



LIVABILITY REPORT

ENVIRONMENTALLY SUSTAINABLE COMMUNITY

2018







INTRODUCTION

*...this report
reflects what
it means to
truly enjoy
this city
for all that it
has to offer...*

The report you are reading is filled with goals and objectives, figures and statistics, and more than a little bit of technical jargon. But set all of that aside for a moment and think about what natural environment and sustainability mean to Boise and its livability.

There's no denying it: Boise is on the map. Hardly a month goes by that a national organization or publication doesn't list our city at or near the top of the best places in America to *live, work, raise a family, start a business, retire or just have fun*. And those of us who live here know they're right.

It's biking along the Greenbelt with your family, listening to the clear, flowing Boise River and knowing that such an *amazing urban river* truly makes Boise special.

It's the look in your dog's eyes when it's time to head into the Foothills to enjoy solace and trail time. The knowledge that the *open space conservation* has been deliberate and will have long-lasting effects.

It's one of those perfect summer evenings, taking in the gorgeous downtown skyline and mountain ranges in almost every direction. The appreciation that clean air matters.

Facts and figures are important, no doubt. But at its heart, this report reflects what it means to truly enjoy this city for all that it has to offer—and to ensure that the Boise we love today will be there for future generations.



PART OF THE BIGGER PICTURE

The vision of the City of Boise is to be the most livable city in the country. Like growing numbers of businesses and organizations around the world, the city has adopted a triple bottom line approach to evaluate our performance in achieving that goal—based not just on financial results, but on social and environmental outcomes as well.

Create **L**ASTING ENVIRONMENTS
Cultivate **I**NNOVATIVE ENTERPRISES
Build **V**IBRANT COMMUNITIES



The city strives to achieve livability through the following seven targeted goals. This document focuses on the Environmentally Sustainable Community goal.





HERE'S WHAT SUSTAINABILITY MEANS TO BOISE:

- Ensuring that the Boise we all love and celebrate today will be here for generations to come.
- Recognizing that planning for climate change is not optional. Boise will proactively adapt for and work to mitigate the effects of climate change.
- Realizing that resiliency is good for business—attracting and retaining top quality companies and jobs—and for securing a robust economy.
- Setting goals and tracking progress to make sure we know where we've succeeded and where we need to do better.

Sustainability

isn't just a

buzz word; it

represents the

city's genuine

commitment

to lead.

The goals and initiatives highlighted in this report document the city's efforts in the areas of energy, air quality, water resources, open space and waste management. Many of these programs address more than one goal, creating economic and social benefits as well. All aspects of Boise's livability are interconnected, and our approaches to enhancing that livability should complement one another in the same way.



SUSTAINABILITY GOALS



PROMOTE ENERGY EFFICIENCY



ENCOURAGE RENEWABLE ENERGY



REDUCE MATERIAL SENT TO THE LANDFILL



PRESERVE AND IMPROVE WATER QUALITY



RESPONSIBLY MANAGE LOCAL WATER RESOURCES



PROTECT AIR QUALITY



CONSERVE PARKS, OPEN SPACE AND NATURAL RESOURCES



PROMOTE ENERGY EFFICIENCY



Intentional design and deliberate policy around energy efficiency is the most cost effective way to save the city and its citizens money, reduce dependence on energy production and make us more self-reliant.

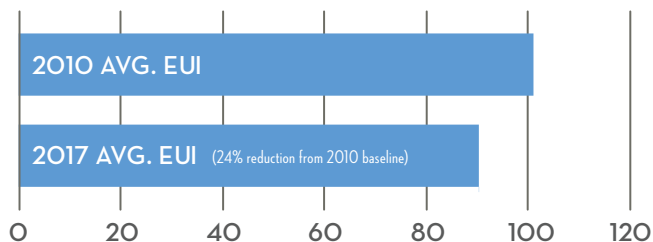
TARGETS:

- 🎯 New city buildings will be net-zero energy (producing as much energy as they consume) by 2030
- 🎯 Reduce energy use in existing city buildings by 50% by 2030
- 🎯 Engage community through public outreach on best energy-efficiency practices

HIGHLIGHTS:

- Fifty municipal buildings are tracked for improvements in energy use. The overall goal is a 50% reduction in average Energy Use Intensity (EUI, kwh/sq.ft.) from the 2010 baseline. Thus far, overall progress for city buildings is a 24% reduction from the 2010 baseline.

AVERAGE EUI PROGRESS TOWARDS 2030 GOAL



PROGRAMS AND INITIATIVES

	Proposed/ Planned	Ongoing	Completed
CITY OPERATIONS			
Develop energy use reduction plan for all city-owned buildings that provides prioritization steps		■	
Building light replacements with LEDs		■	
Replace 400 streetlights with LEDs per year			■
Conduct energy audits on priority city buildings			■
Initiate an employee action program on energy use reduction	■		
COMMUNITY PLAN			
Renovate a home to demonstrate energy efficiency and sustainable practices through public tours			■
Evaluate energy use throughout the community to create tracking benchmarks		■	
Provide leadership and technical input on statewide energy code updates		■	
Implement Boise Green Construction Code to encourage energy efficiency in new building designs		■	
Actively promote utility energy efficiency programs	■		



ENCOURAGE RENEWABLE ENERGY



Renewable energy will play a pivotal role in our city's future. As our city continues to grow, so too does the amount of energy required to power an increased number of homes, businesses, schools, hospitals, our infrastructure and our economy.

TARGETS:

- The electricity that powers the city's own facilities and operations will be 100% renewable by 2030
- Establish community-wide renewable energy goal
- Promote renewable energy projects

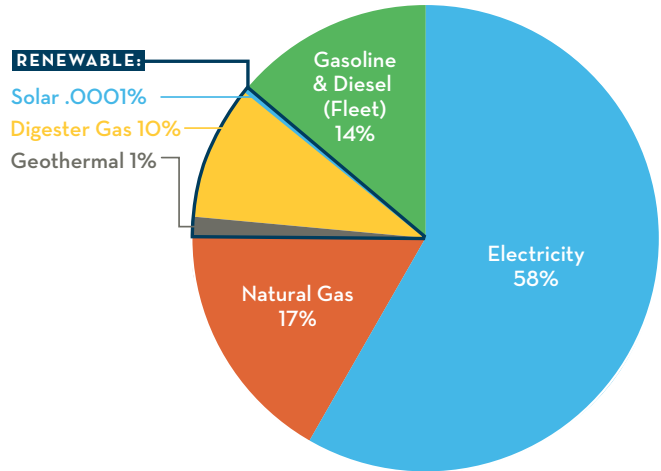


City of Boise's net-zero building at Twenty Mile South Farm

HIGHLIGHTS

- The city has added **solar energy** to the Boise Airport, Library! at Bown Crossing and 20-Mile South Farm which add to the city’s existing solar buildings, City Hall West and Jim Hall Foothills Learning Center.
- As the largest direct-use system in the US, Boise’s **geothermal energy** system continues to generate national interest and increased demand from local businesses. Boise City Hall, the Main Library! and Fort Boise Community Center are collectively getting 86% of their energy to heat the buildings from geothermal.
- The **net-zero building** at 20-Mile South Farm produced 30,000 more kwh than it consumed in it’s first year, essentially making the facility net-positive.

2016 MUNICIPAL ENERGY SOURCES



PROGRAMS AND INITIATIVES	CITY OPERATIONS	Proposed/ Planned	Ongoing	Completed
	Develop implementation plan for municipal renewable electricity goal	■		
	Maintain energy recovery efforts at both water renewal facilities*		■	
	Acquire additional water rights to expand geothermal network			■
	Develop a strategic plan for the expansion of our geothermal energy system		■	
	Promote onsite energy production in all new city building projects		■	
	COMMUNITY PLAN			
Develop community-wide renewable energy plan		■		
Strategize and prioritize expansion of city’s geothermal energy system		■		
Investigate additional community-based solar projects	■			

*Boise has two water renewal facilities (wastewater treatment plants): West Boise and Lander Street



REDUCE MATERIAL SENT TO THE LANDFILL



Compost in windrows at Twenty Mile South Farm

By turning materials once thought of as waste into beneficial products, Boise can truly shift the way we perceive what we toss out at our homes and businesses. Rather than being sent to the Foothills to be buried forever, *Boise will remain a national leader* in creating local cycles to reuse what we throw away.

TARGETS:

- 🎯 Divert a minimum of 30% waste from the landfill through a variety of city-wide programs, including recycling and composting
- 🎯 Increase community education and outreach on the reduction, reuse and recycling of discarded materials

HIGHLIGHTS

- Boise has seen a 33% drop in household pounds per month of waste going to the landfill since compost collection began. Since the beginning of the program, over 62 million pounds of compost has been collected.
- Over 1,500 cubic yards of finished compost have been given back to Boise residents.



Compost give-back at Idaho Botanical Gardens

PROGRAMS AND INITIATIVES

CITY OPERATIONS	Proposed/ Planned	Ongoing	Completed
Provide recycling at nine city parks and all three sports complexes		■	
COMMUNITY PLAN	Proposed/ Planned	Ongoing	Completed
Evaluate financial structure and customer rates to provide incentives for waste reduction and recycling for businesses and industries		■	
Develop a strategic plan for recycling and composting for businesses and industries	■		
Launch a citywide residential curbside compost program			■
Produce high-quality compost and provide finished compost to the community		■	
Collaborate with the Boise School District on reducing waste	■		
Establish a volunteer education program for recycling and composting programs	■		
Provide recycling support for events throughout the city		■	
Improve recycling opportunities for multi-family, commercial and construction/demolition	■		
Operate a pharmaceutical collection program for residents to drop off medications for safe disposal		■	
Expand the household hazardous waste collection program to provide safe and free disposal and recycling of hazardous waste		■	



PRESERVE AND IMPROVE WATER QUALITY



Dixie Drain Phosphorous Removal Facility near Parma

There is nothing that better sums up Boise's amazing natural environment like the Boise River. *It is truly the lifeblood of our city.* For quality of life, tourism, economic development and recreation, the long-term health of the Boise River is imperative to our city's continued livability.

TARGETS:

- 🎯 Reduce the quantity of nutrients and pollutants released into the Boise River
- 🎯 Reduce pollutants entering the water renewal facilities through outreach efforts
- 🎯 Implement additional stormwater best management practices

HIGHLIGHTS

- The Dixie Drain facility has removed over 9,000 lbs. of phosphorus from the Boise River since 2016.
- Green stormwater infrastructure means using plants and soil to reduce the amount of runoff and pollutants going down storm drains and into the Boise River. At the Library! at Bown Crossing, stormwater from the roof and parking lot are filtered through permeable pavers and landscaped retention areas.
- Broad Street in the Central Addition LIV District utilizes permeable pavers and silva cells (a product that promotes tree growth from beneath pavement) that can capture more than 180,000 gallons from almost eight acres of downtown streets and private development.



Library! at Bown Crossing

INITIATIVES AND PROGRAMS	CITY OPERATIONS	Proposed/ Planned	Ongoing	Completed
	90% reduction in total phosphorus released from water renewal facilities by 2022		■	
	Reuse 100% of biosolids generated by water renewal facilities for local crop production		■	
	Recover phosphorus for beneficial reuse as high-quality fertilizer		■	
	COMMUNITY PLAN	Proposed/ Planned	Ongoing	Completed
	Develop and support educational outreach programs to reduce the amount of mercury entering water renewal facilities		■	
	Implement dental best-management standards and program for collection and disposal of mercury waste (150 facilities with 100% compliance)			■
	Create program for new and remodeled construction that allows stormwater retention offsite when standard retention requirements are impractical			■
	Install and maintain green stormwater infrastructure throughout the city		■	
	Collaborate with community partners on water conservation education	■		



RESPONSIBLE MANAGEMENT OF LOCAL WATER RESOURCES



Esther Simplot Park

As a high-desert city, Boise doesn't have the luxury of inaction or complacency when it comes to water. Our city's **water resources are vital to continued growth and vibrancy**, and with climate change increasing the strain on this precious resource, Boise must be strategic in how we use every drop.

TARGETS:

- 🎯 Provide safe recreational water use by protecting surface waters
- 🎯 Support recreational opportunities and provide watershed management on the Boise River
- 🎯 Create watershed improvements
- 🎯 Increase water conservation education and outreach

HIGHLIGHTS

- Over 1,000 feet of riparian area were planted at Marianne Williams Park, treating 266 acres of runoff.
- The 55-acre Esther Simplot Park opened in 2016 to add more recreational water potential adjacent to Boise Whitewater Park and Quinn’s Pond. With 23 acres of ponds and a mile of trails, the park is the latest addition to the city’s “Ribbon of Jewels.”
- A collaborative pilot project was launched with Land Trust of the Treasure Valley and Audubon Society to create a native plant nursery for riparian restoration projects.



Boise River

INITIATIVES AND PROGRAMS

CITY OPERATIONS		Proposed/ Planned	Ongoing	Completed
	Create Treasure Valley partnerships to preserve open space and clean water	■		
	Create and maintain a recreational water bacteria monitoring program			■
	Provide high quality data on the health of the Boise River by conducting weekly water quality monitoring		■	
	Develop monitoring and evaluation program for harmful algal blooms	■		
	Establish a nutrient reduction and management plan for city park ponds	■		
	Reduce heat impacts on the Boise River by reusing treated water for irrigation	■		
	Inventory city building infrastructure that supports water conservation tools	■		
	Report water use per square foot/acreage for municipal facilities	■		
COMMUNITY PLAN		Proposed/ Planned	Ongoing	Completed
	Incorporate in-stream fish habitat improvements along areas of the Greenbelt damaged by spring flooding		■	
	Partner with Freshwater Trust to identify areas for fish habitat and riparian restoration to address temperature and habitat concerns in the Lower Boise River			■



PROTECT AIR QUALITY



The blue skies and starry nights that enchant Boise’s residents and visitors alike can’t be taken for granted as a future guarantee. With increased economic expansion, population and transportation growth, and longer fire seasons, the city must dig in and continue the hard work to ensure the *brehtaking views that we enjoy and the air we all breathe will be there for generations to come.*

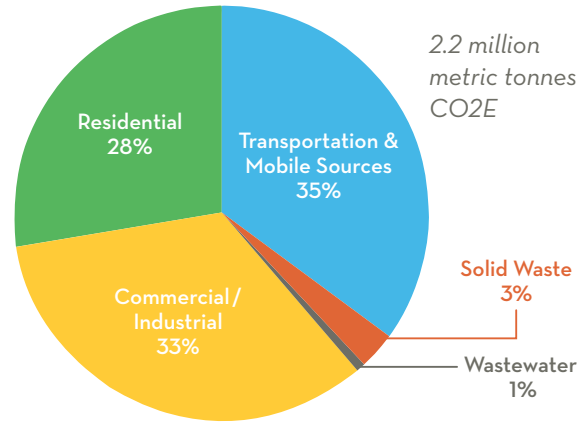
TARGETS:

- Provide alternative clean and efficient transportation
- Reduce greenhouse gas emissions

HIGHLIGHTS

- The six electric vehicles and plug-in hybrids acquired by the city annually reduce tailpipe pollutants by 622 pounds.
- Citywide, Boise has 43 electric vehicle charging stations at 22 different locations, with more planned. This represents a threefold increase since 2015.

2015 BOISE COMMUNITY GREENHOUSE GAS INVENTORY



INITIATIVES AND PROGRAMS

	Proposed/ Planned	Ongoing	Completed
CITY OPERATIONS			
Replace city fleet vehicles with electric and hybrid vehicles		■	
Increase electric charging stations at city facilities		■	
Develop strategic plan for electrification of our vehicle fleet	■		
COMMUNITY PLAN			
Conduct community-wide inventory to determine how many vehicles are using alternative fuels		■	
Increase public electric charging stations and locations throughout the city		■	
Increase urban tree canopy coverage 20-25% within city limits		■	
Provide community education on improving overall air quality and reducing air pollution		■	
Implement Boise's Transportation Action Plan that promotes mobility choices for all		■	
Continue developing the concept of a Downtown Circulator as a transit alternative to efficiently move people in and around the downtown		■	



CONSERVE PARKS, OPEN SPACE AND NATURAL RESOURCES



Conservation of critical open spaces like the Boise Foothills has **shaped our community identity**. Open spaces offer opportunities for outdoor recreation, wildlife viewing, native plant protection and conservation of our natural heritage.

TARGETS

- Protect native wildlife habitat within the Boise Foothills**
- Develop a sustainable trail system through Boise's open space reserves**
- Protect clean water and drinking water sources**

HIGHLIGHTS

- In 2017, the city purchased an additional 840 acres of open space to expand Stack Rock Reserve.
- The open space advisory committee approved two new projects in 2017 – Daylighting Cottonwood Creek that runs through Julia Davis Park, and improvements to BSU’s Intermountain Bird Observatory, including pathways and educational programs.
- Friends of Zoo Boise pledged \$250,000 to fund restoration efforts in critical habitat areas of the Boise foothills.



INITIATIVES AND PROGRAMS	CITY OPERATIONS	Proposed/ Planned	Ongoing	Completed
	Develop a 10-year management plan for the Ridge to Rivers Trail System			■
	Form Open Space and Clean Water Advisory Committee			■
	Create a new position to manage open space lands			■
	COMMUNITY PLAN	Proposed/ Planned	Ongoing	Completed
	Partner with Zoo Boise to implement restoration and invasive species management in the Boise Foothills		■	
	Establish Weed Warriors – a crowd sourcing tool to allow for community engagement in invasive species management		■	
	Enhance clean water, fish habitat and trail system in the Dry Creek area by installing bridges and improving recreational crossings			■
	Develop a fire mitigation policy to engage homeowners and associations in fire prevention			■

COMMUNITY IN ACTION



OPEN SPACE AND CLEAN WATER ADVISORY COMMITTEE

A citizen advisory committee was created to provide recommendations on levy funds that support and protect wildlife habitat, enhance clean water and provide recreational opportunities for enjoyment today and for future generations. Boise's mayor and city council selected volunteers to be a voice for the community to achieve goals within the Open Space and Clean Water Initiative.

BIGGEST PLANTING DAY EVER

More than 500 people took part in a massive effort to restore and replant Boise's iconic Table Rock after it was heavily damaged during a fire in 2016. Zoo Boise conservation funds provided \$100,000 to restore Table Rock's native vegetation. Outdoor enthusiasts of all ages picked up shovels and made the hike up to Table Rock Trail to plant 7,000 native plants throughout the burn area.

COMMUNITY IN ACTION



LESS WASTE, BETTER BOISE

The curbside compost program began in June 2017 and has already shown its environmental return on investment. More than 70,000 Boise homes participated in the program in the first year, providing about 56 million pounds of high-quality compostable materials. Along with the recycling program, the city has kept over 40% of its solid waste out of the landfill, far exceeding goals.

COMMUNITY IN ACTION



CONNECTING STUDENTS WITH NATURE

At the Jim Hall Foothills Learning Center, visitors can explore, learn and connect with Boise's diverse natural landscapes. The center serves more than 10,000 students and community members annually, offering environmental education programs designed to ignite interest in natural resources and science.



COMMUNITY IN ACTION



HEALTH OF OUR WATERSHED

Watershed Watch is a water quality monitoring educational event that aims to raise awareness about the health of the Boise River watershed. The 10 year anniversary was celebrated with more 1,500 volunteers participating.



Learn more about environmental
sustainability and all of the City of Boise's
livability efforts at LIVBOISE.ORG



LASTING ENVIRONMENTS + INNOVATIVE
ENTERPRISES + VIBRANT COMMUNITIES
= A LIVABLE BOISE