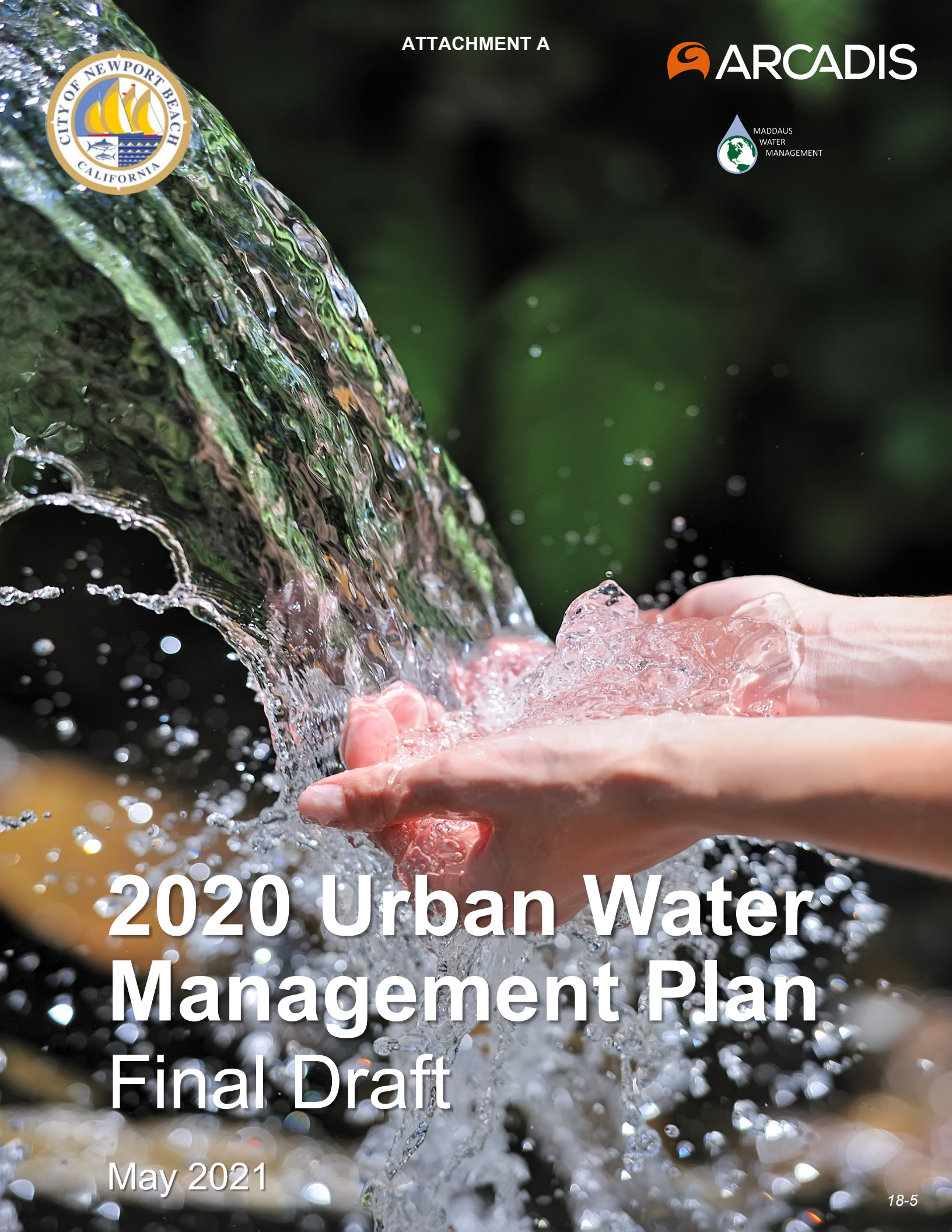
ATTACHMENT A



2020 Urban Water Management Plan

Final Draft

May 2021

2020 URBAN WATER MANAGEMENT PLAN

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ACRONYMS AND ABBREVIATIONS

%	Percent
20x2020	20% water use reduction in GPCD by year 2020
ADU	Accessory Dwelling Unit
Act	Urban Water Management Planning Act of 1983
AF	Acre-Feet
AFY	Acre-Feet per Year
AMI	Advanced Metering Infrastructure
AWWA	American Water Works Association
BEA	Basin Equity Assessment
Biops	Biological Opinions
BMP	Best Management Practice
BPP	Basin Production Percentage
CCC	California Coastal Commission
CDR	Center for Demographic Research at California State Fullerton
CEC	Constituents of Emerging Concern
CEE	Consortium for Energy Efficiency
CFS	Cubic Feet per Second
CII	Commercial/Industrial/Institutional
CIP	Capital Improvement Program
City	City of Newport Beach
CPTP	Coastal Pumping Transfer Program
CRA	Colorado River Aqueduct
CTE	Career Technical Education
CUP	Conjunctive Use Program
CVP	Central Valley Project
CY	Calendar Year
DAC	Disadvantaged Communities
DCP	Delta Conveyance Project
DDW	California State Division of Drinking Water
Delta	Sacramento-San Joaquin River Delta
DRA	Drought Risk Assessment
DMM	Demand Management Measure
DOF	Department of Finance
DVL	Diamond Valley Lake
DWR	Department of Water Resources
FIRO	Forecast Informed Reservoir Operations
FY	Fiscal Year
GAP	Green Acres Project

GHG	Greenhouse Gas
GPCD	Gallons per Capita per Day
gpf	Gallons per Flush
GRP	Groundwater Reliability Plan
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
GWRS	Groundwater Replenishment System
GWRSFE	Groundwater Replenishment System Final Expansion
H_2O_2	Hydrogen Peroxide
HECW	High Efficiency Clothes Washer
HEN	High Efficiency Nozzle
HET	High Efficiency Toilet
HOA	Home Owners Association
IPR	Indirect Potable Reuse
IRP	Integrated Water Resources Plan
JADU	Junior Accessory Dwelling Unit
kWh	Kilowatt-Hour
LRP	Local Resources Program
LTFP	Long-Term Facilities Plan
MAF	Million Acre-Feet
MCL	Maximum Contaminant Level
MET	Metropolitan Water District of Southern California
MF	Microfiltration
MG	Million Gallon
MGD	Million Gallons per Day
MHI	Median Household Income
MNWD	Moulton Niguel Water District
MTBE	Methyl Tertiary Butyl Ether
MWDOC	Municipal Water District of Orange County
MWELO	Model Water Use Efficiency Landscape Ordinance
NDMA	N-nitrosodimethylamine
NPDES	National Pollutant Discharge Elimination System
NRW	Non-Revenue Water
OC	Orange County
OC Basin	Orange County Groundwater Basin
OC San	Orange County Sanitation District
OCWD	Orange County Water District
ORP	On-Site Retrofit Program
PFAS	Per- and polyfluoroalkyl substances
PFOA	perfluorooctanoic acid

PFOS	perfluorooctane sulfanate
Poseidon	Poseidon Resources LLC
PPCP	Pharmaceuticals and Personal Care Product
ppt	Parts per trillion
PSA	Public Service Announcement
QWEL	Qualified Water Efficient Landscaper
RA	Replenishment Assessment
RHNA	Regional Housing Needs Assessment
RO	Reverse Osmosis
RUWMP	Regional Urban Water Management Plan
SBx7-7	Senate Bill 7 as part of the Seventh Extraordinary Session
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCWD	South Coast Water District
SMWD	Santa Margarita Water District
SDP	Seawater Desalination Program
sf	Square Feet
STEAM	Science Technology Engineering Arts and Mathematics
SWP	State Water Project
SWRCB	California State Water Resources Control Board
TAF	Thousand Acre-Feet
TDS	Total Dissolved Solids
USACE	United States Army Corps of Engineers
USBR	United States Bureau of Reclamation
UV	Ultraviolet
UWMP	Urban Water Management Plan
UWMP Act	Urban Water Management Planning Act of 1983
VOC	Volatile Organic Compound
Water Code	California Water Code
WBIC	Weather-Based Irrigation Controller
WF-21	Water Factory 21
WSAP	Water Supply Allocation Plan
WSCP	Water Shortage Contingency Plan
WSIP	Water Savings Inventory Program
WUO	Water Use Objective

EXECUTIVE SUMMARY

INTRODUCTION AND UWMP OVERVIEW

The City of Newport Beach (City) prepared this 2020 Urban Water Management Plan (UWMP) to submit to the California Department of Water Resources (DWR) to satisfy the UWMP Act of 1983 (UWMP Act or Act) and subsequent California Water Code (Water Code) requirements. The City is a retail water supplier that provides water to its residents and other customers using the imported potable water supply obtained from its regional wholesaler, Municipal Water District of Orange County (MWDOC), local groundwater from the Orange County Groundwater Basin (OC Basin), and recycled water from the Orange County Water District (OCWD).

UWMPs are comprehensive documents that present an evaluation of a water supplier's reliability over a long-term (20-25 year) horizon. This 2020 UWMP provides an assessment of the present and future water supply sources and demands within the City's service area. It presents an update to the 2015 UWMP on the City's water resource needs, water use efficiency programs, water reliability assessment and strategies to mitigate water shortage conditions. It also presents a new 2020 Water Shortage Contingency Plan (WSCP) designed to prepare for and respond to water shortages. This 2020 UWMP contains all elements to meet compliance of the new requirements of the Act as amended since 2015.

UWMP PREPARATION

The City coordinated the preparation of this 2020 UWMP with other key entities, including MWDOC (regional wholesaler of imported water for Orange County), Metropolitan Water District of southern California (MET) (regional wholesaler for Southern California and the direct supplier of imported water to MWDOC), and OCWD (OC Basin manager and provider of recycled water in north Orange County). The City also coordinated with other entities, which provided valuable data for the analyses prepared in this UWMP, such as the Center for Demographic Research (CDR) at California State University Fullerton for population projections, through MWDOC's assistance.

SYSTEM DESCRIPTION

The City was incorporated on September 1, 1906 and is governed by a seven-member City Council which operates under a Council-Manager format of government. The City Utilities Department and the Public Works Department work collaboratively to provide water to the customers.

The City's water service area covers about 11 square miles located along the Orange County coast of Southern California. The water service area covers most of the City's boundaries with the remaining areas served by Irvine Ranch Water District (IRWD) and Mesa Water District (Mesa Water).

The City operates a wellfield with a total capacity of 10,900 gallons per minute (gpm), 15 recycled water connections, 6 inter-agency emergency interconnections and manages about 300-mile water mains system with 26,765 service connections.

Lying in the South Coast Air Basin (SCAB), its climate is characterized by Southern California's "Mediterranean" climate with mild winters, warm summers and moderate rainfall. In terms of land use, the City is almost built out with predominantly single and multi-family residential units. Moving forward, the City will continue planning for its Regional Housing Needs Assessment (RHNA) allocation and future planned developments beyond 2020 will mainly include addition of institutional, commercial and a few

residential units. The current population of 61,916 is projected to increase by only 4.8% over the next 25 years.

WATER USE CHARACTERIZATION

Water use within the City's service area has been relatively stable in the past decade with an annual average of 15,413 AF. In this period, potable and non-potable water use accounted for an average of 97% and 3% of total City water use, respectively. In FY2019-20, the City's water use was 14,492 AF of potable water (groundwater and imported) and 513 AF of direct recycled water for landscape irrigation. In FY2019-20, the City's potable water use profile was comprised of 58.9% residential use, 18.2% commercial, institutional, and industrial (CII) and 18.1% large landscape/irrigation, with non-revenue water and other uses comprising about 4.8%.

Water Use Projections: 5-year and 25-year

The City's service area is almost completely built-out and is projected to add minimum land use and small population increase. Water demand is likely to decrease less than 1% over the next 5 years. In the longer term, water demand is projected to increase 5.2% from 2025 through 2045. The projected water use for 2045 is 15,103 AF for potable water and 542 AF for recycled water.

This demand projection considers such factors as current and future demographics, future water use efficiency measures, and long term weather variability.

CONSERVATION TARGET COMPLIANCE

Retail water suppliers are required to comply with the requirements of Water Conservation Act of 2009, also known as SBx7-7 (Senate Bill 7 as part of the Seventh Extraordinary Session), which was signed into law in 2010 and requires the State of California to reduce urban water use by 20% by 2020 from a 2013 baseline.

The retail water suppliers can comply individually or as a region in collaboration with other retail water suppliers, in order to be eligible for water related state grants and loans. The City is part of the Orange County 20x2020 Regional Alliance created in collaboration with MWDOC, its retail member agencies as well as the Cities of Anaheim, Fullerton, and Santa Ana. The Alliance was created to assist OC retail agencies in complying with SBx7-7.

The City met its 2020 water use target and is in compliance with SBx7-7; the actual 2020 consumption was 160 gallons per capita per day (GPCD), which is below its 2020 target of 207 GPCD.

WATER SUPPLY CHARACTERIZATION

The City meets all of its demands with a combination of imported water, local groundwater, and recycled water. The City works together with two primary agencies, MWDOC and OCWD to ensure a safe and reliable water supply that will continue to serve the community in periods of drought and shortage. The sources of imported water supplies include water from the Colorado River and the State Water Project (SWP) provided by MET and delivered through MWDOC.

The City's main source of water supply is groundwater from the OC Basin. Imported water and recycled water supplement the City's water supply portfolio. In FY 2019-20, the City's water supplies consisted of 68% groundwater, 28.5% imported water, and 3.5% recycled water.

It is projected that by 2045, the water supply portfolio will shift to 82% groundwater, 14.5% imported water, and 3.5% recycled water. Note that these representations of supply match the projected demand. The City can purchase more MET water through MWDOC, should the need arise.

The City does not own or operate wastewater treatment facilities but owns and operates the wastewater collection system in its service area that sends all wastewater to OC San for treatment and disposal. The City benefits from its direct and indirect uses of recycled water. OCWD's Green Acres Project (GAP) produces recycled water for direct non-potable reuses such as landscape irrigation. OCWD's Groundwater Replenishment System (GWRS) produces recycled water for indirect potable reuse (IPR) through the replenishment of the OC Basin.

WATER SERVICE RELIABILITY AND DROUGHT RISK ASSESSMENT

Every urban water supplier is required to assess the reliability of their water service to its customers under a normal year, a single dry year, and a drought period lasting five consecutive years. The water service reliability assessment compares projected supply to projected demand for the three hydrological conditions between 2025 and 2045. Factors affecting reliability, such as climate change and regulatory impacts, are accounted for as part of the assessment.

The City depends on a combination of imported and local supplies to meet its water demands and has taken numerous steps to ensure it has adequate supplies. MET's and MWDOC's 2020 UWMPs conclude that they can meet full-service demands of their member agencies through 2045 during normal years, single-dry years, and multiple-dry years. Consequently, the City is projected to meet full-service demands through 2045 for all scenarios, due to diversified supply and conservation measures.

The Drought Risk Assessment (DRA) evaluates the City's near-term ability to supply water assuming the City is experiencing a drought over the next five years. Even under the assumption of a drought over the next five years, MET's 2020 UWMP concludes a surplus of water supplies would be available to all of its Member Agencies, including MWDOC and in effect, the City, should the need for additional supplies arise to close any local supply gap. Additionally, the City partakes in various efforts to reduce its reliance on imported water supplies such as increasing the use of local groundwater and recycled water supplies.

WATER SHORTAGE CONTINGENCY PLANNING

Water shortage contingency planning is a strategic planning process that the City engages to prepare for and respond to water shortages. A water shortage, when water supply available is insufficient to meet the normally expected customer water use at a given point in time, may occur due to a number of reasons, such as water supply quality changes, climate change, drought, and catastrophic events (e.g., earthquake). The City's WSCP provides real-time water supply availability assessment and structured steps designed to respond to actual conditions. This level of detailed planning and preparation will help maintain reliable supplies and reduce the impacts of supply interruptions.

The WSCP serves as the operating manual that the City will use to prevent catastrophic service disruptions through proactive, rather than reactive, mitigation of water shortages. The WSCP contains the processes and procedures that will be deployed when shortage conditions arise so that the City's governing body, its staff, and its retail agencies can easily identify and efficiently implement

pre-determined steps to mitigate a water shortage to the level appropriate to the degree of water shortfall anticipated.

DEMAND MANAGEMENT MEASURES

The City, along with other Retail water agencies throughout Orange County, recognizes the need to use existing water supplies efficiently. This ethic of efficient water use has evolved as a result of the development and implementation of water use efficiency programs that make economic sense while reflecting responsible stewardship of the region's water resources. The City works closely with MWDOC to promote regional efficiency by participating in the regional water savings programs, leveraging MWDOC local program assistance, and applying the findings of MWDOCs research and evaluation efforts. This approach helps minimize confusion to consumers by providing the same programs with the same participation guidelines, maintains a consistent message to the public to use water efficiently, and provides support to retail water agencies with MWDOC serving as program administrator for the region.

PLAN ADOPTION, SUBMITTAL, AND IMPLEMENTATION

The Water Code requires the UWMP to be adopted by the Supplier's governing body. Before the adoption of the UWMP, the City notified the public and the cities and counties within its service area per the Water Code and held a public hearing to receive input from the public on the UWMP. Post adoption, the City submitted the UWMP to DWR and the other key agencies and will make it available for public review no later than 30 days after filing with DWR.