



HI USA



## WATER THE GARDENS BY WASHING LAUNDRY – United States

### SUMMARY

**Project description:** Help us reuse 100% of the water from washing laundry to water landscapes and gardens around the hostel, to fight the effects of Climate Change which puts this landscape is at risk. The result would be equal to reusing 104,100 litres each year or the equivalent of 640 bathtubs.

**Project type:** Water, Education in Sustainability

**National Association:** HI USA

**Project location:** HI Point Montara Lighthouse

**Estimation of number of reduced tonnes of CO2:** 0.06 tonnes of CO2 per year

**Total funds requested:** £9,286

**Total project cost:** £9,840+

**Annual £ saves and ROI (Return On Investment):** £702 (\$925 or €823) is spent on water annually for approximately 32,000 gallons consumed (122,000 litres). Approximately half of the payment is for wastewater discharge and treatment. After install, HI USA will negotiate with local water authorities to determine possible rate reductions, since up to 85% of our consumed water would not be discharged as wastewater.

Additional funds will be saved on vegetables, herbs and flowers for staff and some limited offerings to guests and community visitors. Ensuring the health of the gardens also continues to support the hostel as an attractive destination for travelers and community programs, which supports and maintains existing hostel revenue.

### Why this project should be funded ahead of others:

This project improves the environmental footprint of one of the most beautiful hostel locations in the United States and preserves the hostel as a beacon for environmental sustainability, peace, and intercultural understanding within their community. HI Point Montara Lighthouse is cherished by travelers and the local community, but without its natural beauty, the hostel's impactful engagement and education programs would not be possible.

This project would add to a long resume of sustainability initiatives at HI Point Montara Lighthouse. With current water conservation efforts, the hostel currently uses 10 times less water per guest than the average of all other HI USA hostels. With this project, 85% of that water would be recycled.





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## DETAILED PROJECT INFORMATION

### Project Summary

The landscapes at HI Point Montara Lighthouse are breathtaking and are enjoyed by tens of thousands of guests and community members each year. But due to Climate Change, this landscape is at risk from prolonged, extreme drought in California. Help us reuse 100% of the water from washing laundry to water landscapes and gardens around the hostel. The result would be equal to reusing 104,100 liters each year or the equivalent of 640 bathtubs.

The landscape and gardens at HI Point Montara Lighthouse play a key role in attracting travelers and provide an outdoor classroom for educating local youth on the environment through the Outdoor Hostel Adventure Program. The gardens are also the focal point of *Garden for Peace*, previously voted the best Sleep for Peace event.

Our plan is to install a system that collects water from the laundry machines, called graywater, and pumps it to irrigate landscapes and gardens around the hostel. A sustainable gardening master plan will be executed to create an ecosystem at the hostel that benefits the local environment, staff, and visitors. The project includes educating guests and community members on the benefits of and need for water recycling and sustainable landscaping.

After reusing 100% of the water from washing laundry, only 15% of all the water consumed at the hostel would go down the drain!

Check out the hostel's [Facebook](#) and [Flickr](#) pages to see more pictures.

#### ➤ About HI Point Montara Lighthouse

HI Point Montara Lighthouse is located on a bluff 25 miles south of San Francisco, California. The site was first established in 1875 as a fog signal station to prevent ships from mistaking the area for San Francisco Bay and crashing into the rocks. The current lighthouse was erected in 1928 after it mysteriously traveled over 3,200 miles from its original home on Cape Cod, Massachusetts. The hostel first opened in 1980. Each year, HI Point Montara Lighthouse accommodates an estimated 25,000 total overnights and visitors combined.

#### ➤ Sustainability at HI Point Montara Lighthouse

HI Point Montara Lighthouse is one of the most sustainable hostels in the United States. They received the highest level of certification from the Sustainable Tourism Education Program and California Green Business program. The hostel goes above and beyond in many areas of environmental responsibility. Including:

- The hostel composts all of its organic waste to feed their beautiful gardens.
- Four rain barrels collect rainwater to irrigate the staff vegetable gardens; one barrel is filled by a fog catcher.



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- The hostel uses 10 times less water per guest than the average HI USA hostel.
- The hostel doesn't just buy green, less toxic cleaners, but dilutes peroxide to make their own disinfectant.
- Enjoy locally roasted, fair trade certified coffee every day at the hostel.
- The hostel purchases hand towels and toilet paper made of 100% post-consumer-waste
- The hostel recycles and composts over 79% of their waste.
- The hostel purchases 100% of its electricity from US wind turbines through renewable energy credits.

### ➤ The Garden of HI Point Montara Lighthouse

The gardens at HI Point Montara Lighthouse are part of the beautiful landscape which make the hostel so attractive to travelers and the community. The hostel has made gardening the focal point of its Sleep for Peace efforts. In 2014, 'Garden for Peace' brought travelers and community members to break ground on a new garden at the hostel. The event took home the Sleep for Peace Cup as the best event in the US. In 2015, 'Let Peace Grow' drew an even larger crowd to tend the gardens, create custom cement garden stones, hang messages of peace, and take home local succulent plants. This project helps support the long-term sustainability of these gardens and the connection the hostel has made between its travelers, community, and the planet.

### ➤ Educating Youth on Environmental Issues

Each year more than 1,100 adults and youth encounter wildlife, native plants, and star-filled skies during overnight educational trips at three HI USA hostels on the California Coast, including HI Point Montara Lighthouse. Through the Outdoor Hostel Adventure program, the hostel becomes an expansive natural classroom, where hiking trails leads to discovery of ecological concepts, sensory awareness, and a more vibrant sense of place and of self. Each group participating in OHA can select their lessons, which are taught at the hostel by local naturalist experts. In 2015, 150 local youth participated in the environmental education program at HI Point Montara Lighthouse.

## Project Purpose

### ➤ Climate Change is a Threat Today

Climate change is threatening water security across California. In 2015, after several years of prolonged drought, snowpack in the Sierra Nevada Mountains was only 5% of the average expected level...the lowest ever recorded! Snowmelt from the Sierra Nevada's irrigate Californian farms that produce over half of the US's fruit, nuts and vegetables; and provide a good portion of the drinking water for approximately 23 million people from San Francisco to Los Angeles. This forced the Californian government to pass emergency water use restrictions to reduce water consumption in 2015 by 25%. One of the restrictions included a limit on residents watering their lawns and landscapes.



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➤ **Support Water Conservation and Environmental Education**

This project ensures HI Point Montara Lighthouse is doing everything it can to conserve water in an area where current and future water supply is threatened by climate change. The recycled water will support and maintain an element of the hostel that is cherished for its beauty. The gardens are also important for their contributions to the local environment and HI USA education and engagement programs.

**Project Objectives**

- 1) Recycle 100% of the water from washing laundry at the hostel and use it to water the landscape.
- 2) Implement a sustainable gardening plan that replaces invasive plants with native, shifts toward natural boundaries and paths, and incorporates new sustainable, permaculture gardening designs.
- 3) Develop engagement and educational materials to demonstrate the benefits and need for water recycling and sustainable gardening to travelers and the local community.

**Methodology (How) – project description**

HI USA has successfully installed a similar type of graywater recycling system at HI San Diego Point Loma, so we are familiar with making sure these systems are successful. The system at HI Point Montara Lighthouse will be larger and serve a wider area. The system has three primary components and the overall project includes an additional two:

<i>System Components</i>	<i>Component Details</i>
1) Repair existing laundry to landscape system on 1 of the 2 laundry washing machines	HI Point Montara Lighthouse has an existing system on one of its laundry washing machines that discharges water locally underground but the water is not filtered nor utilized in a garden.
2) Install new laundry to landscape system on the 2 <sup>nd</sup> of 2 laundry washing machines	A new system would be installed on the 2 <sup>nd</sup> washing machine so water can be recycled from all of the hostel’s laundry.
3) Install an advanced graywater system to transport water to desired gardens	The laundry washing machines are in the back of one of the hostel’s buildings but the main gardens of the hostel are uphill in the front of the building. This component will collect all of the recycled water from the two systems above and pump it up to the gardens in the front of the building.
<i>Project Components</i>	<i>Component Details</i>



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4) Sustainable gardening master plan	This master plan will maximize the graywater system and ensure the landscape of the hostel is truly sustainable. A plan for the entire landscape will be developed that replaces invasive plants with native varieties, shifts toward natural boundaries and paths, and incorporates new sustainable, permaculture gardening designs. The end result is an ecosystem that benefits and supports local ecology, staff, and visitors.
5) Education and engagement programming for travelers and community members	HI USA will develop education and engagement programming around the graywater system and landscaping that informs and inspires travelers and community visitors. Programming will include signage, events, educational lessons, and more.

### **Monitoring Plan**

A project team will be assembled to execute the project. The team includes the hostel manager, regional facilities and buildings manager, HI USA sustainability coordinator, and other key leadership members. The team is responsible for choosing the vendor, executing each step of the process, and reporting progress. After completion, the team will closely monitor water consumption at the hostel to ensure the system reaches its potential.

### **Communication and Marketing Plan**

Signage, in-hostel events, and educational information will be developed for the hostel to engage and educate travelers and the local community. HI USA will communicate the project locally and nationally on social media and to media connections. The project will be included within the marketing plans alongside other sustainability accomplishments both nationally and at the hostel.

### **Contribution to Sustainable Development**

#### **➤ Environmental Benefits – Water and Energy Conservation, Sustainable Landscaping**

As a form of sustainable water management, graywater recycling contributes to Goal #6 of the United Nations Sustainable Development Goals. When water is wasted down the drain, it flows to a waste water treatment plant where it is processed to remove contaminants. Energy is wasted when water that is barely contaminated, like that from a laundry washing machine, is processed. Graywater recycling systems allow water to enter back into the natural water cycle locally. As a result, less water is sent to the treatment facility saving energy, and less fresh water is consumed to irrigate the gardens.

To maximize the impact of the graywater recycling system, this project incorporates a sustainable gardening master plan that includes the replacement of invasive species with a guild of native varieties. The design and plant varieties within the improved gardens will work together to create a micro-ecosystem to support and benefit the local environment as well as those who live and visit the hostel.



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➤ **Social Benefits – Environmental Education, Access to Natural Spaces**

Just as many community members visit HI Point Montara Lighthouse each year as travelers to enjoy the beautiful natural landscapes. A vegetable garden is maintained at the hostel for staff benefit. The Outdoor Hostel Adventure program uses HI Point Montara Lighthouse as one of its sites to educate local youth on environmental issues. Annual community events, Garden for Peace and Haunted Hostel Halloween Festival, have built a strong relationship between the community and the hostel, attracting anywhere from 200-400 guests annually. Some guests travel as far as a 2 hour drive to attend! All this would not be impossible without the hostel’s natural beauty.

<b>Environmental Benefits</b>	<b>Social Benefits</b>	<b>Economic Benefits</b>
<ul style="list-style-type: none"> <li>• Reduced water consumption (onsite)</li> <li>• Increased support of local, native biodiversity (onsite)</li> <li>• Reduced energy consumption (offsite)</li> <li>• Increased local biodiversity</li> <li>• Removal of invasive species</li> </ul>	<ul style="list-style-type: none"> <li>• Increased support of environmental education for local youth and travel community</li> <li>• Increased support of local natural beauty and place of refuge for local community</li> <li>• Free vegetables, herbs, and flowers for staff and some limited offerings for guests and community visitors</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced wastewater costs for HI USA will be negotiated</li> <li>• Support increased hostel revenue as another sustainability project that attracts community groups to come to public hostel events</li> </ul>

**Estimation of CO2 Reduction**

104,100 liters (27,500 gallons) of water recycled equals

- 640 bathtubs of water recycled
- 85 kilowatt hours of electricity from wastewater treatment conserved
- 60 kilograms (132 pounds) of carbon dioxide prevented from entering the air
- 143 miles driven in a car reduced
- 1.5 tree seedlings grown for 10 years

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