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16
 17 BEFORE THE
 18 CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

19
 20 HEARING IN THE MATTER OF
 CALIFORNIA DEPARTMENT OF WATER
 21 RESOURCES AND UNITED STATES
 BUREAU OF RECLAMATION REQUEST
 22 FOR A CHANGE IN POINT OF DIVERSION
 FOR CALIFORNIA WATER FIX
 23

TESTIMONY OF
 EILEEN M. WHITE, P.E.

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1 I, Eileen M. White, do hereby declare:

2 **I. INTRODUCTION**

3 I am the Operations and Maintenance Department Manager and the Chief Operator for
4 the East Bay Municipal Utility District (“EBMUD”). I am responsible for operation of
5 EBMUD’s entire water system. I have held this position for over eight years. For the eight years
6 prior to my current position, I served as the Manager of Water Treatment and Distribution in
7 EBMUD’s Department of Operations and Maintenance. I have been employed by EBMUD for
8 over twenty-nine years, during which time I also served in senior positions in EBMUD’s
9 Engineering and Wastewater Departments and as an engineer in EBMUD’s Engineering and
10 Natural Resources Departments. Before joining EBMUD, I worked for two years as a design
11 engineer in Pacific Gas & Electric’s (“PG&E”) Hydroelectric Engineering Department. I have
12 been registered as a Civil Engineer in the State of California for approximately thirty years, and I
13 have held a Water Distribution Grade 5 operator certificate (the highest level) from the State
14 Water Resources Control Board Division of Drinking Water for over a decade.

15 I provide this testimony to describe EBMUD’s facilities and the operations of those
16 facilities under normal conditions and some of the potential operational issues that are expected
17 to arise as a result of the construction and/or operation of the proposed California WaterFix
18 Project, including issues arising from the construction and/or operation of the three proposed
19 new points of diversion on the Sacramento River and from the two proposed large diameter
20 tunnels (“Twin Tunnels”) that will extend approximately thirty miles underneath the Delta, all of
21 which are the subject of the Joint Change Petition (“Change Petition”) filed on August 26, 2015,
22 by the California Department of Water Resources (“DWR”) and United States Bureau of
23 Reclamation (“USBR”) (collectively, “Petitioners”).

24 **II. EBMUD’S WATER SUPPLY AND FACILITIES**

25 EBMUD’s facilities on the Mokelumne River include: two reservoirs, Pardee and
26 Camanche; the Mokelumne Aqueducts, which convey water from Pardee Reservoir to the East
27 Bay; and hydroelectric generation facilities at the base of the Pardee and Camanche Reservoirs.
28 EBMUD operates the Mokelumne River facilities in a coordinated and integrated manner, as a

1 single unified Mokelumne River project. EBMUD diverts its municipal supply from Pardee
2 Reservoir, while operating Camanche Reservoir to support those diversions and concurrently
3 making releases from Camanche Reservoir to satisfy downstream senior rights and regulatory
4 and environmental obligations. This operation allows EBMUD to efficiently provide a high
5 quality water supply for a population of over 1.4 million people in Alameda and Contra Costa
6 Counties and associated industries in the East Bay; to minimize pumping needs; and ensure that
7 it can satisfy senior water right requirements, provide flood control protection for the lower
8 Mokelumne River area, meet instream flow requirements, manage water temperatures to benefit
9 the Mokelumne River fishery, and generate hydroelectric power.

10 EBMUD's 332 square-mile water system extends on the west from Crockett in the north,
11 southward to San Lorenzo (including Oakland and Berkeley), eastward from San Francisco Bay
12 to Walnut Creek, and south through the San Ramon Valley. EBMUD's water supply system
13 consists of a complex, integrated network of reservoirs, aqueducts, water treatment plants, and
14 distribution facilities that carry water approximately 90 miles from its principal source, the
15 Mokelumne River watershed basin in the Sierra Nevada range, through the Delta region to its
16 customers in the East Bay. In dry years, EBMUD now also has access to water from the
17 Sacramento River through the Freeport Regional Water Project facilities.

18 **A. EBMUD Reservoirs and Mokelumne Aqueducts**

19 EBMUD collects and stores stream flow from the Mokelumne River in its Pardee and
20 Camanche Reservoirs, both located in the Sierra foothills. Pardee Reservoir has a licensed
21 storage capacity of 209,950 acre feet, while Camanche Reservoir was constructed with a storage
22 capacity of 431,500 acre-feet. EBMUD operates the Pardee and Camanche Reservoirs as an
23 integrated system to achieve its multiple objectives. From those two reservoirs, water flows into
24 the 2.2-mile Pardee Tunnel and then into the 82-mile, three-barreled Mokelumne Aqueducts,
25 across the foothills and the Central Valley, across the Delta to Walnut Creek, where the water is
26 sent to one of EBMUD's water treatment plants or to one of its terminal reservoirs.

27 EBMUD maintains five terminal reservoirs within its East Bay service area: San Pablo,
28 Upper San Leandro, Briones, Lafayette, and Chabot. These reservoirs are used to regulate

1 EBMUD's Mokelumne River supply; to augment EBMUD's water supply by storing local runoff
2 as emergency sources of supply in case of extended drought or facility outages; to minimize
3 downstream flooding; and to provide environmental and recreational benefits to the communities
4 in the East Bay. EBMUD's terminal reservoirs are normally operated to provide up to a 180-day
5 standby storage.

6 EBMUD also manages six water treatment plants located throughout its system: Upper
7 San Leandro in Oakland, San Pablo in Kensington, Sobrante in El Sobrante, and in-line
8 treatment plants located in and named for Orinda, Lafayette, and Walnut Creek. EBMUD's six
9 water treatment plants can filter, process, and deliver more than 375 million gallons of water a
10 day ("MGD") to its water distribution system.

11 **B. The Freeport Regional Water Project**

12 Despite EBMUD's significant investments in water conservation and water recycling
13 programs, EBMUD's Mokelumne River supply is not sufficient to provide reliable water
14 supplies during dry periods without resulting in substantial hardship on its customers.
15 Concurrently, demands on the Mokelumne River for senior water right holders are expected to
16 increase in the future, further reducing the available water supply for EBMUD's customers,
17 particularly in dry years.

18 To address this shortfall, EBMUD executed a water service contract with USBR in 1970
19 for up to 150,000 acre-feet per year of Central Valley Project ("CVP") water from the American
20 River delivered via the Folsom South Canal. However, a lawsuit filed in 1972 challenging
21 EBMUD's right to receive American River water through USBR's Folsom South Canal delayed
22 construction of the necessary facilities for nearly two decades. The litigation was resolved in
23 1990, when the court affirmed EBMUD's right to receive American River water through the
24 Folsom South Canal, while limiting diversions during dry conditions to protect fishery resources.
25 EBMUD, USBR, and the Sacramento County Water Agency ("SCWA") subsequently agreed to
26 move the diversion point downstream to the Sacramento River near Freeport.

27 In February 2002, EBMUD and SCWA formed a joint powers authority, the Freeport
28 Regional Water Authority ("FRWA"), to build and operate the Freeport Regional Water Project

1 (“Freeport Project”). The Freeport Project is used by SCWA and EBMUD to divert surface
2 water from the Sacramento River through the Freeport Project intake and associated facilities.
3 Both agencies use water diverted through Freeport to supply their respective customers in
4 Sacramento County and the East Bay. EBMUD is able to use the Freeport Project facilities to
5 divert up to 100 million gallons per day (“MGD”) to supplement its surface water supplies
6 during dry periods. SCWA is able to divert up to an additional 85 MGD to supplement its
7 groundwater supplies. Both agencies use the Freeport Project to take water from the Central
8 Valley Project (“CVP”) by contract with the United States.¹ EBMUD executed its current long-
9 term renewal contract with USBR in 2006. EBMUD’s current CVP contract provides EBMUD
10 with CVP water in dry years only, with an annual maximum delivery of up to 133,000 acre-feet
11 in any single year, and no more than 165,000 acre-feet in three consecutive years. In addition to
12 both agencies’ CVP supply, EBMUD also uses the Freeport Project to divert supplemental
13 supplies from upstream water users, and SCWA has an appropriative right and a contract right
14 for diversion of remediated groundwater.²

15 The Freeport Project, which was completed in 2011, is the first new source of water for
16 EBMUD since the completion of Camanche and Briones Reservoirs in 1964. It took nearly 40
17 years to come to fruition and represents a long-term, significant investment by EBMUD. In
18 total, the Freeport Project cost \$922 million to plan, design, and build, of which EBMUD funded
19 \$483 million.

20 The Freeport Project is a critical element in EBMUD’s water supply. During normal
21 years, approximately ninety percent of EBMUD’s water supply originates in the Mokelumne
22 River watershed, is collected in Pardee Reservoir, and transported to the East Bay for treatment
23 or storage in the terminal reservoirs via the Mokelumne Aqueducts. Average local supply yields
24 twenty to forty MGD of beneficial use during normal hydrologic years, and is near zero during

25 _____
26 ¹ See Exhibit EBMUD-179 (EBMUD CVP water service contract) and Exhibits SCWA-14,
27 SCWA-16 and SCWA-17 (SCWA CVP contracts).

28 ² See Exhibits SCWA-21 (Water Rights Permit No. 21209) and SCWA-26 (agreement for
provision of water from groundwater extraction and treatment).

1 dry conditions. EBMUD therefore relies on the Freeport Project to divert water from the
2 Sacramento River to meet customer needs that cannot be met by water from the Mokelumne
3 River and local supply during multiple-year droughts. EBMUD expects to use the Freeport
4 Project facilities, on average, about three out of every ten years, increasing over time as demand
5 increases and climate conditions change.

6 1. Freeport Project Facilities

7 The Freeport Project facilities divert Sacramento River water and convey it to the
8 EBMUD and SCWA service areas through the following facilities:

9 (1) a water intake and pump station located on the Sacramento River near Freeport Bend;

10 (2) an 84-inch joint pipeline that extends from the river intake to a bifurcation point,
11 where the joint pipeline splits into two branches to direct water to SCWA's Vineyard Water
12 Treatment Plant (for SCWA use) and the Folsom South Canal (for EBMUD use);

13 (3) a bifurcation facility (which includes isolation valve vaults, surge control, etc.), where
14 the water from the Freeport Project intake is channeled to EBMUD's system and/or SCWA's
15 system;

16 (4) a flow control structure;

17 (5) a 66-inch extension pipeline, which can transport up to 85 MGD north to the SCWA
18 treatment plant for delivery to SCWA customers;

19 (6) a 72-inch extension pipeline, referred to as the "Gerber Pipeline," which can transport
20 up to 100 MGD and runs approximately four miles from the bifurcation facility to the Folsom
21 South Canal for delivery to EBMUD customers;

22 (7) a terminal weir structure, located at the intersection of the EBMUD extension pipeline
23 and the Folsom South Canal;

24 (8) a 72-inch diameter pipeline, referred to as the Folsom South Canal Pipeline or the
25 "FSC Pipeline," which extends approximately nineteen miles from the Folsom South Canal to
26 EBMUD's Mokelumne Aqueducts; and

27 (9) related pumping plants, terminal facilities and water treatment facilities located
28 throughout the system.

1 The river intake/pumping plant, 84-inch joint pipeline, bifurcation facility and flow
2 control structure (identified as items 1 through 4 above) are owned by FRWA (*i.e.*, co-owned by
3 EBMUD and SCWA). Though designed and constructed as part of the Freeport Project
4 facilities, the Gerber Pipeline, FSC pipeline, and the terminal weir structure, which direct water
5 to the Mokelumne Aqueducts, are solely owned by EBMUD, and the 66-inch SCWA extension
6 pipeline that directs water to SCWA's treatment plant, is solely owned by SCWA.

7 In total, the Freeport Project can divert up to 185 MGD, of which 100 MGD is allocated
8 to EBMUD and 85 MGD to SCWA.

9 2. Freeport Project Operations

10 The Freeport Project facilities divert Sacramento River water and convey it to the
11 EBMUD and SCWA service areas using the following facilities: an intake and pump station
12 near Freeport, a pipeline extending from the intake to SCWA's treatment plant and to the Folsom
13 South Canal, a pipeline extending from the Folsom South Canal terminus to EBMUD's
14 Mokelumne Aqueducts and related pumping plants, chemical feed systems, terminal facilities,
15 and water treatment facilities. Maintaining all of these elements requires an extensive
16 coordinated, around-the-clock effort.

17 The raw water intake and pumping facility for the Freeport Project is located on the
18 Sacramento River at Freeport Bend. Water is diverted from the river through fish screens and
19 pumped into the raw water pipeline. Here, eight identical vertical turbine raw water pumps are
20 operated to generate flows between 15 and 185 MGD. This is the only pump station serving the
21 joint pipeline.

22 These pumps draw Sacramento River water and send it through approximately thirteen
23 miles of the 84-inch diameter joint pipeline to a bifurcation area, where water can be directed
24 towards the SCWA Vineyard Water Treatment Plant or to EBMUD's Mokelumne Aqueducts via
25 the Folsom South Canal. From the bifurcation area, water designated for EBMUD's Mokelumne
26 Aqueducts first travels approximately four miles through EBMUD's Gerber Pipeline to the
27 Terminal Weir Structure, where the overflow weir allows flow to spill into the Folsom South
28 Canal.

1 EBMUD water from the Freeport intake then travels approximately fourteen miles
2 through the Folsom South Canal, which is owned and operated by USBR. The Freeport Project
3 water exits the Folsom South Canal at the Clay Station Raw Water Pumping Plant (“RWPP”),
4 located approximately one mile south of Twin Cities Road in the town of Clay.

5 The Clay Station RWPP draws raw water from the Folsom South Canal into the 72-inch
6 diameter FSC Pipeline. The Clay Station RWPP has four vertical turbine pumps, two with
7 variable speed drives and two with constant speed drives. The rated capacity of each individual
8 pump is 35 MGD. With four pumps running simultaneously, the total Clay Station RWPP rated
9 capacity is 120 MGD.

10 From the Clay Station RWPP, water flows approximately nineteen miles through the FSC
11 Pipeline to the Camanche Raw Water Pumping Plant. The Camanche RWPP has four vertical
12 turbine pumps. The rated capacity of each individual pump is 40 MGD. With four pumps
13 running simultaneously, the total Camanche RWPP rated capacity is 120 MGD. The Camanche
14 RWPP also raises the water pressure to match the existing Mokelumne Aqueduct pressure. The
15 Clay Station and Camanche Raw Water Pumping Plant are operated in a series pumping
16 configuration; they work together and cannot operate independently of the other.

17 From the Camanche RWPP, water flows into to the Brandt Flow Splitting Facility, where
18 the FSC Pipeline intersects the Mokelumne Aqueducts. The Brandt Flow Splitting Facility
19 controls the flow of water into one or more of the three Mokelumne Aqueducts. At this point,
20 the FSC Pipeline divides into three pipes, each dedicated for one of the Mokelumne Aqueducts.

21 3. Flow through the Mokelumne Aqueducts to the East Bay

22 When the Freeport Project facilities are in operation, either Mokelumne Aqueducts
23 Nos. 1 and 2 or Mokelumne Aqueduct No. 3 are dedicated for the transmission of the Freeport
24 Project water.

25 If routed through Mokelumne Aqueducts No. 1 and 2, the Freeport Project water travels
26 west until Mokelumne Aqueduct Nos. 1 and 2 join at the Walnut Creek East Portal and continue
27 as Lafayette Aqueduct No. 1. Lafayette Aqueduct No. 1 then continues either: to the Moraga
28 Raw Water Pumping Plant for delivery to the Upper San Leandro Reservoir; or through the

1 Orinda Water Treatment Plant and San Pablo Creek to the San Pablo Reservoir; or to one of
2 EBMUD's in-line water treatment plants.

3 If Freeport Project water is directed to the Briones Reservoir, it must be routed through
4 Mokelumne Aqueduct No. 3, which travels west until it becomes Lafayette Aqueduct No. 2 near
5 the Walnut Creek Water Treatment Plant. From Lafayette Aqueduct No. 2, water can either be
6 pumped into the Briones Reservoir via the Briones RWPP; diverted into San Pablo Reservoir via
7 the Orinda Diversion works at the Briones RWPP; or treated and delivered towards San Pablo
8 Reservoir and Upper San Leandro Reservoir, or to one of EBMUD's in-line water treatment
9 plants.

10 The Lafayette and Chabot Reservoirs do not receive Freeport Project water; and are
11 generally used as an emergency supply source.

12 **C. Chemical Management**

13 In addition to managing the physical movement of water through the series of
14 coordinated reservoirs, intakes, and pumps – whether originating in the Mokelumne River or the
15 Sacramento River through the Freeport Project – EBMUD also manages chemical feed systems
16 to protect the lining of the aqueducts and to ensure discharges from the pipelines do not have
17 negative impacts on the environment. The chemical operations include chlorination and
18 dechlorination and the management of pH levels at several points throughout EBMUD's entire
19 water system. The operation of the several chemical systems is dependent on the volume of
20 water in the system at any given time and is subject to change in response to reduced flow or the
21 termination of flow in the system.

22 **III. POTENTIAL OPERATIONAL IMPACTS FROM THE WATERFIX PROJECT**

23 Should operation of the WaterFix Project's three proposed new points of diversion cause
24 low or reverse flows on the Sacramento River near the Freeport Project intake, or should the
25 construction or operation of the Twin Tunnels damage any of EBMUD's facilities, EBMUD
26 would have to undertake immediate operational changes to protect the quantity and quality of the
27 water flowing through its system. Such operational measures are necessary to ensure continued
28 service to EBMUD's customers and to meet its other operational objectives. Operational

1 changes may involve full or partial shutdowns, each of which require an extensive coordinated
2 effort to complete and then to resume full services, while maintaining compliance with
3 EBMUD's various agreements with third parties and its relevant permit obligations. In the event
4 of a full shutdown, due to the integrated nature of the system and the need to coordinate with
5 other entities, water cannot resume flow through the entire system to Upper San Leandro
6 Reservoir for at least 48 hours due to PG&E's requirements to restart the Moraga RWPP.
7 Extended operational shutdowns could put the health and safety of EBMUD's 1.4 million
8 customers at risk and could impact the East Bay economy.

9 **A. Freeport Project Shutdown**

10 The Freeport Project's intake location, at Mile 47.1 on the Sacramento River, was chosen
11 for its deep water, available land, and desirable location downstream from the confluence with
12 the American River and upstream of Regional San's discharge facility. However, in the event of
13 tidally influenced low or reverse river flow, the Freeport Project intake can be impacted by
14 downstream wastewater treatment plant treated discharges at Sacramento River Mile 46. To
15 prevent diversion of these discharges and avoid water quality impacts, FRWA entered into a
16 coordinated operations agreement with the Sacramento Regional County Sanitation District
17 ("Regional San").³ That coordinated operations agreement was incorporated into the Freeport
18 Project control strategies and into the domestic water supply permits issued to EBMUD and
19 SCWA by the State Water Resources Control Board's Division of Drinking Water.⁴

20 In compliance with EBMUD and SCWA's domestic water supply permits and the
21 coordinated operations agreement with Regional San, the Freeport Project facilities will not
22 divert Sacramento River water when treated effluent from the Sacramento Regional Wastewater
23

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25 ³ For a copy of the FRWA/Regional San agreement, see Exhibit EBMUD-180 ("Coordinated
26 Operations Agreement for the Freeport Regional Water Authority Intake Facilities and
Sacramento Regional County Sanitation District," dated December 13, 2006, as amended).

27 ⁴ For a copy of the relevant amendment to EBMUD's domestic water supply permit, which
28 imposes a reverse-flow operational limitation on EBMUD, see EBMUD-181 (Water Supply
Permit No. 02-04-98P-0110005, issued by Department of Health Services on March 31, 1998, as
amended July 11, 2011).

1 Treatment Plant may be present in the river at a dilution ratio exceeding about 0.1%. The
2 Freeport Project control system calculates “particulate position” based on the velocity of the
3 river (velocity x time = distance). The Freeport Project intake pumps automatically shut down
4 when the “particle” has traveled 0.9 miles upstream of a flow sensor located between the
5 Freeport Project intake and Sacramento’s treatment plant. The Freeport Project intake can
6 resume pumping only after the “particle” has returned to 0.7 miles upstream of the flow sensor
7 located between the Freeport Project intake and the wastewater treatment plant.

8 Reverse flows in the Sacramento River create particular challenges during operation of
9 the Freeport Project. During dry years, the lowest Sacramento River flows typically occur in
10 April and May, which is also when the highest tides occur (spring tides). The low flows in
11 conjunction with high tides during these months can cause reverse flows on the Sacramento
12 River, which can trigger a shutdown of the Freeport Project pumps. Shutdown of the Freeport
13 Project intake pumps has an impact on, and may require a complete shutdown of, all of the
14 pumps downstream in the EBMUD system. This complete shutdown may be required because
15 the pumps from the Freeport Project intake through the East Bay work as an integrated system.
16 If the water flow is sufficiently reduced in one or more of the pipelines as a result of a shutdown
17 of the Freeport Project pumps, the pumps at the other end of those pipelines must be shut down
18 as well.

19 A complete shutdown of all of EBMUD’s pumps from the Freeport Project intake
20 downstream results in negative cascading impacts on the Freeport Project’s connection with the
21 Folsom South Canal, the Mokelumne Aqueducts, the Upper San Leandro Reservoir, Briones
22 Reservoir, and the Moraga RWPP. A restart following a complete shutdown of the system is not
23 automatic. Because the Freeport Project and the Mokelumne Aqueducts are part of an integrated
24 system, a shutdown of the entire system requires restarting the various pumps and chemical feeds
25 along the line in a series. The necessary volume of water must travel through the system to each
26 of the pumping stations before those pumps can be activated.

27 However, other factors can come into play that may further delay a restart of the system.
28 In particular, because operation of the Moraga RWPP causes a large voltage drop in the local

1 electric grid, PG&E requires 48 hours' notice to restart these pumps and only allows the Moraga
2 RWPP to be restarted between midnight and 6:00 a.m.

3 In an effort to avoid complete shutdowns of the entire water systems resulting from
4 reverse flow events on the Sacramento River, EBMUD developed an operating procedure to
5 reduce, rather than completely shut down, flows downstream of the Folsom South Canal during a
6 reverse flow event with an anticipated duration of less than three hours. If the reverse flow event
7 lasts more than a few hours, all Freeport facilities and downstream pumping plants will be shut
8 down. Alternatively, EBMUD can continue to draw water from Folsom South Canal at a
9 reduced flow rate while the Freeport Project intake is shut off. However, the amount of time that
10 reduced flow can be diverted from the Folsom South Canal is limited. The terms of the
11 agreement between the USBR and EBMUD relating to the easement providing EBMUD use of
12 the Folsom South Canal require EBMUD to operate within a prescribed operating range. For
13 reverse flow events that last less than three hours, EBMUD can stay within the required
14 operational range by resuming Freeport Project intake operations and delivery to the Folsom
15 South Canal at the designated rate after the reverse flow event ends, while continuing to draw
16 from the Folsom South Canal at the reduced rate until the Folsom South Canal volume is
17 equalized.

18 The Freeport facilities are not yet used to their full capacity every day, and since the
19 pumps are not operated continuously 365 days per year, EBMUD has been able to make up for
20 "lost" water from reverse flow events by continuing to operate the Freeport intake when it
21 otherwise would not be used. However, EBMUD and the SCWA each plan to use the Freeport
22 Project facilities more over time. With less down time in the future, opportunities to deliver
23 water that was stopped due to reverse flow events will become scarce.

24 The impacts resulting from shutdowns extend well beyond the diversion point. For
25 example, some Freeport Project water is stored in the Upper San Leandro Reservoir, which is
26 filled by water that flows through the Moraga RWPP. The Moraga RWPP was not designed to
27 handle intermittent flows caused by reverse flow shutdowns and, once shut down, cannot be
28 restarted for at least 48 hours due to compliance with PG&E requirements. This delay is more

1 than an inconvenience – it risks permanent loss of water that could have been diverted and stored
2 during the downtime. Should these events become more frequent as a result of the construction
3 and/or operation of the WaterFix Project, EBMUD’s ability to deliver high quality water to its
4 customers and to meet its other operational objectives could be substantially compromised,
5 potentially putting the health and safety of EBMUD’s 1.4 million customers, the environment,
6 and the economy of the East Bay at risk.

7 **B. Mokelumne Aqueduct Shutdown**

8 Physical damage to EBMUD’s Mokelumne Aqueducts caused by the construction and/or
9 operation of the WaterFix Project would be catastrophic. Should the WaterFix Project cause
10 damage to one or more of the Mokelumne Aqueducts, EBMUD would immediately implement
11 operational changes to limit or prevent the loss of water and to ensure water quality. However,
12 because Petitioners’ proposed Twin Tunnels intersect with the Mokelumne Aqueducts in the
13 Delta region – downstream from the point where the Freeport Project joins the Mokelumne
14 Aqueducts – any potential damage Petitioners may cause to the Mokelumne Aqueducts would
15 severely compromise or completely shut down EBMUD’s entire water supply from the
16 Mokelumne and Sacramento Rivers. Complete shutdown of all three of the Mokelumne
17 Aqueducts would leave EBMUD with immediate access only to the water stored in its five
18 terminal aqueducts, which are normally maintained only to provide a 180-day supply.
19 Ultimately, should Petitioners’ construction or operation of the WaterFix Project damage one or
20 more of the Mokelumne Aqueducts, EBMUD would be forced to implement extraordinary
21 operational measures.

22 **IV. CONCLUSION**

23 Operation of EBMUD’s integrated network of reservoirs, aqueducts, water treatment
24 plants, and distribution facilities, which carries water from the Mokelumne and the Sacramento
25 Rivers to approximately 1.4 million customers in the East Bay, is complex under normal
26 operating conditions. Should the proposed WaterFix Project impact EBMUD’s facilities or
27 operation of EBMUD’s water system – either through an increase in the frequency and/or
28 duration of reverse flow events on the Sacramento River or damage to the Mokelumne

1 Aqueducts in the Delta region – EBMUD would be forced to make immediate operational
2 changes to protect and preserve its water supply. Any such incidents could potentially
3 jeopardize the quality and quantity of EBMUD’s water supplies, putting the health and safety of
4 EBMUD’s 1.4 million customers, the environment, and the economy of the East Bay at risk.

5

6 Executed this 31st day of August 2016 in Oakland, California.

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Eileen M. White

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EILEEN M. WHITE

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