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11 STATE WATER RESOURCES CONTROL BOARD
12 DIVISION OF WATER RIGHTS

14 In the matter of:

15 Santa Ana River Water Right Applications
16 31165, 31174, 31369, 31370, 31371, and
17 31372 and Wastewater Change Petition
18 No. WW-0045.

Hearing Officer: Arthur Baggett, Jr.

**WRITTEN TESTIMONY OF KEVIN
MILLIGAN ON BEHALF OF THE CITY
OF RIVERSIDE**

Date: May 2, 2007
Time: 9:00 a.m.
Dept: 1001 I Street, Second Fl.
Costal Hearing Room
Sacramento, CA

28 Riverside Ex. 1-0

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1 1. I have been employed by the City of Riverside Public Utilities since 1984. I
2 currently serve as the Utilities Assistant Director - Water. Prior to becoming Utilities Assistant
3 Director - Water, I served as the Utilities Principal Engineer for planning and development. As
4 part of my duties, I have been closely involved in the City's development of the Riverside Public
5 Utilities Recycled Water Program, including oversight of the preparation of the Recycled Water
6 Phase I Feasibility Study and Citywide Master Plan, the 2005 Water System Master Plan and
7 Non-potable Water Supply Assessment, the Recycled Water Program Environmental Impact
8 Report, Application 31372, and Wastewater Change Petition No. WW-0045. Attached hereto as
9 Riverside Ex. 1-1, Riverside Ex. 1-2 and Riverside Ex. 1-3 respectively, are true and correct
10 copies of the Recycled Water Phase I Feasibility Study and Citywide Master Plan, the 2005
11 Water System Master Plan and Non-Potable Water Supply Assessment and the Recycled Water
12 Draft Program Environmental Impact Report.

13
14 2. The people of the state of California have a primary interest in the development of
15 facilities to recycle water containing waste to supplement existing surface and underground water
16 supplies and to assist in meeting the future water requirements of the state (California Water
17 Code, Section 13510). This state policy is in the best interest of the City, as it is highly dependent
18 on groundwater for domestic, agricultural and industrial uses. The reliability of the supply of
19 groundwater is uncertain, as the levels of groundwater are dependant upon climatic conditions.
20 Riverside wished to develop and utilize recycled water in order to reduce its dependence not only
21 upon local groundwater but also and additional imported water. Recycled water should be more
22 readily available in seasons of drought when the supply of potable water for nonessential uses
23 may be uncertain.

24
25 3. The City is committed to developing water projects which minimize the City's
26 dependence on groundwater and non-local sources of water. Additionally, the City endeavors to
27 make the best use of its valuable water resources. Planned potable water projects, including a
28 new groundwater treatment plant, will increase annual production capacity to approximately

1 90,000 afa by mid-2008, as further described herein. Development of the recycled water
2 facilities is expected to meet the balance of the increased demand and offset a portion of the
3 present demand, thus reducing on an annual and peak basis the need for increased imported
4 water.

5
6 4. The City was incorporated in 1883. In 1913 the City-owned water utility was
7 established. Presently, the Riverside Public Water Utility service area includes approximately
8 76.4 square miles and encompasses most of the corporate boundary of the City of Riverside and
9 includes several unincorporated county neighborhoods including portions of Highgrove and
10 Home Gardens.

11
12 5. Major facilities in the water system include supply wells, transmission pipelines,
13 distribution pipelines, storage reservoirs, treatment plants, pumping facilities, and pressure
14 reducing facilities. The City maintains 56 active wells for supplying domestic and irrigation
15 water to its service area. Distribution and transmission pipelines total over 906 miles. There are
16 16 storage tanks with a total capacity of 100.4 million gallons. Ten treatment plants remove
17 contaminants from local groundwater before the water is delivered to the distribution system.

18
19 6. Multiple interagency and wholesale water connections allow the City to purchase
20 and exchange potable water with neighboring agencies. Presently, the annual demand totals
21 approximately 79,000 afa, and is projected to increase to approximately 100,000 afa by 2025.
22 Peak day demand in summer 2006 was approximately 109 mgd. The City's actual production
23 capacity from local resources totals approximately 99 mgd.

24
25 7. The City provides water service to over 60,000 service connections. In order to
26 provide this water service the City presently relies almost entirely on local groundwater
27 resources. The City extracts groundwater from the Bunker Hill and Riverside Basins.
28 Approximately 60 percent of the water is pumped from the Bunker Hill Basin and roughly 40

1 percent is pumped from the Riverside Basin. Currently, the City relies on imported water
2 supplies for approximately 3 percent of its annual needs.

3
4 8. The City is a party to the judgment in Western Municipal Water District et al. v.
5 East San Bernardino County Water District et. al (Riverside County Superior Court No. 78426,
6 April 17, 1969) (Applicants' Joint Ex. 2-7.). Under the terms of the Judgment, Riverside is
7 entitled to extract a total of 49,542 afa from the San Bernardino Basin Area (Bunker Hill Basin)
8 for export outside San Bernardino County. The Judgment also limits extractions from the
9 Riverside North Basin Area for use outside San Bernardino County to approximately 24,000 afa.
10 The Judgment does not limit extractions within the Riverside South Basin Area for use within
11 Riverside County.

12
13 9. Presently, the City extracts and exports its full entitlement in the San Bernardino
14 Basin Area (Bunker Hill Basin), and is approaching its maximum of extraction and exportation of
15 water from the Riverside North Basin Area. Water quality constraints, including high levels of
16 VOCs, SOCs, TDS, and nitrate have limited new production in the Riverside South Basin Area.

17
18 10. The City of Riverside's Regional Water Quality Control Plant ("RWQCP") is
19 located on a 121 acre site at 5950 Acorn Street, Riverside, California. The site is south of the
20 Santa Ana River, near the intersection of Van Buren Boulevard and Jurupa Avenue. Attached
21 hereto as Riverside Ex. 1-4 is a true and correct copy of an aerial photo which shows the
22 RWQCP.

23
24 11. The RWQCP consists of two secondary treatment plants, one tertiary treatment
25 plant, and sludge handling facilities. In 1995, approximately 50 acres of wetlands, known as the
26 Hidden Valley Wetlands Enhancement Project ("HVWEP"), were constructed and are being used
27 for additional treatment of effluent. The HVWEP is located approximately two miles west of the
28 RWQCP, with the final effluent from the project entering the Santa Ana River near California

1 Street in the City of Norco.

2
3 12. Presently, the City operates a small recycled water system composed of 8-inch and
4 12-inch diameter distribution mains. Riverside supplies approximately 290 afd of recycled water
5 to the Van Buren Golf Center, Van Buren Urban Forest, Riverside Energy Resource Center
6 (“RERC”) Power Plant, and Toro Manufacturing Company, and has existing recycled water
7 pipelines in Van Buren Boulevard and Doolittle Avenue. The current recycled water system is
8 nearing operational capacity.

9
10 13. The RWQCP is currently permitted to treat 40 million gallons per day (mgd) of
11 wastewater. Presently, the plant produces approximately 33 mgd, which translates to
12 approximately 36,000 afd of effluent. Almost all of the treated effluent is discharged into Reach
13 3 of the Santa Ana River, by way of a constructed channel and the constructed wetlands.
14 Following treatment and chlorination/dechlorination, the final effluent is discharged into a
15 constructed channel that parallels the Santa Ana River flow. Eventually, the effluent flow is split,
16 with some water discharged through a constructed channel that ultimately intersects the flow of
17 the Santa Ana River. The balance of the effluent travels through a constructed channel to the
18 HVWEP. Water flows through the HVWEP and re-enters a constructed channel where it
19 intersects the Santa Ana River. The HVWEP was designed for an average influent flow of
20 approximately 16 cfs.

21
22 14. The City plans a phased expansion of the RWQCP from the existing permitted
23 capacity of 40 mgd to the ultimate capacity of 60 mgd or approximately 67,000 afd. The City
24 expects the plant to be operating at ultimate capacity by 2030.

25
26 15. The Master Plan identifies a phased expansion of the City’s existing recycled
27 water distribution system from the present 290 afd to 41,400 afd by 2025. The Master Plan
28 provides a framework for the planning, building and operation of a recycled water distribution

1 system. (See Riverside Ex. 1-2.) The Riverside Public Utilities prepared a draft Program
2 Environmental Impact Report in connection with the Master Plan. (See Riverside Ex. 1-3.) The
3 draft Program Environmental Impact Report was released for public comment on October 12,
4 2006.

5
6 16. The City of Riverside's Project has three components: Adoption of the Master
7 Plan; implementation of near term and long term projects to deliver recycled water from the
8 RWQCP; and re-use of 41,400 afy of treated effluent from the RWQCP for use as recycled water.
9 The re-use of 41,400 afy per year would not be immediate but rather would occur over a period of
10 time, as the plant is expanded, and as the population and employment in Riverside and
11 surrounding areas continues to grow and thus the amount of treated effluent generated increases.

12
13 17. The City's objective is to ensure the continuous beneficial use of water by
14 expanding the treatment facility, and directing a portion of the treated effluent from the RWQCP
15 to recycled water users, while continuing to contribute flow and protection of water quality and
16 biological resources of the Santa Ana River. The Project will increase the City's ability to rely
17 on localized water supplies to meet domestic water needs and will enable the City to decrease
18 reliance on imported water supplies, such as State Water from the Sacramento-San Joaquin Bay
19 Delta. Without this Project, the City will be forced to rely more heavily on imported supplies as
20 the City's population increases. As stated above, the City is currently utilizing nearly all of its
21 adjudicated groundwater rights in the Riverside North and Bunker Hill Basins.

22
23 18. The City anticipates using the recycled water for several types of projects within
24 the Project area, including: Landscape Irrigation within City Limits, Industrial/Commercial uses
25 within City Limits, Non-Agricultural uses outside City Limits, and Agricultural uses within and
26 outside the City limits. The City anticipates that there is a potential demand for approximately
27 21,400 afa of treated water for landscape irrigation and municipal/industrial use within and
28 outside the City limits. Seventy percent of this anticipated irrigation need is comprised of

1 schools, golf courses and parks. Approximately 2,700 afa of the total could be used for irrigation
2 and industrial/commercial uses outside the City. Finally, the City estimates that up to 20,000 afy
3 of treated water could be used in the Riverside and surrounding areas for agricultural uses.
4

5 19. The City proposes to distribute recycled water throughout the City and to
6 connection points in the community services districts that currently use the RWQCP: Jurupa and
7 Rubidoux.
8

9 20. The Master Plan contemplates development of capital improvements, which
10 include the core distribution system, Phase 1 expansion, Citywide distribution facilities, and the
11 agricultural use system. The core distribution system will consist of the initial modifications to
12 the RWQCP facilities to enable the final effluent to be redirected to new pump stations, storage
13 tanks, and transmission pipelines prior to reaching the plant outfall and constructed channel, in
14 order to provide recycled water for landscape irrigation and other municipal and industrial uses
15 within the project area. Phase 1 expansion is the initial phase of the distribution system and will
16 improve the existing system to expand delivery capacity within a two mile radius of the RWQCP.
17 City wide distribution facilities will expand the Phase I facilities to reach all identified markets
18 within the City and those agencies identified in the Master Plan. The Agricultural Use System is
19 a combination of short- and long-term projects to develop a system to deliver recycled water for
20 agricultural uses.
21

22 21. The City contemplates developing a series of pump stations and storage tanks to
23 minimize and dampen the peak demands on the system and ensure a continuous and regular flow
24 of treated effluent to the wetlands and Santa Ana River.
25

26 22. At no time will the City discharge less than 25,000 afy to the River. Upon
27 completion of the Project, the City expects discharges to be approximately 26,000 afy. This is
28 significantly more than the 15,250 afy the City is required to discharge pursuant to the stipulation

1 between the City and Western Municipal Water District dated November 30, 1968, which was
2 ultimately incorporated into the Judgment in Orange County Water District v. City of Chino, et
3 al. (Orange County Superior Court No. 117628, April 17, 1969). (See Applicants' Joint Ex. 2-1.)
4

5 23. On March 29, 2007, the City signed a Stipulation with the California Department
6 of Fish and Game ("CDFG") that resolved CDFG's protest to the City's Application 31372 and
7 stated that CDFG would not protest the City's Wastewater Change Petition WW-0045. The
8 Stipulation provides, among other things, that "[t]he Parties do not anticipate an impact on fish,
9 wildlife or other instream beneficial uses . . . as a result of City's requested appropriation
10 described in Application 31372 or Wastewater Change Petition WW-0045." Pursuant to the
11 Stipulation, the City has committed to continue its existing monitoring of the effluent flows and
12 report the results of such monitoring annually to CDFG. The Parties have also agreed to meet
13 with CDFG to address any impacts should they occur in the future. The Stipulation provides that
14 the City present the Stipulation as evidence at the hearing regarding Application 31372 and WW-
15 0045. A true and correct copy of the Stipulation is attached as Riverside Ex. 1-5.
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17 24. On April 13, 2007, the United States Forest Service indicated that it would dismiss
18 its protest to the City's Application 31372. We expect the Parties to execute a Stipulation to that
19 effect prior to the Hearing.
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