



MONROVIA®

SUSTAINABILITY PRACTICES

2022





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## *Let's Grow Responsibly Together*

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We've been pioneers in the art of growing robust, healthy plants for nearly 100 years. Similarly, we seek to lead the industry in pioneering sustainable large-scale growing practices – from recycling water and organic waste, to using beneficial insects to manage pests. By establishing innovative, environmentally enduring practices in our four nurseries located across the country we are able to grow over 4,000 varieties of plants more responsibly.

We've made a good start, but we know that there's far more we can do to make a positive impact on the earth and the industry as a whole. This is a report of where we stand today, and a pledge that we're always striving to do better tomorrow.





## *Water Conservation*

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### OUR MOST PRECIOUS RESOURCE

We were the first major nursery to recycle irrigation runoff in the late 1970s. This breakthrough drastically reduced our use of water and fertilizer and has now become a standard in the industry. We continue to scrutinize the way we use water, and water conservation is only growing in importance as we see increased drought throughout the country.





## *What We're Doing*

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### **IRRIGATION AUTOMATION**

Hundreds of irrigation valves are computerized where site managers can monitor temperature and wind conditions in order to choose the most effective means of irrigating plants.

### **MICRO IRRIGATION**

We use micro-irrigation to cut water use and manage diseases on certain crops. Micro-irrigation prevents the wetting of plant foliage, which reduces the incidence of diseases, thereby reducing the need for chemicals.

### **CONSTRUCTED FOR WATER RECYCLING**

When you visit our nurseries, you'll notice sloped fields that allow for irrigation runoff to return to retention ponds and be re-used. By recycling more than 95% of irrigation water at our four growing locations, we save more than 2.5 billion gallons of water per year.

### **CONSTRUCTED WETLAND**

We operate a constructed wetland at our Cairo, Georgia location – another first in the nursery industry. Excess rainwater is diverted into the wetlands, where plants and bacteria utilize any nutrients in the water.

### **EXTENSIVE WATER AND NUTRIENT MANAGEMENT PLAN**

Our nurseries utilize extensive water and nutrient management plans that allow water to be recycled whenever possible, reducing the amount of groundwater and chemicals used to grow healthy plants.





## *Energy Efficiency*

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### DOING OUR PART

We are the proud recipient of the Environmental Protection Agency's prestigious EPA Evergreen Award, which recognizes outstanding pollution prevention efforts, but this is just the beginning of our efforts to reduce our emissions and dependency on fossil fuels. The objective of good energy management is to reveal energy inefficiencies and use those findings to significantly reduce emissions.





## *What We're Doing*

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### **ENERGY-EFFICIENT GREENHOUSES**

High roofs with venting increase circulation naturally. The boilers used to heat the greenhouses are high efficiency, helping to reduce the amount of fuel needed to provide the optimum growing environment for our plants.

### **EFFICIENT LOADING PRACTICES**

Plants are waiting on racks when our trucks arrive, and are quickly loaded. This practice maximizes efficiency of loading and unloading while protecting plant integrity.

### **SHIPPING EFFICIENCY**

In 2001 we added two East Coast nurseries. By growing regionally, we are able to greatly reduce the distance our plants travel. For deliveries beyond a certain distance, the trucks do not return to the nursery, thus no empty trucks wasting fuel.





## *Soil Health*

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### EVERYTHING IS CONNECTED

Soil is a living, dynamic ecosystem. It is the key to everything when growing healthy plants – successful rooting, vigorous growth, great harvests, weed, pest, and disease control. Soil is what connects all of our efforts as we strive to be a part of the sustainability solution.





## *What We're Doing*

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### **SOIL NUTRITION MONITORING**

By carefully monitoring fertility levels in the soil, we have been able to drastically cut the amount of nitrogen fertilizer applied through the irrigation water.

### **SLOW-RELEASE FERTILIZER**

In the early 1990s, we began incorporating slow-release fertilizer into the soil, which reduced the amount of nitrogen fertilizer – a source of greenhouse emissions – by 75 percent.

### **CUSTOM SOIL MIXES**

Different plants require different soils to reach their full potential, so we create over 100 different soil mixes to allow plants to grow in their ideal conditions. This leads to less fungicide and fertilizer usage.

### **MYCORRHIZAE**

We add mycorrhizae to all our plants. Mycorrhizae are a group of beneficial organisms that grow along the roots of host plants and make the plant much more efficient in the uptake of nutrients and water. As Monrovia plants are added to the garden, the mycorrhizae in our soil will spread to other areas, benefiting the entire landscape.





## *Pesticide and Herbicide Use*

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### POLLINATOR-FRIENDLY IS PLANT-FRIENDLY

As plant experts and leaders in the horticultural field, we recognize the integral role that pollinators and beneficial insects play in plant and environmental health. Protecting (and utilizing) beneficial insect populations is a priority for our nurseries. Monrovia grows thousands of plants that support pollinators, and all of our nurseries use pollinator-friendly growing methods.





## *What We're Doing*

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### **WEEDING BY HAND**

Our Plant Health Team weeds each of our 22 million plants by hand at our four growing locations, allowing us to reduce the amount of herbicides required. Hand weeding is a labor-intensive process, but one that is safer for the environment.

### **ORGANIC MULCHES**

Top-dressing plants with mulch greatly reduces weeds, and the need for herbicide use.

### **NO TO NEONICOTINOIDS**

We fully ceased neonicotinoid pesticide use in 2019.

### **GENTLE PESTICIDE USAGE**

When pesticide applications are necessary, only the least harmful pesticides are used. Biorational products – pesticides of natural origin that have limited or no adverse effects on the environment or beneficial organisms – are used whenever possible.

### **BENEFICIALS**

Our Integrated Pest Management program relies on beneficial organisms to reduce pests, with consistent applications of various beneficial insects and spider mites to treat pests, beneficial nematodes for control of insects, beneficial fungi or bacteria for the control of various diseases and insects, and beneficial wasps to control aphids and red scale.

### **NATURALLY ROBUST PLANTS**

One key focus of our new plant introductions is to find plants with a high degree of natural pest and disease resistance, thereby reducing the need for pesticide application both at our nursery and in the home landscape.





## *Plastics and Plants*

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### AN UNHEALTHY RELATIONSHIP

Plastic use remains one of the largest sustainability challenges in the nursery industry. It's a challenge to find non-plastic nursery pots that last long enough outdoors and on the ground for plants to grow to our high standards. We are constantly testing new formulas and materials in pots that will withstand the elements. We seek to find innovative ways to reduce our plastic usage.





## *What We're Doing*

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### **RECYCLABLE POTS**

Our recyclable pots are made of poly propylene (PPE) and high-density polyethylene (HDPE). Most recycling facilities accept these plant pots, and #2 HDPE is the most-often recycled plastic in the United States – the same plastic used to make milk and dish-washing detergent bottles.

### **CONSISTENT RESEARCH**

We've discovered new ways in which plastic pots can be made using far less plastic. We are working to incorporate these innovations into our production line so as to greatly reduce our use of plastic moving forward.

### **BIODEGRADABLE POT TRIALS**

On top of researching ways in which our pots can be made with less plastic, we are also researching several biodegradable plastic materials and plan to do trials to determine if they can work in the nursery setting.





## *Invasive Species*

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### PROTECTING HABITATS

When non-native plants with a vigorous growth habit spread naturally to surrounding natural habitats, we call them “invasive.” But an invasive plant in one state might be perfectly fine in another part of the country. That’s what makes the threat of invasive plants so challenging, and something we monitor closely and consistently.





## *What We're Doing*

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### **STRICT SHIPPING AND SELLING RESTRICTIONS**

We do not sell or ship plants to states where they are considered invasive.

### **ELIMINATION OF INVASIVE PLANTS FROM OUR NURSERIES**

Some varieties we have stopped growing entirely because they became invasive in more and more regions.

### **TESTING NEW PLANTS FOR INVASIVENESS**

Before we introduce a new plant variety, it is scrutinized for potential invasiveness.





## *Sustainability Goals*

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### WHAT'S NEXT

We are dedicated to being the industry leader in sustainable growing and nursery management. We have a lot of work ahead of us to forge the path with innovative solutions that make a big impact. In order to make meaningful changes across all of our nurseries, we are starting with an in-depth audit of our current environmental impact. Then, we will quickly and thoughtfully move forward with setting goals and making plans for improved practices.





## *What We're Doing*

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### **SUSTAINABILITY AUDIT**

We're collecting detailed data across our nurseries with a system-wide audit to help us better understand our inefficiencies, deficits, and strengths so we can move forward on our goals with confidence.

### **INTERNAL RESEARCH**

We have an internal sustainability task force that's focusing on researching innovations and priorities to meet our goals to reduce greenhouse emissions overall.

### **STANDARDIZING PROCESSES ACROSS ALL NURSERIES**

Due to the age of facilities, regional challenges, and varying craftsmen experience and knowledge, one challenge is consistent practice across all four nursery locations.

### **SETTING SUSTAINABILITY GOALS FOR 2030**

We will publish an updated report and goals in 2023.



**MONROVIA®**  
*Grow Beautifully*

PHOTOGRAPHY BY DOREEN WYNJA

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