

BRAVE BLUE WORLD

Lighthouse Awards



intel

HEINEKEN

South East Water



San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission



xylem
The Water Company

LIGHTHOUSE LEADERSHIP AWARDS

Our team of researchers explored the world for fascinating stories of innovators and pioneers in the water sector to capture in the Brave Blue World documentary. We spoke with and interviewed dozens of companies that are pushing the needle and forging the path of innovation within water technology, finance, policy and partnerships in this sector.

December 2020, The Brave Blue World Foundation launched the Lighthouse Awards. We honour these pioneers and visionaries both corporates and utilities within the water sector who are reducing their impact in water stressed regions, including circularity in their practice, and groups that have established and achieved progressive targets.

The awards enable us, as an industry, to celebrate each other's success and to learn from the challenges encountered on the way.



Nike

- Nike partnered with Mexican knitted textile supplier, Vertical Knits, enabling the firm to reduce freshwater by 85 per cent per kg of fabric, through innovative water recycling and manufacturing process improvements.
- The Vertical Knits facility in Mexico has reduced water from 120 liters per kg, to 24 liters per kg. In addition to water savings, Vertical Knits realised nearly 50 per cent reduction in energy savings.
- Through Nike's engagement and partnership, they have encouraged suppliers to reimagine their potential for reduced water use and have encouraged the roll out of water recycling at a manufacturing level.
- This will significantly reduce Nike's overall water footprint, and ease impact on supplies at a local level.



Apple

- Apple established a data center in Prineville, Oregon. When examining how best to meet the water needs for the data center with minimal impact to the basin, Apple worked with local stakeholders to identify some of the main water challenges.
- Apple discovered through partnership with the City that there was a significant difference between peak demand in the summer versus the rest of the year, and that this difference was even more pronounced for the data center's cooling needs. The City might see a 4x increase in water use in the summer and data centers can use very little water most of the year but can see as much as 10x increase in their average use during the hot summer months.
- The local hydrogeology of the region meant it was possible to deposit small amounts of water evenly during off-peak months into the aquifer for withdrawal during the three-month summer peak. By doing so, this stabilized groundwater levels and reduced the drawdown on other wells that support the rest of the city.
- Apple contributed \$8.7m to fund this project through innovative partnership with the City. This approach demonstrates the value of taking time to understand the specific context of each basin, and devise solutions through partnership with other stakeholders that can address the drivers of water stress and the needs of all users.



Salesforce

- Salesforce collaborated with the City of San Francisco and Boston Properties, to implement a blackwater system in Salesforce Tower San Francisco, the company's worldwide headquarters, making it one of the first partnerships in the U.S. between a city government, a building owner and a tenant to support blackwater reuse in a commercial high-rise building.
- The water reuse system has been incorporated into the 61- floor Salesforce HQ in San Francisco. Wastewater from cooling towers, showers, sinks, toilets and urinals, along with rainwater collected from the roof, will be collected and treated in a centralized water treatment centre. From there, the recycled water will recirculate through a separate pipe system to serve non-potable uses in the Salesforce building, such as drip irrigation, toilet flushing and cooling.
- The system reduced the buildings water consumption, saving up to 30,000 gallons of fresh water a day or 7.8 million gallons a year.
- The impact on water resources, when these techniques become a standard in urban areas, will be significant. Developers in water-scarce and growing areas including Miami and Las Vegas, as well as the relevant municipal authorities will take note.



Facebook

- Facebook's Menlo Park headquarters were in the midst of a relentless California drought which prompted the team to start using reclaimed water onsite.
- The Menlo Park Water recycling system represents a number of 'firsts,' not least of all being the first permitted water recycling system in a commercial building in the San Mateo County, navigating the permitting process without prior precedents to follow means both the City and Facebook were working in uncharted territory to install this water recycling system.
- The installed system recycles 17 million gallons of water annually between two buildings, making it the largest district scale black water reuse system in California.
- The treatment train consists of screening, biological treatment, ultrafiltration, UV disinfection and addition of chlorine to sanitise the water while in storage. In the case of blackwater recycling, an additional step of total dissolved solids and nutrient removal is included.
- Taking it one step further the team installed an RO system to reduce dissolved solids and salts to ensure that recycled water could be used for the green roofs and plants.
- Facebook has set the standard for commercial building water recycling and we are sure that this pioneering decision will encourage an increased uptake of commercial building water recycling in the region.



Heineken

- The wetlands of Doñana are a famous and iconic World Heritage Site near Seville. Heineken Spain launched a project with Commonland and the Andalusian government to restore four degraded lagoons by improving soil structure and water filtration and re-planting endemic trees and other species in areas surrounding the lagoons.
- The aim was to compensate and return 420,000m³ of water each year to Doñana. Work was successfully completed in all four lagoons, including San Lázaro, Pardillas and Lince. They moved more than 6000 m³ of soil, transplanted 70 cork and oak trees, and planted 1,500 new trees - mainly ash, back poplar and willow. Also a neglected floodgate system was repaired to avoid water drainage.
- Research by the University of Granada reveals that the project balanced more than 1 million m³ of water per year, doubling the initial target and creating a successful template for restoration globally.



San Francisco Public Utilities Commission

- The SFPUC'S pioneering approach to effective water reuse policy is working on both a State and National level in the US to establish guidance and policy frameworks to help local jurisdictions overcome barriers for onsite water reuse.
- With the leadership, vision and guidance of the SFPUC San Francisco is the first city in the United States to mandate newly constructed buildings (over 250,000 ft.) to install onsite water reclamation systems.
- Additionally, the city requires small buildings (above 40,000 ft.) to complete a reuse Assessment and over time will require the city "to use non-potable water for all irrigation needs and cleaning of public spaces." San Francisco will no longer sacrifice drinking-quality water for uses other than human consumption.
- The implementation of this onsite water reclamation policy has enabled the city of San Francisco to pioneer an efficient and affordable way to rethink and change the community's water usage. Rainwater, greywater, blackwater, and stormwater will all be repurposed for non-potable demands, including cooling, toilet flushing, and irrigation. The reuse of water for non-potable uses will prevent large amounts of fresh water being dumped into the ocean after being treated and requiring intense energy usage.
- The system will help reduce the overall potable water demand, sustaining the community's water supply. San Francisco is shining a light on water reuse for the rest of the world to follow.



The Glenmorangie Distillery

- The Glenmorangie distillery sells roughly half a million cases of whisky annually. Glenmorangie's continued growth depends on its ability to preserve the health of the Dornoch Firth—the estuary it overlooks that has been designated by Europe as both a Specially Protected Area and a Special Area of Conservation.
- The European flat oyster thrived in these waters for thousands of years, as it did all over Europe. But in the 19th century, overfishing and disease essentially crushed the species.
- In a research and action partnership unlike any other currently underway, Glenmorangie has collaborated with the Marine Conservation Society of the United Kingdom and Heriot-Watt University in Edinburgh to bring back the European flat. The Dornoch Environmental Enhancement Project, aims not only to preserve the current diversity of marine life in the area, but also reintroduce the once-teaming bivalve.
- They are licensed to discharge 350 cubic meters per day of suspended solids which is 95% treated by Anerobic digestion. The remaining 5% of the COD is then taken care of by the oysters which are natural bio-filters. Ultimately the water goes back into the environment as it should do. This company has gone from discarding wastewater with a minimum environmental impact to discharging in an effort to enhance and restore an ecosystem.
- The organisation's work has already seen 20,000 oysters returned to the Dornoch Firth. After achieving successful repopulation of oysters in the Dornoch Firth Glenmorangie is helping marine scientists and conservationists restore oyster populations in at least 15 European countries.
- This is an example of a company going above and beyond sustainability and instead become truly regenerative and additive to the environment it inhabits.



Intel

- Intel has invested in multiple water shed projects through collaboration with The Nature Conservancy to fund a portfolio of projects that solve local water challenges. Their goal for 2030 is to achieve net positive water use by conserving 60 billion gallons of water and funding external water restoration projects.
- In Bangalore, India Intel partnered with Clean International who is working with a local NGO. Bangalore was famous for their lakes which have been degraded with pollution. Together, they are rebuilding the natural infrastructure of the lake that was there at one point to promote groundwater recharge.
- In Lake Nanjapura, they are excavating sediment, taking the sediment that they recover and building a walking path around the lake, planting trees to shade the water to create a natural storage bowl for water thus making sure that no drop of water is wasted in this dry region and every drop of rain water is stored for future use.

South East Water Australia

- A unique water efficiency program, driven by South East Water, which is lowering water demand and securing future water supplies by building efficiencies into infrastructure from the start, as well as providing additional sustainable housing.
- The 'Aquarevo' in-house water reuse project is a residential development whereby each house is equipped with a rain water capture system used for bathing and showering. Clusters of houses are connected to a pressure sewer system which pumps wastewater to an onsite water recycling plant, where it undergoes advanced treatment and is used for toilet flushing, running washing machines and gardening.
- This will be the most water efficient housing development in Australia and it is a shining light for developers around the world to look.



Xylem/ Man City Partnership

- Xylem and Manchester City launched an innovative purpose-driven partnership to “challenge water complacency amongst 1 billion people globally by engaging football fans and the general population”
- This project is a shining example of a company going above and beyond to communicate and activate water stewardship with the general public. Over the past two years the partnership has succeeded all expectations by gaining a 770M+ total reach across all of their activations; including 21M+ views of their awareness building films; 39,500+ individuals have committed to being better water stewards; and 11,300+ youths in communities in need have been trained on a unique Football & WASH Education Framework.