

ERIC GARCETTI  
*Mayor*

Commission  
MEL LEVINE, *President*  
WILLIAM W. FUNDERBURK JR., *Vice President*  
JILL BANKS BARAD  
MICHAEL F. FLEMING  
CHRISTINA E. NOONAN  
BARBARA E. MOSCHOS, *Secretary*

MARCIE L. EDWARDS  
*General Manager*

October 5, 2015

The Honorable City Council  
c/o Office of the City Clerk  
Room 395, City Hall  
Mail Stop 160

Attention: Councilmember Mike Bonin  
Member, Public Safety Committee

Honorable Members:

Subject: Council File (CF) No. 15-0887 – Efforts to Prepare the City of Los Angeles’  
(City) Infrastructure for Potential El Niño Event

This report is prepared in response to the Council Motion made by Councilmember Mike Bonin on July 28, 2015. The Council Motion relates to efforts in preparing the City’s public utilities and critical infrastructure for a possible El Niño weather event.

The National Oceanic and Atmospheric Administration is forecasting a high probability of a strong El Niño phenomenon developing this winter. The Los Angeles Department of Water and Power (LADWP) continuously monitors weather patterns in preparation for the impacts rainfall may bring to facilities in Central and Southern California. LADWP is strategically planning to manage increased levels of rainfall through stormwater capture and replenishment of our groundwater basins.

#### Water Operations and Facilities

An important component to LADWP’s regional El Niño storm response is the Los Angeles Aqueduct (LAA) system. Along LAA’s 200 mile long right-of-way lie numerous reservoirs with a cumulative capacity of nearly 300,000 acre-feet of storage,

equivalent to half the City's annual water supply. LAA is strategically operated to take full advantage of wet-weather months by retaining water in the system's reservoirs for later use. Some of the current measures LADWP is implementing to facilitate these operations include inspection of various drainage systems along the right-of-way for LAA and reservoirs.

With over 200 facilities throughout the City's metropolitan area, LADWP has prioritized facilities in need of immediate attention. Debris basins and drainage channels within LADWP facilities are being cleaned to facilitate management of runoff and sediments. Maintenance is also being performed on mechanical systems such as floating covers and dewatering pumps to protect drinking water supplies. In addition, employee training on procedures and methods of handling stormwater and storm damage is being conducted.

LADWP is currently implementing projects that will prevent erosion of roadways and slopes at our facilities. These projects are scheduled to be completed prior to the wet-weather season. Less critical projects that cannot be completed within this time-frame have been postponed until after the wet season to not disturb compacted soils and create unstable soil conditions.

#### Watershed Management

In addition to the LAA system, the City also benefits from a network of groundwater replenishment facilities in the San Fernando Valley. Historically, through synchronized operation of dams and groundwater recharge facilities, the City has been able to capture and recharge the San Fernando Groundwater Basin (SFB) with nearly 90,000 acre-feet of stormwater, equivalent to 16 percent of the City's annual water supply.

For decades, LADWP has partnered with the Los Angeles County Flood Control District (LACFCD) working collaboratively to benefit from precipitation conditions in the watersheds that can positively impact the City's groundwater basins. Appendix 1 (enclosed) shows the network of dams, rivers, and facilities operated under strategic coordination by the LACFCD and United States Army Corps of Engineers (USACE). USACE is the owner and operator of several stormwater facilities, including Hansen Dam and regional channels. Similarly, LACFCD is the operator of Pacoima Dam, Big Tujunga Dam, and five spreading ground facilities in the San Fernando Valley that feed SFB.

During precipitation conditions, water is retained at both Pacoima and Big Tujunga Dams for controlled releases into the Tujunga and Pacoima Channels. A series of five spreading grounds intercept channel flows, directing stormwater into spreading basins where it is allowed to percolate into the groundwater basin. Consequently, the

stormwater facilities system also provides flood control, water conservation, and water quality benefits.

LACFCD is maintaining these spreading grounds by clearing debris from the spreading basins. Removal of invasive species and tilling of soils in the basins helps maximize recharge capacity. Rubber dams and intake structures along the channels are also being cleared of debris to allow unobstructed flow of stormwater during operations.

Furthermore, all facilities are undergoing renovations and improvements to enhance their capabilities. Big Tujunga Dam was recently seismically retrofitted for safe operation of its maximum storage. To date, retrofit and renovations are complete at Big Tujunga Dam and Hansen Spreading Grounds. Improvements at Tujunga and Pacoima Spreading Ground projects will begin construction next year, and finally, Lopez Spreading Grounds and Pacoima Dam improvements are in design. These upgrades will increase capacities and allow for higher stormwater capture volumes during rain events, particularly in years of high precipitation.

LADWP is also focusing on smaller scale projects, such as green streets and rain barrels, to benefit from rainfall. These distributed projects offer opportunities for partnerships with other agencies to deliver multiple benefits, including enhanced water quality and public works improvements, while reducing localized flooding. Appendix 2 (enclosed) reflects a list of completed stormwater capture projects and their expected recharge to the SFB. This amount represents stormwater that would have otherwise been lost to the ocean.

### Conclusion

LADWP will continue to closely monitor weather patterns for the possibility that the El Niño phenomenon will result in increased rainfall this season. Reservoirs within the LAA system will be operated in response to weather conditions to ensure maximum capture and storage of stormwater. As predictions of wet-weather probabilities increase, LADWP will continue to collaborate with LACFCD and other agencies to maximize the local capture and groundwater basin recharge benefits from anticipated precipitation.

The Honorable City Council  
Page 4  
October 5, 2015

If you have any questions or require further information, please contact me at (213) 367-1338, or Ms. Winifred J. Yancy, Director of Intergovernmental Affairs and Community Relations, at (213) 367-0025.

Sincerely,



Marcie L. Edwards  
General Manager

ML/yrg

Enclosures

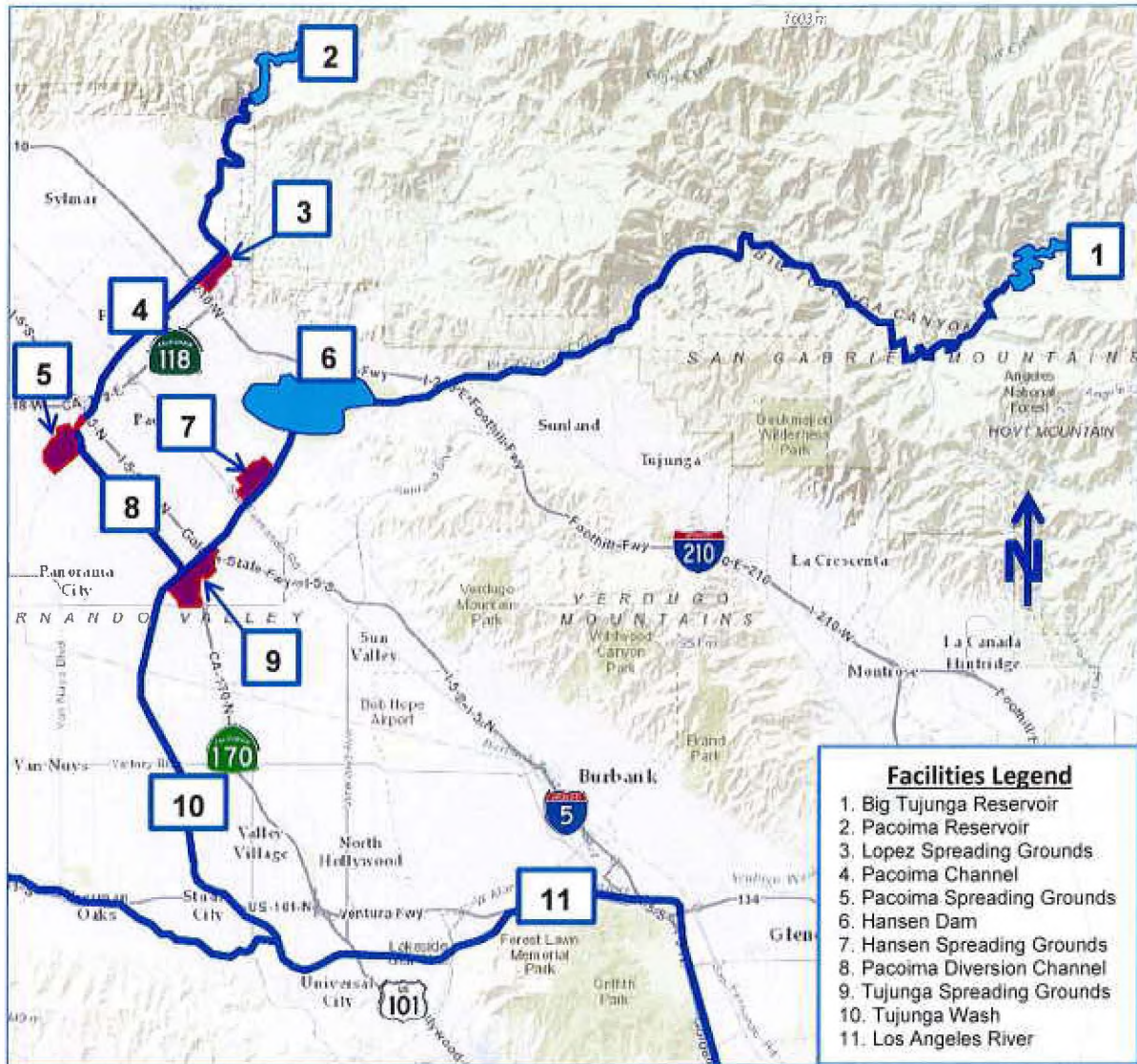
c/enc: Councilmember Mitchell Englander, Chair, Public Safety Committee  
Councilmember Joe Buscaino, Vice Chair  
Councilmember Mike Bonin, Member  
Councilmember Mitch O'Farrell, Member  
Councilmember Nury Martinez, Member  
Mr. Michael Espinosa, Legislative Assistant

Councilmember Joe Buscaino, Chair, Public Works & Gang Reduction Committee  
Councilmember Nury Martinez, Vice Chair  
Councilmember Curren D. Price, Jr., Member  
Councilmember Mitch O'Farrell, Member  
Councilmember David E. Ryu, Member  
Mr. John White, Legislative Assistant

Ms. Winifred J. Yancy

# Appendix 1

Los Angeles Stormwater Conservation Network, stormwater flows from north to south.



Appendix 2

Stormwater Capture Projects and Average Yields Expected for the 2015-2016 Water Year

Facility Type	Stormwater Capture Projects	Expected Recharge in acre-feet*
<b>Conservation</b>	Big Tujunga Dam	3,200
	Pacoima Dam	3,700
	<i>Total Conservation =</i>	<i>6,900</i>
<b>Centralized Recharge</b>	Pacoima Spreading Grounds	6,900
	Hansen Spreading Grounds	11,000
	Tujunga Spreading Grounds	8,000
	Lopez Spreading Grounds	580
	<i>Centralized Recharge Subtotal =</i>	<i>26,480</i>
<b>Distributed Recharge</b>	Woodman Avenue Median	55
	Glenoaks-Sunland	28
	Garvanza Park	51
	Elmer Avenue/Elmer Paseo	41
	North Hollywood Alley Retrofit	29
	Sun Valley Park	30
	HBT Stormwater Capture Projects	20
	Rain Barrels (4,052)	8
	Rain Gardens (189 units)	3
	Oros Avenue	3
	Imperial Highway Median	8
	Los Angeles Zoo Parking Lot)	28
	Riverdale Avenue	7
	Ed P Reyes River Greenway	77
<i>Distributed Recharge Subtotal =</i>	<i>388</i>	
<b>Total</b>	<b><i>Centralized + Distributed =</i></b>	<b>33,768</b>

\*One acre-foot sustains approximately 3 average-size households per year.

MOTION

Recent reports indicate a greater than 90% chance of an El Niño event bringing significant rainfall to the region. This El Niño is expected to continue intensifying into the upcoming fall or winter and may persist into spring 2016, which provides the potential for it to be the strongest one on record. While significant precipitation is welcome news in light of California's record-setting fourth consecutive year of drought, previous El Niño events in Los Angeles have unleashed devastating mudslides, rockslides, debris flows, widespread flooding and extreme high tides. The last El Niño event in 1997-98 resulted in 17 deaths and approximately \$550 million in damage 35 counties throughout California.

The City of Los Angeles must ensure steps are taken in order to prepare our City's hillsides, storm drains, gutters, debris basins, bridges, and other infrastructure for potentially significant rainfall. We should also take this opportunity to prepare residents and property owners for this potentially dangerous and damaging climate event by educating them on the steps they can take to reduce their chances of experiencing storm-related damage.

**I THEREFORE MOVE** that the Department of Public Works Bureaus of Sanitation and Street Services, along with the Department of Water and Power, be instructed to report to the City Council relative to their efforts to prepare the City's storm drains, gutters, debris basins, public utilities, and other critical infrastructure for a potential El Niño event.

**I FURTHER MOVE** that the Emergency Management Department and Fire Department be instructed to report to the City Council relative to their efforts to prepare and educate residents in low-lying coastal communities, as well as the hillside and recent burn areas, on how to ensure public safety and protect property from storm-related damage.

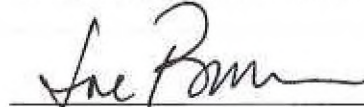
PRESENTED BY:




MIKE BONIN

Councilmember, 11<sup>th</sup> District

SECONDED BY:



ORDER

  
JUL 28 2015