EBMUD Commercial Guidebook:

Alternate Onsite Water Sources

EBMUD

ALTERNATE ONSITE WATER SOURCES

Many commercial and industrial facilities have the potential to reuse onsite wastewater streams in non-potable applications within their operations and production processes. Such end uses can include toilet flushing, irrigation, cooling tower makeup water, and more. This chapter provides definitions for different categories of reusable wastewater, a summary of relevant regulations, and examples of possible sources.

This chapter does not cover the onsite treatment of blackwater, or treated municipal wastewater reuse, including direct potable reuse. To learn more about the onsite treatment of blackwater, consult the San Francisco Public Utility Commission's excellent resource, Onsite Water Reuse Program Guidebook. To learn about EBMUD's recycled water programs for commercial and industrial customers, visit the recycled water information portal. For information on California's Direct Potable Reuse regulations, in effect as of October 1st, 2024, visit the California State Water Board's website.

Potential Sources of Alternate Onsite Water Sources

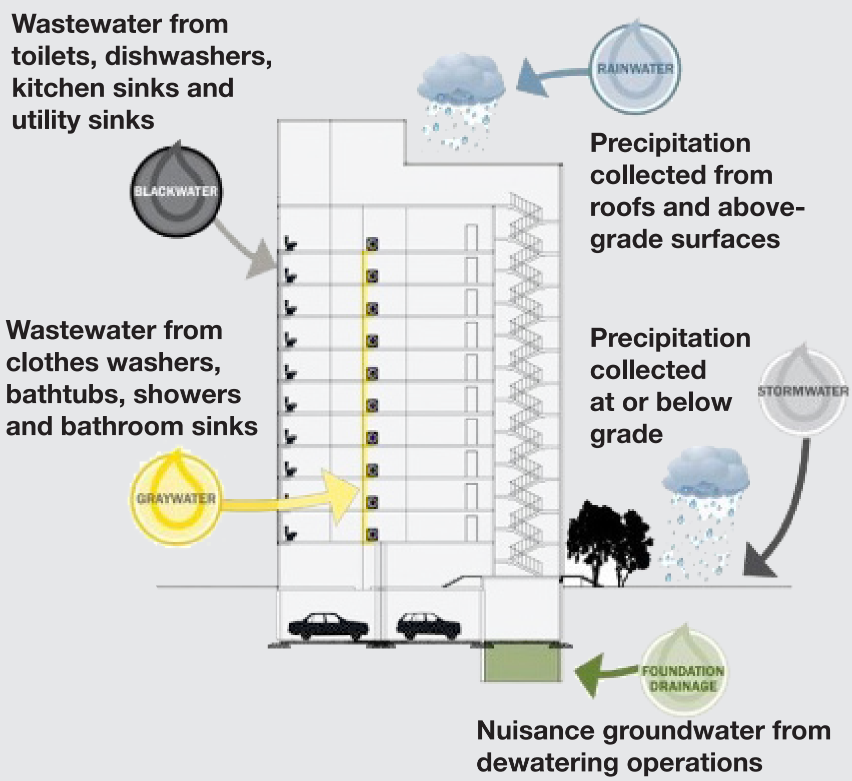

Image source: San Francisco Public Utility Commission

Alternative sources of water covered in this guide:

- **Graywater –** untreated wastewater not contaminated by high levels of biological solids, or toilet discharge or infection
- **Rainwater –** typically collected from roofs
- **Stormwater –** rainwater that has come into contact with the ground
- **Foundation drain water –** groundwater interacting with the built environment
- **Cooling tower blowdown**
- **Air conditioner condensate**

Other sources not covered can include:

- **Blackwater –** untreated wastewater from toilets, kitchen sinks, dishwashers, and utility sinks
- **Swimming pool drain water**
- **Chemical mixing water**
- **Defrosting of refrigeration coils**
- **Equipment cleaning water such as:**
  - Shipment containers and crates flush-out
  - Gutter and sewer flushing
  - Fluming, washing of fruits and vegetables
  - Makeup water for conveyor lubrication systems

Overview

The initial step in determining the reuse potential for an alternate water source is to identify the requirements, such as water quality regulations, that the alternate water source will need to meet for the desired end use. Where an end use requires a very high-quality source water, the reused wastewater will require additional treatment to remove contaminants or constituents. Removing

Table 7-1: Treatment types per end us water quality needs

Source	Filtration	Sedimentation	Disinfection	Biological Treatment	Other Considerations
Rainwater	D	D	D		May be used for irrigation w/out additional treatment
Stormwater	T	D	D	D	For non-potable use only
Air conditioner condensate			T		Segregate coil cleaning water
Pool filter backwash	T	D			May have high TDS and chlorine levels
Cooling tower blowdown	D	D	T		Consider TDS monitoring
RO & NF reject water					Consider TDS monitoring
Graywater	T	D	T	D	Per CA regs, cannot be stored >24 hrs without treatment. Subsurface drip requires the least treatment
On-site wastewater treatment	T	T	T	T	Biologically unstable for long periods of storage unless treated
Foundation drain water	D		D		May be hard if in alakaline soils

T = treatment likely needed
D = treatment depends on use

Source: HW (Bill) Hoffman & Associates, LLC

contaminants for specialized end use is standard procedure; even potable water needs to be treated for certain industrial processes. The next step is to verify that the desired volume of end-use water demand can be consistently and reliably met by the identified alternative onsite source.

General water quality and treatment considerations for use of alternate sources are summarized in Tables 7-1 and 7-2.

Each section below provides criteria for evaluating a potential onsite water supply and includes basic considerations for system design. However, due to the site-specific nature of both non-potable water demand and potential supply, these are necessarily broad. A latter section discusses some general design considerations for the coordinated use of surface water and groundwater.

Onsite reuse design and evaluation considerations include:

- Identifying possible uses for wastewater streams
- Matching water quality of source water to type of end use
- Choosing water treatment type, if needed
- Determining reliability/regularity of the non-potable source

Due to the widely varied circumstances of each site in regard to the proposed end use versus the source water, cost effectiveness evaluations are unique to each project. As a result, a feasibility study at the proposed site is recommended to determine cost implications and payback period.

Table 7-2: Water Quality Considerations for Alternative On-Site Sources of Water

Source	Sediment	TDS	Hardness	Organic (BOD)	Pathogens (A)	Other Considerations
Rainwater	1-2	1	1	1	1	None
Stormwater	3	?	1	2	2	Pesticides & fertilizers
Air conditioner condensate	1	1	1	1	2	May contain copper when coil cleaned
Pool filter backwash	3	2	2	1	2	Pool treatment chemicals
Cooling tower blowdown	2	3+	3	2	2	Cooling tower treatment chemicals
RO & NF reject water	1	3+	3	1	1	High salt content
Graywater	3	2	2	3	3	Detergents and bleach
On-site wastewater treatment	3	2	2	3+	3+	Human waste
Foundation drain water	1	?	?	2	2	Similar to stormwater

1 - Low level of concern
2 - Medium level; may need additional treatment depending on end use
3 - High concentrations are possible and additional treatment likely
? - Dependent on local conditions
(A) All water used indoors (e.g., toilet flushing) should be disinfected

**The use of pass-through cooling water is also a posssible source of on-site water, but should be discouraged because of its huge potential to waste water, despite providing a relatively pure source of water. For that reason, it is not included in this list.*

Source: HW (Bill) Hoffman & Associates, LLC

Regulations

In California, onsite non-potable reuse is regulated by the State Water Resources Control Board (SWRCB), the Clean Water Act (CWA) (33 U.S.C. §§ 1251 et seq.), the California Plumbing Code (CPC) (Cal. Code Regs. tit. 24, § 5) and, in the absence of local treatment requirements, the NSF/ANSI Standard 3501. For information on regulations in other states, visit the EPA's Regulations and End-Use Specifications Explorer (REUSExplorer).

In 2018, California Senate Bill 966 was passed, requiring the California State Water Resources Control Board (SWRCB) to develop uniform water quality standards for onsite treatment and reuse of water. The bill also required that municipalities establish local programs to comply with the state's new standards. The bill "prohibits an onsite treated non-potable water system from being installed except under a program established by a local jurisdiction in compliance with the bill's provisions.[1]"

1 *https://pacinst.org/wp-content/uploads/2021/01/Role-of-Onsite-Water-in-Silicon-Valley-Jan-2021.pdf*

Table 7-3: NSF/ANSI 350 and 350-1 On-Site Water Reuse Systems

	NSF/ANSI 350 for Above Ground And Sub-Surface Use	NSF/ANSI 350-1 for Sub-Surface Discharge Only
Building Types	Single family residential up to 1,500 gallons per day / Commercial all above 1,500 plus all commercial laundry water	Single family residential up to 1,500 gallons per day / Commercial all above 1,500 plus all commercial laundry water
Influent Types	Black water, graywater, bathing water only, and laundry water	Black water, graywater, bathing water only, and laundry water
End Uses	Non-potable application such as irrigation and toilet and urinal flushing	Subsurface irrigation only

Table 7-4: Nonpotable Water System Water Quality Requirements

Recycled Water Class/Category	Source Water Type	Water Quality Parameter	Specification	Sampling/ Monitoring Requirements
Onsite treated non-potable graywater systems (toilet & urinal flushing, above/below ground irrigation, trap primers)	Graywater	The minimum water quality for onsite treated non-potable graywater systems shall meet the applicable water quality requirements for the intended applications as determined by the public health authority having jurisdiction. In the absence of local water quality requirements, the requirements of ANSI/NSF 350 shall apply.		
Harvested Rainwater	E. coli	<100 CFU/100mL	Water quality should be tested every 12 months or after system renovation or repair	
	Turbidity	<10 NTU		

This development resulted in updated CPC regulations. Table 7-3 summarizes the results.

Please note the following exceptions to the summarized water quality guidelines, excerpted from the CPC:

- Untreated graywater systems that are used exclusively for subsurface irrigation that are regulated by Chapter 15 (commencing with Section 1501.0) of the California Plumbing Code (Part 5 of Title 24 of the California Code of Regulations).
- Untreated rainwater systems that are used exclusively for surface, subsurface, or drip irrigation that are regulated by Chapter 16 (commencing with Section 1601.0) of the California Plumbing Code (Part 5 of Title 24 of the California Code of Regulations)."

Rainwater catchment system components

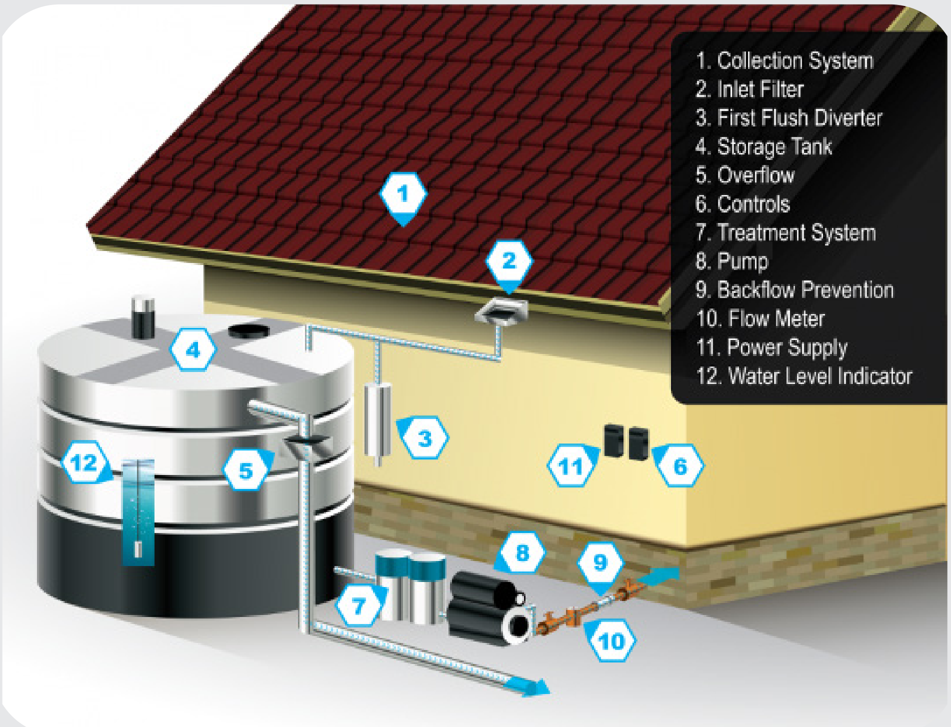

Image source: www.energy.gov - Federal Energy Management Program

The type of roof surface impacts the quality of the rainwater runoff.

For the highest quality rainwater, especially if the water is to be used for in-building uses such as flushing toilets and urinals, harvesting should ideally employ smooth metal roofs and non-toxic, non-leaching surface finishes.

Gutter design should employ at least a 1 percent slope and route water to a central collection point for transfer to a cistern or storage tank. The system will need a "first-flush diverter" to minimize the debris and waste or debris of any kind from the roof surface that enters the cistern.

Rainwater Harvesting

Rainwater harvesting captures, diverts, and stores rainwater from rooftops for later use[2]. The California regulations Cal. Code Regs. tit. 24, § 5, also known as the California Plumbing Code, defines the following approved onsite non-potable reuse applications for the use of harvested rainwater:

- Toilet and urinal flushing
- Clothes washing
- Ornamental fountains and other water features
- Cooling tower make-up water
- Car washing
- Surface, subsurface, and drip irrigation
- Spray irrigation

Facilities with large areas of impervious roof cover can capture runoff and use the water for various non-potable purposes with little treatment. This section deals with methods available to facilities that capture water from their roofs. Harvested rainwater can also be combined with air-conditioner condensate, the next option.

For rainwater destined for landscape watering, additional consideration should be given to diverting water directly into landscaped areas, with swales and berms to capture and direct the flow.

Care must be taken in designing such landscape rainwater harvesting to avoid long-term pooling of water and creation of potential insect vectors.

The following illustration shows the basic components of most commercial-scale rainwater catchment systems:

Costs are considerably lower for systems which do not include tanks or cisterns, such as rain gardens and bio swales. These designs slow the water down to allow it to percolate into the landscape and provide additional stormwater runoff reduction benefits as well.

Approximately 0.62 gallons of water can be collected per square foot of collection surface per inch of rainfall. In practice, however, most installers assume an efficiency of 80% (percent). Some rainwater will always be lost to the first flush, evaporation from the roof surface, or splash-out from the gutters. Rough collection surfaces are also less efficient at conveying water, and water captured in pore spaces is lost to evaporation.

2 *https://www.energy.gov/femp/rainwater-harvesting-systems-technology-review*

In California, onsite treatment of stormwater for reuse is only permitted for outdoor irrigation.

The inability of the system to capture all water during heavy storms also affects practicable efficiency. For instance, spillage may occur if the flow-through capacity of a filter-type first flush is exceeded, and overflow rainwater can be lost after storage tanks are full if a raingarden or bioswale is not designed downstream of the overflow. Therefore, special consideration should be given to the size of storage tanks, how often they will be used, and where overflow will be directed to.

The use of rainwater collection systems, also referred to as cisterns, is most practical in regions with periodic precipitation throughout a plant's growing season. However, in regions such as California where rainfall is restricted to a few months out of the year, cistern storage is still possible with careful planning and system design. If capturing enough water to last the dry season is the goal, sites and budgets that can accommodate large storage capacities are ideal. This storage capacity will also need some space within the building that is protected, therefore, a large cistern may not be feasible. However, if the rainwater harvesting system is included as part a wholistic portfolio of water sources for a given industrial process or irrigation end point, it can still make up a valuable portion of the water conservation portfolio even without meeting an entire dry season's water use needs.

The American Rainwater Collection Systems Association (ARCSA) is a source of much useful information on rainwater harvesting. Visit [arcsa.org.](arcsa.org)

Calculations

Annual production potential:

Gallons = roof area (sq. ft.) x annual precipitation (in.) × (0.62 x 0.8)

Required annual storage capacity for the planned landscape should be determined as follows:

- Calculate the monthly water budget for the planned landscape using the water budget calculations in the section, "Landscape Irrigation Efficiency."
- Estimate the monthly average rainfall quantities that could be harvested, based upon roof area and rainfall for the location.
- Estimate the amount of rainwater storage that would be cost-effective to construct, based upon monthly inflows from rainfall and outflows based upon the landscape water budget.
- This calculation assumes that 20% of rainwater will be lost to evaporation, roof washing and other losses.

Rainwater Harvesting Regulations Map

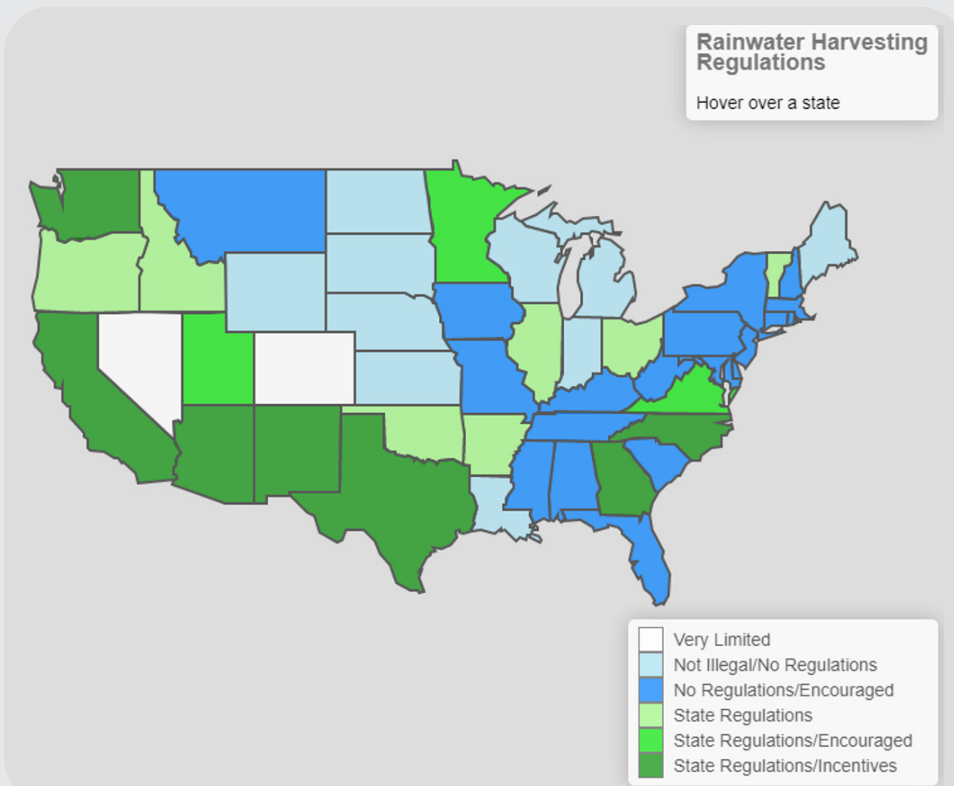

Image source: www.energy.gov - Federal Energy Management Program

Recommendations

- Examine the statutes in your area. In California, see the [California Plumbing Code, Chapter 16: Non-Potable Rainwater Catchment Systems] and [Cal. Code Regs. tit. 24, § 5]
- Use the [American Rainwater Catchment Systems (ARCSA)] technical materials as a quide
- Examine the [International Association of Plumbing and Mechanical Officials (IAPMO) Uniform Plumbing Code] section on alternate sources of water
- New commercial developments with more than 20,000 square feet of roof area to provide a preliminary feasibility study, including cost analysis, to determine whether rainwater harvesting is viable at the site.

Stormwater

Stormwater is commonly differentiated from rainwater as being precipitation that reaches the ground and drains to a low point or storm drain. Because of the contact with surfaces such as roadways and pavement, which present greater likelihood of contamination, stormwater tends to require greater treatment than rainwater.[3] According to the California State Water Resources Control Board (State Water Board), "capturing and using urban stormwater as a resource provides multiple benefits such as offsetting drought related impacts through additional groundwater recharge and aquifer storage, mitigating pollution of stormwater, creating green and open spaces, enhancing fish and wildlife habitat, supporting watershed processes, and improving water use efficiency while mitigating the adverse effects of flood flows.[4]" Other benefits can include reducing strain on sewer systems during large rain events, especially in areas with combined sewer systems.

As of the time of publication, in California, onsite treatment of stormwater for reuse is only permitted for outdoor irrigation. The State Water Board is still in the process of drafting and adopting regulations for risk-based water quality standards for onsite treatment and reuse of non-potable water for non-potable end uses in multifamily residential, commercial, and mixed-use buildings.[5] Tentatively slated for acceptance in 2025, these regulations will likely increase the opportunities for CII-scale onsite stormwater capture and reuse.

Stormwater capture and landscape irrigation reuse opportunities can be examined during the planning stages of new construction, when stormwater systems are being

Multi-Benefits of Stormwater Capture and Use

Image source: Federal Environmental Protection Agency - [Link here]

3 *https://watereuse.org/educate/types-of-reuse/stormwater-reuse/*

4 *https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/California-Water-Plan/Docs/Update2023/PRD/RMS/Draft-Urban-Stormwater-Runoff-Capture-and-Management-RMS.pdf*

5 *https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/onsite_nonpotable_reuse_regulations.html*

designed[6], or during a retrofit project process. The overall concept is to keep the rain on the site where it falls to the maximum extent possible. The water captured and held can displace part or all of the potable water otherwise used for irrigation and can optimize groundwater infiltration, water quality, and slow-release augmentation of local streams

Stormwater capture and reuse can look like:

- Storage in the soil profile
- Capture in onsite features, such as berms, swales, rain gardens, or terraces
- Capture in a detention structure, such as a pond, from which it can be pumped back to the landscape
- Green infrastructure, such as rain gardens, planter boxes, permeable landscape

Recommendations

- Include capture in on-site features, such as berms, swales, rain gardens, or terraces, and the use of soil as a water-storage medium jointly in the design of landscape and stormwater facilities
- Create and build green infrastructure where possible
- Examine the statutes in your area. In California, see the [Cal. Code Regs. tit. 24, § 5]
- Examine the potential of captured and stored stormwater along with other on-site water sources
- Additional resources:
  - SFPUC On-site Reuse Handbook
  - SFPUC On-Site Reuse webpage
  - EPA Water Reuse resource webpage
    - Water reuse case studies/success stories
  - CA Waterboards Stormwater Storymap

US Dept of Energy's Condensate Capture Potential Map

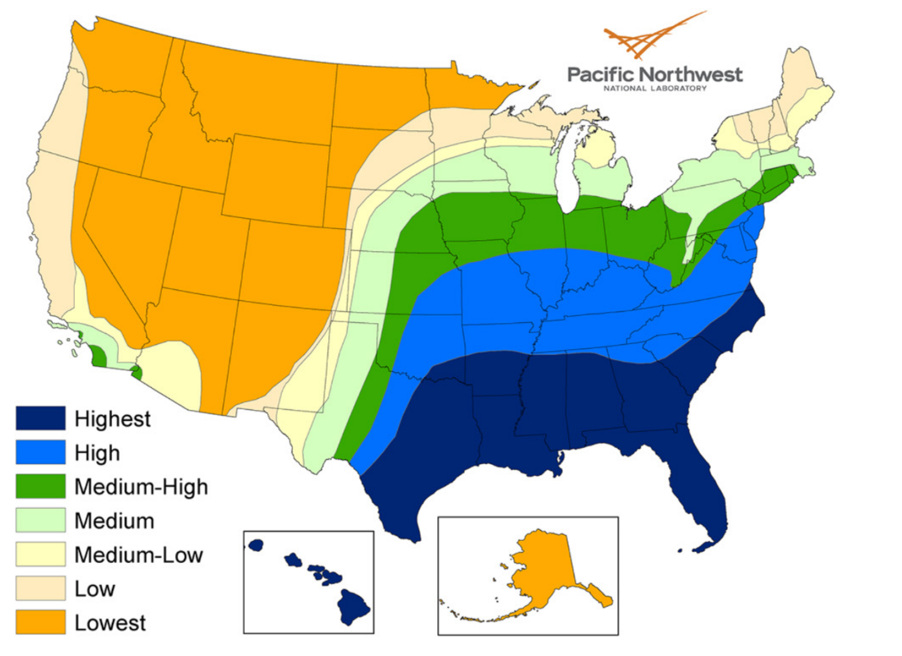

Image source: www.energy.gov/femp/condensate-capture-potential-map

Air Conditioner Condensate

Water condenses on air-handling units (AHUs) and cooling coils when humid air contacts these cool surfaces. A large amount of condensate can form on cooling equipment in areas with hot, humid summers such as the southeastern United States. Water that collects on the AHUs and cooling coils must be drained to prevent damage to the equipment or the building from water buildup. Typically, the condensate is collected in a central location and discharged to a sewer drain. In a condensate capturing system, the condensate is directed to a central storage tank or basin and then distributed for reuse6.

Captured condensate recovery water can be used as make-up water for cooling towers. Due to its relatively good water quality, it will generally not decrease cycles of concentration achievable in cooling towers.[7] Condensate can also be used for irrigation and other non-potable uses. `If it is used for landscape irrigation, provisions may have to be made to divert water collected during coil cleaning to the sewer, if copper concentrations would be of concern.

Readers interested in estimating the recovery potential of HVAC condensate at their site can consult Building Green's Revised Air Conditioner Condensate Calculator.

6 *https://www.epa.gov/npdes/stormwater-planning*
7 *https://www.energy.gov/femp/condensate-capture-potential-map*

The potential volume of condensate recovery varies by region and is based on local climate conditions of a given city. The condensate capture potential illustrated below may also vary due to local annual weather patterns. Additional factors to consider when assessing the potential for condensate capture can include:

- Size of cooling system: Larger systems can potentially produce more condensate (depending on cooling system operation).
- Cooling system operation: Hours of operation and temperature set points will influence total hours of operation and condensate production.

Recommendations

- Download the free condensate estimator from Building Green.
- Commercial sites with more than 100-tons of air-conditioning must examine the feasibility of diverting all condensate drain water to a common point where it could easily be captured.
- If necessary in your jurisdiction, help change regulations that require condensate to be discharged into a sewer to allow for other alternative uses.

Foundation Drain Water

Foundation drain water, another potential source on large commercial campuses, can be captured to preserve foundation integrity. End uses can range from non-potable irrigation systems, to leach field distribution, to other creative solutions that vary with the water needs of adjacent structures and landscapes.

Foundation Drain Water Storage and Treatment Infrastructure Mid-Installation

Image source: San Francisco Public Utilities Commission

Drain water can originate from a variety of sources, including subsurface waterways, or groundwater. Following is a case study of a creative solution to recover over 30 million gallons of groundwater intruding each year into a local subway system. The groundwater was able to be redirected into a steam plant that serves a large portion of San Francisco's downtown commercial buildings.

Subway Groundwater Intrusion Solution

This water reclamation project required collaboration between the City of San Francisco Public Utilities Commission (SFPUC), the local subway operator SFMTA, and Cordia, an energy solutions company that manages a large, centralized steam plant in downtown San Francisco. This steam plant serves approximately 180 customers for space heating, domestic hot water, air conditioning, and industrial process use.

The project included constructing a system that transported groundwater from the Powell Street Station to the Cordia plant via a newly installed underground pipeline, then treated to boiler-grade levels of purity — a much higher standard than regular drinking water. For the new system to be successful, it needed multiple steps of purification to remove trash, dirt, biologicals, minerals, and chemicals. It also required the use of an advanced front-end filtration plant, which integrates with the existing water softening equipment at the steam plant, and a new and innovative reverse osmosis (RO) treatment system. This project reduced the steam plant's domestic water use by 30%.

Recommendations

- Sites that require the use of a foundation drain should provide a feasibility summary study of how the sources might be used.

Cooling Tower Blowdown

Evaluate the feasibility of reusing cooling-tower blowdown water for another purpose, such as diversion for compressors, vacuum pumps, and other equipment with water-cooled air-condenser units. A detailed analysis is beyond the scope of this section, but any such project should be closely coordinated with local stormwater and water-quality officials, since the type of cooling-tower water treatment will determine the quality of the blowdown water. Using blowdown water may offer a classic example of tradeoffs. Often, achieving the maximum numbers of cycles of concentration is a primary goal of cooling tower management. In some cases, however, if the need for irrigation water (or other desired end-use) exceeds blowdown volumes at the site, the designer may wish to consider reducing the cycles of concentration and, instead, choose treatment that will produce blowdown suited for irrigation purposes. This also avoids water-quality problems for streams receiving runoff from the property. The net benefits of using blowdown are that it makes use of all the water entering the tower, displaces potable water use for irrigation, and eliminates wastewater discharge from the tower. One benefit of diverting cooling-tower blowdown for reuse in other areas is the possibility of reducing wastewater costs, such as [EBMUD's Estimation of Wastewater Volume Permit Application](). Check with your local water agency or municipality for more details.

Layout of the New Groundwater Transport System

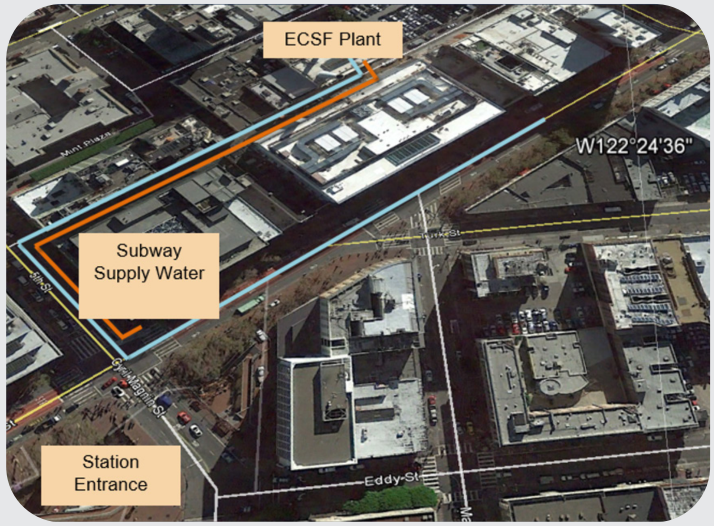

Image source: Cordia

Pipeline Components of the New Groundwater Transport System

Image source: San Francisco Public Utilities Commission

ECSF Projected Water Cost Improvement with Ground and Well Water 2018-2024

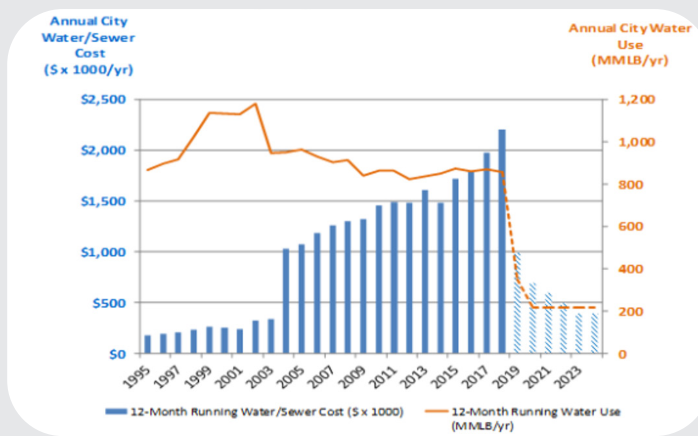

Image source: Cordia

Schematic of the Groundwater Treatment Process

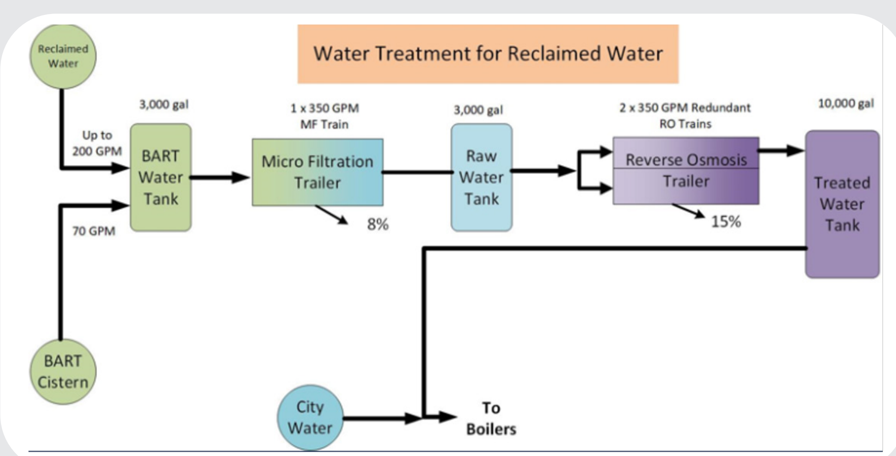

Image source: Cordia

Another option is to use nanofiltration or reverse osmosis to treat tower make-up water so that extremely high cycles of concentration can be achieved. Reject water can then be used for irrigation.

Figure 7-1 shows how indoor and outdoor water use varies for facilities in Texas. This breakdown will be different for every area in the United States. What the figure shows is that outdoor uses can be significant.

Recommendations

- New projects that employ filtration and membrane processes should provide a feasibility summary study of how these sources might be used.

Onsite Treatment of Graywater and Wastewater

Graywater is defined in California law as "untreated wastewater which has not come into contact with toilet waste. Graywater includes wastewater from bathtubs, showers, bathroom wash basins, clothes-washing machines, and laundry tubs, or an equivalent discharge as approved by the Administrative Authority. It also does not include wastewater from kitchen sinks, photo-lab sinks, dishwashers, or laundry water from soiled diapers," in Title 24 section 5 of the Code. The use of gray water or on-site treatment of wastewater for onsite reuse requires a project-by-project analysis and is beyond the scope of this document. However, many commercial projects have employed technologies ranging from simply using septic tanks and near-surface dosing of the effluent for subsurface irrigation to the installation of full-capacity wastewater-treatment plants, followed by conventional landscape irrigation. Another example is treating effluent to a quality sufficient for toilet and urinal flushing.

As an example, the 250-unit Solaire Apartments in Battery Park was a private-public partnership and is the first "green" residential high-rise building that incorporates advanced materials, energy conservation, and water reuse in an urban setting. The Solaire Apartments selected the ZENON Membrane Solutions proprietary ZeeWeed MBR (membrane bioreactor) process to treat, store, and reuse wastewater for toilet flushing, irrigation, and cooling towers. This approach reduces the fresh water taken from the city's water supply by more than 75 percent and significantly decreases energy costs, since less drinking water is pumped from the city's treatment plant and wastewater is not transferred to the city's wastewater treatment system. The system is the first on-site water-recycling system in the U.S. built inside a multi-family, residential building.

Gray water from wash basins, bathing and showers, and laundry operations has also been considered. Graywater generally does not contain fecal matter and, thus, can more easily be treated and reused on-site. Gray water requires simple filtration to remove suspended particles and, when stored, requires only treatments such as chlorination for odor or aeration for nutrients in the water.

A primary concern is to involve health department, code enforcement, and stormwater quality officials in the design and development of any project to ensure that all applicable environmental concerns are taken into account, that appropriate technologies are employed, and that regulations are met.

Recommendations

- Consult local regulations for design considerations. In California, that is the California Plumbing Code, Chapter: Alternate Water Sources for Non-Potable Applications

Figure 7-1: How Water is Used in Texas Facilities with Cooling Towers

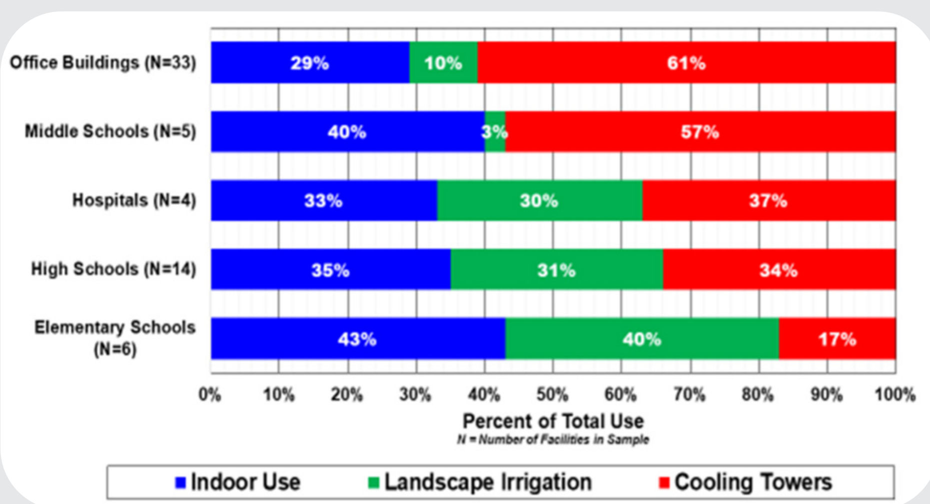

Image source: HW (Bill) Hoffman & Associates, LLC

Combining Multiple Alternative Sources

Plumbing of rainwater, gray water, drain water, and blowdown from various sources to common end uses, like landscape irrigation, or non-potable indoor uses, such as toilet flushing, is not common, but is recommended. Cost effectiveness of such "hybrid" systems is improved by diversifying the sources of water and improving the consistency of water availability, since rainfall episodes, often the largest and most significant single source of water, are sometimes separated by long dry periods.

Recommendations

- Clarify in local ordinances the specific plumbing uses of alternative sources of water and their relationships to the potable water system.
- Consult the EPA's Water Reuse Resource Hub by End-Use Application for more information

Resources

1. US EPA, Onsite Collected Waters for Potable Water Reuse
https://www.epa.gov/waterreuse/california-onsite-collected-waters-potable-water-reuse
2. US EPA, Onsite Non-Potable Water Reuse Research
https://www.epa.gov/water-research/onsite-non-potable-water-reuse-research
3. US EPA, Stormwater Management Practices at EPA Facilities
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12. US Environmental Protection Agency, A Case for Stormwater Capture and Reuse
https://www.epa.gov/system/files/documents/2022-03/wrap-pure-potential-report.pdf
13. US Department of Energy Sstatus of rainwater harvesting regulations and incentives in the United States
https://www.energy.gov/eere/femp/rainwater-harvesting-regulations-map
14. Greywater Action- for a Sustainable Water Culture, Map of States where Graywater is Allowed
https://greywateraction.org/greywater-codes-and-policy/
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