THE FASCINATING & VITAL LANDSCAPE OF WATER CONSERVATION FOR MULTI-FAMILY HOUSING IN 2022 & 2023

PIONEER®

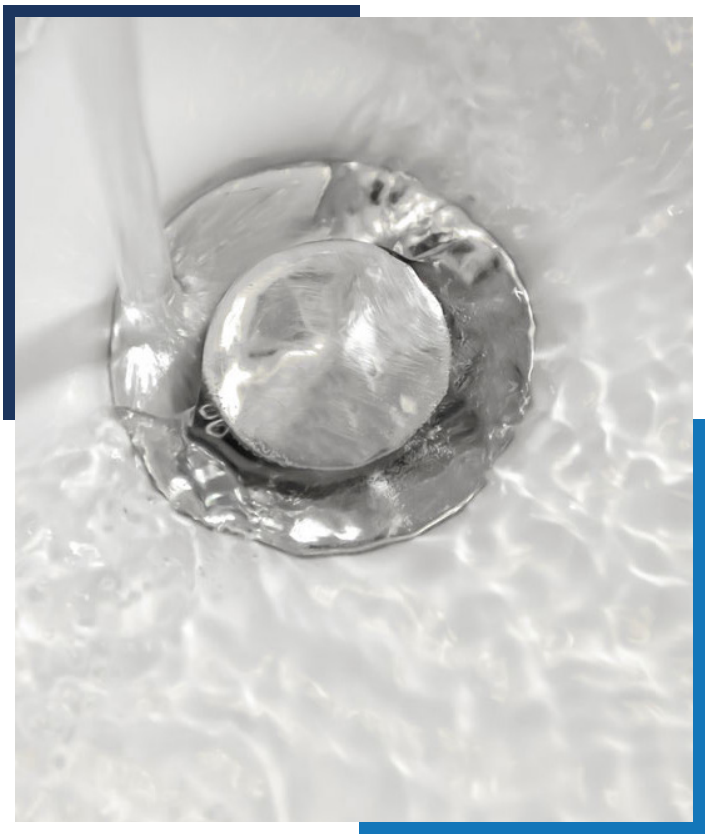
THE LAY OF THE LAND IN 2022

In 2022 and 2023, those who are prepared with necessary information regarding the impact of a changing climate on the construction and building industry will have a distinct advantage. Fresh water is the world's most precious resource, and its protection can't be weighed heavily enough when determining the many details of a proposed multi-family housing development. With nearly 53 million Americans living in drought-affected areas already, municipal water conservation requirements are set to increase in scope and number dramatically. As a higher number of Americans seek more affordable housing options in areas like the water-deprived Southwestern United States, more careful planning and regulation will become necessary to ensure the future viability of building in the region. Water conservation is poised to become one of the most important nationwide priorities in the coming decades. As snowpack levels continue to underwhelm year after year, public demand for accountability and action will increase as it has previously in drought-stricken areas. This will impact everything from demand to laws.

How manufacturers of water fixtures are adapting to the changing landscape has become vital to multi-family and other large housing projects in 2022 and 2023.

How Much Water Are We Really Using?

To understand what the future of sustainable residential water use will look like, we'll start by exploring and evaluating how we currently utilize our resources. In multi-family developments and single-family homes alike, the lion's share of the water is consumed in the bathroom. Toilets, faucets and showers account for three of the largest water-hogging culprits in the average home. Not surprisingly, kitchen water usage is also high. A single family in the US uses more than 300 gallons of water per day on average, according to the Water Research Foundation's residential report. With 70% of this consumption from appliances and fixtures indoors, focusing reduction efforts here simply makes sense.



Where Are We Using the Most Water Indoors?

Appliance	Household per Day	Percent of Total	Appliance	Household per Day	Percent of Total
Toilet	33 gallons	24%	Washer	22 gallons	16%
Shower	27 gallons	20%	Leaks	18 gallons	13%
Faucet	27 gallons	20%	Bath	4 gallons	3%

From the table above, sourced from **watercalculator.org**, notice that the **shower and faucet combined are responsible for 40%** of indoor household water consumption. Focusing conservation efforts here makes financial and ecological sense.

Taking the Pulse of Current Government Requirements & Programs

2021 was chaos for government regulations concerning the environment as the main US political parties were vying for, at times, contradictory changes or updates to laws. In 2022, new regulations have already been announced. For example, in California, where laws enacted to protect the environment and resources tend to be passed first, January 18, 2022 marked the first day that the emergency regulation requirements became effective. This came after the driest January and February ever on record in that state. The new regulations are mostly for homeowners, but those for builders are coming soon, according to experts. Currently California's Title 20 Water Efficiency law states that maximum flow can't exceed 12 gallons per minute for bathroom fixtures and 18 gallons per minute for kitchen faucets. Public faucets can't exceed .5 gallons per minute. Toilets must not exceed 128 gallons per flush.

Compliance with laws either current or those expected in the near future is only one reason for builders and developers to research water conservation. Other key driving factors are a sincere concern for the planet's resources and monetary factors. Regarding the latter, saving water simply makes financial sense. The average consumer is much more savvy now than ten years ago. As water costs continue to rise and climate change intensifies, home buyers, condo owners and renters will only become more keenly focused on ensuring that the fixtures their investment is equipped with are using water in the most efficient way possible, without sacrificing performance.

Many builders as well as manufacturers are getting ahead of new regulations as a matter of survival for the reasons mentioned above. As an example, Howard Hughes CEO David O'Reilly released this statement in March of 2022, "Every [Howard Hughes] home will have low-flow fixtures, national desert landscaping, drip irrigation and reclamation. We work with the local municipalities, the city of Buckeye, all the water districts, to make sure that we're enacting real conservation measures, not just at our property, but across the entire region."

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–David O'Reily
Howard Hughes CEO

WaterSense®

In 2006, the Environmental Protection Agency established WaterSense, a voluntary program specifically intended to identify products that meet the WaterSense guidelines that are put into place to protect the US's water supply now and in the future. Manufacturers submit their low-flow fixtures to the EPA for testing; those that pass earn the WaterSense label. For matters of energy vs water, the partner program is Energy Star.

> "Products bearing the WaterSense label are generally 20 percent more water-efficient than similar products in the marketplace. The WaterSense label helps you identify high-performing, water-efficient products and homes as well as professional certification programs that embrace and encourage the use of water-efficient design."
>
> *–EPA*

WaterSense® Standards & How Builders Can Benefit

The WaterSense program guidelines in the latest version (5.5) encourage builders to "build, renovate, or otherwise produce homes in accordance with the WaterSense Specification for Homes; promote WaterSense labeled products and WaterSense labeled homes to consumers; report data on the number of homes built on an annual basis; and provide other support as specified in the WaterSense Home Certification System.

The evaluation factors for products are stringent and look to not only low-flow output, but also to these factors, among others:

- Water savings
- Performance
- Innovative technology
- Independent third-party certification
- Measurable results
- Cost-effectiveness
- Availability of certification programs
- Stakeholder support

LEED & LEED Zero

LEED is "the most widely used green building rating system in the world" for a reason—it provides a clear and fair certification system that leads to undeniable benefits for builders, investors, and residents.

LEED certified buildings:

- Are more efficient
- Lower carbon emissions
- Save money over time
- Promote the health of residents

There are four levels of LEED certification which are awarded through credits based on how well a project addresses issues of:

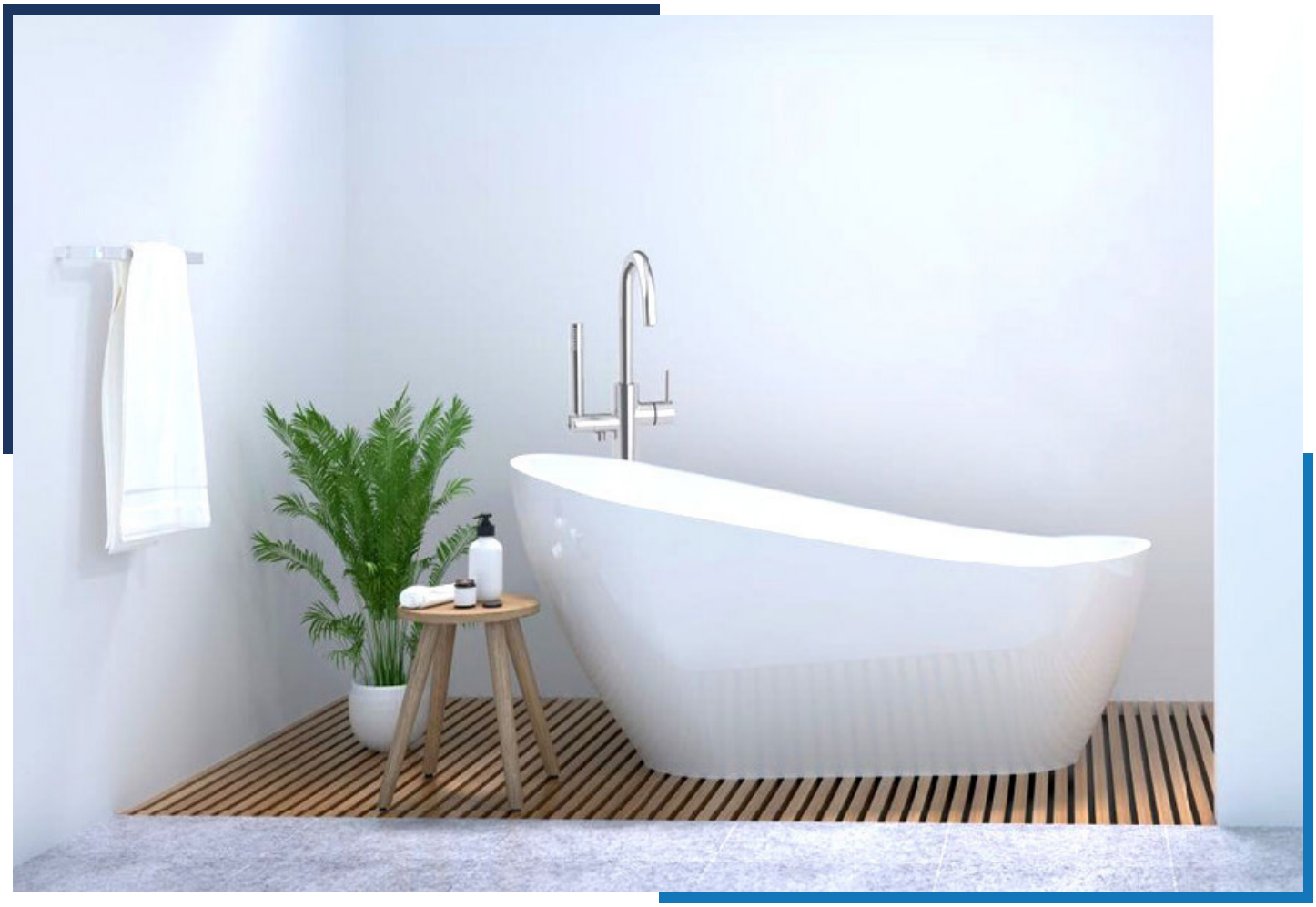
- 35% reducing climate change
- 20% improving human health
- **15% conserving water resources**
- **10% encouraging biodiversity**
- 10% assisting the green economy
- 5% community involvement
- 5% conserving other natural resources

LEED Zero takes LEED certification to the next level by verifying Net Zero goals.

LEED Zero Carbon recognizes net zero carbon emissions from energy consumption through carbon emissions avoided or offset over a period of 12 months.

- LEED Zero Energy recognizes a source energy use balance of zero over a period of 12 months.
- **LEED Zero Water recognizes a potable water use balance of zero over a period of 12 months.**
- LEED Zero Waste recognizes buildings that achieve GBCI's TRUE certification at the Platinum level.

Choosing bath and kitchen fixtures that are certified to conserve water is an important part of earning LEED credits. Choosing those that also excel in form and function ensure investor and resident buy-in.



A GLIMPSE INTO THE FUTURE OF LOW-FLOW PRODUCTS

The future of low-flow faucets and fixtures lies in performance and technology. Early and many current low-flow products focus on water flow almost exclusively, leaving the end users of their products to be unsatisfied and spend more time to achieve the same result. For example, if a shower with a low-flow shower head takes a person 18 minutes in order to feel as if she has rinsed all the shampoo out of her hair, whereas normally it takes her 10 minutes, water hasn't actually been saved. On top of this, she is likely not impressed and may very well go back to her standard shower head. Taking into account these types of real-world experiences is important when designing a better fixture.

The next wave of low-flow fixtures saves water while delivering the same, if not better, experience with much less water. Proprietary technology can already deliver this and it will only get better. The best products take into consideration the human experience. The future of low-flow will mean gallons per flush or gallons of water per second used will continue to decrease dramatically, while the user experience improves.

MEET THE FUTURE: LUX-FLOW™: LOW-FLOW FIXTURES WITHOUT COMPROMISE

Introducing a better shower with less water, now available to builders. Pioneer's patent-pending Lux-Flow™ system injects air into every drop of water, creating the feel of a traditional, higher-pressure shower while saving 30% more water than the average flow shower head. The Pioneer Lux-Flow showerhead saves 7.5 gallons of water for a single 10-minute shower, compared to the average standard-flow shower head.

WaterSense Certified

If your city doesn't already require low-flow plumbing fixtures, chances are those regulations are coming soon. Think ahead by installing Lux-Flow shower heads. The Lux-Flow's 1.75 gallon-per-minute flow rate meets both WaterSense and CALGreen criteria, which exceed water usage regulations for most states.

Installs in Minutes

The Lux-Flow showerhead is compatible with all existing fittings, so switching takes just minutes, an average of 15 minutes per fixture. If installed as an original fixture, it's even faster.

Incredible Value

At an average price of $21 per shower head, this upgrade pays for itself quickly, in as few as 60 showers, and keeps on paying back—an incredible and useful selling point.

Use our online cost-saving calculator to calculate your potential savings.

Find it at **pioneerind.com/new-lux-flow-shower-head-technology.**

PIONEER'S PROMISE

The Pioneer family of companies has provided top-quality faucets and fixtures to builders, contractors, and plumbers for more than three decades. Each of our brands—Pioneer, Olympia, and Central Brass Company—is uniquely designed to meet the needs of a particular market and delivers on the Pioneer promise of excellence and reliability.

We provide an industry-leading 10-year commercial warranty, as well as a cutting-edge manufacturing facility that allows for unparalleled product quality and design. We offer multiple lines of uniquely designed products and prompt, worry-free delivery to meet your project needs and have been the trusted source for builders for over 35 years. We want to provide more than just products, we want to provide a trusted partnership.

Let's get started on a lifelong partnership that will benefit your company in every way.

Contact us today using our easy website form at:
pioneerind.com/contact-us

Our Certifications

Look for the icons below for faucets that meet or exceed regulatory standards

IAPMO Listed
File# 3778

IAPMO
Listed
File# 6060

Compliant with Buy America Act allowing products to be sold to all government agencies

Compliant with federal drinking water legislation and state legislations, including AB1953, S152 and HB372

ADA Compliant with The American Disability Act

Indicates products that meet low-flow requirements

Indicates products that are Water-Sense Certified.

Product meets Cal Green flow standards: bath faucets with a 1.5 GPM rating and kitchen faucets with a 1.8 GPM or less.





SOURCES & RESOURCES

The following sources were used for this article. We encourage you to use these as resources for your multi-family housing projects.

The Water Research Foundation:
https://www.waterrf.org

Environmental Protection Agency:
https://www.epa.gov

WaterSense:
https://www.epa.gov/watersense

WaterSense Program Guidelines PDF:
https://www.epa.gov/sites/default/files/2017-02/documents/ws-program-guidelines.pdf

Home Water Works:
https://home-water-works.org

Water Footprint Calculator:
https://watercalculator.org

Regulations.gov:
https://www.regulations.gov

AM Conservation:
https://info.amconservationgroup.com

Builder:
https://www.builderonline.com

LEED and LEED Zero:
https://www.usgbc.org/programs/leed-zero

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