PILLSBURY WINTHROP SHAW PITTMAN LLP
CHRISTOPHER J. MCNEVIN #109603
725 South Figueroa Street, Suite 2800
Los Angeles, CA 90017-5406
Telephone: (213) 488-7100
Facsimile: (213) 629-1033

Attorneys for Applicant
ORANGE COUNTY WATER DISTRICT

STATE WATER RESOURCES CONTROL BOARD

OF THE STATE OF CALIFORNIA

In the Matter of State Water Resources Control Board Hearing on Water Rights Applications 31165 and 31370 of San Bernardino Valley Municipal Water District and Western Municipal Water District of Riverside County; Application 31174 of Orange County Water District; Application 31369 of Chino Basin Watermaster; Application 31371 of San Bernardino Valley Water Conservation District; and Application 31372 and Waste Water Change Petition WW-0045 of the City of Riverside.	Application No. 31174 DIRECT TESTIMONY OF CARL R. NELSON, ON BEHALF OF ORANGE COUNTY WATER DISTRICT FOR WATER RIGHTS APPLICATION 31174 Date: May 2, 2007 Time: 9:00 a.m. Location: Cal EPA Building Coastal Hearing Room

DECLARATION OF CARL R. NELSON

I, Carl R. Nelson, declare and state as follows:

BACKGROUND AND QUALIFICATIONS.

1. I am the former director of the Orange County Department of Public Works and a former engineer for the Orange County Flood Control District ("OCFCD"). I now serve as a civil engineering consultant. I make this declaration as my direct testimony for the State Water Resources Control Board Hearing to Consider Water Right Application 31174 of Orange County Water District ("OCWD"). This Declaration is Exhibit OCWD 2-1. The information contained in this declaration is based upon my personal knowledge and information gained through my involvement with the Santa Ana River through 47 years of employment with the OCFCD, the Orange County Department of Public Works, and the Orange County Sanitation District. The intent of this Declaration is to explain the highly modified nature and characteristics of the Santa Ana River as a result of flood control engineering by OCFCD, upstream flood control districts, and the U.S. Army Corps of Engineers ("Corps") based on my experience.

2. Beginning in 1960, I was employed by OCFCD as a staff engineer for 14 years, then ascending to a 14 year period as Orange County's Director of Public Works. As OCFCD's Planning Division Engineer, early in the days of flood control work on the Santa Ana River, in 1964 I co-authored a report entitled "An Investigation of Flood Control and Water Conservation Deficiencies. Within Orange County, California." That publication led to a February 10, 1965 public hearing by the Corps' regarding a "Review of the Santa Ana River Basin and Orange County, California," a federal flood control project first authorized by Congress in 1936. At that hearing I presented the OCFCD request for federal construction funds for the Santa Ana River and other countywide needs. From that time forward, I was the principal OCFCD liaison with the Corps and upriver counties until 1989. During that time, I had increasing levels of responsibility, including supervising Santa Ana River maintenance operations, and coordinating with the Corps' on Prado Dam flood

control discharges. In that capacity I directed the design of Santa Ana River improvements from the mouth of Santa Ana Canyon to the ocean, and met regularly with Corps engineers as they prepared the 1975 "Review Report on the Santa Ana River". From 1977 to 1989, I also represented the Orange County Board of Supervisors in hearings before the California Water Commission and Congressional Committees regarding the Santa Ana River Mainstem Project.[1]

3. In order to perform my function at OCFCD I became a serious student of the Santa Ana River's modern history as summarized below. I have personally worked with staff and management of the OCFCD, the Corps, and OCWD to construct this history, either as an employee or as a consultant, from 1962 to the present time.

4. A resume of my education and experience is Exhibit OCWD 2-2.

INTRODUCTION TO AGENCIES INVOLVED IN FLOOD CONTROL.

5. The availability of water from the Santa Ana River has played a key role in the development of Southern California, in particular Orange County. But, along with the water's benefits, comes a significant threat of flood. That threat has been controlled by the cooperative actions of OCFCD and the Corps with the incidental benefit of improving water conservation through cooperation with the OCWD.

6. Orange County Flood Control District. The flood of 1916 led the State Legislature, in 1927, to create the Orange County Flood Control District with the authority and power to issue bonds and levy taxes for the purposes of protecting property by the control and conservation of flood and storm waters. Planning was undertaken for a countrywide program of flood control improvements. Since formation, OCFCD's largest concern has been with the Santa Ana River's infrequent, but devastating floods across the coastal plain where no incised watercourse existed.

---

[1] Among the Mainstem Project's key features are the Seven Oaks Dam, Prado Dam and the Lower Santa Ana River reconstruction.

7. The U.S. Army Corps of Engineers. Coping with the national peacetime emergency of the depression, the Congress of the United States named the U.S. Army's Corps of Engineers as the organization responsible for a nationwide flood control effort. Prior to that time, the work of the Corps had been primarily military construction and coastal harbors improvements. In 1936, Congress authorized the "Santa Ana River Basin and Orange County, California" project, which included most of the program previously planned by OCFCD. The federal legislation established a strict hierarchy for justification of Congressional project funding. To qualify, a project would need a local sponsor (such as OCFCD) capable of providing the land, easements, rights of way and relocations ("LERDS") necessary for construction. Before qualifying, a Corps study would be required to show that a project's benefits would exceed the estimated costs of flood damages. Qualifying projects could be considered for inclusion in the annual budget to be approved by Congress. The Corps' Santa Ana River studies were greatly accelerated by the Great Flood of 1938, and Congress acted quickly to appropriate funds for construction of Prado Dam. The Dam, located east of the Orange/Riverside County boundary, was completed in 1941 and is further described below.

SANTA ANA RIVER WATERSHED CLIMATOLOGY.

8. Paramount to understanding the nature of the Santa Ana River is the climatology of the watershed. The Santa Ana River is the largest Southern California stream south of the Santa Clara River. Rising on the ridges of the San Gabriel and San Bernardino Mountains to the northeast, the Chino Hills to the west and the Santa Ana Mountains to the east, the upper Santa Ana River Watershed of 1,490 square miles converges at the head of Santa Ana Canyon before entering Orange County. Historically, the river meandered for approximately 11 miles through this narrow canyon before emerging upon a broad alluvial plain (or "wash") and then, only during exceptionally intense storm periods continuing another 24 miles to an ocean entry at Newport Beach. Exhibit OCWD 2-3 is a Watershed Map of the Santa Ana River prepared by the Corps.

9. The climate of Southern California is semi-arid with widely varying rainfall amounts, annually averaging as much as 30-40 inches or more in the mountains above 5,000 feet and as little as 10-12 inches at coastal locations. Seldom is there an "average" rainfall year. More commonly, there are a series of dry years followed by a year of exceptional winter storms causing flood damages to unwary occupants of the River floodplain. A constant of Southern California climate is the fact that drought is an every year occurrence. Long-term records show that little or no rainfall occurs between May and October.

BRIEF HISTORY OF USAGE OF THE SANTA ANA RIVER.

10. In 1857, Surveyor George Hansen laid out a tract of 1165 acres within Rancho San Juan y Cajon de Santa Ana for the original "Anaheim Colony". The Los Angeles Vineyard Society purchased the land along with a right of way for a ditch and rights to enough water from the River for irrigation of the tract. The Anaheim Water Company was incorporated in 1859, and was the first duly organized irrigation company in the State of California. On January 9, 1884 the Anaheim Union Water Company ("AUWCO") was incorporated for the purpose of consolidating the Anaheim Water Company with several other ditch companies to finance improvements to the original canal system and perfect water rights for service to an expanded area of water service. Exhibit OCWD 2-4 is a map showing Santa Ana River Irrigation Systems in approximately 1857-89, an excerpt from the WPA's Orange County History project, which I obtained from First American Title Company. Exhibit OCWD 2-5 is a photograph of the AUWCO diversion site in the 1890s, which I obtained via internet from the Anaheim Public Library.

11. In about 1870-71, along the south side of the river, several entrepreneurs acquired land from the former Rancho Santiago de Santa Ana and improved the former rancho ditches. In 1873 they formed the Semi-Tropic Water Company which was later incorporated into the Santa Ana Valley Irrigation Company. Exhibit OCWD 2-6 is a photograph showing the Santa Ana Valley Headgate, which is a personal photograph I took

on a vocational outing in 1965. Similarly, Exhibit OCWD 2-7 is a photograph I took on the same outing, showing Anaheim Union's diversion site. Exhibits OCWD 2-6 and OCWD 2-7 illustrate the small dry weather flow available prior to the Corp's 1969 closure of the formerly ungated openings of Prado Dam.

12. With increasing quantities of water needed to expand their irrigation service areas and to reduce water losses by infiltration, by the late 1870s, Anaheim Union and Santa Ana Valley had extended their respective diversion headworks upstream into Santa Ana Canyon and began lining their ditches with concrete. By about 1877 the base flow of the river in Santa Ana Canyon had been so depleted by upstream appropriations and downstream competing interests that the companies were embroiled in legal arguments over water. These disputes culminated in a formal agreement in 1899 that the two companies would share equally in the available flow of water. Their further litigation against water users in Riverside and San Bernardino counties extended well into the twentieth century.

13. During the summer months irrigation needs exceeded supply in the Santa Ana Canyon. In contrast, large winter floods (for example in 1862 and 1884) occasionally devastated the companies' diversion works requiring their reconstruction before the ensuing irrigation season. Nonetheless, the area prospered and in 1889 the County of Orange was de-annexed from Los Angeles County, and a separate county government was formed. By 1900, census records show the population of the new County had reached almost 20,000 persons.

KEY EVENTS IN THE EVOLUTION OF THE SANTA ANA RIVER.

14. The Santa Ana River historically has been plagued with periodic intense storm events. In the past 150 years since the founding of the Anaheim colony, rainfall and runoff records show only 15 years when exceptionally large flood flows occurred on the lower Santa Ana River in Orange County; i.e., 1862, 1884, 1907, 1916, 1927, 1938, 1969, 1978, 1980, 1983, 1992, 1993, 1995, 1998 and 2005. These data are graphically depicted in Exhibit OCWD 2-8, which is a copy of a chart I obtained from the Orange County's annual

Hydrologic Data Report. What follows is a discussion of some of the key flood control events which shaped the Santa Ana River watershed as it is today.

15. Simplistically, there are two significant variables affecting the peak flow of runoff during winter storms. The first is the seasonal cycle of rainfall intensity and duration. The second is the porosity of the watershed surface. Although farming once prevailed across the valley floor of western Riverside and San Bernardino, the area is rapidly urbanizing. For example, since 1961, the populations of Riverside and San Bernardino counties combined have grown from 800,000 to more than 3,500,000. Hence, it is no surprise when reviewing the 150 year list of flood years above to see the following comparisons:

- In the first 100 years from 1857 to 1957 there were 5 significant flood years.
- In the latter 50 years there were 10 significant flood years.

16. Formation of the Orange County Flood Control District. In 1916 the Santa Ana River faced an extreme flood event, which produced a peak flow of 45,000 cubic feet per second, ravaging the farmlands, railroads (Exhibit OCWD 2-9) and the small towns of Santa Ana, Orange and Anaheim. The significant damages and loss of life resulting from the flood stimulated the County Board of Supervisors to employ the prominent Civil Engineer, J.B. Lippincott to investigate the means for controlling floods and conserving water to reduce overdraft of the underground water table. Lippincott recommended construction of a flood control and water conservation dam on the Santa Ana River at the farming community of Rincon (commonly known as Prado) east of Santa Ana Canyon. The Lippincott report also recommended acquisition of 1,000 acres of wash lands in the Anaheim area for spreading waters released from the dam at controlled rates to replenish the underground basin of central Orange County.

17. The State Legislature responded to the Lippincott report by forming the Orange County Flood Control District in 1927. The district's boundaries are co-terminus with the county's boundaries, and the County Board of Supervisors is ex-officio the board

of directors of the Flood Control District. The OCFCD's legislative mandate gives it these powers:

> "To provide for the control of the flood and storm waters of said district, and the flood and storm waters of streams that have their source outside of said district, but which streams and the flood waters thereof, flow into said district and to conserve such waters for beneficial and useful purposes by spreading, storing, retaining and causing to percolate into the soil within said district, or without said district, such waters, or to save or conserve in any manner all or any of such waters and protect from damage from such flood or storm waters, the harbors, waterways, public highways and the property in such district."

18. Between roughly 1929 and 1933, OCFCD undertook various attempts to finance flood control and water conservation projects, including a dam and reservoir on the Santa Ana River within Santa Ana Canyon.

19. Formation of the Orange County Water District. In 1933, faced with shrinking base flow in the Santa Ana River due to upriver diversions, ever lower water tables due to basin overdraft and increasing costs of groundwater pumping, the State Legislature formed OCWD. OCWD's legislative charter includes management and protection of the underground basin, and conservation and reclamation of surface waters for groundwater replenishment. OCWD's early efforts were concentrated on litigation to limit over-prescription of water rights by upriver diversions. OCWD supported the OCFCD's pursuit of Prado Dam construction in order to reduce peak discharges and release of post-flood storage at rates practicable of conservation in Anaheim area spreading grounds.

20. The Federal Program of 1936. The Federal Flood Control Act of June 22, 1936 authorized a program entitled the "Santa Ana River Basin (and Orange County), California" Project which included the list of projects formerly proposed by OCFCD in 1929 which were rejected by voters. The program would be implemented by the Corps, but

required local participation by acquiring land, easements, and rights of way for reservoirs. In 1937 voters approved the issuance of $2,500,000 in bonds for local participation, and the Corps began preliminary engineering studies that would be returned to Congress for consideration of federal appropriations for construction.

21. The "Flood of the Century". Before the Corps' engineering reports (pursuant to the 1936 Federal Flood Control Act) could be completed, on March 2, 1938, an intense winter storm covering Southern California climaxed with a devastating flood peak of 100,000 cubic feet per second passing through Santa Ana Canyon and then spreading across central Orange County from Orange to Seal Beach. Municipal and private property damages were estimated in the millions, 45 lives were lost and most regional highways, bridges and rail transportation facilities were destroyed. Exhibit OCWD 2-10 is a photograph of the 1938 Flood, showing the River's breakout across the orange groves of Anaheim and Orange downstream from Olive-Orange Road (now Lincoln Avenue), which I obtained from the OCFCD Library.

22. The severity of the 1938 flood damages accelerated the Corps' work. By 1939 its "Survey Report for the Santa Ana River" was completed and Congress appropriated the funds necessary for the design and construction of Prado Dam. Reservoir lands were acquired, the farming community of Rincon was eliminated, and the Santa Fe Railroad was relocated out of the reservoir area. Prado Dam was completed in 1941, along with smaller flood control dams on Brea Creek and Fullerton Creek to the west of Santa Ana Canyon. Exhibit OCWD 2-11 is a photograph of Prado Dam taken in the 1980s during the Corps' planning for the Santa Ana River Mainstem Project described below.

23. Prado Dam significantly reduced the damaging effects of subsequent downstream flood flows. Then, following World War II, Orange County experienced great urban growth. Local flooding in 1952 led the Orange County Grand Jury to recommend a major plan of flood control which was then prepared by the OCFCD to cope with urban growth.

24. The 1956 Flood Control Bond Program. In 1956, voters approved financing for the construction of 70 projects that would provide a countywide network of projects providing flood protection for the impending urbanization of the county. For example, bond funds were used for levee improvements to the lower Santa Ana River Channel as shown in Exhibit OCWD 2-12, for containment of controlled releases from Prado Dam and downstream tributaries. Other examples include Carbon Canyon Diversion Channel, Carbon Creek, San Diego Creek and San Juan Creek. Exhibit 2-13 shows Villa Park Dam on Santiago Creek, which reduces peak flow to the Santa Ana River and was constructed with bond funds without waiting for federal assistance.

25. By 1962 most of the bond projects had been completed. OCFCD requested Congress to authorize a restudy of the 1936 Santa Ana River Basin to determine if additional flood control improvements might be eligible for federal funding. In 1964 a report entitled "An Investigation of Flood Control and Water Conservation Deficiencies in Orange County, California", which I co-authored, was submitted to OCFCD's Board of Supervisors indicating a need for additional funding to keep pace with the unanticipated rate of development and population growth.

26. Revenues from the rapidly growing property tax base enabled the OCFCD to improve the sand-bottom Santa Ana River channel with revetted levees in critically vulnerable locations from Imperial Highway to the ocean. Exhibit OCWD 2-14 is an aerial view showing the dual channelization constructed as a joint project of OCFCD and OCWD in the same location as the 1938 flood scene depicted in Exhibit OCWD 2-10. Several new highway bridges were constructed. Concurrently OCWD acquired off-channel basins in the Anaheim forebay area, increasing its diversion capacity. Exhibit OCWD 2-15 is a 1993 aerial view of OCWD's water spreading operations on the dual channel and off-channel basins. During dry fall seasons the riverbed from Imperial Highway to Ball Road is also used for groundwater replenishment with imported water purchased (when available) from the Metropolitan Water District.

27. Prado Dam Operations. The Prado Dam and reservoir was designed in 1940 for incoming peak flow of 190,000 cubic feet per second with a 4-day volume of 275,000 acre-feet. At the time, it was thought this would control a flood having a recurrence interval of 200 years. To achieve this control, the gates were designed for a controlled release of 9,300 cubic feet per second. Presumably this would minimize flood damages en route through Santa Ana Canyon and across the alluvial plain to the ocean.

28. To avoid interference with upper and lower water rights holders, the dam was designed with two ungated openings whereby floodwaters temporarily detained in the reservoir during flood would freely empty during the receding hydrograph. The practical effect was that the maximum discharge from Prado Dam from 1941 until 1969 never exceeded 2,000 cubic feet per second through the ungated openings. In 1969 there were two large volume storms each of which raised reservoir water levels to unprecedented elevations which require gated releases from the dam, in addition to the ungated flow described above. However, when the discharge rate reached 5,000 cubic feet per second, erosion damages began to occur to downstream agricultural operations and private water facilities in Santa Ana Canyon above Imperial Highway. Downstream from Imperial, the facilities of OCFCD and OCWD also experienced damaging erosion. Although the predetermined gate schedule of the Corps should have required opening to the maximum of 9,300 cubic feet per second, coordination with OCFCD and OCWD, and favorable weather forecasts, enabled the Corps to moderate the gate settings and allow abnormally high water levels to accumulate in the reservoir while minimizing downstream damages.

29. Reservoir drawdown extended well into the dry season with extraordinary benefits to OCWD's groundwater replenishment program. Also, in 1969, the long-time litigation between OCWD and upriver water interests was settled, and a watermaster was appointed, thus guaranteeing a minimum base flow passing Prado Dam annually. This enabled the Corps and OCFCD to agree to close Prado's ungated opening. The closure has much improved use of the Prado's debris pool for post-flood water conservation storage.

Now, written agreements between the Corps and OCWD have established the coordination of gated releases so as to correlate with management of spreading grounds infiltration capacity.

30. Until 2005, the Corps continued to operate Prado Dam so as to limit gated discharges to 5,000 cubic feet per second while the channel to the ocean was under reconstruction as part of the Santa Ana Mainstem Project, described below. In January 2005, however, the Corps' reconstruction of Prado Dam embankment created a situation compounded by another exceptional storm event. During this event, rather than letting the reservoir water rise even higher than in 1969, it was necessary to release the maximum design rate of nearly 10,000 cubic feet per second. Although this disrupted construction at Prado Dam it caused no damage to the recently completed channel from Weir Canyon to the ocean. However, once again, utilities and highways in Santa Ana Canyon habitat area were threatened with damaging erosion.

31. The Santa Ana River Mainstem Project. As a consequence of the large flood damage experiences of 1969, the Corps re-examined the hydrology of Prado Dam and the rate of tributary watershed urbanization. By 1971, Corps studies recognized that Prado Dam was not providing Orange County with flood protection from extreme events. By that time, Orange County's population had reached more than a million persons in the Santa Ana River floodplain. A 100 year storm event would result in uncontrolled spillway flow from the dam, perhaps more devastating than the "Flood of the Century" in 1938. By the time the Corps' Survey Report was submitted to Congress in 1975, the River was deemed the worst flood threat in the United States west of the Mississippi. The recommended solution was named the Santa Ana River Mainstem Project.

32. The three-county project includes the following features: Seven Oaks Dam at the base of the San Bernardino mountains (OCWD Exhibit 2-16), and San Timoteo Creek in San Bernardino County; raising Prado Dam to increase flood storage; reconstruction of outlet gates for larger discharge; the Oak Street Drain in Riverside

County; preservation of 1500 acres of natural habitat in Santa Ana Canyon; Channelization of Santiago Creek; and reconstruction of the entire Santa Ana River Channel (Exhibit OCWD 2-17) for increased capacity from Weir Canyon Road to the ocean in Orange County. A lynch-pin in the federal approval process is the three-county Local Cooperation Agreement signed by the Counties of Orange, Riverside and San Bernardino with the Corps of Engineers. The Mainstem Project was approved by Congress in 1988 and appropriations were commenced in 1989.

33. The Santa Ana River Mainstem Project is nearing completion. The upper Santa Ana River floodplain in San Bernardino and Riverside Counties receives protection from the recently completed Seven Oaks Dam. When Prado Dam construction is completed, the threat of uncontrolled spillway discharge will be mitigated and the maximum design discharge will be limited to 30,000 cubic feet per second. However, the habitat conservation area within Santa Ana Canyon remains subject to erosive flows from Prado Dam, and the Corps and OCFCD are planning embankment revetment to protect the Riverside Freeway and realignment of the Santa Ana River Interceptor Sewer Line. The lower Santa Ana River Channel improvements (Exhibit OCWD 2-18) through Orange County have been completed with a carrying capacity of up to 50,000 cubic feet per second, including the Prado discharge and local tributaries. Agreements are in place for optimizing conservation of post-storm discharges from the debris pool at Prado Dam. Flood channel improvements and rubber dams (Exhibit OCWD 2-19) are in place affording capacity for increased diversion to off-channel basins by OCWD.

34. When completed in 2008, the new Prado Dam reservoir will have storage capacity for approximately 360,000 acre-feet. The Corps and OCWD have a written agreement for a conservation pool affording post-flood releases of water at rates equaling spreading ground infiltration capacity. The lower Santa Ana River Channel reconstruction has been completed (OCWD Exhibit 2-20) to safely convey discharge up to 50,000 cubic feet per second to the ocean, including tributaries downstream from Prado. Ultimately, the

Santa Ana Mainstem project will ensure that Orange County's flood protection is restored to the 200 year protection level anticipated in 1941.

INCIDENTAL TO FLOOD CONTROL, WATER CONSERVATION HAS BEEN IMPROVED.

35. As mentioned above, rights to the base flow of the river in Santa Ana Canyon were adjudicated in 1884 with the two companies, Anaheim Union and Santa Ana Valley, each entitled to half the available flow. Nonetheless, satisfying their expanded areas of service required some off-channel storage of winter runoff, and further augmentation with groundwater pumping. At their zenith, the two companies served an area of approximately 32,000 acres, solely for agricultural irrigation. Paralleling urban growth and the need for flood control facilities, the demands for irrigation water in the 1950s declined and municipal water and sewer services superceded agricultural water use. OCWD acquired the two companies' Santa Ana River pre-1914 and permitted entitlements and the water is now utilized for groundwater replenishment, as shown in Exhibit OCWD 2-15.

36. The Corps and OCWD, by written agreements, have resolved environmental issues and established a cooperative basis for integrating Prado's debris pool with springtime storage and release of water for groundwater replenishment.

37. The coordinated operations at Prado Dam, described above, have enhanced storm runoff conservation opportunities, enabling OCWD to significantly expand its water spreading operations during the past 50 years.

SUMMARY AND CONCLUSION.

38. Over the past 70 years of progressive flood control modifications, the Santa Ana River has changed from a natural, meandering, flood-prone alluvial wash to a well-regulated but generally non-natural river. The primary projects, from the headwaters to the Pacific Ocean are:

- Seven Oaks Dam in the San Bernardino Mountains;

- Floodplain acquisition and preservation through Riverside and San Bernardino counties and some bank protection revetments;
- Increased storage capacity and reconstructed outlet gates at Prado Dam;
- Santa Ana Canyon acquisition and Habitat Management Plan;
- Two rubber dams and improved structures for off-channel water conservation;
- Hundreds of acres of land acquired for groundwater replenishment basins;
- Reconstruction of revetted Santa Ana River levees with sand-bottom channel across pervious areas of Anaheim from Santa Ana Canyon to City of Santa Ana; and,
- Construction of concrete channel lining from Santa Ana to ocean.

As a result, from the location of OCWD's most upstream diversion point to the ocean, the Santa Ana River has been structurally confined to a leveed floodway by OCFCD. Winter runoff exceeding conservation capacity is lost to the ocean via OCFCD's concrete lined Santa Ana River Channel. Within this modified, flood-control environment, OCWD efficiently operates in cooperation with OCFCD and the Corps.

Executed under the penalty of perjury under the laws of the State of California in Laguna Niguel, California on April 11, 2007.

Carl R. Nelson