

# Sustainability in Action



Three companies, one job:  
Working for a sustainable Nevada

LVVWD • SNWA • SPRINGS PRESERVE

# What does sustainability mean to us?



Sustainability means taking environmentally responsible actions that meet the needs of the present without compromising the ability of future generations to meet their own needs.

The Las Vegas Valley Water District, the Southern Nevada Water Authority and the Springs Preserve have long advocated environmentally responsible actions in the workplace. We decrease our environmental impacts by reducing waste, using recycled and renewable materials, and educating our employees and our community on sustainable practices. In 2008, sustainability was officially incorporated into our organizational goals and values.

Sustainability initiatives that may have been informal work practices are now being standardized across our entire organization. Our employees, and even our community partners, are encouraged to act sustainably.

This sustainability report details the efforts we're making to reduce our environmental impacts, and it will help serve as a guide to working in a more environmentally conscious way.

# Sustainability: Our organization's efforts

Our organization identifies opportunities to reduce our environmental impacts operationally, but all of us working together make it successful.

Sustainability transcends resource boundaries, but it is inseparably linked to the conservation of vital resources such as water and energy. This concept forms the framework for our sustainability initiatives, which focus on four main areas:

- **Water**
- **Energy**
- **Environment**
- **Personal Responsibility**



## **Water**

As a water provider and educator in one of the region's driest communities, living a conservation ethic is an essential part of our work practices. We strive to provide sufficient water to our community while promoting conservation; utilizing reliable, renewable water resources; and maintaining water quality with minimal impact on the environment.

## **Energy**

As the state's largest energy user, we aspire to replace our fossil fuel resources with 100 percent renewable resources that maximize efficiency.

## **Environment**

Our organization is reaching out to area businesses and agencies, other water utilities and our neighbors to make Southern Nevada the sustainable heart of the Southwest.

## **Personal Responsibility**

We responsibly steward the resources of current and future generations by eliminating waste, using renewable resources, reducing our use of non-renewable resources and partnering with our community to promote our sustainability vision.



## Water

We recognize that water is one of the most precious resources on Earth, which is why we strive to help ensure its conservation. As managers of Southern Nevada's water resources, we recognize we are called to an even higher level of accountability to ensure we're doing everything possible to preserve this limited resource. Working toward sustaining this resource requires a broad range of initiatives within our organization, from securing the water supply to conserving it; we're helping to contribute to the preservation of our water supply, now and in the future.





## **Water: What we're doing**

As we explore ways to responsibly augment Southern Nevada's groundwater supply, the SNWA addresses ecological impact issues and concerns through environmental analysis. We are assisting the Bureau of Land Management in the preparation of an extensive environmental impact statement assessing the effects of the Clark, Lincoln and White Pine Counties Groundwater Development Project on the surrounding environment.

We've entered into an interstate water banking agreement that adds more than 325 billion gallons of water to our reserves, and more than 975 billion additional gallons through the Brock Reservoir. These efforts, as well as developing intentionally created surplus, extend our resources and help sustain the Colorado River Basin.

We are also researching methods to make the treatment of Southern Nevada's drinking water more eco-friendly. Our Chemical Reduction Program increases non-chemical water-treatment methods and has reduced our carbon footprint by 309 Metric Tons Carbon Equivalent.

## **Water: What we're doing**

Water conservation is the focus of many organizational initiatives that help sustain our water resources. Conservation initiatives take many forms, from leak-prevention programs to the Water Smart Landscapes Rebate program and conservation education.

These initiatives include promoting water-conserving landscaping and the sale of native plants at the Springs Preserve. Our Cactus Grant Rescue Program salvages threatened cacti species from lands under development and resells them to the public, with proceeds used to help pay for supplies in local school science classes. Our organization also produces and distributes conservation literature to Southern Nevada residents and businesses. We also helped establish and support the Water Conservation Coalition, a public/private partnership among community leaders to help increase water-efficient practices within the Southern Nevada business community.





### **Water: What we're doing**

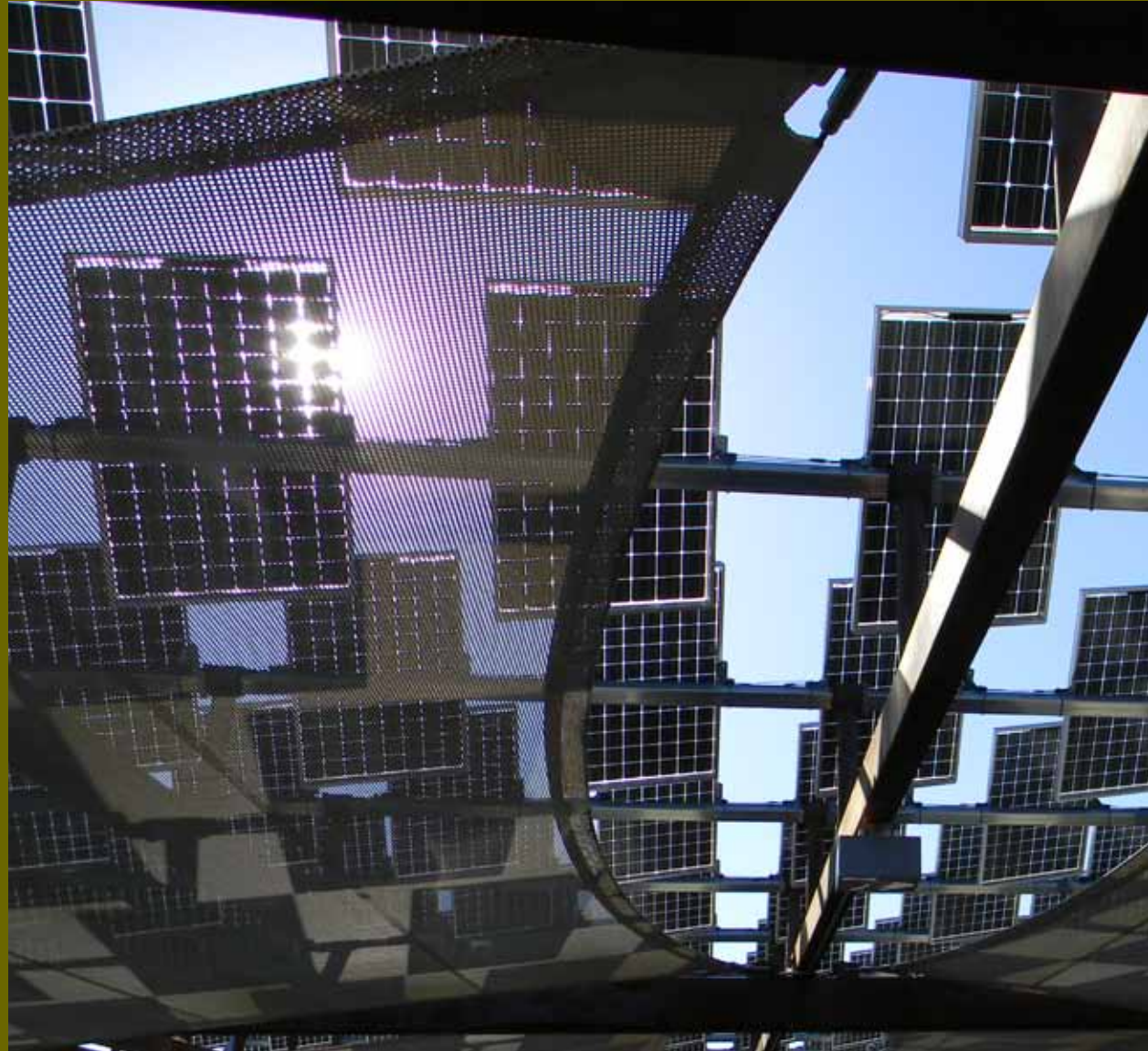
We're dedicated to raising awareness about our limited water supply both locally and around the world. We observe and promote World Water Day; created the Youth Advisory Council to engage high school students in a discussion of water issues; and formed the Water Education Institute, which enhances environmental and water education. The semi-annual Las Vegas Wash Green-Up events galvanize thousands of community volunteers to help stabilize and protect the environmentally sensitive urban waterway.

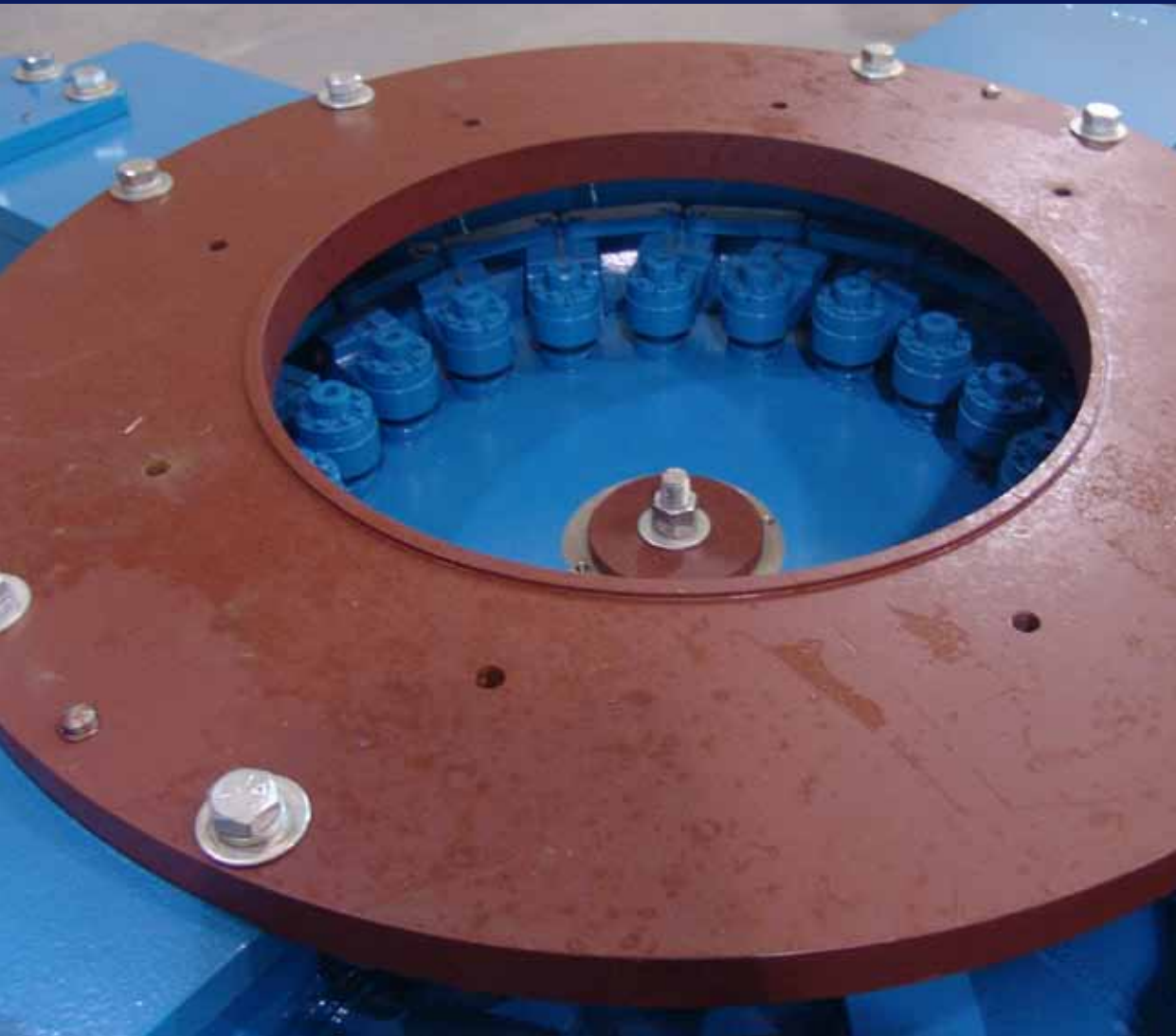
Experts from the Southern Nevada Water Authority Conservation Division conduct public classes at the Springs Preserve to teach our community the seven steps of water-smart landscaping and how to design and maintain a water-efficient drip-irrigation system.



## Energy

Our conservation efforts focus on helping to sustain our energy resources to meet our present needs without compromising energy resources for future generations. We strive to reduce energy consumption and reduce environmental pollution through efficient energy use and incorporating renewable resources such as solar, wind, hydro, biomass and geothermal energy.





## **Energy: What we're doing**

We are working to create a culture of energy efficiency within our daily and long-term operations. Current efforts include evaluating our energy use to determine whether to continue operations as they are, make equipment repairs or replace equipment to optimize efficiency.

We are developing a life cycle cost evaluation standard process as an organizational tool to systematically consider a project's associated needs, costs and benefits before recommending implementation of a proposal.

Our organization optimizes energy efficiency by evaluating all Southern Nevada Water System energy requirements to maximize pumping and scheduling capabilities. We also pursue renewable energy options and treatment efficiency. In addition, we evaluate the potential benefits of certain pumping station equipment and refine computerized lighting and power settings at our facilities.

## Energy: What we're doing

From simple actions such as shutting off the lights when leaving a room and replacing outdated or older monitors with efficient LED models to more intricate programs, our organization continually identifies avenues of operational energy conservation. As one of many long-term initiatives, the Southern Nevada Water Authority received a \$2.2 million State Revolving Loan Fund to perform and install energy conservation measures at the Alfred Merritt Smith Water Treatment Facility.



## Energy: What we're doing

Treating and delivering water to Southern Nevada requires a significant amount of energy resources. Instead of relying solely on fossil fuel energy, we pursue and implement adaptable renewable energy options in an effort to reduce greenhouse gas emissions and offset our carbon footprint.

The Arrow Canyon Energy Recovery Hydropower Project will use water piped from Coyote Spring Valley to Moapa Valley to create energy through a hydroelectric turbine. The project is expected to generate 0.5 megawatts of power, enough energy for approximately 160 average homes. The energy generated by this project will offset other SNWA loads when it is completed.





## Energy: What we're doing

The use of renewable resources accounts for approximately 13 percent of our energy portfolio and reduces our carbon emissions by approximately 58,000 metric tons carbon equivalent per year.

Our fleet is nearing its goal of becoming 100 percent alternative fueled, replacing standard-fueled vehicles with alternative-fueled models when their lifecycles have been met.

A portion of our renewable energy efforts involve partnering with other agencies. We're working with the City of Las Vegas to provide information and assistance as the city develops its own solar projects.

We are harnessing solar energy from covered parking composed of solar panels at the Springs Preserve, River Mountains and Alfred Merritt Smith Water Treatment facilities, and through the Las Vegas Valley Water District's onsite hydrogen fueling station, the first in the nation powered by solar energy.

## Environment

Our organization continues to identify ways to minimize the environmental impacts of operations and create a greener way of working. When we process used materials into new products to prevent waste, reduce the consumption of fresh raw materials and reduce energy use, we reduce air pollution and water pollution and lower greenhouse gas emissions.

Reducing, reusing and recycling are key components of modern waste reduction, and our organization has embraced this philosophy at every level.



## Environment: What we're doing

Recycling plays a major role in reducing our environmental impacts. From recycling lubricating oil at our pumping stations to using register tape and ticket stock made from recycled paper, the ripple effects of recycling are evident throughout our organization.

We also promote the use and sale of sustainable products. The Springs Preserve gift shop primarily sells products made out of sustainable or recycled materials and packaging. Retail items are either the result of fair trade; organically made or acquired locally, primarily from minority-owned and small businesses. Throughout the Preserve, the use of recycled material and recyclable products can be seen in our temporary and permanent exhibits.



## Environment: What we're doing

Youth School Field Trips, conducted at the Preserve, weave the concept of sustainability through five different tours emphasizing aspects of sustainable living. Students participate in the hands-on, two-hour tours, learning different ways to reduce, reuse and recycle while exploring the green initiatives and resources available at the Springs Preserve. Other sustainable living programs at the Preserve are designed to provide visitors with information and ideas to make small lifestyle changes that have a positive impact on our environment.

In addition to Springs Preserve education initiatives, the Las Vegas Wash provides a unique opportunity for teachers to educate their students about water quality, plant life and wildlife at the Wash, as well as the importance of preserving and protecting our natural resources.







### **Environment: What we're doing**

Our efforts to reduce our environmental impacts are not just limited to our operations and administrative areas. Our facilities are also designed to be environmentally conscious. Springs Preserve maintenance employees use pruning techniques that are naturalistic and have lower environmental impact. We use only climate-appropriate plants and state-of-the-art irrigation systems on our grounds to maximize efficiency. In addition, the Water District uses integrated pest control and green products to minimize chemical use.

As part of soil amendment, our organization uses compost tea, an extremely beneficial and sustainable way of building life in the soil to promote the health and growth of plants in the outdoor areas of our facilities. Compost tea is a water extract of compost that is actually brewed, containing soluble nutrients and a diversity of bacteria, fungi, protozoa and nematodes. It is a product of our larger-scale compost operation, where green waste generated on all facility sites is collected, processed and recycled as mulch and compost that are used in the gardens.

## Environment: What we're doing

Complementing our robust composting program, the Southern Nevada Christmas Tree Recycling Committee, comprising local businesses, non-profits and government agencies, recycles cut Christmas trees and gives them a second life as mulch in local landscaping projects while helping to conserve valuable landfill space. The Springs Preserve, one of our community drop-off locations, composts discarded trees and uses the mulch onsite.



## Environment: What we're doing

The Las Vegas Valley Water District now requires its construction contractors to recycle construction waste and demolition debris. To save paper, Service Rules for all six systems are no longer printed, but posted on the district website along with other online reports.

Leadership in Energy and Environmental Design (LEED) is an internationally recognized green building certification system. Our facilities at the Springs Preserve and City Parkway Campus are currently LEED certified, and we are working toward retrofitting our existing facilities to LEED standards. In our quest to increase our rating eligibility, our organization created a LEED AP Professional Accreditation Program to pursue the necessary funding to obtain LEED AP accreditation for qualified employees. The program teaches employees how to create more environmentally friendly workspaces with lower environmental impacts.



## Environment: What we're doing

Organizationally, we will continue to seek out innovative ways to perform operations with lower environmental impacts, including continued tracking and reporting on national, regional, and local sustainability activities. We will continue refining purchasing and contracting guidelines; measuring our carbon footprint and creating an environmental impact audit for certification. Efforts also include evaluating the costs of electronic pay stubs.

Our efforts are focused both inside and outside of our organization. Externally, we will continue to partner with other agencies and working groups such as the Nevada Development Authority, Southern Nevada Regional Planning Coalition, Clark County Sustainability Working Group, academics and the Las Vegas Chamber of Commerce.



# Sustainability: Our employees' efforts

## What we're doing

Employees are critical to the success of sustainability and have been responsible for generating the majority of the initiatives outlined in this report. From reducing, reusing and recycling office supplies to suggesting unique ways to work greener, our employees' efforts play a large part in our current and future success.

Employees have been exercising greener work practices that reduce energy consumption throughout our organization. These everyday simple actions, from powering off equipment when not in use to turning off lights, save our organization hundreds of thousands of dollars in energy costs while reducing our carbon footprint. Refining computerized lighting and power settings in our offices further expands this effort.



## **We're reducing our use**

Employees are using less paper and making an effort to reduce the number of hard copy prints of correspondences, drafts, plans and budgets in favor of electronic and web media. When we are required to print, we're increasing the use of recycled paper. To encourage responsible electronic storage and documentation, our Records Management Program encompasses retention and disposition of electronic, paper and other forms of records. The process will result in increased storage space and reduced hardware costs, as well as conservation of physical and human resources.

Reduced paper use has resulted in the reduced use of printers, copiers and fax machines in our organization, which has eliminated unnecessary equipment as well as helped reduce energy consumption. Employees have also been exploring green options when replacing and purchasing electronic equipment.





### **We're identifying greener methods**

By identifying green alternatives to potentially hazardous items, such as substituting vinegar as a cleaning agent for a chemical cleanser, employees are taking the initiative to eliminate potentially hazardous waste and convert to 100 percent green cleaning supplies.

Employees are also collaborating with the Purchasing Division to identify sustainable products to replace non-sustainable inventory items. This includes identifying and categorizing the new sustainable materials in the Avantis system for tracking and waste-monitoring purposes.



## **We're helping each other**

Sustainability is imbedded in the very culture and values of our organization. Sustainability training, offered by Employee Development, is available to all staff. Employees are trained on organizational sustainability practices as well as the everyday actions for which we are all responsible. Training will be tied to employee reviews through behaviorally anchored rating statements (BARS) for sustainability. Our organizational Awards of Excellence will further reward employee efforts to strengthen sustainability commitments.

Employees can join the conversation on sustainability at the It's Easy Being Green blog, available on the Hydroweb intranet; reading sustainable living articles in the ePipeline employee newsletter; and engaging in conservation practices promoted through our publications that circulate to residents throughout Southern Nevada.

As employees continue to develop unique and innovative ways to embrace sustainable work practices, we are working to develop a consistent, simple, reliable method to calculate the dollar value of these sustainability proposals. The method will employ cost/benefit measurements to justify, or provide alternatives to, sustainability proposals.



## Our success

### Water:

**Chemical Reduction Program:** By optimizing disinfection, fluoridation and corrosion control, our organization has reduced its carbon footprint by 309 Metric Tons Carbon Equivalent.

Based on the most current data available, approximately 60 percent of customers who received leak notifications in 2009 corrected their leaks, resulting in an estimated water savings of 9.7 million gallons annually.

More than 42,000 participants have converted more than 147 million square feet of grass to desert-friendly landscaping through the Water Smart Landscapes program, conserving 8.2 billion gallons annually. Participation in the Water Smart Landscape program reduced the community's carbon footprint by approximately 26,000 Metric Tons Carbon Equivalent per year.

Our commercial conservation incentive program—Water Efficient Technologies (WET)—helped businesses earn rebates worth \$243,836 for a collective savings of more than 114 million gallons.





## **Our success**

### **Energy:**

Combined, our solar facilities generate more than 6.7 million kilowatt hours of clean electricity, enough to power nearly 450 average Southern Nevada homes annually.

### **Environment:**

In its second year, the Cactus Grant Rescue Program has raised approximately \$2,500 to help local science teachers purchase classroom supplies thanks to proceeds raised from the sale of salvaged or rescued cacti species.

The Environmental Monitoring and Management Division identified more than 160 species of birds and more than 180 species of plants—in addition to amphibians, bats, fish, reptiles and small mammals—at the Las Vegas Wash. The division also works closely with Surface Water Resources to study riparian areas such as the Virgin and Muddy Rivers and the Mexican Delta. Staff also monitor biological resources, water quality and existing water resources to protect our environment and safeguard our current resources.

## **Our success**

### **Personal responsibility:**

We have reduced our electricity use by approximately 13 percent at the Valley View Campus since converting to a 4-10 work week in July 2009. This reduction includes our PC and monitor powering-off strategy, and HVAC improvements in the West Administration building.

A cross-departmental team (CDT) composed of employees remains focused on sustainability efforts and continues to engage in monthly meetings where information and ideas are exchanged. The CDT provides status updates on our organization's sustainability initiatives and tracks national, regional, and local sustainability activities.





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