

# **League of California Cities City Attorneys' Conference**

May 4, 2018  
San Diego, CA

## **Municipal Water Reuse In An Increasing Complex Regulatory Environment**

Prepared by

Stephanie Hastings  
Dylan Johnson  
Brownstein Hyatt Farber Schreck, LLP  
1020 State Street  
Santa Barbara, CA 93101  
[SHastings@bhfs.com](mailto:SHastings@bhfs.com)  
[DJohnson@bhfs.com](mailto:DJohnson@bhfs.com)

*This paper summarizes the key regulatory framework for the discharge of wastewater and the delivery and use of recycled water as of March 1, 2018. It also identifies emerging issues in this area. The law regarding recycled water is rapidly evolving. Potential changes in the law are noted throughout this document. Attorneys should confirm the accuracy of the law at the time of consideration and perform an independent evaluation of the issues raised in this paper. Neither this paper, nor its contents, is offered as or intended to be legal advice.*

## **TABLE OF CONTENTS**

I.	SUMMARY OF REGULATORY FRAMEWORK.....	1
A.	Key Statutes/Regulations .....	1
B.	Primary Regulatory Agencies .....	1
1.	State Water Resources Control Board (SWRCB).....	1
a.	Division of Drinking Water (DDW) .....	1
b.	Division of Financial Assistance (DFA).....	2
c.	Division of Water Rights .....	2
2.	RWQCB.....	2
II.	REGULATION OF WASTEWATER DISCHARGES.....	2
A.	Statutes .....	2
B.	Permits .....	2
C.	Regulations .....	3
III.	REGULATION OF WATER RECYCLING.....	4
A.	State Policy Promoting Use Of Recycled Water .....	4
1.	Proposed Amendments .....	5
B.	Statutes Governing Water Recycling.....	6
C.	Permitting.....	7
1.	General Permits.....	7
2.	Individual Permits .....	8
a.	Individual Water Recycling Requirements .....	8
b.	Master Recycling Permits .....	9
D.	Regulations .....	9
1.	Uniform Statewide Recycling Criteria.....	9
2.	Model Water Efficient Landscape Ordinance.....	10
3.	Potential Changes in the Law .....	11
E.	Permitted Recycled Water Uses.....	11
1.	Direct Non-Potable Use .....	11
a.	Sample Project(s) .....	12
2.	Indirect Potable Use .....	12
a.	Sample Project(s) .....	12
3.	Use of Recycled Water For Augmentation of Surface Water Supplies.....	13
a.	Sample Project(s) .....	13
IV.	CHANGES IN USE OF TREATED WASTEWATER .....	14
A.	Water Code Section 1211 .....	14
B.	Change Petition Process.....	14
C.	Proposed Amendments .....	15
V.	FUNDING.....	15
A.	The Safe Drinking Water, Clean Water, Watershed Protection, and Flood Protection Act .....	16
B.	The Water Quality, Supply, and Infrastructure Improvement Act of 2014 .....	16
C.	Clean Water State Revolving Fund.....	16
D.	Title XVI.....	16
VI.	EMERGING ISSUES .....	17

A.	Challenges/Litigation Risks .....	17
B.	Direct Potable Reuse (DPR) .....	18
1.	Raw Water Augmentation.....	18
2.	Treated Drinking Water Augmentation .....	19
3.	Sample Project(s).....	19
C.	Onsite Non-potable Systems.....	19
1.	Sample Project(s).....	20
2.	Proposed Legislation.....	20

## SUMMARY OF KEY TERMS<sup>1</sup>

**Antidegradation Policy:** State Water Resources Control Board (SWRCB) policy that applies to the disposal of waste to high-quality surface water and groundwater. This policy requires that the quality of existing high-quality water be maintained unless the State finds that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water, and will not result in water quality less than that prescribed in policies as of the date on which such policies became effective. (SWRCB Resolution 68-16.)

**Master Recycling Permit (MRP):** As an alternative to issuing WRRs, a Regional Water Quality Control Board may issue an MRP to a supplier or distributor of recycled water. Like WRRs, an MRP prescribes the conditions and requirements related to the treatment and use of recycled water.

**National Pollutant Discharge Elimination System (NPDES) permit:** NPDES permits prescribe conditions and requirements for the discharge of pollutants to waters of the U.S. The Clean Water Act provides that no person may discharge pollutants through a point source (discrete conveyance such as a pipe) without first obtaining an NPDES permit.

**Recycled water:** “water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefore considered a valuable resource.” (Wat. Code § 13050(n).) A form of water reuse that includes primary, secondary and tertiary treatment of wastewater to produce water suitable for a variety of non-potable applications, most notably for landscaping irrigation and industrial uses. Recycled water is synonymous with “reclaimed water,” “Title 22 Water” (water that conforms to the Uniform Statewide Recycling Criteria), and “treated wastewater.”

**Policy for Water Quality Control for Recycled Water (Recycled Water Policy):** SWRCB policy to increase the use of recycled water from municipal wastewater sources in a manner that implements state and federal water quality laws. (SWRCB Resolution 2013-0003 (Effective April 25, 2013).)

**Uniform Statewide Recycling Criteria:** Regulations implementing the Water Recycling Law (See Wat. Code § 13521 *et seq.*). The Uniform Statewide Recycling Criteria establish permissible uses for recycled water, along with treatment, control, monitoring, reporting, engineering and operational requirements applicable to producers, providers and users. (22 CCR § 60301 *et seq.*)

**Wastewater:** Sewage that comes from homes, industry or businesses and which is collected and treated at wastewater treatment plants; needed for water reuse.

**Waste Discharge Requirements (WDRs):** WDRs prescribe conditions and requirements for the discharge of waste that could affect the quality of the waters of the state. No person may discharge waste without obtaining WDRs. In some instances, WDRs also serve as an NPDES permit. WDRs are typically issued by the RWQCBs.

**Water Reclamation Requirements (WRRs):** WRRs prescribe conditions and requirements related to the treatment and use of recycled water. No person may recycle water or use recycled water for any purpose without obtaining WRRs. WRRs are typically issued by the RWQCBs.

---

<sup>1</sup> Key terms and all defined terms are bolded throughout.

## I. SUMMARY OF REGULATORY FRAMEWORK

### A. Key Statutes/Regulations

The discharge of waste to waters of the state, including surface water and groundwater, is regulated by the Porter-Cologne Water Quality Control Act. Recycled water in California is regulated by the State through the Health and Safety Code, the Water Code, the Government Code, the Public Resources Code, the Public Utilities Code, and Titles 17 and 22 of the California Code of Regulations.<sup>2</sup>

### B. Primary Regulatory Agencies<sup>3</sup>

#### 1. State Water Resources Control Board (SWRCB)

The SWRCB establishes general policies governing the permitting of recycled water projects consistent with its role of protecting water quality and allocating water supplies. The SWRCB:

- establishes the **Uniform Statewide Recycling Criteria**;<sup>4</sup>
- develops general **water reclamation requirements (WRRs)** for production and use of recycled water;
- develops a general permit for irrigation uses of recycled water; exercises general oversight over recycled water projects, including review of **Regional Water Quality Control Board (RWQCB)** permitting practices;
- leads the effort to meet the state's recycled water use goals; and
- provides financial assistance to local agencies for recycled water projects.

The Uniform Statewide Recycling Criteria (22 CCR § 60301 *et seq.*) address:

- allowable uses of recycled water based on treatment categories and potential for human contact,
- infrastructure and other delivery requirements, including the use of purple pipes,
- operational requirements, including monitoring and reporting requirements, and
- protection of water supply.

#### a. Division of Drinking Water (DDW)

The DDW has statewide responsibility for protecting public health with respect to the use and application of recycled water. The DDW establishes statewide recycling criteria based on water

---

<sup>2</sup> The SWRCB has compiled all statutes and regulations relating to recycled water in the following documents: SWRCB, Recycled Water-Related Statutes (last updated Jan. 13, 2017) and SWRCB, Recycled Water-Related Regulations (last updated July 16, 2015), available at:

[https://www.waterboards.ca.gov/drinking\\_water/certlic/drinkingwater/Lawbook.html](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Lawbook.html) (last visited March 20, 2018).

<sup>3</sup> Other agencies with some role in the regulation of the use of recycled water include: the Department of Water Resources, the Public Utilities Commission, the Department of Housing and Community Development, and the Building Standards Commission.

<sup>4</sup> Previously, the Department of Public Health had this responsibility. In 2014, the Legislature transferred responsibility for adopting water recycling criteria to the SWRCB. (Wat. Code § 174(b); Health & Saf. Code § 116271.)

source and quality, and specifies sufficient treatment based on intended use and human exposure. (Wat. Code § 13521.)

b. Division of Financial Assistance (DFA)

The DFA administers the implementation of SWRCB financial assistance programs that include loan and grant funding for construction of municipal sewage and water recycling facilities.

c. Division of Water Rights

The Division of Water Rights oversees changes in water rights, including changes in the place of use, point of diversion and discharge of treated wastewater. (Wat. Code § 1210 *et seq.*)

2. RWQCB

The RWQCBs regulate the treatment and discharge of wastewater and the subsequent re-use (or recycling) of wastewater for beneficial purposes. The Water Recycling Law directs the state's nine RWQCBs to establish requirements for the use of recycled water that are in conformance with the Uniform Statewide Recycling Criteria to protect the public health, safety, or welfare. (Wat. Code § 13523.)

RWQCBs are empowered to issue three types of permits relevant to recycled water: **waste discharge requirements (WDR)** for the discharge of treated wastewater into receiving waters, WRRs and **master recycling permits (MRP)** for the re-use of treated wastewater.

## II. REGULATION OF WASTEWATER DISCHARGES

### A. Statutes

The Porter-Cologne Water Quality Control Act (Wat. Code §§ 13000–16104) regulates the discharge of wastewater, including recycled water, to waters of the state to protect the use and enjoyment by the people of the state. The SWRCB and RWQCBs are the principal state agencies with responsibility for the control of water quality. (Wat. Code § 13001.) The Clean Water Act (33 USC § 1251 *et seq.*) regulates the discharge of pollutants to waters of the U.S. The authority to issue **National Pollutant Discharge Elimination System (NPDES)** permits pursuant to the Clean Water Act for discharges to waters of the U.S. has been delegated to the SWRCB and RWQCBs.<sup>5</sup>

### B. Permits

Any person proposing to discharge waste water that could affect the quality of waters of the state, including surface water and groundwater (other than into a community sewer system), must file with the appropriate RWQCB a report of waste discharge in order to obtain WDRs. (Wat. Code § 13260(a)(1).) When the discharge would affect waters of the U.S., WDRs also serve as an NPDES permit.

---

<sup>5</sup> SWRCB, National Pollutant Discharge Elimination System (NPDES) – Wastewater, available at: [https://www.waterboards.ca.gov/water\\_issues/programs/npdes/](https://www.waterboards.ca.gov/water_issues/programs/npdes/) (last visited April 9, 2018).

A report must also be filed for “any material change or proposed change in the character, location, or volume of the discharge.” (Wat. Code § 13260(c).) Since the use of recycled water necessarily involves the discharge of wastewater that may affect waters of the state, permitting recycled water production, distribution and use requires compliance with the WDRs requirements. Failure to file a report of waste discharge can result in civil or criminal liability. (Wat. Code § 13261.)

The WDRs requirements are set forth in Water Code §§ 13260–13276. WDRs “shall implement any relevant water quality control plans that have been adopted, and shall take into consideration the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance....” (Wat. Code § 13263.)

WDRs typically contain discharge prohibitions, management plan requirements, and water quality monitoring and reporting requirements. (See Wat. Code § 13267(b)(1).) If the WDRs also serve as a NPDES permit, it will include effluent limitations that establish numeric limitations for discharges of specified parameters (pollutants). (33 USC § 1311.) WDRs/NPDES permits require compliance with effluent water limitations through implementation of Best Available Technology Economically Achievable and Best Conventional Pollutant Control Technology. WDRs/NPDES permits typically also include receiving water limitations that establish maximum limits for specified pollutants in the water into which the permittee discharges.

The SWRCB or a RWQCB may prescribe general WDRs for a category of discharges if the board finds that: (1) the discharges are produced by the same or similar operations, (2) the discharges involve the same or similar types of waste, (3) the discharges require the same or similar treatment standards, and (4) the discharges are more appropriately regulated under general discharge requirements than individual discharge requirements. (Wat. Code § 13263(i).) When a board has established general WDRs, a prospective permittee enrolls under the permit by filing a Notice of Intent. Prior to the adoption of the WRRs General Order (discussed below), recycled water was permitted through a WDRs General Order (Order WQ 2014-0090-DWQ).

Unless requested by a RWQCB, a report of waste discharge need not be filed by a user of recycled water that is being supplied by a supplier for whom an MRP has been issued. (Wat. Code § 13260.)

### **C. Regulations**

Title 23, Division 3, Section 9 of the California Code of Regulations sets forth additional requirements for filing reports of waste discharge and processing and specifications for WDRs.

WDRs must ensure that all discharges of waste are consistent with state’s **Antidegradation Policy** (SWRCB Resolution No. 68-16), adopted in accordance with federal law under Title 40, Chapter I, Subchap. D, Part 131, Subpart B, section 131.12 of the Code of Federal Regulations. The Antidegradation Policy requires that existing quality of waters be maintained unless it has been demonstrated to the state that any change will be consistent with the maximum benefit to the people of the state, will not unreasonably affect present and anticipated beneficial use of the water, and will not result in water quality less than that prescribed in the policies.

The Antidegradation Policy requires that any activity that produces a waste or increased volume or concentration of waste and discharges to existing high quality waters will be required to meet WDRs that will result in the best practicable treatment or control of the discharge necessary to assure pollution or nuisance will not occur, and the highest water quality consistent with the maximum benefit to the people of the State will be maintained.

### **III. REGULATION OF WATER RECYCLING**

#### **A. State Policy Promoting Use Of Recycled Water**

California law encourages the use of recycled water because it maximizes the beneficial use of the state's water resources (see Cal. Const. Art. X, § 2; Wat. Code § 100; see also Wat. Code § 275).<sup>6</sup> Specifically:

- The Legislature has “declared that the primary interest of the people of the state in the conservation of all available water resources requires the maximum reuse of reclaimed water in the satisfaction of requirements for beneficial uses of water.” (Wat. Code § 461.)
- “It is hereby declared that the people of the state have a primary interest in the development of facilities to recycle water containing waste to supplement existing surface and underground water supplies and to assist in meeting the future water requirements of the state.” (Wat. Code §13510.)
- “The Legislature finds and declares that a substantial portion of the future water requirements of this state may be economically met by beneficial use of recycled water. The Legislature further finds and declares that the utilization of recycled water by local communities for domestic, agricultural, industrial, recreational, and fish and wildlife purposes will contribute to the peace, health, safety and welfare of the people of the state.” (Wat. Code §13511.)
- “It is the intention of the Legislature that the state undertakes all possible steps to encourage development of water recycling facilities so that recycled water may be made available to help meet the growing water requirements of the state.” (Wat. Code §13512.)
- . . . . “The use of recycled water is a cost-effective, reliable method of helping to meet California's water supply needs. . . . Retail water suppliers and recycled water producers and wholesalers should promote the substitution of recycled water for potable water and imported water in order to maximize the appropriate cost-effective use of recycled water in California.” (Wat. Code §13576.)

In fact, the Legislature has declared that using potable water for numerous nonpotable uses, including, but not limited to, cemeteries, golf courses, parks, highway landscaped areas, and industrial and irrigation uses, “is a waste and unreasonable use of water within the meaning of Section 2 of Article X of the California Constitution” when recycled water meeting specified requirements is available to the user. (See Wat. Code § 13550.)

---

<sup>6</sup> “It is hereby declared that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare. . . .” (Cal. Const., Art. X, § 2.)

In furtherance of this policy promoting the use of recycled water, the Legislature:

- established a statewide goal to recycle 700,000 acre-feet of water per year by the year 2000 and 1,000,000 acre-feet of water per year by the year 2010 (Wat. Code § 13529(e)).
- directed the SWRCB to “identify and report to the Legislature on opportunities for increasing the use of recycled water ... and identify constraints and impediments ... to increasing the use of recycled water” (Wat. Code § 13578).
- directed “retail water suppliers” (which includes public agencies providing retail water), to “identify potential uses for recycled water within their service areas, potential customers for recycled water service within their service areas, and, within a reasonable time, potential sources of recycled water” (Wat. Code § 13579).

In response to these directives, the SWRCB has adopted a **Policy for Water Quality Control for Recycled Water (Recycled Water Policy)**.<sup>7</sup> The purpose of the Recycled Water Policy is to increase the use of recycled water from municipal wastewater sources in a manner that implements state and federal water quality laws. It calls for the development of salt and nutrient plans for each basin and establishes requirements for control of incidental runoff, requirements for streamlined permitting for recycled water projects, and criteria for groundwater recharge projects.

As a component of the Recycled Water Policy, the SWRCB has adopted the goal of increasing the use of recycled water over 2002 levels by at least one million AFY by 2020 and by at least two million AFY by 2030. (Recycled Water Policy, Preamble.) To achieve this goal, the SWRCB has found that the use of recycled water that supports the sustainable use of groundwater and/or surface water, which is sufficiently treated so as not to adversely impact public health or the environment and which substitutes for use of potable water, is presumed to have a beneficial impact. (Recycled Water Policy, p. 3.) The SWRCB has also established a mandate to increase the use of recycled water in California by 200,000 AFY by 2020 and by an additional 300,000 AFY by 2030.

To date, California is far from meeting these mandated annual targets. According to the SWRCB’s and Department of Water Resources’ recent recycled water survey, the total increase in recycled water use between 2001-2015 was only 189,000 AF, lower than the SWRCB’s annual mandate over a 14 year period. Between 2009 and 2015, recycled water use increased by only 45,000 AF in total.<sup>8</sup>

#### 1. Proposed Amendments

In December 2016, the SWRCB adopted Resolution No. 2016-0061, which directed staff to reconvene the Science Advisory Panel to update its recommendations for monitoring Constituents of Emerging Concern in recycled water and update the Recycled Water Policy

---

<sup>7</sup> SWRCB Resolution 2013-0003, Policy for Water Quality Control for Recycled Water, Preamble (Effective April 25, 2013).

<sup>8</sup> California Recycled Water Use in 2015 (July 2017), available at: [https://www.waterboards.ca.gov/water\\_issues/programs/grants\\_loans/water\\_recycling/munirec.shtml](https://www.waterboards.ca.gov/water_issues/programs/grants_loans/water_recycling/munirec.shtml) (last visited March 20, 2018).



considering changes that have taken place since 2013. The draft amendment to the Recycled Water Policy is expected to be released for public comment in April 2018.<sup>9</sup>

## **B. Statutes Governing Water Recycling**

Water suppliers must provide recycled water for non-potable purposes when it is available. A person or public agency “shall not use water from any source of quality suitable for potable domestic use for nonpotable uses ... if suitable recycled water is available as provided in Section 13550.” (Wat. Code § 13551.) The SWRCB may order a party to use recycled water or to cease using potable water after notice and a hearing. (Wat. Code § 13550.)<sup>10</sup>

The **Water Recycling Law** (Wat. Code §§ 13500–13557) provides the primary statutory authority governing recycled water production and use. It includes policies calling for use of recycled water to supplement water supplies, authorization for the SWRCB to provide loans for development of reclamation facilities, mandates for establishing recycling criteria setting levels of constituents in recycled water to protect public health, and requirements for reporting and permitting recycled water use.

The **Water Recycling Act of 1991** (Wat. Code §§ 13575–13583) encourages retail water suppliers and customers of recycled water to enter into recycled water delivery agreements and, further, mandates the use of recycled water when available. Specifically:

- a “retail water supplier that has identified a potential use or customer ... may apply to a recycled water producer or recycled water wholesaler for a recycled water supply” (Wat. Code § 13580).
- “a customer may request, in writing, a retail water supplier to enter into an agreement or adopt recycled water rates in order to provide recycled water service to the customer” (Wat. Code § 13580.7(b)).
- a “retail water supplier that receives a request from a customer ... shall enter into an agreement to provide recycled water, if recycled water is available, or can be made available, to the retail water supplier for sale to the customer” (Wat. Code § 13580.5 (emphasis added)).

The law also provides procedures for dispute resolution (Wat. Code § 13581(a)) and appeal of a public agency’s failure to comply with these directives (Wat. Code § 13583).

The **Water Recycling in Landscaping Act** (Gov’t. Code § 65601 et seq.) provides that if any local public or private entity that produces recycled water determines that within 10 years it will provide recycled water within the boundaries of a city or county, it shall notify the city or county

---

<sup>9</sup> Recycled Water Policy, available at:

[https://www.waterboards.ca.gov/water\\_issues/programs/water\\_recycling\\_policy/](https://www.waterboards.ca.gov/water_issues/programs/water_recycling_policy/) (last visited March 20, 2018).

<sup>10</sup> See also Water Code §§ 13552.2–13554 (declaring the following uses of potable water a waste and unreasonable use when recycled water is available: residential landscaping; trap priming; cooling towers; air-conditioning devices; and toilet and urinal flushing in structures). Any public agency may require the use of recycled water for these uses, if recycled water is available to the user and meets the requirements set forth in Section 13550 and other specified requirements are met. See also Water Code §§ 32601–32602 (declaring uses for cemeteries, parks, highway landscaped areas, new industrial facilities, landscaped common areas of residential developments maintained by a homeowner’s association, and golf course irrigation is a waste and an unreasonable use.)

of that fact and shall identify in the notice the area that is eligible to receive the recycled water, and the necessary infrastructure that the recycled water producer (or retail water supplier) will provide to support delivery of the recycled water. (Gov't. Code § 65604.)

Within 180 days of notification that recycled water will be available, the city or county must adopt and enforce a recycled water ordinance. The ordinance must include provisions stating that (1) it is “the policy of the local agency that recycled water ... shall be used for nonpotable uses within the designated recycled water use area ... when the local agency determines that there is not an alternative higher or better use for the recycled water, its use is economically justified, and its use is financially and technically feasible for projects under consideration by the local agency; (2) designate the areas within the boundaries of the local agency that can or may in the future use recycled water, ...; (3) establish general rules and regulations governing the use and distribution of recycled water”; (4) “establish that the use of the recycled water is available in new industrial, commercial, or residential subdivisions located within the designated recycled water use areas for which a tentative map or parcel map is required”; and (5) “require a separate plumbing system to serve nonpotable uses in the common areas of the subdivision, including, but not limited to, golf courses, parks, greenbelts, landscaped streets, and landscaped medians.” (Gov't. Code § 65605.)

The Water Recycling in Landscaping Act also required the SWRCB to adopt a general permit for landscape irrigation uses of recycled water, which the SWRCB has done (see below). (Wat. Code § 13552.5(a).)

### C. Permitting

A water recycling project has three permitting options: (1) obtaining coverage under the SWRCB General WRRs, (2) obtaining individual WRRs/WDRs from the relevant RWQCB, or (3) obtaining an MRP from the relevant RWQCB.

#### 1. General Permits

On June 7, 2016, the SWRCB adopted a General Order establishing statewide WRRs entitled **Water Reclamation Requirements for Recycled Water Use (Order WQ 2016-0068-DDW) (General WRRs)**.<sup>11</sup> The General WRRs serves as a statewide permit authorizing beneficial, non-potable recycled water uses that are consistent with the Uniform Statewide Recycling Criteria (discussed below). An applicant who can meet the requirements to enroll under the General WRRs and whose proposed recycled water use complies with the statewide uniform criteria, may obtain permit coverage under the General WRRs to distribute and use recycled water (production facilities require separate individual permitting under individual WDRs/WRRs or an MRP). The General WRRs is the sole permit coverage required for any permittee enrolled under the order.

---

<sup>11</sup> Order WQ 2016-0068-DDW replaces and supersedes Order WQ 2014-0090-DWQ. (Order WQ 2016-0068-DDW, at p. 18 (providing WQ 2016-0068-DDW is rescinded except for enforcement purposes).) The General WRRs are available at: [https://www.waterboards.ca.gov/drinking\\_water/certlic/drinkingwater/requirements.shtml](https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/requirements.shtml) (last visited April 9, 2018).

The General WRRs contains prohibitions on certain uses, requirements for application of recycled water, engineering requirements for production and delivery of recycled water, inspection requirements, and monitoring and reporting requirements.

Producers, distributors, and users may seek coverage under the General WRRs for use of recycled water. An applicant obtains coverage by submitting a **Notice of Intent (NOI)** to enroll under the permit. Appendix A to the General WRRs sets forth the requirements for submitting an NOI. In general, the applicant must submit a description of the treatment, storage, and distribution facility (including a Title 22 engineering report under 22 CCR § 60323), a description of proposed use, description of the applicant's water recycling program, and a description of personnel organization and responsibilities.

An applicant may seek to enroll as an administrator of its recycled water program, in which case it has conditional authority to grant permits to users of the recycled water it provides and establish rules for recycled water use.

The SWRCB has also adopted a general order specific to use of municipal recycled water for landscape irrigation. (Order No. 2009-0006-DWQ, General Waste Discharge Requirements for Landscape Irrigation Uses of Municipal Recycled Water.)<sup>12</sup>

Additionally, some RWQCBs have adopted general orders applicable to distribution and use of recycled water within their region. (See, e.g., Los Angeles RWQCB Order No. R4-2009-0049, General Waste Discharge and Water Recycling Requirements for Title 22 Recycled Water for Non-Irrigation Uses Over the Groundwater Basins Underlying the Coastal Watersheds of Los Angeles and Ventura Counties;<sup>13</sup> Colorado River Basin RWQCB Order No. 97-700, General Waste Discharge Requirements for Discharge of Recycled Water for Golf Course and Landscape Irrigation.<sup>14</sup>) Like the SWRCB General WRRs, proponents of recycled water projects may seek permit coverage by submitting an NOI to the relevant RWQCB. However, in adopting the General WRRs, the SWRCB declared its intent that RWQCBs would terminate their general orders within three years and that permit coverage would be transferred to the General WRRs. (General WRRs, p. 15.)

## 2. Individual Permits

### a. Individual Water Recycling Requirements

Sections 13520–13557 of the Water Recycling Law provide the primary statutory authority for delivery and use of recycled water.

---

<sup>12</sup> The general order is available at:

[https://www.waterboards.ca.gov/water\\_issues/programs/water\\_recycling\\_policy/landscape\\_irrigation\\_general\\_perm\\_it.shtml](https://www.waterboards.ca.gov/water_issues/programs/water_recycling_policy/landscape_irrigation_general_perm_it.shtml) (last visited April 9, 2018).

<sup>13</sup> The general WDRs/WRRs is available at:

[https://www.waterboards.ca.gov/losangeles/board\\_decisions/adopted\\_orders/](https://www.waterboards.ca.gov/losangeles/board_decisions/adopted_orders/) (last visited April 9, 2018).

<sup>14</sup> The general WDRs is available at:

[https://www.waterboards.ca.gov/coloradoriver/board\\_decisions/adopted\\_orders/general\\_board\\_orders.html](https://www.waterboards.ca.gov/coloradoriver/board_decisions/adopted_orders/general_board_orders.html) (last visited April 9, 2018).

The law authorizes any public agency to “acquire, store, provide, sell, and deliver recycled water for any beneficial use, including, but not limited to, municipal, industrial, domestic, and irrigation uses, if the water use is in accordance with statewide recycling criteria and regulations established pursuant” to sections 13500–13557 of the Wat. Code (Water Reclamation). (Wat. Code § 13556.) There is a presumption that use of recycled water in accordance with the recycling criteria does not cause, constitute, or contribute to, any form of contamination. (Wat. Code § 13522.)

Similar to the requirement to file a report of waste discharge, any person producing or using recycled water, or making a change in the character of recycled water or its use, must file with the appropriate RWQCB a report containing information required by the board. (Wat. Code § 13522.5.) The RWQCBs may prescribe WRRs for recycled water production and use. (Wat. Code § 13523.) No person may recycle water or use recycled water until requirements have been established. (Wat. Code § 13524.)

WRRs may be issued to the person recycling water, the user, or both. The requirements must be established in conformance with the Uniform Statewide Recycling Criteria (discussed below). Generally, WRRs include effluent limits, specifications for recycled water being produced including treatment standards, approved uses, engineering requirements for the production and distribution of recycled water, requirements for the area of recycled water use, and monitoring requirements.

An RWQCB may require the submission of a preconstruction report for the purpose of determining compliance with the recycling criteria. The requirements for a use of recycled water not addressed by the recycling criteria are considered on a case-by-case basis. (Wat. Code § 13523(b).)

#### **b. Master Recycling Permits**

In lieu of issuing WDRs and/or WRRs for recycled water production and use, a RWQCB may issue an MRP to a supplier or distributor, or both, of recycled water. (Wat. Code §§ 13523.1, 13263(h).) An MRP allows a purveyor of recycled water to deliver recycled water to multiple users in the purveyor’s service area. A user of recycled water that is being supplied pursuant to a master recycling permit need not file a report of waste discharge. (Wat. Code § 13260(l).)

An MRP must include WDRs, a requirement that the permittee establish rules and regulations for users, and inspection and reporting requirements. (See Wat. Code § 13523.1 for a complete list of requirements.)

### **D. Regulations**

#### **1. Uniform Statewide Recycling Criteria**

The Uniform Statewide Recycling Criteria (Title 22, Div. 4, Chp. 3 of the Code of Regulations) implement the Water Recycling Law and establish permissible uses for recycled water, along with treatment, control, monitoring, reporting, engineering and operational requirements applicable to producers, providers, and users.

Permissible uses are divided by treatment level. For non-potable use, there are four types of recycled water based on levels of treatment: non-disinfected secondary, disinfected secondary-23, disinfected secondary 2.2, and disinfected tertiary. Non-disinfected secondary recycled water has the lowest level of treatment and is suitable for applications that have a very minimal public exposure level, such as irrigation for fodder crops. Disinfected tertiary recycled water has the highest level of treatment, which is deemed sufficient for applications with more public exposure, such as irrigation of parks, decorative fountains, or artificial snowmaking for commercial outdoor use.

The following provides an illustrative example of uses allowed by treatment level:

- Tertiary treatment (defined at 22 CCR § 60301.230): surface irrigation of food crops where the water comes into contact with edible portions of the crops, parks and playgrounds, school yards, and residential landscaping. (22 CCR § 60304(a).)
- Disinfected to at least a secondary-2.2 level (defined at 22 CCR § 60301.220): surface irrigation of food crops where the edible portion is produced above ground and not contacted by the recycled water and restricted recreational impoundments. (22 CCR §§ 60304(b), 60305(d).)
- Disinfected to at least a secondary-23 level (defined at 22 CCR § 60301.225): cemeteries and freeway landscaping. (22 CCR § 60304(c).)
- Undisinfected secondary recycled water (defined at 22 CCR § 60301.900): surface irrigation of orchards where the recycled water does not come into contact with the edible portion of the crop and flushing sanitary sewers. (22 CCR §§ 60304(d), 60307(c).)

A complete list of permissible uses by treatment level is found at 22 CCR §§ 60303–60307. The following are also included in the criteria:

- Use area requirements (22 CCR § 60310).
- Plumbing and delivery requirements (22 CCR § 60313).
- Sampling and analysis requirements (22 CCR § 60321).
- Engineering and operational requirements (22 CCR §§ 60323–60331).
- Design requirements (22 CCR §§ 60333–60337).
- Alternative treatment and reliability requirements (22 CCR §§ 60320.5, 60339, 60341–60355).

The Uniform Statewide Recycling Criteria apply only to recycled water from sources that contain domestic waste. (22 CCR § 60302.) They do not apply to the use of recycled water onsite at a water recycling plant, or wastewater treatment plant, provided that access by the public to the area of onsite recycled water use is restricted. (22 CCR § 60303.)

Title 17 sets forth additional engineering and management requirements applicable to public water systems, including systems providing recycled water. (See 17 CCR § 7583 *et seq.*)

## 2. Model Water Efficient Landscape Ordinance

Beginning December 1, 2015, the **Model Water Efficient Landscape Ordinance** (Title 23, Div. 2, Chap. 2.7 of the Code of Regulations) took effect. Local agencies, including cities, had the

option of adopting the ordinance by reference, adopting their own ordinance with requirements at least as stringent as the model ordinance, or taking no action, which allows the model ordinance to become applicable within the agency's jurisdiction. The model ordinance imposes requirements for landscaping at commercial, residential, industrial, and institutional projects of specified size. The model ordinance includes a requirement that recycled water irrigation systems installed shall allow for the current and future use of recycled water. (22 CCR § 492.14.) It also provides for additional water allowances for certain irrigation with recycled water. (22 CCR § 491(tt).)

### 3. Potential Changes in the Law

NPDES discharge permits issued by State agencies cannot exceed five years in duration. (33 USC § 1342(b)(1)(B).) The Trump Infrastructure Plan released on February 12, 2018, proposes lengthening the permit time limit from five years to fifteen years and providing for automatic renewals of such permits, if the water quality needs do not require more stringent permit limits, to bring more stability to projects subject to permits.

For WDRs associated with recycled water projects that also function as NPDES permits, this could elongate the duration of these permits and provide more long-term certainty for the projects.

## **E. Permitted Recycled Water Uses**

To date, there are three permitted uses of recycled water: direct non-potable use, indirect potable reuse and surface water augmentation.

### 1. Direct Non-Potable Use

Recycled water may be delivered directly to customers to serve non-potable demands. Recycled water for direct non-potable use is delivered in purple pipes. (Health & Saf. Code § 116815 [pipes installed after June 1, 1993 that are designed to carry recycled water, shall be colored purple or distinctively wrapped with purple tape].)

Recycled water may be used for the following direct non-potable uses, depending on treatment level, as discussed above:

- Irrigation: food crops, orchards and landscaping.
- Cooling or air conditioning: industrial and commercial.
- Impoundment (lakes/ponds): non-restricted recreational impoundments (swimming), fish hatcheries, landscape impoundments.
- Other uses: flushing toilets and urinals, industrial-process water that may contact workers, structural and nonstructural firefighting, decorative fountains, commercial laundries, consolidation of backfill material, creation of artificial snow, industrial boiler feed, soil compaction, mixing concrete, dust control on roads and streets, flushing sanitary sewers, and cleaning roads, sidewalks and outdoor work areas.

a. Sample Project(s)

Direct non-potable use is perhaps the most common use of recycled water today statewide. Agencies are making recycled water available for landscape and golf course irrigation, industrial cooling, sewer flushing, street sweeping, and a variety of other authorized non-potable uses.

2. Indirect Potable Use

Recycled water may also be used to replenish and/or augment groundwater supplies—**Indirect Potable Use (IPR)**. This may be accomplished indirectly, via the discharge to percolation ponds or directly by injection into a groundwater aquifer. (Wat. Code §§ 13540(b), 13562.)

Prior to operating a **Groundwater Replenishment Reuse Project (GRRP)** using surface application, a project sponsor must obtain approval of a plan to supply an alternative drinking water supply to all users of a drinking water well that becomes unsafe to use as drinking water or fails to meet applicable drinking water standards as a result of the GRRP. The recycled wastewater must meet disinfection standards and be retained underground for a period specified in the regulations. Technical reports regarding the GRRP and the hydrogeologic setting must be provided as part of obtaining approval. (22 CCR § 60320.100.) Approval of a GRRP requires a noticed public hearing. (22 CCR § 60320.102.) The criteria contain technical monitoring, reporting, and control requirements. (See 22 CCR § 60320.104–.128.)

When a GRRP involves subsurface application, the project must incorporate full advanced treatment of an oxidized wastewater using a reverse osmosis and an oxidation treatment process that, at a minimum, meets the requirements set forth in the criteria, prior to application of the recycled water. (See 22 CCR § 60320.200–.228.)

a. Sample Project(s)

**Orange County Water District’s Groundwater Replenishment System** is the world’s largest indirect potable reuse system. The system purifies treated wastewater using a three-step advanced treatment process consisting of microfiltration, reverse osmosis and ultraviolet light with hydrogen peroxide. According the OCWD, the process produces high-quality water that meets or exceeds all state and federal drinking water standards. The purified water is injected into a seawater barrier and pumped to recharge basins where it naturally percolates into the Orange County Groundwater Basin and supplements Orange County’s drinking water supplies. The system currently produces 100 MGD, with ultimate capacity projected at 130 MGD.<sup>15</sup>

**Chino Basin Recycled Water Groundwater Recharge Program (GWR)** is operated jointly by Inland Empire Utilities Agency, Chino Basin Watermaster, Chino Basin Water Conservation District, and San Bernardino County Flood Control District. Among other water sources, recycled water is directed to 16 recharge sites most of which consist of multiple recharge basins. These recharge basins are located throughout a 245 square mile area. The basins are designed to

---

<sup>15</sup> Orange County Water District, Groundwater Replenishment System technical brochure, available at <https://www.ocwd.com/media/4267/gwrs-technical-brochure-r.pdf> (last visited April 9, 2018).



hold the water so that it can percolate into the ground and replenish the groundwater supply. The GWR annually recharges about 10,000 acre feet of recycled water.<sup>16</sup>

### 3. Use of Recycled Water For Augmentation of Surface Water Supplies

On March 6, 2018, the SWRCB adopted regulations authorizing use of recycled water to augment surface water supplies, including reservoirs, pursuant to legislative mandates. (SWRCB Resolution 2018-0044; Wat. Code §§ 13562(a)(2)(A); Health & Saf. Code § 116551.)

The regulations allow the placement of recycled municipal wastewater into a surface water reservoir that is used as a source of domestic drinking water supply. (22 CCR § 64320.300.) The project sponsor(s) must submit a plan to the State and Regional Board for approval. The plan must contain corrective actions to be taken if the recycled water does not meet standards required by the regulations and procedures for notification. (22 CCR § 60320.301.) The same categories of standards regarding monitoring, reporting, control, and treatment that apply to groundwater augmentation through subsurface application (discussed above) apply to surface water augmentation. (See 22 CCR § 60320.301–.330.)

The recycled municipal wastewater stream must be treated using a reverse osmosis and an oxidation treatment process meeting the requirements established by the regulations prior to delivery into the augmented reservoir. (22 CCR § 60320.302.) The water supplier must obtain a domestic water supply permit to use the augmented reservoir as a water source. (22 CCR § 64668.20.) Before use as an augmented surface reservoir, the reservoir must have been in operation for a period of time sufficient to establish a baseline record of the reservoir's water quality not less than five years. (22 CCR § 64668.30(a).) Regulations establish required retention times for recycled water and maximum limits of recycled water to be supplied during specified time periods. (22 CCR § 64668.30(c).)

#### a. Sample Project(s)

**San Diego Water Purification Demonstration Project:** From 2009 to 2013, the City of San Diego embarked on a demonstration project to determine whether advanced water purification technology could provide a local and safe drinking water supply for San Diego. The project evaluated the feasibility of a full-scale reservoir augmentation project, where purified water could be blended with imported water supplies in the San Vicente Reservoir before going to a standard drinking water treatment plant. According to the City, the project's operational testing and monitoring verified the water purification process consistently produces water that meets all state and federal drinking water standards. The purified water is similar in quality to distilled water.<sup>17</sup>

**Pure Water San Diego – Miramar Reservoir Project:** San Diego has plans to convey 30 MGD of treated water to Miramar Reservoir as part of the City's Pure Water project (a plan to provide

---

<sup>16</sup> Inland Empire Utilities Agency, "Groundwater," available at: [www.ieua.org/water-sources/groundwater](http://www.ieua.org/water-sources/groundwater) (last visited April 9, 2018).

<sup>17</sup> City of San Diego, Water Purification Demonstration Project, available at: <https://www.sandiego.gov/water/purewater/demo> (last visited April 9, 2018).



one-third of San Diego's water locally by 2035). The City expects the Miramar Reservoir project to be operational by 2021.<sup>18</sup>

#### **IV. CHANGES IN USE OF TREATED WASTEWATER**

##### **A. Water Code Section 1211**

A wastewater treatment facility owner has the exclusive right to all treated wastewater generated, unless a contract provides otherwise. (Wat. Code § 1210; see, e.g. *In the Matter of Wastewater Petition WW0095 (San Bernardino Valley Mun. Wat. Dist.)*, at § 9.4.4.) The owner's exclusive right extends to treated wastewater that has been discharged to a watercourse. Downstream users may not appropriate the supply. (Wat. Code § 1212.) However, SWRCB approval is required before a wastewater treatment facility owner may make changes to the use of treated wastewater that result in the reduction of flow to a watercourse, including for example, the direct delivery of recycled water to customers in lieu of discharge of the supply to a watercourse.

Prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater, the owner of any wastewater treatment plant shall obtain approval of the board for that change. The board shall review the changes pursuant to the provisions of Chapter 10 (commencing with Section 1700) of Part 2 of Division 2. (b) Subdivision (a) does not apply to changes in the discharge or use of treated wastewater that do not result in decreasing the flow in any portion of a watercourse.

(Wat. Code § 1211.) A petition is not needed for changes in the discharge or use of treated wastewater that do not result in decreasing the flow in any portion of a watercourse, or when the discharge is directly to the ocean or a bay. Also, reductions in discharge associated with reduced plant influent due to water conservation measures are not subject to the petition requirement.<sup>19</sup>

##### **B. Change Petition Process**

The process for obtaining SWRCB approval includes submission of a Petition for Change, notice of the Petition for Change to the California Department of Fish and Wildlife and the public, the opportunity for any party to protest the proposed change on the grounds of injury to legal user, investigation by the SWRCB and compliance with CEQA, as applicable. (See Wat. Code § 1700 *et seq.*; see also 23 CCR § 791.)<sup>20</sup> A hearing may be required if one or more protests to the petition have been made and remain unresolved. (Wat. Code § 1704.)

---

<sup>18</sup> City of San Diego, Pure Water San Diego, available at: <https://www.sandiego.gov/water/purewater/purewatersd> (last visited April 9, 2018).

<sup>19</sup> SWRCB, Wastewater Change Petition Program, available at: [https://www.waterboards.ca.gov/waterrights/water\\_issues/programs/applications/wastewaterchange/](https://www.waterboards.ca.gov/waterrights/water_issues/programs/applications/wastewaterchange/) (last visited March 20, 2018).

<sup>20</sup> SWRCB, Wastewater Change Petition Program, available at: [https://www.waterboards.ca.gov/waterrights/water\\_issues/programs/applications/wastewaterchange/](https://www.waterboards.ca.gov/waterrights/water_issues/programs/applications/wastewaterchange/) (last visited March 20, 2018). The following diagram illustrates the change petition process: [https://www.waterboards.ca.gov/waterrights/board\\_info/docs/petprocess.pdf](https://www.waterboards.ca.gov/waterrights/board_info/docs/petprocess.pdf) (last visited March 20, 2018).

The SWRCB may approve, deny or condition a Petition for Change. (Wat. Code § 1704.) To approve a Petition for Change, including a Wastewater Change Petition, the SWRCB must find that the proposed change will not injure other legal users of water, will not unreasonably harm instream uses, and is not contrary to the public interest. (Wat. Code §§1210, 1702; *see generally* Wat. Code § 1700 *et seq.*) Under the “no injury” rule, only parties with rights to the supply can claim injury, and they can show injury only by demonstrating that the proposed change will injure those rights. (*SWRCB Cases* (2006) 136 Cal.App.4th 674, 740, cert. denied 549 U.S. 889.) Parties who introduce foreign or developed water into a watercourse have exclusive rights to that water. (*City of Los Angeles v. City of San Fernando* (1975) 14 Cal.3d 199, 259-62; *City of Los Angeles v. City of Glendale* (1943) 23 Cal.2d 68, 77-78.) Therefore, a Wastewater Change Petition that seeks to reuse tertiary treated wastewater derived from the use of foreign water supplies cannot operate to injure any legal user of water. (See *In the Matter of Wastewater Change Petition WW-45 (City of Riverside)*, SWRCB Ord. WR 2008-0024, at § 7.1 [downstream water right holders are protected from injury only to the extent that the source of the return flow to a stream is native water]).) Conversely, where a treated wastewater supply is derived from the native supply, users with rights in the native supply will likely have legal standing to object to changes that would result in interference with their water right. (*Scott v. Fruit Growers Supply Co.* (1972) 202 Cal. 47, 55.)

The SWRCB has determined that fish and wildlife qualify as a “legal use.” Accordingly, the SWRCB has compelled the continued discharge of treated wastewater as necessary to avoid injury to fish and wildlife. (See *In the Matter of Treated Waste Water Change Petition WW-20 (El Dorado Irr. Dist.)*, SWRCB Ord. WR 95-9; *In the Matter of Water Right Application 29408 and Waste Water Change Petition WW-6 (City of Thousand Oaks)*, SWRCB Dec. 1638.)

### C. Proposed Amendments

It is anticipated that the forthcoming amendments to the Recycled Water Policy will include clarification regarding the process for complying with Wat. Code section 1211, including inter- and intra-agency coordination, and may also address cumulative impacts resulting from multiple wastewater change petitions.<sup>21</sup>

## V. FUNDING

The mission of the **Water Recycling Funding Program (WRFP)** is to promote the beneficial use of treated municipal wastewater (water recycling) in order to augment fresh water supplies in California by providing technical and financial assistance to agencies and other stakeholders in support of water recycling projects and research.

---

<sup>21</sup> SWRCB Presentation at Stakeholder Meeting, Proposed Amendments to Recycled Water Policy, Topic 6 (Jan. 4, 2018), available at: [https://www.waterboards.ca.gov/water\\_issues/programs/water\\_recycling\\_policy/docs/2018/stakeholder\\_workshop\\_presentation.pdf](https://www.waterboards.ca.gov/water_issues/programs/water_recycling_policy/docs/2018/stakeholder_workshop_presentation.pdf) (last visited March 20, 2018).

According to the SWRCB's Water Recycling Funding Programs Guidelines adopted in 2015,<sup>22</sup> the primary sources of funding for the WRF are the following:

**A. The Safe Drinking Water, Clean Water, Watershed Protection, and Flood Protection Act**

Proposition 13, the 2000 Water Bond, was approved by voters in 2000. (Wat. Code § 79135 *et seq.*) It provides financial assistance through loans and grants for planning and construction activities. Proposition 13 primarily provides for water recycling facilities planning grants. These planning grants are funded through a small revenue stream generated by repayments from previously financed projects. Periodically, construction grants and loans may be available. The funding capacity under Proposition 13 is now limited because a majority of the original funding has been awarded and ongoing revenue streams are small.

**B. The Water Quality, Supply, and Infrastructure Improvement Act of 2014**

Proposition 1 (2014 Water Bond) provides for \$625 million in funding for recycled water projects. (Wat. Code § 79700 *et seq.*) It makes available grant and low interest financing for planning and construction activities for water recycling projects. The SWRCB may dedicate up to two percent of the Proposition 1 funding allocated to recycled water, as well as two percent of repayments from Proposition 1 funded water recycling construction loans, to recycled water research and development as set forth in Water Code section 79144.

**C. Clean Water State Revolving Fund**

The **Clean Water State Revolving Fund (CWSRF)** program was established by the 1987 amendments to the Clean Water Act as a financial assistance program for a wide range of water infrastructure projects. (33 USC § 1383.) Under the CWSRF, EPA provides grants to all 50 states plus Puerto Rico to capitalize state CWSRF loan programs. The state loan programs function like environmental infrastructure banks by providing low interest loans to eligible recipients for water infrastructure projects. States are responsible for the operation of their CWSRF program. In California, the CWSRF provides low interest (generally one half the State of California's most recent general obligation bond rate) financing for planning, design, and construction activity.

**D. Title XVI**

**Title XVI of P.L. 102-575, as amended (Title XVI)**, provides authority for the **United States Bureau of Reclamation's (USBR)** water recycling and reuse program. Through the Title XVI program, USBR identifies and investigates opportunities to reclaim and reuse wastewaters and naturally impaired ground and surface water in the 17 Western States and Hawaii. Title XVI includes funding for the planning, design, and construction of water recycling and reuse projects, on a project specific basis, in partnership with local government entities. In recent years,

---

<sup>22</sup> The Water Recycling Funding Programs Guidelines are available at: [https://www.waterboards.ca.gov/water\\_issues/programs/grants\\_loans/water\\_recycling/docs/wrfp\\_guidelines.pdf](https://www.waterboards.ca.gov/water_issues/programs/grants_loans/water_recycling/docs/wrfp_guidelines.pdf) (last visited March 20, 2018).

program funds have been provided for recycled water projects by the cities of Anaheim, Benicia, and Mountain View.<sup>23</sup>

## **VI. EMERGING ISSUES**

### **A. Challenges/Litigation Risks**

Environmental plaintiffs are increasingly challenging RWQCB permits approving recycled water projects on novel grounds. The objective of these suits is to target municipal decisions about water supply indirectly through the water quality permitting process – i.e., the RWQCB’s issuance of WDRs/WRRs.

Following the Los Angeles RWQCB’s issuance of WDRs and WRRs to the City of Oxnard in 2015, the Wishtoyo Foundation sued the SWRCB and Los Angeles RWQCB to challenge the city’s use of recycled water. Wishtoyo claimed the RWQCB violated the law by: (1) failing to analyze whether the use of recycled water authorized by the WDRs/WRRs is reasonable and not wasteful in violation of Article X, Section 2 of the California Constitution, and (2) by failing to exercise a mandatory duty under the Public Trust Doctrine to protect in-stream flows. The court denied Wishtoyo’s petition for writ of mandate and ruled: (1) a WDRs/WRRs permit imposes requirements on the applicant to ensure the delivery and use of recycled water does not adversely affects its water quality – it does not allocate a water supply; accordingly, the RWQCB does not have a mandatory duty to ensure reasonable use and avoid waste; and (2) the recycled water at issue was not a public trust resource subject to the Public Trust Doctrine. The case – which raises questions of first impression – is currently on appeal in *Wishtoyo Foundation v. State Water Resources Control Board*, 2nd Dist. Court of Appeals, Case No. BS159479 (filed Sept. 22, 2017.).

Recently, Los Angeles Waterkeeper and Lawyers for Clean Water sued the SWRCB and the Los Angeles RWQCB again challenging the RWQCB’s issuance of WRDs and WRRs to the Cities of Los Angeles, Burbank and Glendale for their operation of four wastewater treatment facilities on the grounds that the RWQCB failed to consider whether the Cities’ continued discharges into the Los Angeles River constituted a waste and unreasonable use and for failing to undertake a feasible alternatives analysis pursuant to CEQA. (See *Los Angeles Waterkeeper v. State Water Resources Control Board, et al.*, Los Angeles County Superior Court Lead Case No. BS171009, related to: BS171010, BS171011 and BS171012.) A hearing date has not yet been scheduled.

Separately, a number of petitions recently filed with the SWRCB pursuant to Water Code section 1211 for changes in discharges of wastewater have faced objection on the grounds of project-related and cumulative environmental impacts to instream beneficial uses resulting from associated reduced discharges to streams.

These cases illustrates that cities embarking on recycled water projects may face opposition when the project makes alternative water supplies available for non-potable uses perceived to be non-essential, reduces instream flows and/or fails to maximize beneficial use of recycled water – all of which potential conflict with each other.

---

<sup>23</sup> See USBR, Feasibility Review Study for Title XVI (January 2018).

## **B. Direct Potable Reuse (DPR)**

The Water Recycling Law required the SWRCB to “investigate and report to the Legislature on the feasibility of developing uniform water recycling criteria for direct potable reuse” on or before December 31, 2016. (Wat. Code § 13563(a).) “Direct potable reuse” is defined as the introduction of recycled water either directly into a public water system or into a raw water supply immediately upstream of a water treatment plant. It includes both raw water augmentation (placement of recycled water into a system of pipelines or aqueducts that deliver raw water to a drinking water treatment plant that provides water to a public water system) and treated drinking water augmentation (placement of recycled water into the water distribution system of a public water system). (Wat. Code § 13561(b).)

In December of 2016, the SWRCB issued a report titled “Investigation on the Feasibility of Developing Uniform Water Recycling Criteria for Direct Potable Reuse.” The SWRCB convened an expert panel, which found that it is “technically feasible to develop uniform water recycling criteria for DPR [direct potable reuse] and that those criteria could incorporate a level of public health protection as good as or better than what is currently provided by conventional drinking water supplies and IPR [indirect potable reuse].” The panel concluded that the protection normally provided by an environmental buffer between recycled water and potable water could be addressed by enhancing the reliability of mechanical systems and treatment plant performance. While the panel found no need for additional research prior to developing criteria for DPR, it provided certain research recommendations and recommended filling in the knowledge gap related to system reliability.<sup>24</sup>

In the meantime, the operator of an advanced water purification facility may cause advanced purified demonstration water to be bottled and distributed as samples for educational purposes and to promote water recycling, without complying with certain legal requirements for bottled water provided in the Health and Safety Code, subject to the requirements specified in the statute. (Wat. Code § 13570(d).) The water must be treated by means of microfiltration, ultrafiltration, or other filtration processes to remove particulates before reverse osmosis; reverse osmosis; and advanced oxidation. The water must meet or exceed all federal and state drinking water standards.

### **1. Raw Water Augmentation**

The Water Recycling Law provides that, on or before December 31, 2023, “the state board shall adopt uniform water recycling criteria for direct potable reuse through raw water augmentation. In adopting the initial uniform recycling criteria ... the state board must comply with all of the following:”

- “develop the uniform water recycling criteria using information from the recommended research described in the law after soliciting stakeholder input from water agencies, wastewater agencies, local public health officers, environmental organizations, environmental justice organizations, public health nongovernmental organizations, and the business community;” and

---

<sup>24</sup> SWRCB, Investigation on the Feasibility of Developing Uniform Water Recycling Criteria for Direct Potable Reuse (Dec. 2016), p. IV–V.

- Submit the proposed “uniform water recycling criteria ... to the expert review panel established pursuant to the law. The expert review panel shall review the proposed criteria and shall adopt a finding as to whether, in its expert opinion, the proposed criteria would adequately protect public health.”

(Wat. Code § 13561.2.)

## 2. Treated Drinking Water Augmentation

As discussed above, in 2016 the SWRCB issued a report finding it feasible to develop uniform water recycling criteria for DPR. At this point, there is no statutory mandate to adopt regulations for treated drinking water augmentation in California.

## 3. Sample Project(s)

Spurred by an unprecedented drought, two DPR systems were recently opened in the Texas. The Colorado River Municipal Water District in Big Spring opened in 2013. The plant treats the wastewater effluent using microfiltration, reverse osmosis (RO), and ultraviolet disinfection (UV). The water is then added to a raw water pipeline that also sources water from an area lake. This mix (20 percent recycled water, 80 percent raw water) is then distributed to five drinking water facilities in the region (serving a total of 250,000 people) where it is treated again using conventional drinking water treatment techniques.

In 2014, a second DPR system was started up in Wichita Falls, Texas, not far from Big Spring. The Wichita Falls system operates differently. The plant mixes its treated effluent with raw water. Their mix is 50-50 and takes places at the same facility where it is treated again using conventional drinking water treatment techniques. The end result is distributed to roughly 150,000 people.

## C. **Onsite Non-potable Systems**

In 2012, the City and County of San Francisco adopted the Onsite Water Reuse for Commercial, Multi-Family, and Mixed Use Development Ordinance (commonly referred to as the Non-Potable Water Ordinance). The ordinance added Article 12C to the San Francisco Health Code allowing collection, treatment and use of alternate water sources for non-potable application in individual buildings and at the district-scale. In July 2015, Article 12C became a mandatory requirement for large development projects (commercial building developments larger than 250,000 square feet), thereby requiring these projects to construct onsite<sup>25</sup> non-potable treatment and recycling systems.

## 1. Sample Project(s)

---

<sup>25</sup> “Onsite” means that the water recycling occurs in individual buildings, as opposed to utility-scale water recycling.

In compliance with the ordinance, San Francisco's newest skyscraper, Salesforce Tower, will house the largest water recycling system in a commercial high-rise building in the United States – capable of treating grey water and black water onsite.<sup>26</sup>

## 2. Proposed Legislation

As a result of a lack of permitting standards for onsite recycled water systems, cities and other “local governments are often stymied in creating local programs to expand the use of graywater, blackwater, rainwater, stormwater, foundation drainage and other reused water.”<sup>27</sup> In February, 2018, SB 966 was introduced to facilitate the creation of onsite recycled water systems. SB 966 directs the SWRCB to develop risk-based water quality standards for use by local governments when regulating the treatment of alternate water sources. According to the bill's author, a recent report by the Water Research Foundation titled: *Risk-Based Framework for the Development of Public Health Guidance for Decentralized Non-Potable Water Systems*<sup>28</sup> lays the foundation for creating these standards.

---

<sup>26</sup> Water Deeply, San Francisco's Tallest Building Makes Big Water Recycling Statement (Jan. 31, 2018), available at: <https://www.newsdeeply.com/water/community/2018/01/31/san-franciscos-tallest-building-makes-big-water-recycling-statement> (last visited March 20, 2018).

<sup>27</sup> Senator Wiener Announces Bill to Expand On-site Water Recycling in All California Cities (February 1, 2018) available at: <http://sd11.senate.ca.gov/news/20180201-senator-wiener-announces-bill-expand-site-water-recycling-all-california-cities> (last visited March 20, 2018),

<sup>28</sup> The Water Research Foundation report is available at: <https://www.werf.org/a/ka/Search/ResearchProfile.aspx?ReportId=SIWM10C15> (last visited March 20, 2018).