant and will add some color. Apply mulch between plants

Plants: photos of succulents and Old Venice garden





- a. Use some cuttings from City Hall satellite garden succulents
- b. Other plants with lots of green, and gray accents, like Old Venice garden which has been very popular
- c. Trees keep Pepper trees, remove dead trees, check pine tree for safely (it leans)
- d. Mulch between plants

Other Elements: photos of benches, rocks, artwork





- a. Seating provide a community atmosphere with some sort of seating. Examples include concrete benches that match the city hall plaza, river rock which are wide and flat and would compliment building great for children. Or combination of both.
- b. Rocks as artwork anchors plantings visually, add interest
- c. Artwork recondition existing artwork

Budget: Project can be done in phases, like the satellite garden at City Hall, unless funding is secured for the entire project. The first phase would encompass the grassy square at the corner. It includes the flag pole, Pepper trees and signage area.

Plants, Installation and to Oversee project \$5000.00 (for Phase I); \$5,000 (for Phase (II)

Mulch free

Need costs for: decomposed granite, irrigation, site preparation, benches and rock (could be dedicated)

2011 Water Conservation Slogan and Logo Contest for Manhattan Beach

Objectives:

- To develop a water conservation slogan that will be reflective of the character of Manhattan Beach and resonate with its residents.
- To communicate to MB residents the importance and value of wise and efficient water use, even in periods of apparent abundance.
- To create, implement and publicize the contest in a manner that:
 - Maximizes resident interest/focus, participation, ownership and education about this issue; and
 - Generates interest, participation and ownership from the business community as well.
- To create, implement and publicize the contest at no out-of-pocket cost.
 - All prizes to be donated by local businesses e.g. West Basin and/or MWD
 - o All labor, materials, publicity, etc. to be donated

Contest Parameters:

- Students will develop a slogan and logo that promotes the efficient use of water as a lifestyle change
- The goal of the contest is to design a message that will resonate community-wide as a statement on this need for a lifestyle change to maintain the reliability and sustainability of regional water resources

Developing & Implementing the Contest

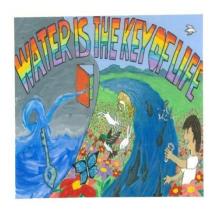
- MBUSD Superintendent will support
- West Basin MWD was contacted about coordinating MB slogan/logo contest with WB student art contest
 - West Basin has had trouble with MB student participation
 - ETF needs Council approval to work with West Basin
- Contest to run for 2 months, starting in early January
- MB contest entrants (with art) will automatically be in WB contest.
 - MB contest rules will be consistent with WB rules, with more emphasis on slogan.

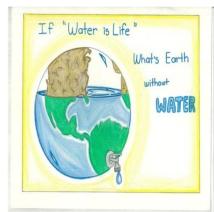
Purpose of Developing a Slogan: Memorable Messaging

Examples:

- From Advertising
 - o Don't leave home without it! (Amex)
 - o Just do it! (Nike)
 - o The happiest place on earth (Disneyland)
 - o A diamond is forever (De Biers)
 - o Where's The Beef?! (Wendy's)
- Environmental Slogans
 - o Reduce, Reuse, Recycle
 - o Give a hoot, don't pollute!
 - o There is no Planet B
 - o Save water, shower with a friend
 - o Save water, drink beer

West Basin 2011 Art Contest Winners







Entries from:

Topanga Elementary

St. John Chrysostom Middle School

Leuzinger High School