



Agenda Item #: _____

Staff Report

City of Manhattan Beach

TO: Honorable Mayor Montgomery and Members of the City Council

THROUGH: David N. Carmany, City Manager

FROM: Sona Kalapura, Environmental Programs Manager

DATE: January 18, 2011

SUBJECT: Review of 2011 Environmental Work Plan and Appointment of Environmental Task Force (ETF) members

RECOMMENDATION:

Staff recommends that the City Council accept the 2011 Environmental Work Plan and appoint ten new members to the second phase of the Environmental Task Force.

FISCAL IMPLICATION:

City Council has allocated funds in the current budget to support the development of recommendations from the Environmental Task Force. The primary fiscal implications will be costs associated with hosting public outreach events, advertising to promote the City's environmental programs, and the possible allocation of existing funds to implement recommendations of the Task Force.

BACKGROUND:

The current environmental program began in 2007 when the City of Manhattan Beach signed the U.S. Mayors Climate Protection Agreement. In 2008, the City produced its comprehensive Green Report declaring its commitment to environmental stewardship, not only for climate protection, but for all areas of city operations. The City then created a 19-member citizen Environmental Task Force (ETF) which operated for 18 months (October 2008 - April 2010). The ETF used the Green Report to evaluate and make recommendations to City Council for new policies in the areas of Solid Waste Reduction and Recycling, Sustainable "Green" Building Design, Climate Protection, and Water Conservation and Storm Water Management.

On July 20, 2010 the City Council approved the development of the second phase of the Environmental Task Force—a smaller 10-member committee, focusing on implementing programs in three key focus areas: Energy Efficiency and Renewable Energy, Water Conservation and Sustainable Landscaping, and Zero Waste. Staff has developed these key areas into sample project goals and tasks for the new ETF to complete during its 1-year term (See Attachment A).

City Council also adopted a new structure for the Task Force, which will be comprised of 10 residents and 2 Council members that will serve as co-chairs on the ETF. The role of the ETF will

be to: "...support the development of an integrated environmental strategy for the City of Manhattan Beach by evaluating the City's current policies and practices, and providing specific recommendations for reducing the City's environmental impact."

Finally, the new Vitality City initiative is gaining momentum in the City of Manhattan Beach, and several of the initiative's goals fall in line with the City's existing sustainability and health and well-being programs. The City will be able to utilize the resources and efforts of its Environmental Task Force to promote sustainable projects, like community gardens or a ban on smoking in public places, that also have long-term health and social well-being benefits espoused by the Vitality City initiative.

DISCUSSION:

Environmental Work Plan

With the completion of the first term of the Environmental Task Force, staff recommends that the City's environmental efforts continue with a focus on community engagement. The ETF made phenomenal progress in creating and developing several environmental policies that put Manhattan Beach on the leading forefront of environmental sustainability in the region, and nationwide. While progress was made, a lot remains to be done in order to keep Manhattan Beach ahead of the curve, and more importantly, to engage its citizens in environmental stewardship.

Based on the goals of the City's Green Report, and feedback incorporated from the first ETF experience, including the input of the City Council co-chairs (Councilmembers Cohen and Ward), staff has developed the following areas in the 2011 Environmental Work Plan:

1. Energy Efficiency and Renewable Energy

The source of, and emissions from, energy production will continue to be a critical component of eco-sustainability. The City conducted a greenhouse gas (GHG) emissions inventory to better understand the contributors to increasing carbon emissions in municipal operations as part of its commitment under the U.S. Mayors Climate Action Agreement. The City needs to balance economic efficiencies with a reduction in GHG emissions, 17.5% by 2012. To identify ways to reduce emissions and see a return on investment, the City recently completed a comprehensive energy audit of its municipal operations. The ETF is now prepared to evaluate the next phase for not just the City but the community at large. Many cities around the world are implementing solar and other clean, renewable energy source systems. The ETF will research, evaluate, recommend and educate the community on viable energy sources and systems that have a significant return on investment. (Refer to Attachment A for specific project goals.)

2. Water Conservation and Sustainable Landscaping

The City recently initiated tiered water rates for the community, as well as adopted permanent water conservation restrictions. Now it is time to help the community embrace them. The City has a goal to preserve and protect its natural resources for future generations, without depleting the fresh water supply, nor contaminating the ocean with stormwater runoff. The Manhattan Beach City Council joined the Metropolitan Water Department this year with a goal of enhancing its independent water supply and decreasing importation of water. The next ETF will help do that by bringing to the attention of the community the abundance of beautiful, sustainable landscaping options to Manhattan Beach citizens. (Refer to Attachment A for specific project goals.)

3. Zero Waste

The City is instituting tiered waste rates, and is about to enter into a long term contract with a solid waste hauler. The next step is to teach the community how to limit and eliminate waste. Composting and anaerobic digestion are household terms in other communities around the world. They should be in Manhattan Beach, as well. The ETF will evaluate programs in other cities, research best practice implementation methods, and share this information with the community through outreach events. The ETF will also investigate “waste-to-energy” programs the city and businesses might participate in such as the current Long Beach facility program. (Refer to Attachment A for specific project goals.)

ETF Appointments

The City received a broad set of highly qualified applicants from throughout the community. Attachment B details each applicant’s experiences and preference to serve on an environmental subcommittee. There are 29 new applicants for the ETF, and City Council will be asked to select and appoint these members to serve on the Task Force. Of these 29 members, two applicants are students. Staff proposes that City Council consider appointing these two individuals as student liaisons to the ETF, and continue to move forward with the appointment of an additional 10 members to the Task Force.

Selection Criteria Considerations

Each Councilmember will appoint 1 ETF member, and vote in the remaining 5 members. The goal is to select a broad spectrum of community stakeholders (residential, commercial, industrial, education, nonprofit) that represent the City’s geographic diversity, and possess a range of skill sets. ETF members would be selected based on their:

- Expertise in environmental protection
- Expertise in sustainable landscaping and water issues
- Renewable energy expertise or experience in energy efficiency issues
- Experience with recycling in residential/commercial/industrial/business sector
- Environmental non-profit experience
- Knowledge of green building issues and municipal codes

CONCLUSION:

The 2008-2010 Environmental Task Force was a highly successful program due to the foundation of the Green Report, City Council and Staff’s commitment to carrying out the Green Report’s mission, and the selection of exceptional citizen members with a strong work ethic and commitment to the environment.

Staff recommends that Council accept the 2011 Environmental Work Plan, and appoint a new 10-member Environmental Task Force based on the identified criteria.

Attachments: A. 2011 Environmental Work Plan
B. List of 2011 ETF Applicants

Agenda Item #: _____

cc: Jim Arndt, Public Works Director
Richard Thompson, Community Development Director

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.

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. **ETF Role:** 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. **ETF Role:** 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.

b. **Renewable Energy Incentive program for Residents and Businesses**

- 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

- 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 acre-feet of water, equivalent to nearly 500 billion 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. **ETF Role:** 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. **ETF Role:** 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.

a. Community Garden Project

- i. 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

- i. 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.
- ii. **ETF Role:** Research existing landscaping practices and determine 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

- i. The City can encourage residents and businesses to replace inefficient 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)
- ii. **ETF Role:** Design the parameters of this incentive program, as well as 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

d. Reduce Harmful Pesticide & Herbicide Use for Ocean and Drinking Water Protection

- 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. **ETF Role:** 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**

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 materials management system, 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.

a. Implement Waste Reduction Goal for Municipal Operations

- 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. **ETF Role:** 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

- i. 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. **ETF Role:** Work with local business associations to promote recycling and zero waste practices. Coordinate with the waste hauler and waste-related nonprofits to help provide this information.

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

- i. 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

- i. 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.
- iii. **ETF Role:** Research other cities with existing programs to determine how to best provide this service to Manhattan Beach. Develop recommendations for City Council to consider.

c. Community-wide Composting

- i. 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.
- ii. **ETF Role:** Research other cities that offer composting services to its 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. **ETF Role:** 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 B: 2011 Environmental Task Force Applicants

	Name and Position	Qualifications/Expertise	Subcommittee Preferences	Notes/ Attachments
1.	Scott Bell CEO, GDP Wealth	<ul style="list-style-type: none"> ▪ Environmental Protection ▪ Experience in Renewable Energy/Energy Efficiency ▪ Knowledge of water and storm water issues ▪ Expertise in sustainable landscaping ▪ Residential/commercial recycling 	<ol style="list-style-type: none"> 1. Solid Waste Reduction 2. Water Conservation and Sustainable Landscaping 3. Energy Efficiency and Renewal Energy 	<p>Experienced in recycling, composting and sustainable purchasing</p> <p>Previous Leadership MB participant skilled in communication and working with a team, also on the board of Tedx Manhattan Beach</p> <p>Manhattan Beach business owner</p> <p>Attached: Cover Letter</p>
2.	Paul Beswick Senior Environmental Specialist, Metropolitan Water District	<ul style="list-style-type: none"> ▪ Environmental Protection ▪ Knowledge of water and storm water issues 	Interested and experienced in all three issues.	<p>Over 15 years of experience with Metropolitan Water District</p> <p>Experience in chemical risk management, hazardous materials and waste</p> <p>Personal experience in solar panel use, sustainable landscaping, recycling and composting</p> <p>Skilled in communication and organization</p>

	Name and Position	Qualifications/Expertise	Subcommittee Preferences	Notes/ Attachments
3.	Elena Castor EcoTripps, Owner	<ul style="list-style-type: none"> ▪ Environmental Non-profit Representative 	<ol style="list-style-type: none"> 1. Water Conservation and Sustainable Landscaping 2. Solid Waste Reduction 	<p>Sierra Club volunteer, volunteer and board member for other environmental organizations</p> <p>Skilled in public outreach regarding natural resources and sustainable practices</p>
4.	Andrew Cobb Xero Solar	<ul style="list-style-type: none"> ▪ Experience in Renewable Energy/Energy Efficiency 	<ol style="list-style-type: none"> 1. Energy Efficiency and Renewal Energy 	<p>Expertise with solar and power purchase agreements.</p> <p>Skilled in project analysis and financial analysis</p>
5.	Stacia Costa MBUSD Energy Education Specialist	<ul style="list-style-type: none"> ▪ Renewable Energy/Energy Efficiency ▪ Residential/commercial recycling ▪ Business related recycling 	<ol style="list-style-type: none"> 1. Energy Efficiency and Renewable Energy 	<p>Experience in working on energy conservation with the schools</p> <p>Knowledge of rebates and resource development for public sector</p> <p>Started the recycling program at Meadows, Earth Club leader at Pennekamp</p> <p>Attached: Resume</p>
6.	Michael Dunitz Broker	None specified	None specified	<p>Experience with construction, remodeling, and commercial real estate</p> <p>Interest in environmental issues that balance costs and benefits</p>

	Name and Position	Qualifications/Expertise	Subcommittee Preferences	Notes/ Attachments
7.	<p>Julie Gonella</p> <p>Vice President, Manhattan Beach Botanical Garden</p>	<ul style="list-style-type: none"> ▪ Environmental Non-profit Representative ▪ Expertise in sustainable landscaping 	<ol style="list-style-type: none"> 1. Water Conservation and Sustainable Landscaping 2. Energy Efficiency and Renewal Energy 	<p>Manhattan Beach Botanical Garden volunteer for 10 years (president and vice president, newsletter editor)</p> <p>Expertise in sustainable landscaping practices and CA natives</p> <p>Skilled in public education</p> <p>Participated in previous ETF meetings and environmental events</p>
8.	<p>Cory Hoffart</p> <p>Founder, GreenCollarBusiness.com</p>	<ul style="list-style-type: none"> ▪ Environmental Protection ▪ Construction Industry Representative ▪ Environmental Non-profit Representative ▪ Experience in Renewable Energy/Energy Efficiency ▪ Expertise in sustainable landscaping ▪ Residential/commercial recycling ▪ Business related recycling ▪ Green Building design and construction ▪ Municipal codes and process 	<p>Interested in and experienced in all three issues.</p>	<p>Implemented sustainability programs for schools, large business and non-profits focusing on energy use and emissions reductions, renewable energy, and recycling.</p> <p>Skilled in presentations, marketing, and community engagement</p> <p>Former chapter board member of US Green Building Council</p> <p>Attached: Cover Letter and Resume</p>

	Name and Position	Qualifications/Expertise	Subcommittee Preferences	Notes/ Attachments
9.	Jeff Holland LEED AP	<ul style="list-style-type: none"> ▪ Construction Industry Representative ▪ Experience in Renewable Energy/Energy Efficiency ▪ Knowledge of water and storm water issues ▪ Municipal codes and process 	Interested and experienced in all three issues.	<p>Former Chief Engineer at MB Marriott</p> <p>Experienced in sustainable building practices, as well as lighting and water efficiency retrofits</p> <p>Skilled in management and working with others</p> <p>Participated in previous ETF meetings and environmental events</p>
10.	Audrey Judson Realtor, Manhattan Beach	<ul style="list-style-type: none"> ▪ Experience in Renewable Energy/Energy Efficiency 	<ol style="list-style-type: none"> 1. Energy Efficiency and Renewal Energy 2. Water Conservation and Sustainable Landscaping 	<p>Expertise in mechanical engineering with a focus on solar energy</p> <p>Skilled listener, works well with others and has technical awareness of environmental issues</p> <p>Interested in bicycle pathways in MB and</p> <p>Attached: Statement</p>

	Name and Position	Qualifications/Expertise	Subcommittee Preferences	Notes/ Attachments
11.	Ann Lin Water Resource Control Engineer, Los Angeles Regional Water Quality Control Board	<ul style="list-style-type: none"> ▪ Environmental Protection 	<ol style="list-style-type: none"> 1. Energy Efficiency and Renewable Energy 2. Water Conservation and Sustainable Landscaping 	<p>Experience in water protection, groundwater remediation, environmental compliance</p> <p>Skilled in environmental assessment, compliance, data management</p>
12.	Chris Maloney UCI Ecology program, graduate	<ul style="list-style-type: none"> ▪ Environmental Protection ▪ Operator of multi-family living complex ▪ Experience in Renewable Energy/Energy Efficiency ▪ Knowledge of water and storm water issues 	<ol style="list-style-type: none"> 1. Water Conservation and Sustainable Landscaping 2. Energy Efficiency and Renewal Energy 	<p>UCI Green Campus club member experienced in public outreach and energy conservation outreach</p> <p>LEED Green Associate training</p>
13.	Kim Matsoukas Sustainability Manager, Bentley Prince Street	<ul style="list-style-type: none"> ▪ Environmental Protection ▪ Experience in Renewable Energy/Energy Efficiency ▪ Residential/commercial recycling ▪ Business related recycling ▪ Green Building design and construction 	<ol style="list-style-type: none"> 1. Energy Efficiency and Renewal Energy 	<p>Experience with a large business in waste elimination, end-of-life reclamation, climate-neutral products, GHG inventories, and community outreach.</p> <p>LEED accreditation, and experience with a LEED Existing Building project</p>

	Name and Position	Qualifications/Expertise	Subcommittee Preferences	Notes/ Attachments
14.	Dr. Claudia Medl Physician	<ul style="list-style-type: none"> ▪ Environmental Protection ▪ Environmental Non-profit Representative ▪ Experience in Renewable Energy/Energy Efficiency ▪ Knowledge of water and storm water issues ▪ Green Building design and construction 	<ol style="list-style-type: none"> 1. Energy Efficiency and Renewal Energy 2. Water Conservation and Sustainable Landscaping 	<p>Scientist and physician with experience in chemical impacts on people and the environment</p> <p>Skilled in research and writing on environmental issues</p>
15.	Martin Memmott Former staff for the LA County Chief Administrator's Office	<ul style="list-style-type: none"> ▪ Experience in Renewable Energy/Energy Efficiency ▪ Knowledge of water and storm water issues ▪ Residential/commercial recycling ▪ Municipal codes and process 	<ol style="list-style-type: none"> 1. Water Conservation and Sustainable Landscaping 2. Solid Waste Reduction 	<p>Experience in recycling and composting</p> <p>Skilled in working with local government through 28 years with LA County</p>
16.	Greg Monfette, City of LA Urban Forestry Division Superintendent Registered Consulting Arborist	<ul style="list-style-type: none"> ▪ Environmental Protection ▪ Construction Industry Representative ▪ Knowledge of water and storm water issues ▪ Expertise in sustainable landscaping ▪ Residential/commercial recycling 	<ol style="list-style-type: none"> 1. Water Conservation and Sustainable Landscaping 2. Solid Waste Reduction 	<p>Experience in projects dealing with environmental issues, construction, stormwater, sustainable landscaping and green building</p> <p>Knowledgeable with municipal codes and local government</p>

	Name and Position	Qualifications/Expertise	Subcommittee Preferences	Notes/ Attachments
		<ul style="list-style-type: none"> ▪ Green Building design and construction ▪ Municipal codes and process 		<p>Skilled in managing operations and certified arborist and licensed pest control advisor</p> <p>Attached: Resume</p>
17.	<p>Leigh Noda</p> <p>Consultant, and former Environmental Health and Safety manager for ARCO</p>	<ul style="list-style-type: none"> ▪ Environmental Protection ▪ Experience in Renewable Energy/Energy Efficiency 	1. Energy Efficiency and Renewal Energy	<p>Expertise in alternative fuel and technical assessment, and environmental health and safety management</p> <p>Scientific background with degree in chemical engineering and an MBA from UCLA</p> <p>Skilled in technical and financial analysis, leadership and team building, and knowledge of energy sources and delivery systems</p> <p>Attached: Statement</p>
18.	<p>Gretchen Renshaw</p> <p>Manhattan Beach Botanical Garden, co-founder</p> <p>Instructor, UCLA Extension Gardening & Horticulture</p>	<ul style="list-style-type: none"> ▪ Environmental Non-profit Representative ▪ Knowledge of water and storm water issues ▪ Knowledge of building codes 	1. Water Conservation and Sustainable Landscaping	<p>Gardening and Horticulture instructor at UCLA</p> <p>Former board and committee member of several organizations (Hometown Fair, tree committee)</p>

	Name and Position	Qualifications/Expertise	Subcommittee Preferences	Notes/ Attachments
19.	Mike Romagnoli Master's degree in Biology, former Teacher	<ul style="list-style-type: none"> ▪ Environmental Protection ▪ Renewable Energy/Energy Efficiency ▪ Residential/commercial recycling 	1. Energy Efficiency and Renewable Energy	<p>Interested in energy efficiency initiatives that have little or no cost to implement</p> <p>Able to make complicated matters easily understandable</p> <p>Skilled in engaging people in discussions and in making presentations</p>
20.	Vickie Ruch Family Nurse Practitioner (FNP), Master of Science in Nursing	<ul style="list-style-type: none"> ▪ Environmental Protection ▪ Environmental Non-profit Representative ▪ Experience in Renewable Energy/Energy Efficiency ▪ Knowledge of water and storm water issues ▪ Expertise in sustainable landscaping ▪ Residential/commercial recycling ▪ Green Building design and construction 	1. Water Conservation and Sustainable Landscaping	<p>Skilled in research and advocacy, with experience in renewable energy and sustainable building</p> <p>Interested in Vitality City initiatives and eco-aspects of the program (bikability/walkability; urban gardening, etc.)</p> <p>Participated in previous Solar Homes Tours, ETF meetings and events</p>
21.	Daniel Salzman LEED Homes AP, LEED Green Associate	<ul style="list-style-type: none"> ▪ Environmental Protection ▪ Construction Industry ▪ Renewable Energy/Energy Efficiency ▪ Water & Stormwater issues 	1. Energy Efficiency and Renewable Energy	<p>Built several of the first green homes in MB; has a strong knowledge of green technologies and materials</p> <p>Hosts community showcases of</p>

	Name and Position	Qualifications/Expertise	Subcommittee Preferences	Notes/ Attachments
		<ul style="list-style-type: none"> ▪ Sustainable Landscape practices ▪ Green Building design and construction ▪ Municipal codes and process 	2. Water Conservation and Sustainable Landscaping	<p>projects and sustainability events</p> <p>Co-owns largest eco showroom of green building supplies in SoCal</p> <p>Frequent expert presenter at large-scale events</p> <p>Attended previous ETF meetings and volunteered to assist in development of City green building code</p> <p>Attached: Resume</p>
22.	Sema Sanigok Founder, Sema Sanigok Design	<ul style="list-style-type: none"> ▪ Environmental Protection ▪ Construction Industry Representative ▪ Experience in Renewable Energy/Energy Efficiency ▪ Green Building design and construction ▪ Municipal codes and process 	1. Energy Efficiency and Renewal Energy	<p>Experience in environmental design, including renewable energy, for residential and commercial projects</p> <p>Strong project management skills</p> <p>Attached: Statement</p>

	Name and Position	Qualifications/Expertise	Subcommittee Preferences	Notes/ Attachments
23.	Zak Smith Environmental Attorney, NRDC	<ul style="list-style-type: none"> ▪ Environmental Protection ▪ Environmental Non-profit Representative ▪ Experience in Renewable Energy/Energy Efficiency ▪ Knowledge of water and storm water issues 	<ol style="list-style-type: none"> 1. Energy Efficiency and Renewal Energy 2. Water Conservation and Sustainable Landscaping 	<p>Expertise in marine mammal protection</p> <p>Experience in environmental law, renewable energy issues, stormwater issues, sustainable landscaping, green building, and recycling</p> <p>Skilled in research, writing, and discussing difficult issues with a broad audience</p> <p>Attached: Resume</p>
24.	Jon Swidler Environmental Specialist, Metropolitan Water District	<ul style="list-style-type: none"> ▪ Environmental Protection ▪ Experience in Renewable Energy/Energy Efficiency ▪ Knowledge of water and storm water issues ▪ Expertise in sustainable landscaping ▪ Residential/commercial recycling ▪ Business related recycling ▪ Municipal codes and process 	Interested in all	<p>Over 20 years of experience with the Metropolitan Water District</p> <p>Additional environmental experience in transportation, energy, and infrastructure</p> <p>Skilled in environmental regulations, codes, and in balancing issues of growth and environmental responsibility</p>

	Name and Position	Qualifications/Expertise	Subcommittee Preferences	Notes/ Attachments
25.	Diane Wallace Former educator Pacific Institute member, South Bay representative	<ul style="list-style-type: none"> ▪ Environmental Non-profit Representative ▪ Knowledge of water and storm water issues ▪ Expertise in sustainable landscaping 	1. Water Conservation and Sustainable Landscaping	<p>Attended previous ETF meetings</p> <p>Manhattan Village resident, VOICE and EPN member</p> <p>Experience in public education and knowledge of water issues</p>
26.	Terry Watson Operator of multi-family properties	None specified	1. Energy Efficiency and Renewable Energy 2. Water Conservation and Sustainable Landscaping	<p>Management experience and problem-solving skills</p> <p>Strong engineering background</p> <p>40-year career in aerospace industry</p> <p>Attached: Resume</p>
27.	John Wilcox EcoBroker, Certified Green Building Professional (CGBP)	<ul style="list-style-type: none"> ▪ Environmental Protection ▪ Environmental Non-profit representative ▪ Renewable Energy/Energy Efficiency ▪ Water & Stormwater issues ▪ Sustainable Landscape practices ▪ Residential/commercial recycling <p>Green Building design and construction</p>	1. Energy Efficiency and Renewable Energy 2. Water Conservation and Sustainable Landscaping	<p>Expertise in environmental protection, energy efficiency, and green building</p> <p>Formal training in sustainable landscaping practices</p> <p>Organizer for Heal the Bay beach cleanups; volunteer with 10-10-10 event</p> <p>Attended previous ETF meetings</p>

Student Liaisons

	Name and Position	Qualifications/Expertise	Subcommittee Preferences	Notes/ Attachments
1.	Alina Heim, Vistamar High School student	None specified	Interested in all	Hard working high school student, passionate about energy efficiency and water conservation Skilled in arts, advertising and presentation Willing to connect other interested students to ETF programs
2.	Ryan Patel Campus Environmental Coordinator, Manhattan Beach Middle School	<ul style="list-style-type: none"> ▪ Experience in Renewable Energy/Energy Efficiency ▪ Business related recycling 	Interested in all	Experience in recycling Skilled in problem solving, research and idea development