

4.0 WATER SUPPLY

The City receives its water supply from imported water connection from the Metropolitan Water District of Southern California (MWD) and groundwater production wells. The City owns three wells in the West Coast Basin (Well 11A, Well 13, and Well 15). The City extracts groundwater supplies from the West Coast Basin from two active wells (Well 11A and 15). Well 13 was abandoned in 1982 due to deteriorating water quality and failure of well casing. City is currently installing a treatment facility to remove manganese contamination which has impacted production from Wells 11A and 15 and has also required the City to increase purchases of imported water in recent years.

4.1 IMPORTED WATER SUPPLY

MWD is the regional wholesaler of imported water for most of Southern California, providing water to its member agencies through a regional distribution system. West Basin Municipal Water District (WBMWD) is one of MWD's member agencies that provides imported water to agencies in the South Bay portion of Los Angeles County, including the City. WBMWD provides imported water to the City at connection WB-04, located at the intersection of Manhattan Beach Boulevard and Redondo Avenue. From the WB-04 connection, the imported supply is directed to the Peck Facility through a 14-inch pipeline and to the Block 35 Facility through an 18-inch pipeline. Each of these pipelines contains an automatic flow control valve that allows the City to adjust the percent of flow to the Peck and Block 35 facilities.

4.1.1 Entitlement of Imported Water

The City maintains a metered connection with WBMWD, to receive treated imported water. The capacity of this connection is 15 cubic feet per second (cfs).

4.2 LOCAL GROUNDWATER SUPPLY

The City extracts groundwater supplies from the West Coast Basin from two active wells (Well 11A and 15) underlying the southwestern portion of the Los Angeles Coastal Plain. The City abandoned Well 13 in 1982 due to deteriorating water quality and failure of well casing. Since that time, the water quality in that area is thought to have improved due to the continued injection of fresh water at the West Coast Basin Barrier. The City is interested in determining if the water quality has improved at the Well 13 site and if it is feasible to construct a new production well.

The West Coast Basin is managed by the Water Replenishment District of Southern California (WRD) and covers approximately 160 square miles, bordered by the Ballona Escarpment to the north, the San Pedro Bay and the Palos Verdes Hills to the south, the Newport-Inglewood Uplift to the east, and the Santa Monica Bay to the west. Subsurface flow from the Central Basin is the main source of natural recharge to the West Coast Basin, where general regional groundwater flows southwesterly towards the Pacific Ocean from the Central Coast Plain.

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The West Coast Basin is subdivided into three major aquifer systems: the Holocene Alluvium Formation, Pleistocene Lakewood Formation, and the Lower Pleistocene San Pedro Formation. The Lower Pleistocene San Pedro Formation includes the Lynwood, Silverado, and other unnamed aquifers. The Silverado aquifer is the most productive in the West Coast Basin, yielding 80 to 95 percent of its groundwater, with a storage capacity of about 6.5 million acre-feet (AF). The City extracts groundwater from the Silverado aquifer.

The West Coast Basin court adjudication, published in August 1961, appointed the California Department of Water Resources as the watermaster to uphold water rights and manage annual groundwater extraction. The adjudication was then amended in 2014, when the Department of Water Resources was replaced with the current Watermaster: an Administrative Body under WRD that consists of a Water Rights Panel and Storage Panel.

- The West Basin Water Rights Panel consists of five representatives, including three members from the West Basin Water Association, who are elected officers of president, vice-president, and treasurer, and two members who are selected by the West Basin Water Association Board of Directors. The Panel began its Watermaster duties in January 2015.
- The Storage Panel is composed of each Water Rights Panel representative and the WRD Board of Directors, which together review and approve groundwater storage and augmentation projects within each Basin. Specifically, there is a Central Basin Storage Panel and a West Coast Basin Storage Panel.

When a project application is submitted for consideration, the Administrative Body reviews the application for completeness. Once considered complete, the final application is sent to the Storage Panel and all parties of the corresponding adjudicated basin. The Water Rights Panel and WRD Board of Directors, sitting jointly as the Storage Panel, will conduct a joint public hearing concerning the project application. Both entities, sitting as the Storage Panel, work together to adopt a uniform set of findings.

4.2.1 Entitlement of Groundwater

Per the City's 2020 UWMP, as of 2014, according to the West Coast Basin Judgement, the City has an adjudicated pumping right of 1,131 afy from the West Coast Basin and allowance to pump up to 20 percent more of its annual entitlement, or carry-over up to 20 percent of its annual entitlement in any given year. City's total annual groundwater production cannot exceed 1,357afy. In addition, the City is allowed to lease West Coast Basin water rights from other West Coast Basin producers.

4.3 RECYCLED WATER

The City purchases recycled water for use within its services area and has been an active participant in the use of recycled water since 1995. To encourage customers to convert to recycled water, the City of Manhattan Beach in conjunction with the WBMWD agreed to sell recycled water at a discounted rate. The recycled water is purchased from West Basin Municipal Water District's Water Reclamation Facility located in El Segundo. Since 1995, the City has purchased an average of 277 acre-feet per year of

recycled water from WBMWD. Recycled water is currently being used for irrigation of greenbelt areas, landscape, medians, parks, schools, and a golf course.

Currently, the City uses approximately 298 afy of recycled water supplied by the WBMWD's recycled water system. The recycled water system is owned, operated, and maintained by WBMWD. The system is not operated by the City and is not analyzed in this Master Plan.

4.4 WATER CONSERVATION

The City's water conservation program is coordinated by the Water Distribution Supervisor working in conjunction with WBMWD and the School District. The Manhattan Beach City Council approved a Water Conservation Ordinance that became effective on July 2, 2009 and was since amended. This ordinance requires the City to meet current water conservation regulations. Highlights of the permanent requirements are as follows:

Irrigation

- Irrigation watering hours: No spray irrigation between the hours of 9:00 a.m. and 6:00 p.m. on any day. This subsection shall not apply to any drip irrigation system, irrigation system maintenance, leak repair or new planting of low water usage plants or if reclaimed water is utilized as permitted by law.
- Irrigation Overspray and Runoff: Water shall not spray or flow to any impermeable private or public surface, including but not limited to, walkways, driveways, sidewalks, alleys, streets, or storm drains.
- Water Drift: No sprinklers, fountains, or other water features shall be operated when winds are so high as to create water drift causing runoff or flow to any impermeable private or public surface, including, but not limited to, walkways, driveways, sidewalks, alleys, streets, or storm drains.
- Over-Irrigation: It is prohibited to water or irrigate lawns, turf, or other landscape beyond saturation causing runoff or flow to any impermeable private or public surface, including, but not limited to, walkways, driveways, sidewalks, alleys, streets, or storm drains.
- Irrigation During/After a Rain Event: It is prohibited to water or irrigate any landscaping within 48 hours of a one-tenth of an inch (0.10") or greater rainfall event.
- Landscape Irrigation: New construction or new landscape irrigation with potable water shall be delivered by drip or microspray irrigation systems for irrigation projects submitted for City review on July 1, 2015 or after.

Cleaning

- No use of water to clean or clear any sidewalks, streets, walkways, patios, driveways, alleys, or parking areas, whether paved or unpaved, with a hose connected to a domestic water source unless through use of a water broom or pressure washer.

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- No use of water to wash vehicles, motorized or unmotorized, except by use of a hand-held bucket or similar container or a hose equipped with a positive action quick release shutoff valve or nozzle. Does not apply to commercial car washing facility which uses recycling system to capture or reuse water.

Water Features and Water Recreation Facilities

- No filling water features (fountain, pond, lake, etc.) unless the water feature is constructed with a water recirculation system
- No filling any water recreation facility (hot tub, spa, permanent swimming pool, or wading pool) unless it is equipped with a cover to reduce water loss due to evaporation

Waste, Ponding, Leak

- No water leak from any exterior or interior pipe, hose, or plumbing fixture
- No water to flow from any source on private or public property or pond into gutters, streets, alleys, or storm drains, except because of rainfall or excessive groundwater from a private sump pump or from a non-potable source of water or beneficial use

Eating and Drinking Establishments

- Provide drinking water upon request for all eating and drinking establishments (including, but not limited to, any restaurant, hotel, cafe, cafeteria, bar or club, whether public or private)
- Install water conserving pre-rinse nozzles

Hotels, Motels, Bed and Breakfast

- Provide customers the option of choosing not to have towels laundered daily
- All rooms shall have low flow toilets

Carwashes

- All carwash systems shall use water recirculation systems

Commercial Establishments

- Low flow toilets and efficient urinals
- Water efficient dishwasher

Hoses

- No water to flow freely from a hose that is not equipped with a positive action quick release shutoff valve or nozzle

In addition to these permanent requirements, the City Council may impose additional restrictions which will vary depending on stages of water shortage declared: Stage 1, 2, or 3. The details of these requirements are outlined in the ordinance.