



City of
NORWALK

**2010
URBAN WATER
MANAGEMENT PLAN**

June 2011

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Executive Summary

The City of Norwalk prepared this 2010 Urban Water Management Plan in accordance with the requirements of the **California Urban Water Management Planning Act (Act)** which was established in 1983. The Act requires urban water suppliers to develop water management plans to actively pursue the efficient use of available supplies. Urban water suppliers are to develop long range plans in an effort to ensure appropriate levels of reliability in its water service during normal, dry, and multiple dry water years.

The preparation of this 2010 Urban Water Management Plan (Plan) fulfills the requirement to update the Plan every five years. This Plan will be submitted to the California Department of Water Resources within 30 days of approval by the City Council of the City of Norwalk. The previous Urban Water Management Plan was prepared by the City in December 2005. The City is only responsible for the preparation of a plan for the Norwalk Municipal Water System. Other major purveyors that serve water in the City (i.e., Golden State Water Company and Park Water Company) are responsible for preparation of Urban Water Management Plans for its respective water service areas.

In accordance with the Act, the Plan describes and evaluates sources of water supply, reasonable and practical efficient uses, recycled water and demand management activities. The Plan also addresses measures for residential, commercial, governmental, and industrial water demand management.

The Plan indicates that the City of Norwalk has experienced moderately slow growth in population, a trend which is expected to continue through the year 2030. The City is comprised of mostly residential users, which constitutes approximately 92% of the water service connections. Commercial, institutional, and industrial water service accounts comprise the remaining 8%. These percentages are not expected to vary significantly over the next 25 years. As a result, water use is expected to increase only moderately during this time period.

The NMWS is supplied water from groundwater via its wells, and purchase of water from outside sources including Central Basin Municipal Water District (CBMWD), the City of Cerritos and the City of Santa Fe Springs.

Over the past 15 years, the City has reduced its supply from groundwater due to the closure of two of its wells due to water quality concerns resulting in greatly increasing the purchase of water from outside suppliers.

Based on historic data, and water use and demand assumptions for the future, a water supply and demand comparison through the year 2030 has been prepared as a part of this Plan. The analyses include evaluation of water supply and demand during single dry water years and multiple dry water years, as required by the Act.

The Plan indicates that there are variations in water supply availability depending upon the amount of water carryover and net leases of water rights. The Plan also indicates that severe single and multiple drought years can impact the NMWS water supply.

In the past, in single dry years or multiple dry years, the City was able to meet demand by purchasing additional water from CBMWD and local agencies (cities of Santa Fe Springs and Cerritos) as needed. The projected supply and demand analysis indicates that there will be sufficient supply to meet demand, even during multiple dry year periods, through 2024 assuming the availability of imported water supplies. However, in the future, the City may not be able to meet demand in single dry years or multiple dry years if regional agencies are unable to supply sufficient supply to all its member agencies, and local suppliers must retain its supplies for its own use.

If water supplies are significantly curtailed as a result of a severe or catastrophic water supply shortage, the City may be unable to meet demand because regional and local agencies may not be able to provide the needed supplies to meet demand under such circumstances.

As a result, it is recommended that the City continue to develop a long-range strategy to increase self-sufficiency and to assure water availability from outside sources. It is recommended that the City consider long-term plans to reduce its dependence on imported water supplies from CBMWD and local water agencies, since long-term supplies from these sources cannot ultimately be guaranteed. Greater diversity in water supply can help assure a more reliable supply, even under adverse conditions.

The City must continue to evaluate, upgrade and maximize its own groundwater supply sources and implement water treatment as needed. The City must look toward the future and secure alternate sources of supply from other cities or agencies. This requires long-term agreements with agencies to ensure that alternate supplies are available when needed in accordance with those agreements, even if it is for emergency supplies only.

Upgrading the water system infrastructure, including the addition of new wells, back-up power and system redundancy, and increasing the use of reclaimed water where applicable can help the City to achieve the objective of reducing imported supplies. There is an added benefit to reducing the amount of purchased water, since it is usually less expensive to produce well water than to pay the current rates for imported supplies.

To ensure reliability for future water supplies, the City has engaged in several undertakings that will enhance its long-term supplies.

The City is working toward implementation of its planned Norwalk Reservoir project, which includes a new well, additional water storage and increased water system reliability because of the seismic standards incorporated into the project design. The City is also in the construction stage of a new water well, Norwalk Park Well or Well No.

10. This is high capacity well, which is anticipated to come online in August 2011. Increasing groundwater from new wells may require the attainment of additional water rights either by purchase or lease.

The City has developed and implemented various water conservation and Demand Management Measures required by the Act in an effort to reduce water consumption and create a water-conscious populace. These include water conservation kit distribution; participating in low-flush toilet replacement and rebate programs, high-efficiency washing machine rebate program, and commercial sector rinse and save program; monitoring the water system for leaks; instituting public information; and adopting water conservation ordinances. An aggressive water conservation campaign should continue to be instituted, not just in drought years, but on a continual basis.

Overall it is anticipated that through 2030, the City will be able to meet demand even in the event of other drought periods through creative management, adequate planning, water conservation efforts and upgrading its water infrastructure.

I. INTRODUCTION

Urban Water Management Planning Act

The State of California recognizes that the waters of the state are a limited and renewable resource. The State also understands that the conservation and efficient use of urban water supplies are of statewide concern, but the planning and implementation of water management programs can best be accomplished at the local level. As a result, the **California Urban Water Management Planning Act (Act)** was established in 1983. The Act has subsequently been amended and is included in Division 6 of the California Water Code, Part 2.6 Urban Water Management Planning, Sections 10610 through 10657.

One of the Act's primary goals is to encourage urban water suppliers to develop long-range plans in an effort to ensure appropriate levels of reliability in their water service during normal, dry, and multiple dry water years. Thus, in accordance with the Act, urban water suppliers are required to develop water management plans to actively pursue the efficient use of available supplies. Specifically, the act requires that urban water suppliers providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet (AF) of water annually prepare and adopt an urban water management plan addressing the prescribed elements contained in the Act.

The Act also addresses the public health issues pertaining to water contamination and implementing effective water management strategies, including groundwater storage projects and recycled water projects. The Act recognizes that water quality regulations are becoming an increasingly important factor in water agencies' selection of raw water sources, treatment alternatives and modifications to existing treatment facilities, and that changes in drinking water quality standards may impact the usefulness of water supplies and may ultimately impact supply reliability.

In accordance with the Act, the State legislature identifies the State policy as follows:

- a. The management of urban water demands and efficient use of water shall be actively pursued to protect both the people of the state and their water resources.
- b. The management of urban water demands and efficient use of urban water supplies shall be a guiding criterion in public decisions.
- c. Urban water suppliers shall be required to develop water management plans to actively pursue the efficient use of available supplies.

A copy of the Act is located in Appendix A.

It is clear through ever-increasing changes to the Act and other legal actions that the Urban Water Management Plan is becoming a more vital plan by which urban water suppliers must rely for their present and future water planning needs and planned development.

According to the California Department of Water Resources (DWR), the Urban Water Management Plan is considered to be a source of information for *Water Supply Assessments* and *Written Verifications of Water Supply* required by recent legislation. In addition, an Urban Water Management Plan may serve as a long-range planning document for water supply, a source of data for development of a regional water plan, and a source document for cities and counties as they prepare their General Plans.

Other Pertinent Legislation

SB 221

Over the past five years since the preparation of the last UWMP in 2000, several pieces of legislation have impacted water planning in California. Most notably are SB 610 and SB 221.

SB 221 (California Government Code Section 66473) passed the legislature in 2001. This code requires that the water supplier verify in writing that a sufficient and reliable water supply will be available prior to completion for development projects consisting of more than 500 housing units, or in smaller developments if the project represents 10 percent or more of the total number of service connections if the water purveyor has fewer than 5,000 connections. Certain types of projects, including affordable housing projects may be exempt.

Prior to approving a proposed subdivision, a city or county must make a finding that there is enough water to serve the project during average, dry, and multiple dry years without affecting existing and projected water customers. Valid water entitlements, water infrastructure financing, and all major permits and approvals must be in place to justify sufficient water supply. [*Water and Land Use, 2004*]

SB 610

SB 610 (California Government Code Sections 10631, 10656, 10910, 10912, 10915, and 10657) also passed the legislature in 2001. In accordance with the requirements, cities, counties and/or water supply agencies must incorporate water supply assessments into environmental documents prepared in accordance with the California Water Quality Act (CEQA), including Negative Declarations, Mitigated Negative Declarations, and Environmental Impact Reports for specified projects exceeding the following thresholds:

- Residential use of more than 500 units
- Retail use of more than 500,000 square feet
- Office use of more than 250,000 square feet
- Hotel/motel use of more than 500 rooms

- Industrial use of more than 40 acres or 650,000 square feet
- Mixed use project that includes any use or combination as large as any of the above, or
- Any project that would demand water greater than the equivalent of 500 dwelling units.

The assessment must cover a 20-year projection of water demands and supplies in normal, dry, and multiple dry years, including existing and planned future water users. If the project requires a new water source, the assessment must demonstrate that the water purveyor has secured water rights, can obtain capital funding for the infrastructure, and can identify and secure the required regulatory permits and approvals. [*Water and Land Use, 2004*]

Both these California laws have an overall impact in California water planning, particularly for expanding and growing communities. Due to the conditions contained in each, they would impact the City of Norwalk only if there are large-scale development projects triggered by the requirements of the legislation.

Copies of SB 221 and SB 610 are located in Appendix B.

SB X7-7

The Water Conservation Act of 2009 was incorporated into Division 6 of the California Water Code. The legislation specifically calls for developing methodologies and a set of criteria for adjusting daily per capita water use at the time compliance is required (the 2015 and 2020 compliance years). These methodologies, water use targets, and reporting apply to urban retail water suppliers that meet a threshold of number of end users or annual volume of potable water supplied. For additional information on the Water Conservation Act, please see Section IV – Water Conservation Act. A copy of this legislation is located in Appendix B.

City of Norwalk Urban Water Management Plan

The City of Norwalk submitted its first Urban Water Management Plan to the California Department of Water Resources (DWR) in 1985, and updated Plans were submitted in 1990, 1995, and 2000 as required by the Act. The City has reviewed its previous plans in preparation of the new 2005 Plan. The 2005 Plan reflects accomplishments since the last plan and identifies additional and modified programs to effect enhanced water reliability planning. The preparation of this 2005 Urban Water Management Plan fulfills the requirement to update the Plan every five years. The Plan contains information on the following:

- Water Utility Information
- Plan Preparation and Public Participation

- Climatology
- Comparison of Existing and Projected Water Supply Sources versus Existing and Projected Water Use
- Wastewater and Recycled Water Description Including Its Potential for Use as a Water Source in the Service Area
- 20X2020 baselines and targets in order to achieve 20% reduction by the year 2020.
- Urban Water Shortage Contingency Plan Components
- Description of Supplier's Water Demand Management Measures Under Current Implementation or Scheduled Implementation, Including Steps to Implement Proposed Measures
- Evaluation of Each Water Demand Management Measure that Is Not Currently Being Implemented or Scheduled for Implementation

Section 10631 (f) of the Act specifies 14 Demand Management Measures (DMMs) for urban water suppliers to address in the Urban Water Management Plan as identified below:

1. Water Survey Programs for Single-family Residential and Multifamily Residential Customers
2. Residential Plumbing Retrofit Programs
3. System Water Audits, Leak Detection and Repair
4. Metering with Commodity Rates for All New Connections and Retrofit of Existing Connections
5. Large Landscape Conservation Programs and Incentives
6. High-efficiency Washing Machine Rebate Programs
7. Public Information Programs
8. School Education Programs
9. Conservation Programs for Commercial, Industrial and Institutional Accounts
10. Wholesale Agency Programs
11. Conservation Pricing
12. Water Conservation Coordinator
13. Water Waste Prohibition
14. Residential Ultra-Low Flush Toilet Replacement Programs

The DWR has provided checklists and worksheets as guidance in the preparation of urban water management plans. The checklists and worksheets are useful tools to

understand the Act and can be used to develop the plan in accordance with the Act. The worksheets and checklists have a series of checkboxes, tables, and additional information an agency could discuss for the topics listed above.

City of Norwalk

Formation and Location

The City of Norwalk was incorporated in 1957. It is located in the Central Basin of Los Angeles County, approximately 17 miles southeast of downtown Los Angeles.

The City covers approximately 9.8 square miles of land, varying in elevation from about 65 feet above sea level in the southern portion of the City to more than 120 feet above sea level at the northern border. The City is bounded by the City of Downey on the north, the City of Santa Fe Springs on the north and east, the Cities of Cerritos and Artesia on the south, and the San Gabriel River on the west.

As indicated in the City's General Plan, the beginning of the development of the Norwalk community can be traced to the establishment of Norwalk Station by the railroad in 1874, and the subsequent recording of a tract map in 1877 for the town site.

Beginning in the mid-1940s, the area encompassed by the City experienced rapid development and expansion driven by the local defense industry. This changed the area from a primarily rural agricultural area into a growing suburb. During the period from 1945 to the present, most of the area's agricultural areas were converted to homes and businesses.

The City is accessible from a network of freeways which link it to the rest of the southern California region. The Santa Ana Freeway (I-5), San Gabriel Freeway (I-605), Artesia Freeway (SR 91), and the Glenn Anderson Freeway (I-105) all pass through Norwalk, or are located within close proximity. The City is also linked to a network of passenger and freight rail systems, including the Metropolitan Transit Authority (MTA) Metro Green Line light rail, and the Metrolink commuter rail line connecting San Diego communities with a number of communities in Orange, Los Angeles, San Bernardino, and Riverside Counties.

Norwalk is primarily a residential community, with single family and multi-family homes representing nearly 50 percent of its total land area. Single family housing, much of which was constructed prior to City incorporation, has been replaced in some areas by higher density apartments and condominiums. Commercial uses comprise approximately six percent of the City's incorporated land, and manufacturing and industrial uses constitute just under five percent of City territory. Open space, public schools, institutional and public facilities comprise approximately 11 percent of the City's

acreage, while about 28 percent of the City is located in areas which have no land use designation.

Management

Norwalk has a five member City Council. Council members are elected at-large and serve four-year terms. The City Mayor is determined each year by a vote of the City Council. The City Manager is appointed by the City Council. Other City managerial positions are filled by the City Manager. The Public Services Director is responsible for the operation and management of the City's water system.

Norwalk Municipal Water System

Due to rapid pre-incorporation growth, brought on in large part by the development of southern California defense industries prior to and during World War II, a diversity of local and neighborhood water companies were formed to serve the water needs of Norwalk residents and businesses. More specifically, this wartime population growth resulted in seven separate water companies wholesaling water to City residents by 1960.

After its incorporation in the late 1950s, the City of Norwalk, recognizing the benefits of consolidated water distribution systems, began to consolidate the existing water facilities by purchasing them as they became available. These purchases formed the basis of the present Norwalk Municipal Water System (NMWS).

In 1959, the City received ownership and custody of the water system known as County Water Works District No. 2, from the County of Los Angeles. This water system consisted of 808 water services, two wells, an elevated storage tank, and a distribution system, which encompassed approximately 380 acres in central Norwalk.

The City then acquired Independence Square from the Suburban Water Company in 1962. This system consisted of 4-inch steel main lines and 184 water services, all of which were located in the private property of the customers served. In 1963 the City replaced all of the water lines and services with 6-inch, 8-inch, and 12-inch mains with copper services in the public right-of-way.

In 1970, the City purchased 536 water services from the City of Santa Fe Springs. With this purchase the City also obtained a distribution system north of Lakeland Road and west of Pioneer Boulevard, plus the pumping rights to 224 acre-feet (AF) of water per year in the Central Basin.

In the same year, the City also purchased the assets of the Junior Water Company, which was located adjacent to the old County Works District No. 2 in the center of town. The City obtained 1,187 service connections, two residential buildings, three properties, a distribution system and two wells, with water rights to pump 590 AF per year from the Central Basin.

When the two-part S&S Tract located at Alondra Boulevard and Wilder Avenue, and Alondra Avenue and Blackburn Avenue, was developed in 1971, the City elected to be the water purveyor. The tract encompassed 284 services and a distribution system composed of 8-inch and 12-inch asbestos cement (A.C.) pipes with copper or polyethylene pipe services. Water for this area is currently provided through two (2) meters, which receive their water from the City of Cerritos through the jointly owned Norwalk/Cerritos pipe originating in Cerritos.

In 2005, the City purchased the portion of County Water Company, which is located in the southern portion of the City bordering the Cities of Cerritos and Artesia. This purchase included 456 AF per year of allowed pumping allocation and 1,051 water services.

Currently, the City has a total of 1,773 AF per year of water rights to pump from the Central Groundwater Basin (Basin).

The City of Norwalk is presently served water by five retail water agencies. These are:

1. City of Norwalk Municipal Water System (NMWS)
2. Park Water Company
3. Golden State Water Company
4. City of Santa Fe Springs (through NMWS)
5. City of Cerritos (through NMWS)

Sources of water for these agencies include Metropolitan Water District of Southern California (MWD), Central Basin Municipal Water District (CBMWD), and local wells.

The Norwalk Municipal Water System is the water agency operated by the City of Norwalk and serves small portions of the Cities of Norwalk and Artesia and a small unincorporated LA County area, known to the County of LA as the "Cerritos Island". The NMWS serves an estimated population of 18,361 through 5,359 service connections.

The NWMS is comprised of five (5) distinct service sectors within the City boundaries, including the North, West-Central, Eastern, Southeastern and South sectors, as described below.

North Sector

The North Sector is divided into two units, separated by the I-5 Freeway. The western unit formerly received its water from the NMWS Well No. 3. This well was shut down in 1993. This unit now receives all of its water from the City of Santa Fe Springs through NMWS. The source of water for the eastern unit is also the City of Santa Fe Springs.

West-Central Sector

The West Central Sector of the NMWS receives its water from Norwalk Wells No. 4 and No. 5, and purchased water from CBMWD. Well No. 8 was shut down in 1999 and no longer provides water to this sector at this time. Wells No. 4 and No. 5 pump to individual 10,000-gallon pneumatic tanks which help maintain system pressure at 40-55 pounds per square inch (psi). When in service, Well No. 8 pumps to NMWS's 100,000 gallon elevated storage tank, which also provides water to the system at 40-55 psi. In addition to well water, a 16-inch water pipeline also carries MWD water from Central Basin Turnout No. 16, down Norwalk Boulevard to San Antonio Drive and west on Rosecrans Ave. This pipeline also provides fire protection in the West-Central Unit and acts as a backup for emergencies; it is also used to provide fire protection in portions of Golden State Water Company's service area where pipes are of insufficient size to convey the water volume required for fire protection.

The West-Central Unit has three 6-inch inter-connections with Park Water Company, and one 4-inch inter-connection with Golden State Water Company, to allow water exchanges during emergencies.

Eastern Sector

The Eastern Sector of the NMWS obtains water through a 6-inch meter connection with the City of Santa Fe Springs water system. An 8-inch emergency inter-connection also connects this Sector with Park Water Company. The Park Water inter-connection was originally used for distribution, but because water from the City of Santa Fe Springs is generally less costly, this inter-connection has been relegated to emergency use only. Pressure within this Sector ranges from 40 to 65 psi.

Southeastern Sector

Water is conveyed to this unit, located in the lower southeastern portion of the City, through two source meters from the City of Cerritos. The pipe that conveys water to this Sector is jointly owned by the cities of Cerritos and Norwalk. As a result, NMWS can purchase water from this source at two dollars per acre-foot above Cerritos' wholesale cost. Water pressure in this Sector is between 40 and 65 psi.

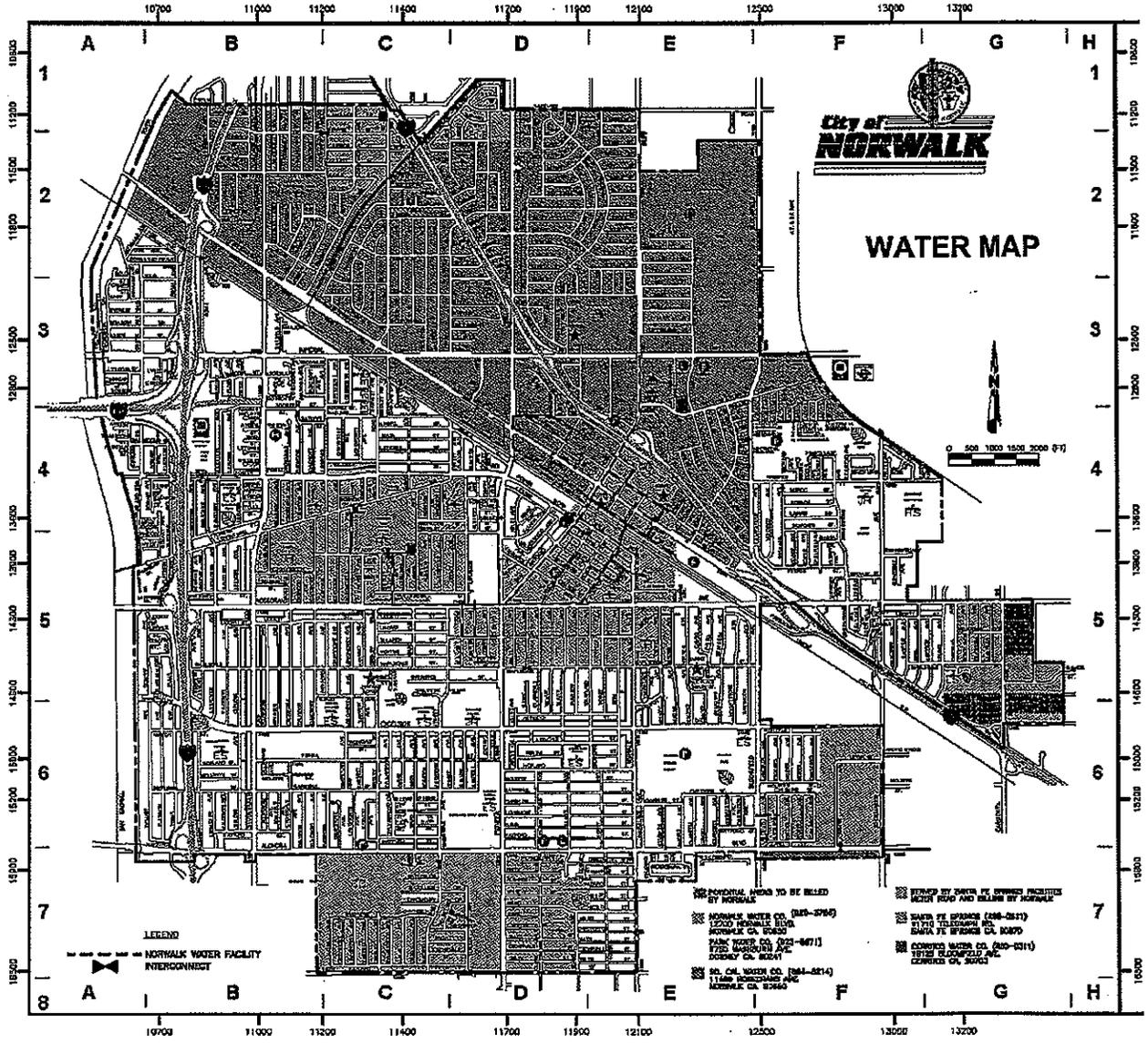
South Sector

This sector of the NMWS is the newly acquired portion of the system from County Water Company. Water serving this sector is from the City of Cerritos.

The NMWS also services water outside the City of Norwalk boundaries. It provides water to portions of the City of Artesia and a small Unincorporated Los Angeles County area as shown on Figure 2.

This Plan represents the Norwalk Municipal Water System service area only. The other water service providers in the City are responsible for submitting Urban Water Management Plans for their respective agency in accordance with the California Urban Water Management Planning Act.

Figure 1 (next page) shows the areas of the City served by the five water agencies. The non-contiguous blue colored sections comprise the NMWS.



II. Plan Preparation and Service Area Setting

Public Participation and Agency Coordination

The City of Norwalk has held public meetings prior to the adoption of the Urban Water Management Plans submitted in 1985, 1990, 1995, 2000 and 2005.

The City prepared this Plan in May 2011 and held a public meeting in June 2011 on the adoption of the 2010 Urban Water Management Plan. Public notice was made of the meeting through postings at City Hall and publication in the local newspaper. Copies of the draft plan were made available at City Hall. After City adoption, the Urban Water Management Plan is filed with DWR.

The City participated in several informative meetings held at CBMWD main office. The meetings informed Central Basin members of the process required to complete the 2010 UWMP, and to assist member agencies with the development of their plans. Numerous member agencies provided informative observations at the meetings so that all agencies could better develop their own UWMP in 2010.

On March 2, 2011 staff attended the Department of Water Resources Workshop at 320 West 4th Street, Carmel Room I Los Angeles, CA 90013 regarding the Urban Water Management Plan 2010 document.

The City is also independently active in creating public awareness programs pertaining to drought conditions and the need to continue to conserve water. Literature is available to the public informing the citizens on water conservation matters. Flyers and information are distributed in water bill mailings and are available at City Hall. In addition, the City routinely includes water related articles and water conservation information in its newsletter. The local City cable television station has also been used for water conservation educational purposes.

The City coordinated the preparation of this document among divisions within the Administration Department and Community Development to assure water program acceptance. The City is a member of Central Basin Municipal Water District (CBMWD) and the Water Replenishment District of Southern California (WRD) and interfaces with these agencies on regional matters. The California Department of Water Resources is the Watermaster for the Central Basin and is responsible for compiling the annual Watermaster Service Reports. A list of persons who participated in the development of this Plan is located in Appendix C.

Coordination with Appropriate Agencies							
	Participated in Developing the Plan	Commented on the Draft	Attended Public Meetings	Contacted for Assistance	Provided a Copy of the Draft Plan	Provided a Notice of Intent to Adopt	Not Involved / No Information
Other water suppliers							
Water management agencies			x	x	x	x	
Relevant public agencies				x	x	x	
Other							

The City has also coordinated with federal agencies on water planning. The City has been developing enhancement programs in its water infrastructure with the U.S. Army Corps of Engineers (Corps) and the U.S. Environmental Protection Agency (EPA).

The City has developed a water system improvement program with the assistance of federal funding for planning and design. The program, administered by the Corps in the late 1990s, resulted in the design of improvements to the City's water distribution system and storage facilities. EPA has provided additional grant funding for construction and design of recommended improvements through grants from 2003 to 2005. The implementation of this program will result in infrastructure that is more structurally reliable from a seismic standpoint. It will also increase public safety by providing additional water storage and capacity for fire fighting. The water infrastructure program has been widely publicized and been discussed at several Norwalk City Council meetings over the past eight years.

As a member of CBMWD, the City of Norwalk received a draft of the Central Basin Municipal Water District 2010 Urban Water Management Plan (dated June 2010) and reviewed the draft plan prior to the preparation of the City's Plan.

Through the coordination and involvement of these many agencies, the City of Norwalk has been able to cooperatively develop and implement programs for long-term water supply sufficiency.

Plan Adoption

In May 2011, the City of Norwalk prepared this 2010 Urban Water Management Plan to address the requirements of the Act and to further develop and implement its water planning and management programs in order to provide adequate water supply sources and effective management of its water resources. A Public Hearing was held and this Plan was adopted by City Council at its meeting in June 2011. The Notice of Public Hearing and the Resolution adopting the Plan are located in Appendix D and Appendix E, respectively. This Plan is submitted to DWR in fulfillment of the City's responsibility under the Act.

Service Area and Climatology

The City of Norwalk General Plan, revised in 1996, did not indicate broad-scale changes in land use designations through 2000. The General Plan primarily served to document existing land uses, and alter designations, which do not accurately reflect the type of development constructed.

The Norwalk Municipal Water System is comprised of primarily residential services, but does have minimal industrial, institutional and governmental facilities.

Residential development is not expected to experience major growth over the next twenty years. Emphasis is being placed on restoring and rehabilitating existing housing and expanding and facilitating access to existing income-based housing. Commercial development will continue to be a factor in the growth of designated areas, such as commercial corridors and Specific Plan areas within the City, but it is not expected to be significant through 2030. The City's water usage in the industrial, institutional and governmental sectors of the community will remain fairly constant. The City is virtually built-out with little or no major development expected over the next 25 years.

According to the U.S. Census population counts, the City of Norwalk's population was 105,549 in 2010 (Source: <http://www.census.gov/>). According to growth forecasts published by Southern California Council of Governments (SCAG), Economic and Human Development (CEHD) Policy Committee, the City of Norwalk's population is projected to be 113,404 in 2020 and 118,544 in 2035 (Source: <http://www.scag.ca.gov/forecast/index.htm>).

The population of the Norwalk Municipal Water System, which serves a small part of the City, is expected to follow the same trend. The estimated population for the NMWS in 2010 is 18,361, and the population in 2035 is projected to be 19,202. A similar increasing trend is also anticipated for the number of service connections and water demand. Table 1 indicates projected population figures for NMWS through 2035.

Table 1: Service Area Population Projections

Service Area Population - Current and Projected						
	2010	2015	2020	2025	2030	2035 - opt.
Service Area Population*	18,361	18,526	18,693	18,861	19,031	19,202

* includes services within Norwalk as well as small portions of Artesia and Unincorporated LA County area

Climatology

Norwalk is located on the relatively flat Downey Plain of the Coastal Plain of Los Angeles County. It overlies the aquifers of the Central Groundwater Basin (Central Basin), which is an important source of local groundwater.

The climate of Norwalk is Mediterranean, characterized by warm, dry summers and cool, and moist winters. Early morning fog is typical in the late spring and early summer. The prevailing wind is from the west from March through October, and is from the east from November through February. Average wind speed is between 5 and 6 miles per hour (mph). During the late fall and early winter, strong, dry offshore winds can occur. Most of the rainfall occurs November through April.

Climate						
	January	February	March	April	May	June
Standard Average ETo [2]	1.65	2.15	3.59	4.77	5.12	5.71
Average Rainfall [3]	3.56	3.91	3.06	0.9	0.23	0.07
Average Temperature [3]	69.4	71.1	72.8	77.8	79.4	83.7

Climate (continued)							
	July	August	September	October	November	December	Annual
Average ETo	5.93	5.91	4.39	3.22	2.18	1.68	46.3
Average Rainfall	0.02	0.02	0.2	0.3	1.23	1.88	15.4
Average Temperature	88.6	89.7	87.9	82.6	75.4	70.9	79.1

[1] Data obtained using California US Census Bureau, Census 2000.

[2] Data obtained from California Irrigation Management Information System (CIMIS) at Long Beach Station for the Los Angeles Region for Calendar Year 2010:

<http://www.cimis.water.ca.gov/cimis/monthlyEToReport.do>

[3] Data taken from the Western Regional Climate Center's website at the Montebello station: <http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?camont>

Past Drought and Conservation Information

The City and the entire region experienced dry water years from 1988 to 1992, 2002 to 2004, and 2007 to 2010. Through creative water management, the City was able to meet its water demands during this dry period. In order to minimize the impact of the drought, the City developed and implemented water conservation programs and as a result decreased the amount of purchased water.

The City developed a water conservation program, which included public information and education, outreach to the community, school children education, plumbing retrofit programs, and the adoption of a Water Conservation Ordinance in 2009.

In March 1991, the City adopted The Emergency Water Conservation Plan (Ordinance No. 1378). It outlines Stages of Action to implement during a declared water shortage emergency. Phases are declared depending upon the percent shortage in its water supplies. The ordinance outlines the mandatory water use reductions for each water conservation phase and also specifies prohibited water use applicable to all customers. The ordinance also specifies penalties for failure to comply. A copy of Ordinance No. 1378 is located in Appendix I.

In concert with Ordinance No. 1378, the City prepared a Water Shortage Contingency Plan in July 1992. The Water Shortage Contingency Plan addresses minimum water supply availability and the impacts of the plan on the revenues and expenditures of the City. A copy of the Water Shortage Contingency Plan is located in Appendix J.

In April of 1993, the City adopted Ordinance No. 1409R which added a section to the municipal code relating to the use of water efficient landscaping. The purpose and intent of this ordinance is to establish provisions to encourage the use of water efficient plants and water efficient irrigation systems, which foster long-term water conservation. A copy of Ordinance 1409R is located in Appendix K.

The City is entitled to an annual pumping right of 1,773 acre-feet from the Central Basin. Additional water supply is obtained through the purchase of water from other water supply agencies, including Central Basin Municipal Water District, the City of Cerritos, and the City of Santa Fe Springs. The NMWS has inter-connections with all these agencies. The City also has the capability to receive water from Golden State Water Company (GSWC) and Park Water Company (Park) through system inter-connections, but has not purchased water from these entities for several years.

The Central Basin Judgment (Central and West Basin, Water Replenishment District, etc. vs. Charles E. Adams et al.) [Second Amended Judgment, May 6, 1991] is the legal document specifying water allocations to the affected parties. A copy of the Central Basin Judgment is located in Appendix L.

In 2005, the City acquired a portion of County Water Company by eminent domain and received 456 AF of water rights as a result of the Final Order of Condemnation dated May 19, 2005. A copy of the Final Order of Condemnation is also located in Appendix L.

III. Water Supply

Water Supply Sources

Over the past five years, from 2005-2010, the NMWS produced approximately 18 percent of its water supply from wells within the NMWS, and imports the remaining 82 percent. The City has been purchasing water for resale from CBMWD and the Cities of Cerritos and Santa Fe Springs.

Well Supply

Currently, the City has two operational wells that supply water to the NMWS. Well No. 4 is located at 11314 Leffingwell Road and has a capacity of 680 gallons per minute (gpm). Well No. 5 is located at 11477 Taddy Street and has a capacity of 640 gpm. A third well (Well No. 8, San Antonio) was operational until October 1999 when it was shut down due to contamination concerns. A fourth well (Lakeland Well No. 3) was shut down in 1993 and has been abandoned.

The City is in the process of constructing a new well to be located at Norwalk Park (central area of the system). This well, Well No. 10, will have the capacity to produce 2,000 gallons of water per minute and is anticipated to come online by August 2011. This well will enable the City to reduce its current dependence on imported water supplies.

The City is entitled to 1,773 acre-feet (AF) of water from the Central Basin as a result of the adjudication of the Central Basin and subsequent successor to water rights from Junior Water Company, Inc., Bayard Ryder, the City of Santa Fe Springs and County Water Company. The City also has had an allowable carry-over of water extractions from previous years during the last 22-year period because it has not pumped up to its annual allocation. Depending upon the need, the City also leases some of its water rights to others due to its reduced pumping of groundwater.

Since 1988, the total amount of ground water produced annually has ranged from 410 AF in 2010 to 507 AF in 2006, with an average of 468 AF over a 5-year period. A summary of this data is shown on a spreadsheet entitled "City of Norwalk - Water Pumping and Supply Data" which is located in Appendix M.

Imported Water

The City purchases water to supply the sectors of its system where there are no City-owned wells. As indicated above, the City is also purchasing water in its West-Central Sector (where there are two operating wells) to compensate for the closure of Well No. 8. However, this will diminish once Well No. 10 (Norwalk Park Well) becomes operational in 2011.

The City purchases water from various sources depending upon need in order to meet its demand. These sources primarily include CBMWD, the City of Santa Fe Springs, and the City of Cerritos; in the past it also included Golden State Water Company, and Park Water Company. The total amount of imported water purchased annually has ranged from 2,215 AF in 2006 to 1,919 AF in 2010. A summary of this data is shown on the spreadsheet located in Appendix M.

Since 1994-1995, the City has been purchasing reclaimed water from CBMWD. It is primarily used for irrigation purposes at schools and parks. The City has purchased an average of 99 AF per year over the past five years. The total amount of reclaimed water purchased each year since 1988 is shown on the spreadsheet located in Appendix M.

Water Storage

NMWS has minimal storage capacity at the current time. There is one elevated storage tank with a capacity of 100,000 gallons that serves the West-Central portion of the NMWS. However, it is anticipated that by 2020, provided funding becomes available, a new 3.3 million gallon reservoir will be constructed and operational. This will greatly enhance public safety by providing supply for daily demand and demand created by emergency situations such as fire or earthquake.

Total Water Supply

Total water supplies consist of groundwater from wells, imported purchased water and reclaimed water. The total supply has ranged from 1,703 AF to 2,330 AF annually since 1988.

Current and Projected Water Supplies

Table 3 on the next page shows current and projected water supplies through 2030.

In 2005, the City pumped 546 AF of groundwater, purchased 1,567 AF from outside sources, and purchased 53 AF of reclaimed water for a total supply of 2,167 AF.

For the projections from 2015 through 2035, it is assumed that Well No. 10 becomes operational in 2011, thus maximizing the City's use of its water rights. This should reduce reliance on imported water supplies in the short-term, but as water demand increases over time due to increased population, the dependence on imported supplies would again rise by the year 2035.

The City is not considering other supply sources such as purchases from other wholesalers or desalination at this time, but is planning on developing a new well as part

of its Norwalk Park Reservoir project within the next decade. This may require the purchase of additional water rights.

Table 3 Current and Planned Water Supplies - AFY						
Water Supply Sources	2010	2015	2020	2025	2030	2035-adj
Supplier produced groundwater	410	1,773	1,773	1,773	1,773	1,773
Supplier surface diversions						
Transfers in or out						
Exchanges In or out						
Recycled Water (projected use)	102	102	102	102	102	102
Desalination						
Carryovers/Net Leases & Exchanges						
Imported Water Sources	1,818	665	892	1,141	1,412	1,708
Total	2,330	2,540	2,767	3,016	3,287	3,583

Recycled Water

As indicated earlier, the City currently purchases recycled water from CBMWD to augment the City's overall supply. In the future, the increased use of recycled water can be a viable option if supply becomes more readily available, it is of consistent quality for the purposes used, and there are enough potential users. The most important consideration factor is cost effectiveness. Recycled water is discussed in more detail in Section VIII.

IV. Water Demand

Past, Current and Projected Water Use

Over the past five years potable water demand has varied from 2,722 acre-feet in 2006 to 2,329 acre-feet in 2010, with an average demand of 2,557 AF/year over the 5-year period. This trend is expected to decrease because of little growth in a virtually built-out city, and increasing water conservation measures. However, modest population growth is expected through 2035 as discussed in Section II.

Potable water demand and production data for the years 2005-2010 are located in Appendix M.

The City is comprised of mostly residential users, which constitutes approximately 87% of the water service connections. Commercial/institutional water service accounts comprise approximately 6% of the total water service accounts. The institutional sector is primarily City offices and facilities, and schools. The industrial water service accounts are approximately 1.36% of the total water service accounts. The landscape and recreational sector is primarily City parks and recreational facilities and comprises approximately 0.32% of the total. There is no agricultural sector within the City. These percentages are not expected to vary significantly over the next 30 years.

Table 8 indicates water usage for 2005 and 2010 and projected usage through 2035 by water use sector. Table 8 also indicates the number of connections to the water system by customer type for the same period of time (2005 – 2035).

The projected water use is based upon modest population growth and little growth in the industrial, commercial and institutional sectors. It is estimated that there will be an additional overall demand of 115 AF for each five-year period through 2030. Similarly, the number of water service accounts are projected which reflect growth due to the population increase. Details of the calculated projections for the number of connections and water demand are located at the end of this section.

Water Loss

Generally, the water loss for the NMWS is estimated at four percent. This is considered reasonable. The City maintains its water system well and will continue to conduct the maintenance and repair on its system to minimize water loss.

Through planned maintenance, review of data, responsible operations, and visual observation of the system, the City can effectively monitor any potential losses within its small water system. It is assumed that the overall water system loss will not change over the next 25 years.

Other Uses

The City does not supply water to other cities or agencies. The City has no additional water uses such as saline barriers or unaccounted-for water system losses.

Figure 4: Breakdown of accounts by sectors

Customer Classification	Potable Water		Recycled Water	
	Metered	Unmetered	Metered	Unmetered
Single Family Residential	4666	0		0
Multi-family Residential	233	0		0
Commercial/Institutional	315	0		0
Industrial	73	0		0
Landscape Irrigation	17	0	5	0
Other	52	0		0
Agricultural Irrigation	3	0		0
TOTAL	5359	0	5	0

V. SB X7-7: WATER CONSERVATION ACT OF 2009

The Water Conservation Act of 2009 was incorporated into Division 6 of the California Water Code. The legislation specifically calls for developing methodologies and a set of criteria for adjusting daily per capita water use at the time compliance is required (the 2015 and 2020 compliance years). These methodologies, water use targets, and reporting apply to urban retail water suppliers that meet a threshold of number of end users or annual volume of potable water supplied.

Baseline Water Use

Water suppliers must define a 10- or 15-year base (or baseline) period for water use that will be used to develop their target levels of per capita water use. Water suppliers must also calculate water use for a 5-year baseline period, and use that value to determine a minimum required reduction in water use by 2020.

Water Use Targets

The 2020 water use target will be calculated using one of the following four methods:

- Method 1: Eighty percent of the water supplier's baseline per capita water use
- Method 2: Per capita daily water use estimated using the sum of performance standards applied to indoor residential use; landscaped area water use; and CII uses
- **Method 3: Ninety-five percent of the applicable state hydrologic region target as stated in the State's April 30, 2009, draft 20X2020 Water Conservation Plan**
- Method 4: Savings by Water Sector. This method identifies water savings obtained through identified practices and subtracts them from the base daily per capita water use value identified for the water supplier.

The Water Code directs that water suppliers must compare their actual water use in 2020 with their calculated targets to assess compliance. In addition, water suppliers will report interim compliance in 2015 as compared to an interim target (generally halfway between the baseline water use and the 2020 target level). The years 2015 and 2020 are referred to in the methodologies as compliance years. All baseline, target, and compliance-year water use estimates must be calculated and reported in gallons per capita per day (GPCD).

Water suppliers have some flexibility in setting and revising water use targets.

- A water supplier may set its water use target and comply individually, or as part of a regional alliance (see Methodology 9: Regional Compliance).
- A water supplier may revise its water use target in its 2015 and 2020 urban water management plan or in an amended plan.

- A water supplier may change the method it uses to set its water use target and report it in a 2010 amended plan or in its 2015 urban water management plan. Urban water suppliers are not permitted to change target methods after they have submitted their 2015 UWMP.

Norwalk Calculations

The City of Norwalk determined the base period for development of the 20X2020 target by examining all timeframes from 2005 through 2010. As Norwalk's recycled water use does not exceed 10 percent of the total water demand, the 10-Year Baseline was calculated. Calendar Year 2001 to Calendar Year 2010 (see Table X) was chosen for the calculation to meet the requirements of Section 10608.20 of the California Water Code. Calendar Year 2004 to Calendar Year 2008 (see Table Y) was chosen for the 5-Year Baseline Period, in accordance with Section 10608.22 of the California Water Code.

The following is an explanation of the calculation of the urban per capita water use for the 5-Year Baseline Periods:

- **Population Estimate:** The population estimates were developed based on US Census data and California Department of Finance data, which were used in conjunction with the City of Norwalk's water system service area.
- **Groundwater Extraction:** Groundwater extraction volume was obtained from analysis of DWR Public Water System Statistics Reports. Water used to develop water production wells, and water sold to other water utilities were subtracted from the groundwater extraction volume to determine the amount of water entering the distribution system.
- **Purchased Water:** The City of Norwalk made numerous purchases for additional supplies during the selected 5-Year Baseline Period. Norwalk purchased additional supplies from the Central Municipal Water District, Central Basin Municipal Water District, the City of Santa Fe Springs, and the City of Cerritos.
- **Distribution System Storage Change:** The net change in the distribution system storage was not included in the gross water calculation.
- **Gross Water Use before Indirect Recycled Water Use:** Groundwater extractions and purchased potable water were combined.
- **Indirect Water Use Deduction:** The Water Replenishment District of Southern California (WRD) uses recycled wastewater to maintain the groundwater table.

The five-year average of recycled water present in groundwater was estimated for each year in the Baseline period. This recycled water percentage reduction, a 10 percent "in-basin loss," and a 3 percent "distribution system loss," were excluded from the groundwater portion of the City of Norwalk's supply.

- **Agricultural Water Use and Process Water:** These water uses were not included in the gross water use calculation.

The Urban Per Capita Water Use Target was calculated using the methodologies outlined in the DWR 2010 UWMP Guidebook. The City of Norwalk's 5-Year Baseline (2004 – 2008) Urban Per Capita Water Use is 118 GPCD. The City of Norwalk plans to use Method 3 to determine the 2020 Urban Per Capita Water Use Target.

Method 3 establishes the 2020 Target as ninety-five percent of the applicable State Hydrologic Region Target as stated in the State's April 30, 2009, Draft 20x2020 Water Conservation Plan. The City of Norwalk is located within the South Coast State Hydrologic Region, which has a 2020 Target of 149 GPCD. Ninety-five percent of the South Coast 2020 Target is 142 GPCD. This value was initially set as the 2020 Urban Water Use Target.

To ensure the City of Norwalk achieves a minimum reduction in water use, the 5-year Base Daily Per Capita Water Use was compared to the 2020 Urban Water Use Target. The calculated 5-year Base Daily Per Capita Water Use for the City of Norwalk was 118 GPCD for 2004 – 2008. Ninety-five percent of the 5-year Base Daily Per Capita Water Use is 112 GPCD. This value is much lower than the 2020 Urban Water Use Target of 142 GPCD. Because of this, the 2020 Urban Water Use Target must be adjusted from 95% of the South Coast Hydrologic Region Target, to 95% of the 5-year Base Daily Per Capita Water Use, as required by the Department of Water Resources. Thus, **the 2020 Urban Water Use Target for the City of Norwalk will be 112 GPCD.**

The current (2010) GPCD for Norwalk is 104. Thus, theoretically, Norwalk is already in compliance with the 20X2020 Urban Per Capita Water Use Target using Method 3.

In order to continue to be in compliance with the 20X2020 mandate, Norwalk will need to continue its water conservation efforts and public outreach to the community. This will ensure minimal water consumption for its service area for the next five years.

It should be noted that a water supplier may change the method it uses to set its water use target and report it in a 2010 amended plan or in its 2015 Urban Water Management Plan. Urban water suppliers are not permitted to change target methods after they have submitted their 2015 UWMP.

Norwalk – Urban Water Use Target Calculations is located on the next page.

MAP

VI. Water Demand Management Measures

The City of Norwalk supports water conservation planning and implementation of water conservation measures. The City has employed several conservation measures to discourage water waste and over-use. In addition, the City also participates in the promotion of water conservation programs developed and implemented by CBMWD, the regional water supply agency of which the City is a member.

In response to the Urban Water Management Planning Act requiring the implementation of 14 Demand Management Measures (DMM), the City provides the following information on its efforts to conserve water and reduce daily water usage through these 14 DMMs. Several water conservation programs have been implemented, some are in the planning and review stage, and others have been deferred due to other priorities, inadequate funding, or infeasibility (not cost-effective).

Even though the City has yet to implement some of the DMMs, the City has made significant strides in developing and implementing water conservation programs. The City continues to be committed to the concept of good water management practice and intends to expand its water conservation program as budgets and staffing allow. The City's water conservation program will periodically be re-evaluated and modified to effect better methods or techniques as the need arises.

The City does not directly offer any grants, loans or other financial incentives to any sector of the community for the installation of water conservation measures. The state of California also does not offer any grants or loans for this type of water conservation. In the future, it is hoped that the state government will be able to provide financial incentives for water conservation to assist the local and regional agencies with the cost of implementing these programs. However, the City currently partners with Central Basin Municipal Water District and the Water Replenishment District of Southern California to offer the many conservation programs to residents of Norwalk and customers of the Norwalk Municipal Water System.

When evaluating the following DMMs, it is important to keep in mind that the NMWS is a small water system (estimated population of 18,361). It is virtually built-out, with only a modest increase in population projected, with very minimal industry (none of which are very large water users), and no overall increase in landscape area over the past ten years.

DMM 1

Water Survey Programs for Single-Family Residential and Multi-Family Residential Customers

The City's system is comprised mainly of single and multi-family dwellings. The overall system loss is estimated to be approximately four percent. As a result, the City has focused on other higher priority water conservation measures. The City water conservation program includes alerting the public to be on the lookout for water system leaks and to correct them expediently. The City is also available to the public to investigate meter discrepancies and to assist in answering questions regarding system leaks or higher than expected water usage.

Since 92% of the City's users are in the single-family residential and multi-family residential categories, any changes in water demand patterns can be easily noticed through billing records.

Through the use of monitoring water consumption by category, the City is able to gauge customer water use and recognize abnormal usage. The City is confident that its users are educated to good water conservation practices. The City may alter its present program of usage monitoring and implement a different form of water survey in the future, if it becomes evident through its water use monitoring, that program modification is necessary. Currently, there are no funds in the budget for a formal water survey program. The City is focusing on other higher priority water system needs such as upgraded infrastructure and water storage for greater water system reliability.

Because of the small size of the NMWS, and its limited availability of funds, other water conservation measures are more cost effective for the City at this time. The City would consider instituting a more advanced water survey program sooner, if state funding becomes available for such a program.

DMM 2

Residential Plumbing Retrofit

The City continues to partner with Central Basin Municipal Water District and Metropolitan Municipal Water District for residential plumbing retrofit programs that may become available to member agencies. The City utilizes its monthly newsletter publication, in addition to flyers, website, and cable TV to advertise these programs.

The City participates in ultra-low flush toilet distribution and rebate programs with CBMWD and MWD. These programs have proven to be very successful. The toilet distribution program is discussed further in DMM 14 "Residential Ultra-Low Flush Toilet Replacement Program" later in this section. The City will continue to partner with CBMWD and MWD and other agencies for future residential plumbing retrofit programs.

In 1994, the State of California passed legislation requiring the manufacture and sale of toilets which use 1.6 gallons per flush or less. The state plumbing code requires the installation of ultra-low flush toilets in new dwellings.

**DMM 3
System Water Audits, Leak Detection and Repair**

As a part of normal operation and maintenance of the water system, water division staff does preventive maintenance. This includes regular valve, meter, detector check, and pipeline maintenance. If during routine inspection of the system leaks are encountered or suspected, further evaluation is conducted, and if leaks are found, they are repaired.

The City has an on-going meter evaluation and replacement program as part of its operation and maintenance program. Meters suspected of inadequate performance are replaced or repaired to ensure accuracy.

The City repairs main pipeline leaks as soon as they are determined. Valves are checked routinely and repaired or replaced as necessary. Hydrants are periodically checked to ensure proper operation. New service lines replace existing pipelines as needed. Annual evaluation of well performance is done. These programs are included in capital replacement program and operations budgets.

The City will continue to monitor the water system loss through existing Water Department Operation & Maintenance funding, and if a trend develops to indicate that further analyses are required, the City will provide the necessary funds to institute a more formal leak detection program.

A list of water audits/leak detection services from 2005-2010 is included in Appendix P.

Water Audits/Leak Detection Services							
	2005	2006	2007	2008	2009	2010	TOTAL
# of Service Calls	99	62	96	139	180	962*	1,538

* Rate increase in 2009 and 2010

DMM 4

Metering with Commodity Rates for All New Connections and Retrofit of Existing Connections

The City meters all customers, including separate metering for single-family residential, multi-family residential, commercial/institutional, industrial, and large landscape facilities.

The City's current rate is currently \$2.87 per hundred cubic feet (ccf) of water. However this is projected to go up by 2.76% in July 2011. The July 2011 unit cost will be \$2.95. Water connection fees and meter service charges are added to the commodity rate to comprise the total water bill. These fees are also scheduled to go up in July 2011. These fees are based on the size of the meter and will range from \$49.10 per month for a 5/8-inch meter to \$549.45 per month for a 6-inch meter. A water rate sheet showing current rates is located in Appendix P.

Based on the current billing system, the more water a customer uses, the higher the water bill. This applies to all water-use sectors (e.g., single family residential, multi-family residential, commercial/institutional, industrial, etc.). Therefore, there is a cost benefit to conserving water.

The City calibrates and replaces meters in the system as needed, as part of its ongoing operations and maintenance program.

Large increases in water consumption within a short period of time on any account is noted and investigated. In addition, if any customer questions the water use within its own residence or facility, and so informs the City, the City will investigate the matter to determine the cause.

The rate for reclaimed water is \$2.30 per 100 cubic feet, regardless of the quantities purchased.

DMM 5

Large Landscape Conservation Programs and Incentives

There are few large landscape irrigation sites within the Norwalk Municipal Water System. The number of meters for landscape sites constitutes approximately one-tenth of one percent (0.1%) of the total water meters.

Primarily, the landscape sites are City-owned parks and recreation areas and Norwalk-La Mirada School District facilities. Most of these facilities are using reclaimed water for irrigation. The incentive to use reclaimed water is its lower cost than potable water and its availability of supply.

The City provides educational material on water conservation through literature at City Hall and articles in the City's newsletter. The literature promotes water conservation in all aspects of everyday life. The City supports the use of drought tolerant landscaping throughout the City in an effort to reduce water requirements for gardens.

In 1993, the City adopted Ordinance No. 1409R adopting provisions for water efficient landscaping and amending the Norwalk Municipal Code. The purpose and intent is to establish provisions which encourage the use of water efficient plants and water efficient irrigation systems which foster long-term water conservation.

The ordinance applies to all residential development projects, where more than four (4) dwelling units are to be built or substantially renovated, and to all commercial/industrial development projects with landscaped areas exceeding 2,500 square feet. It does not apply to homeowner provided landscaping at single-family and multi-family projects. It also does not apply to existing developments until such time as a 50 percent or greater building expansion occurs or full site development occurs, whichever occurs first.

The ordinance requires developers to submit planting and irrigation plans to the City, and to incorporate water conservation elements into planting plans, irrigation systems and irrigation schedules wherever feasible. In addition, all irrigation systems must be designed to avoid runoff, overspray and similar conditions. Where possible, irrigation systems should be connected to the reclaimed water system, or at a minimum, separately metered.

Through the enforcement of this ordinance and other water conservation programs, the City will continue to promote and support the use of drought tolerant landscaping throughout the City.

Because landscape usage is such a small percentage of NMWS water usage, and the fact that most use reclaimed water, it is not prudent to develop and implement an expanded program for large landscape water audits at this time.

DMM 6 High-Efficiency Washing Machine Rebate Programs

The City has coordinated a high-efficiency washing machine rebate program with CBMWD. Through this program, the City educates customers to the water-wise use of laundering. The City will continue to participate in this program as long as CBMWD continues to offer the program. According to CBMWD, high efficiency washer machines save 50% water, 60% electricity and use less detergent; this equates to about \$1,000 in savings over a ten-year period, and a savings of 6,000 gallons per year.

In accordance with program guidelines, high efficiency clothes washers must meet specific guidelines and be on an approved list of washer models to qualify for the

rebate. To apply, a rebate application must be completed with the original sales receipt attached, and submitted to the rebate program address.

The City also relies on manufacturers and retail sales outlets to inform customers of the benefits of purchasing a high-efficiency washing machine, and any rebates that may be available to them through the manufacturer.

DMM 7 Public Information Programs

The City has developed a public information program to educate the public to the benefits of water conservation. The program involves the dissemination of information through literature provided at City Hall, community events, summer concert series, and other City facilities, articles in the City newsletter, as well as the City's quarterly recycling publication: "One Person's Trash..." and local cable television. The City includes informational flyers with the water bills periodically to address water conservation and other important matters.

The City has participated in water conservation programs with CBMWD and MWD. This includes such programs as water conservation kit distribution and the toilet replacement programs discussed earlier.

In addition, educational materials and speakers are available through MWD and CBMWD. CBMWD in cooperation with MWD offers tours of the Colorado River Aqueduct and the State Water Project to legislators, local elected officials, retail agency staff, and the general public. The purpose is to give local decision-makers and others a better understanding and appreciation of the water picture in California.

The City will continue to use these forums to provide knowledge on water conservation matters. As discussed under DMM1, DMM2, DMM6, DMM9, and DMM14, the City has participated in many programs to conserve water and educate the public to wise water use. The City will step-up these activities in low rainfall years and during times of drought to reinforce the concept of practicing daily water conservation. The City may consider expanding the public education program on water conservation as the need arises and budget funding allows.

DMM 8 School Education

As indicated above, the City has literature available on water conservation for public education. The City has incorporated a section in the 3rd Grade School Tours of City Hall that include water conservation practices, storm water prevention and recycling activities. These tours are conducted year round to those schools interested in coming

to City Hall. A City Hall Tour include as many as 100 children per visit and these are conducted two to three times per year.

The City will continue to evaluate the potential to enhance the school education programs to promote water conservation to that sector of the community. This will be done as a part of normal operation and administrative duties; no separate budget has been created for this program at this time.

DMM 9

Conservation Programs for Commercial, Industrial and Institutional Accounts

The City has small commercial/institutional, and industrial components. These sectors of the community constitute 7.4% of all water service connections and approximately 7.4% of the City's yearly water demand. There are no large-scale manufacturing or industrial plants within the City. There are no large-scale water use industries in the City. Most of the water consumed by this sector is for personal consumption while employees are at work.

CBMWD offers a water conservation program for the commercial sector that establishments in Norwalk have participated in thus far. The Rinse and Save Program consists of the installation of water saving pre-rinse spray valves to replace the practice of running water rinsing. In the first seven months of 2005, nine establishments have participated resulting in nine valves installed. Most of these were installed at restaurants, coffee shops and Costco Wholesale.

As indicated above in the Landscape Water Conservation Requirements section, commercial and industrial development projects with landscaped areas exceeding 2,500 square feet are required to adhere to the provisions of the water efficient landscape ordinance. These provisions are designed to reduce water usage and encourage the use of recycled water.

Standard procedure is for the City to review plans and specifications for new commercial and industrial facilities before construction. The review consists of evaluating the water usage and wastewater discharge for the new facility, particularly to determine if there are sufficient water supplies and sewer capacities. For existing facilities with new or revised operations, the City will review the proposed requirements prior to issuance of permits. Budget funds are provided annually for departmental reviews of this type.

The commercial/institutional and industrial sectors are not expected to grow significantly in the City; nor is water usage from existing facilities expected to rise to any great degree. The general public education program is used to educate this sector as well as the rebate programs. Water use for these accounts can be monitored easily by viewing the monthly billing records to determine any major shifts in water usage. The City will

continue to coordinate with this sector of the community regarding water use and conservation through public education, the review process described above, and incentives offered through CBMWD.

DMM 10 Wholesale Agency Programs

The City purchases MWD water via CBMWD. The City will diminish its reliance on imported water once Well No. 10 becomes operational in August 2011. The City will continue to look at increasing groundwater pumping and water storage capabilities, provided funding becomes available. This should reduce the dependence on imported water in the future.

As a member of CBMWD, the City participates in the residential retrofit, toilet replacement and commercial conservation programs co-operatively with CBMWD. This will continue as long as CBMWD sponsors such programs.

DMM 11 Conservation Pricing

The City has a commodity rate of \$2.95/ccf for water consumption. This rate is constant for water usage, regardless of the amount used. It is increased by the City upon determination that additional revenues are needed to maintain the water system and provide a higher level of service to its customers.

The City has prepared an Emergency Water Conservation Plan by adopting Ordinance No. 1378, however this document does not offer reduced pricing for practicing water conservation. The Ordinance does include the provision to assess penalties for failure to comply with the Ordinance, however.

The City must consider the economic impact of considering conservation pricing. Since its system is small, reducing rates to those who have already conserved water would reduce revenue essential to the City for maintaining effective and efficient operations. On the other hand, raising water rates to compensate for lost revenue due to conservation is unpopular with the public. Customers may feel that they are being penalized for practicing water conservation. It is a delicate balance to provide good service at a reasonable price.

At this time the City has no plans to change the water rate structure and has not allocated funds in the current budget to develop or implement any change to the existing rate structure.

DMM 12 Water Conservation Coordinator

Various City staff are involved in the water conservation program. These include managerial and administrative staff, maintenance and operations personnel, Water Department Superintendent, and administrative staff who answer billing and usage questions. The staff serve as part-time water conservation coordinators by nature of their duties and responsibilities in performing their job functions. This includes implementation of DMMs. The amount of time that staff members conduct water conservation activities varies depending upon water supply and demand issues, and drought conditions. It averages approximately 8% to 10% per year.

The NMWS serves water to a small portion of the City and as such does not retain a full-time water conservation coordinator. At this time, the responsibilities of such a position will continue to adequately be served by a collective number of employees.

DMM 13 Water Waste Prohibition

The Emergency Water Conservation Plan (Ordinance No. 1378) contains a provision under Section 1 that states:

"... the general welfare requires that the water resources available to the City be put to the maximum beneficial use to the extent to 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 water be practiced with a view to the reasonable and beneficial use thereof in the interest of the people of Norwalk and for the public welfare."

In addition, the Water Efficient Landscape Ordinance (Ordinance No. 1409R) requires that:

"All irrigation systems shall be designed to avoid run off, overspray or other similar conditions where water flows or drifts onto adjacent property, non-irrigated areas, walks, roadways or structures."

In 2008, the City adopted Resolution No. 08-45, which requested voluntary water conservation measures by all residents of Norwalk. A copy of this Resolution is located in Appendix Q.

Later in 2009, in response to the continued State drought, the City adopted Ordinance No. 09-1619, which amended Title 8 of the Norwalk Municipal Code by adding new provisions relating to water conservation. This Ordinance limited the hours for irrigation,

washing vehicles, prohibited hose watering practices, etc. A copy of this Ordinance is found in Appendix R.

The City considers these provisions to be fulfillment of the requirement of this DMM.

DMM 14
Residential Ultra-Low Flush Toilet Replacement Program

As indicated earlier in this report under DMM 2, the City has participated in a program of distribution of ultra-low flush toilets with CBMWD. CBMWD provided the toilets to customers wishing to replace existing toilets. Studies indicate that a family of four would save approximately 28 gallons per day (gpd) by using an ultra-low flush toilet, and multi-family dwellings would save as much as 48 gpd. This provides an incentive for customers to change out their existing toilet for a new low flow type toilet. NMWS also participates in an ultra-low flush toilet rebate program with CBMWD. CBMWD should be contacted for further details on these programs.

The City's Building Code (adopting the California code) requires the installation of low flow toilets in new construction as of 1992. Even though this does not affect older facilities, it has aided water conservation throughout the region. It is most probably a causative factor that prompted manufacturers and suppliers to only have low flush toilets readily available.

VII. Water Shortage Contingency Planning

The City has developed a program to aid the City in coping with a water shortage emergency, whether the supply interruption is caused by fire, weather, power loss or earthquake.

The program includes the:

1. Development of infrastructure upgrade programs to offset a catastrophic water supply interruption
2. Preparation of a Water Quality Emergency Notification Plan
3. Preparation of an Emergency Chlorination Plan
4. Preparation of a Standardized Emergency Management System (SEMS) Multihazard Functional Plan in September 1996
5. Adoption of a mandatory Water conservation Ordinance
6. Preparation of a Water Shortage Contingency Plan in 1992

Preparing for Catastrophic Water Supply Interruption

It is important for the City and the regional water agencies to establish a response plan in the event of a catastrophic water supply interruption. Loss of water supply can occur from a prolonged drought, water system contamination, power outage, or natural disaster such as an earthquake. Emergency and drought response planning is an integral part of effective water system management.

CBMWD and its member agencies recognize the importance of establishing an overall program, which will reduce reliance on imported water and develop alternative water supplies. According to CBMWD, the following steps have been taken on a regional level in an effort to accomplish this goal.

- CBMWD provides non-potable recycled water from tertiary treated water for irrigation, commercial and industrial purposes.
- CBMWD has developed conjunctive use programs to optimize the use of groundwater and surface water resources.
- MWD has increased water storage as insurance against temporary interruption of imported water supply deliveries due to a catastrophic event.
- MWD developed a multi-year Strategic Planning Process that will determine how new supplies and regional infrastructure will be developed, allocated and financed.

- CBMWD is increasing its water marketing programs such as water transfers and exchanges and is currently involved in efforts to develop effective statewide water wheeling legislation.
- CBMWD has developed water conservation and education programs.
- MWD has established an emergency communication system with its member agencies.
- MWD has developed an Integrated Resources Plan including the water supply strategy to protect the region from future water supply shortages.

The Integrated Resources Plan cited above can be particularly valuable because it evaluates, on a periodic basis, the near-term and long-term water resources strategies to ensure a reliable, least-cost water supply to the customers of southern California.

In the event of a major regional emergency, MWD would activate its Emergency Operation Center (EOC) to coordinate MWD's and CBMWD's efforts to distribute potable water in a timely manner. MWD's Diamond Valley Lake can provide emergency storage supplies for its entire service area's firm demand for up to six months and can do so primarily by gravity feed, thereby eliminating dependence on power sources that could also be disrupted. MWD also has surface reservoirs and groundwater conjunctive use storage accounts that can provide additional supply to meet further demand. CBMWD has a Member Agency Response System (MARS) to immediately contact its customer agencies and MWD to coordinate critical resources according to the severity of the emergency. [Central Basin Municipal Water District Urban Water Management Plan 2005 Final Draft].

In addition to the connection with CBMWD, the City maintains several metered connections and inter-tie connections with other water purveyors which supply water to the City on a routine basis or which can be used for emergency sources of supply. The City has connections with the City of Santa Fe Springs, the City of Cerritos, Park Water Company and Golden State Water Company. Each connection serves a specific sector of the NWMS, but combined there are enough connections to supply water to every sector of the NWMS if needed.

The City has two active wells (Leffingwell No. 4 and Taddy No. 5) which serve the central sectors of the water system. Both wells have been inspected recently and were rehabilitated to optimize productivity. To offset the impact in the event of a regional power loss, standby power supplies are provided at both wells. The City also has a mobilized unit for use if needed.

The City is currently in the process of finalizing the construction of a new well: Well No. 10 – Norwalk Park Well. The City has also identified the need for a pumping station and water storage reservoir in the Norwalk Park area. This project would supply the City

with essential water storage, since the City currently only has about 100,000 gallons of storage capability via an elevated storage tank. Another well facility is also in the planning stages and it will serve the southern portion of the system. Not only will these projects provide greater assurance of water supplies during a drought, but also in other emergencies, such as earthquakes or fires.

The City has established a Water Quality Notification Plan and Procedure to be used in the event of water system or water quality problems. The procedure involves several tiers of City and NMWS personnel, and outside agencies. The procedure ensures notification of the appropriate City management, regional and state agencies, and the public. This procedure can be used to keep all levels of the City government informed of water use during critical emergency times. This would be done to assure swift and decisive action if the data so requires, in order to protect public safety and provide water service to essential services.

The City participates in the Standardized Emergency Management System (SEMS) which requires that emergency response agencies use basic principals and components of emergency management. Through this system, the City is able to keep informed of important developments relating to emergency events within the region and interface with other agencies as needed.

Water Conservation Ordinance and Plans

In 1991, the City adopted Ordinance No.1378, Emergency Water Conservation Plan. In 1992, the City prepared a Water Shortage Contingency Plan. These plans provide the means to institute requirements that will aid the City in coping with a water shortage emergency whether it is caused by fire, weather, power loss or earthquake. In addition, on April 6, 1993, the City adopted an ordinance for efficient water landscaping. These are discussed in greater detail below.

Emergency Water Conservation Plan – Ordinance No. 1378

Ordinance 1378 established a staged approach to water conservation and enforcement. Rationing stages may be triggered by a shortage in one source or combination of sources, and shortages may trigger a specific stage at any time. Specific criteria for triggering the City's rationing stages are discussed below.

The Ordinance authorizes the City to issue a determination of a water shortage and corrective action, thereby triggering the provisions of the Emergency Water Conservation Plan. The purpose of the Ordinance is to provide a mandatory water conservation plan to minimize the effects of a shortage of water supplies on the customers of the City during a water shortage emergency. The Ordinance applies to all

customers, users, and property served by the NMWS, except as specifically noted in the ordinance.

The Ordinance outlines the following items:

- General Prohibitions
- Phase I, II and III Shortages
- Relief from Compliance
- Failure to Comply
- Hearing Regarding Violations
- Additional Water Shortage Measures

Stages of Action

The Ordinance contains a General Prohibition clause and stipulates three water shortage phases (I to III).

General Prohibition

This clause prohibits persons from using water in a manner contrary to any provision of the ordinance or in an amount in excess of that use permitted by any curtailment provisions then in effect pursuant to action taken by the City Council.

Phase I Shortage

A Phase I Shortage shall be declared when the City Council determines that it is likely that it will suffer a ten percent (10%) shortage in water supplies. The following restrictions on the use of water shall be in effect during a Phase I Shortage:

1. There shall be no washing of sidewalks, walkways, driveways, or parking areas or other paved surfaces, except as is required for sanitary purposes.
2. Washing of motor vehicles, trailers, boats and other types of mobile equipment shall be done only with a hand-held bucket or hose equipped with a positive shutoff nozzle for quick rinses, except that washing may be done at the immediate premises of a commercial car wash or with reclaimed water.
3. No water shall be used to clean, fill or maintain levels in decorative fountains, ponds, lakes, or other similar aesthetic structures unless such water is part of a recycling system.

4. No restaurant, hotel, café or other public place where food is sold, served or offered for sale shall serve drinking water to any person unless expressly requested.
5. All persons shall promptly repair all leaks from indoor and outdoor plumbing fixtures.
6. No lawn, landscape or other turf area shall be watered more often than every other day and during the hours between 10:00 a.m. and 4:00 p.m., except that this provision shall not apply to commercial nurseries, golf courses and other water-dependent industries.
7. No person shall cause the water to run off landscape areas into adjoining streets, sidewalks, or other paved areas due to incorrectly directed or maintained sprinklers or excessive watering.

Phase II Shortage

A Phase II Shortage shall be declared when the City Council determines that it is likely that it will suffer a shortage of more than ten percent (10%) but less than twenty percent (20%) in water supplies. The following restrictions on the use of water shall be in effect during a Phase II Shortage:

1. The restrictions listed above in Phase I shall be in effect, except that the restrictions on watering lawns, landscape or other turf area shall be modified to prohibit watering more often than every third day between the hours of 6:00 a.m. and 6:00 p.m.
2. Commercial nurseries, golf courses and other water dependent industries shall be prohibited from watering lawn, landscape or other turf areas more often than every other day between the hours of 10:00 a.m. and 4:00 p.m., except that there shall be no restriction of watering utilizing reclaimed wastewater.

Phase III Shortage

A Phase III Shortage shall be declared when the City Council determines that it is likely that it will suffer a shortage of more than twenty percent (20%) in water supplies. The following restrictions on the use of water shall be in effect during a Phase III Shortage:

1. The restrictions listed above in Phase I except that there shall be no residential outside watering of lawn, landscaping and other turf areas at any time except by bucket.
2. Commercial nurseries, golf courses and other water dependent industries shall be prohibited from watering lawn, landscape or other turf areas more often than every third day between the hours of 6:00 a.m. and 6:00 p.m., except that there shall be no restriction of watering utilizing reclaimed wastewater.

3. The use of fire hydrants shall be limited to fire fighting and related activities and other uses of water for municipal purposes shall be limited to activities necessary to maintain the public health, safety and welfare.

Prohibitions, Consumption Reduction Methods and Penalties

Prohibitions

The prohibited and restricted uses of water are contained in the General Prohibition section of the ordinance and in each of the Phase Shortage sections of the ordinance as described above.

Consumption Reduction Methods

The ordinance employs the use of consumption reduction methods to reduce water use including:

- ❖ Demand Reduction Program
- ❖ Reducing Pressure in Water Lines
- ❖ Flow Restriction
- ❖ Restriction for Only Priority Uses
- ❖ Use Prohibitions
- ❖ Water Shortage Pricing
- ❖ Mandatory Rationing
- ❖ Reduction by Customer Type

In accordance with the ordinance, the City may order implementation of water conservation measures in addition to those set forth in the ordinance.

Refer to the Emergency Water Conservation Plan (Ordinance No. 1378) and the Water Shortage Contingency Plan for further details on these consumption reduction methods. They are located in Appendix I and J, respectively.

Penalties

The Ordinance outlines penalties for failure to comply with the requirements. Notices are issued for violations of the water use provisions of the ordinance. Penalties for failure to comply are stipulated in the Ordinance as follows:

- **First Violation** – issuance of a written notice of the fact of a first violation

- Second Violation – imposing a surcharge penalty in the amount equal to thirty percent (30%) of the person's water bill.
- Third and Subsequent Violations - installation of a flow restricting device, assessment of cost of the installation and removal of flow restricting device, and the assessment of a surcharge as specified under the Second Violation.

In accordance with the ordinance, a hearing may be requested after receipt of a Notice of Violation. The procedure and timetable for such hearings are outlined in the "Hearing Regarding Violations" section of the ordinance.

Water Shortage Contingency Plan

In July 1992, the City prepared a draft Water Shortage Contingency Plan as an amendment to the City's 1990 Urban Water Management Plan. Even though the City did not proceed with a formal adoption process for the Water Shortage Contingency Plan, it serves as a valuable tool in formulating and implementing new water conservation policies and procedures.

The Water Shortage Contingency Plan contains sections on the following items:

- ◆ Current Water Management Programs
- ◆ Past, Current and Projected Water Use
- ◆ Worst Case Water Supply Availability for 12, 24, and 36 Months
- ◆ Stages of Action for Conservation
- ◆ Penalties or Charges for Excessive Use
- ◆ Analysis of Revenue and Expenditure Impacts
- ◆ Implementation of the Plan
- ◆ Water Use Monitoring Procedures

The critical aspects of the Water Shortage Contingency Plan have been discussed previously in this report. The water conservation regulations are discussed in the above section "Emergency Water Conservation Plan – Ordinance No. 1378". The Analysis of Revenue and Expenditure Impacts conducted at the time of its preparation is discussed below.

The City conducted a preliminary study to ascertain the financial impacts related to the implementation of mandatory reductions as specified in Ordinance No. 1378. The

analysis considered impacts to operating revenues and expenses for each of the Phase I, II, and III shortages that could be imposed. Phase III analysis assumed a shortage of 50% in water supplies. It should be noted that the NMWS is a very small water system consisting of only 4,497 services.

The Water Shortage Contingency Plan analyzed the projected fiscal impacts of reduced costs and reduced sales due to shortages. The analysis indicated that the City's General Fund could not be used to offset the reduced revenue from reduced water sales. The analysis further indicated that the City would need to raise the water rates considerably to maintain service levels. The analyses indicated that an increase in meter charges and varying increases in commodity rate are necessary to maintain the pre-shortage level of service, depending upon the percent reduction of water sales. As a further consequence, it is implied that capital programs would suffer and most likely be delayed to continue sufficient operation and maintenance levels.

Water Efficient Landscaping Ordinance – Ordinance 1409R

On April 6, 1993, the City adopted an ordinance for efficient water landscaping by amending the Norwalk Municipal Code. Ordinance 1409R supersedes the provisions of the model water efficient landscape ordinance prepared by the California DWR which became effective in the City January 1, 1993.

The purpose of the ordinance is to establish provisions to encourage the use of water efficient plants and water efficient irrigation systems which foster long-term water conservation for development projects in the City while respecting the economic, environmental, aesthetic and life-style choices of individuals and property owners.

The ordinance applies to all residential development projects, where more than four (4) dwelling units are built or substantially renovated, and to all commercial/industrial development projects with landscaped areas exceeding 2,500 square feet. The ordinance requires that project developers submit planting and irrigation plans to the City, which incorporate efficient and water conserving measures.

A copy of the landscaping ordinance is located in Appendix K.

Water Shortage Declarations

In response to the continuing drought in the early nineties, the City adopted a resolution (Resolution No. 4053) on May 1, 1990 declaring a water shortage and implementing a voluntary 15% water consumption reduction.

Resolution 4053 is located in Appendix T.

VIII. Water Recycling

Wastewater Collection and Treatment

The City is responsible for the maintenance of 180 miles of sewer pipelines, 1,702 manholes, three sewer lift stations and one storm water lift station. The City is also responsible for periodic maintenance of 91 surface drains and three wash rack sump clarifiers. The City provides 24-hour emergency response within one hour of notification.

The Sanitation Districts of Los Angeles County (LACSD) manages wastewater collection and treatment for the City of Norwalk. The wastewater from the City primarily flows to the Los Coyotes Reclamation Plant located in Cerritos, California. The wastewater receives tertiary treatment at this facility. According to the LACSD, at various times wastewater from the City may also be received by the Joint Water Pollution Control Plant (advanced primary with partial secondary treatment) in Carson.

The wastewater flow from the NMWS service area to the LACSD's treatment facilities is estimated at 1.45 million gallons per day (mgd) or 528 million gallons annually. LACSD is also responsible for monitoring industrial waste discharges into the wastewater system.

Recycled Water Use

Recycled Water

The City has a recycled water use program and has been purchasing recycled water from CBMWD since 1994. The City will continue the use of recycled water as long as it is a viable option, meaning that there is an available supply, the supply is of consistent quality for the purposes used, and it cost effective to do so. The use of recycled water augments local supplies and reduces dependence on imported water supplies.

Los Angeles County Sanitation District (LACSD) operates one wastewater treatment plant and six reclamation plants in the Los Angeles Basin. There are two reclamation plants that provide recycled wastewater to residents within the CBMWD. The Los Coyotes and San Jose Creek Water Reclamation Plants provide approximately 120 million gallons per day of recycled water, 40 percent of which was used by CBMWD and other agencies in 2000. The remainder of the effluent is discharged to the San Gabriel River system and spreading grounds for groundwater discharge.

Recycled water is treated to high water quality standards and must meet California Department of Health Services water quality standards. The wastewater from the Los Coyotes and San Jose Creek Water Reclamation Plants receive tertiary treatment,

including coagulation, flocculation, filtration and disinfection. [Central Basin Municipal Water District 2010 Urban Water Management Plan]

The CBMWD water recycling program has two distinct projects. These are the E. Thornton Ibbetson Century Recycled Water Project and the Esteban E. Torres Rio Hondo Recycled Water Project. The Ibbetson Century Recycled Water Project serves the City of Norwalk.

The City completed a Reclaimed Water Study in 1992 to evaluate the implementation of a recycled water program. As a result, the City decided to participate in the program where it made sense to do so.

Within NMWS there are five users of reclaimed water. These include Ramona Park, Morrison School, Johnston School, Corvallis Middle School and Norwalk High School. The use of reclaimed water began in 1994. Over the past ten years, reclaimed water usage has ranged from approximately 54 AF per year to 128 AF per year, with a ten-year average of 100 AF per year. The usage is for irrigation purposes and thus is dependent upon seasonal rainfall. There are no industrial users at this time. Recycled Water data for each year is indicated on the spreadsheet located in Appendix M.

Initially, Norwalk Park was considered as another potential user of recycled water. However, a large reservoir is proposed to be located underground within the park. As a result, the City has decided not to consider the use of recycled water at this park for public safety reasons. If for any reason the reservoir is relocated, the park could again become a candidate for the use of recycled water.

Even though the recycled water program within NMWS is not anticipated to expand in the very near future, there are a few potential candidates for recycled water. These include the Walnut and Waite Elementary Schools.

Prior to any expansion, the City would need to evaluate the cost effectiveness of doing so. The City would assess the use of recycled water by considering these essential factors:

- The cost of transmission and distribution facilities
- The cost of retrofitting existing irrigation systems
- The cost of installation of meters
- The cost of operation and maintenance of a separate system
- The cost of administering user agreements
- Water quality issues

- Difference in revenue from recycled water versus domestic water usage
- Potential funding sources
- Potential number of users
- Potential usage volume

The City will continue to assess the potential for use of recycled water and work with local and regional agencies on this matter.