WATER SUPPLY ASSESSMENT
And
CITY COUNCIL RESOLUTION

NOTE: The WSA technical appendices are available for review at:

- The City of Santa Cruz Planning Department at 809 Center Street, Room 107, Santa Cruz, California.
- The City of Santa Cruz Water Department at 212 Locust Street, Santa Cruz, California.
- The City's website – the Draft EIR will be posted online at: http://www.ci.santa-cruz.ca.us/index.aspx?page=1.

COPY

RESOLUTION NO. NS-28,130

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SANTA CRUZ APPROVING THE WATER SUPPLY ASSESSMENT FOR THE SPHERE OF INFLUENCE AMENDMENT

WHEREAS, in the 2005 University of California Santa Cruz (UCSC) Long Range Development Plan (LRDP) and subsequent settlement agreement (Settlement Agreement) to litigation involving that LRDP it was agreed that the City would amend its Sphere of Influence to allow utility service to an area of the north campus not currently located in the City's Water Service area; and

WHEREAS, pursuant to Settlement Agreement, the City has expressed its intent to provide municipal and industrial water service to said north campus; and

WHEREAS, The City is currently in the process of preparing an Environmental Impact Report as required by California Environmental Quality Act for the Project described as an amendment to the City's Sphere of Influence for provision of extraterritorial water and sewer service to the North Campus of UCSC that would allow development including up to 3,175,000 gross sq ft of development and approximately 3,400 new housing units / beds; and

WHEREAS, section 21151.9 of the Public Resources Code and section 10910 et seq. of the Water Code require the preparation of a water supply assessment ("WSA") by the public water system responsible for serving the North Campus; and

WHEREAS, a WSA was prepared for the Project on behalf of City of Santa Cruz in accordance with section 10910 et seq. of the Water Code and will be included as an Appendix to the Project Draft Environmental Impact Report; and

WHEREAS, the City Council of the City of Santa Cruz has independently reviewed and analyzed the WSA and considered information contained therein prior to approving this resolution and recommending action on the WSA;

WHEREAS, the WSA reflects the independent judgment and analysis of the City of Santa Cruz City Council; and

WHEREAS, the City Council acknowledges that numerous substantive comments relative to the WSA from members of the public have been received by the Council and further acknowledges that the City Council's approval and acceptance of the WSA authorizes its incorporation as an appendix into the afore-referenced Project Draft Environmental Impact Report and that said comments should therefore be deemed comments upon the Project Draft Environmental Impact Report for purposes of the California Environmental Quality Act;

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Santa Cruz as follows:

1. The foregoing recitals are true and correct and this Council so finds and determines.

2. Council makes the following findings, based on the entire record:

(a) The WSA satisfies all requirements of sections 10910 et seq. of the Water Code;

(b) This WSA concludes that in a normal year the City's supplies are sufficient to meet the demands of the Project and the City's existing and planned future uses through at least the year 2025.

(c) The evaluations presented in this WSA indicate that if water demand increases as is projected in an *Updated UWMP Scenario 1*, which anticipates a 0.8% annual increase in the City's three largest customer classes and is consistent with general plans for the City's service area, the City will not be able to meet the demand of the Project and the City's existing and planned future uses beyond 2025 in a normal year.

(d) If water demand increases as is projected in *Updated UWMP Scenario 2,* which anticipates a 0.4% annual increase in customer classes, and is consistent with historical trends in growth, the City will be able to meet the demands of the Project and other existing and planned future uses through the year 2030 (i.e., the 20 year evaluation horizon for this WSA).

(e) This WSA concludes that the City does *not* have sufficient water to meet current or future projected water demand during dry years, irrespective of development of the Project. This finding is consistent with the 2005 UWMP findings and the conclusions presented in the 2003 Integrated Water Plan ("IWP"), which state that: "*The City's water system is grossly inadequate to meet current demand under drought conditions.*"

(f) In those drought conditions, the demand of this Project would increase the City's 2030 water supply shortfall by up to 2% of the total demand (100 mgy out of 4,356 mgy).

(g) In 2003, the City produced an IWP that evaluated potential water supply strategies for managing the City's water supply and demand to address the current supply deficit during dry years. These strategies include: (1) water conservation, (2) curtailment of water demand up to 15% during drought conditions, and (3) desalination of seawater.

(h) Implementation the curtailment plan is completed; implementation of the water conservation is over 50% complete; the desalination investigation work is well underway.

(i) If the preceding measures to implement the IWP materialize as planned, then the total sources of water supply identified to serve the Project would be sufficient to meet demand from the Project through 2025 or beyond in normal rainfall years, in addition to existing and planned future land uses and in single dry and multiple dry water years, for that same period.

3. The Council hereby approves the WSA for the Project.

4. The Council hereby further directs that the afore-referenced public comments on the WSA shall be deemed to constitute comments upon the afore-referenced Project Draft Environmental Impact Report and shall be treated as such by City staff in preparing responses to comments on that document in connection with staff's preparation of the Final Environmental Impact Report for the Project. The Council further directs City Water Department staff, when forwarding the WSA to City Community Development Department for its inclusion in the Draft EIR, to also forward its responses to the afore-referenced WSA comments.

PASSED AND ADOPTED this 27th day of October, 2009, by the following vote:

AYES: Councilmembers Coonerty, Robinson, Lane, Madrigal, Beiers, Vice Mayor Rotkin; Mayor Mathews.

NOES: None.

ABSENT: None.

DISQUALIFIED: None.

APPROVED: _____
Mayor

ATTEST: _____
City Clerk

Erler & Kalinowski, Inc.

Consulting Engineers and Scientists

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13 October 2009

To: City of Santa Cruz

From: Erler & Kalinowski, Inc.

Subject: **City of Santa Cruz Sphere of Influence Amendment Project Water Supply Assessment**
Santa Cruz, California
(EKI A90033.00)

Erler & Kalinowski, Inc., ("EKI") has prepared this memorandum to issue an errata sheet for the *City of Santa Cruz Sphere of Influence Amendment Project Water Supply Assessment*, prepared by EKI dated 15 September 2009. The errata sheet is included as Attachment A and described below.

1. On page 34 the report states that "Johnson et. al. (2004) estimates that total pumping from the Purisima Formation likely exceeds the sustainable yield of the aquifer by approximately 1,200 mgy (400 AFY)." This page should be replaced with the attached errata sheet, which has been corrected to exclude reference to the sustainable yield of the Purisima Formation. The conversion between acre-feet and millions of gallons is incorrect.

hydrostratigraphic units as defined by Johnson et. al (2004) are shown on Figure D-4 of Appendix D.

Beneath the City's water service area, the Purisima Formation is relatively shallow and dipping to the southeast, becoming deeper and thicker towards Capitola and Aptos and outcropping along the Monterey Bay shoreline. Groundwater produced by the City's wells is extracted from hydrostratgraphic units "A" and "AA" (see Figure D-5). The SqCWD also operates production wells within units A and AA within the Soquel Valley Groundwater Basin (DWR Basin No. 3-1).

6.2.3.2 Groundwater Production

The volume of groundwater produced from the Purisima Formation by the City, SqCWD, and CWD between 1986 and 2005 is summarized on Figure D-6 (SqCWD and CWD, 2007). Total groundwater production from the Purisima Formation by these agencies has ranged from a high of 1,530 mgy (4,700 AFY) in 1988 to a low of 1,140 mgy (3,500 AFY) in 2005 (SqCWD and CWD, 2007). Current annual extraction from the Purisima Formation by all pumpers is estimated to be 1,988 mgy (6,100 AFY). Of this total, the City currently produces about 167 mgy (8%), SqCWD produces approximately 1,075 mgy (54%), CWD pumps 18 mgy (1%) and private well production is estimated at about 728 mgy (37%) (Santa Cruz, 2006).

6.2.3.3 Groundwater Levels

Historical water levels reported by Johnson et. al. (2004) between 1998 and 2004 show fluctuations water levels throughout the Purisima Formation as a result of the seasonal and annual variations in groundwater production. Figure D-9a through 9c show water levels in SqCWD Purisima well SC-9 (screened in multiple water bearing units, including Unit A) and Figure D-10a through D-10c shows water levels in the City's Beltz wells over this period. These records show significant fluctuations in groundwater water levels as a result of variable groundwater production, indicating the ability of the aquifer to rebound from short term increases in production.

Water levels in the Purisima Formation near the neighboring SqCWD are characterized by a broad and persistent pumping trough surrounding the SqCWD production wells. Piezometric maps for the A unit of the Purisima Formation during Spring and Fall 2005 are shown on Figures D-7 and D-8. These two figures demonstrate that a drawdown trough persists in the A unit of the Purisima Formation throughout the year, centered approximately in the middle of the SqCWD service area (SqCWD and CWD, 2007).

Groundwater levels consistently below sea level in SqCWD wells (particularly in Unit B/C but also in Unit A) suggest that production may be "mining" freshwater in the deeper Purisima units offshore and exceeding the sustainable yield of the aquifer (SqCWD and CWD, 2007). Johnson et. al. (2004) estimates that total pumping from the Purisima Formation likely exceeds the sustainable yield of the aquifer. Although the positions of the freshwater-saltwater interfaces for the individual Purisima aquifers are largely unknown, Johnson et. al. (2004) concludes that these interfaces have probably moved inward in response to historical pumping.