

ADDENDUM – Assessment of Health Risks for Housing Sites Located Near High Traffic Freeways and Roads

Site Evaluation Worksheets

Date: July 18, 2007

For Site Evaluations

E2 – Oakshade Land Dedication / E3 – Lillard Property

F2 – Seiber, Cowell Boulevard

F11 - Willow Creek Neighborhood Commercial Site

F12 - Willow Creek Light Industrial Site

F13 – Oakshade SE Side of Cowell Blvd. / F14 – Oakshade NW Side of Cowell Blvd.

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Recommended Protocol for Evaluating the Location of Sensitive Land Uses Adjacent to Major Roadways, Sacramento Metropolitan Air Quality Management District, January 2007

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Air Quality and Land Use Handbook: A Community Health Perspective, California Environmental Protection Agency and California Air Resources Board, April 2005

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Handbook for Assessing and Mitigating Air Quality Impacts, Yolo – Solano Air Quality Management District, July 2007

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Purpose

The purpose of this addendum is to provide additional information for evaluating the housing potential on sites near Interstate 80. Staff provides a brief summary of the materials contained in the packet.

Summary of Materials

Staff provided excerpts of the report prepared by the Sacramento Metropolitan Air Quality Management District (SMAQMD). Based upon comments from the Committee, we are providing copies of the full report with areas of key information noted within the report for the Committee's convenience. In addition, the California Air Resources Board (CARB) prepared a handbook in 2005, which provides the basis for the protocol developed by the SMAQMD in their report. The CARB report is referenced by SMAQMD in their protocol report. It should be noted that Davis is not located within the SMAQMD boundaries. The city is located within the boundaries of the Yolo – Solano Air Quality Management District (YSAQMD). Therefore, we have provided the YSAQMD's recently adopted handbook for assessing and mitigating air quality impacts.

CARB Handbook

The handbook was prepared to provide an advisory document for local governments to utilize in making land use decisions. In specific, the handbook provides guidance in siting sensitive land uses in proximity to sources of air toxics. One of the primary sources of air toxics in accordance with the CARB definitions within the Davis area is Interstate 80. Interstate 80 falls in this category because it has daily volumes greater than 100,000 vehicles per day.

Key findings from the handbook are the following:

- The handbook cites information that toxic air contaminants (TAC's) begin to elevate within 500 feet of a typical urban freeway (100,000 vehicle trips per day or more). Cancer and other related risks are elevated within this area.
- Cancer risk ranges from 300-1,700 : 1,000,000 within 500 feet of the urban freeway. Assumptions include constant exposure during a 70-year lifetime.
- Non-cancer related health risks such as asthma are elevated within 1,000 feet from an urban freeway.
- Health risks distances from the urban freeway can vary dependent upon prevailing direction of air flow.
- Health risks due to TAC's can vary from region to region. For example, Los Angeles has a higher ambient health risk than Davis.

Key recommendations from the handbook are the following:

- Avoid locating sensitive land uses, such as residential development, within 500 feet or closer of the urban freeway.
- Utilize available health risk data for site specific assessment. The handbook provides no recommendations on how health risk assessments (HRA's) should be performed.
- CARB notes that the recommendations within the handbook are advisory.

SMAQMD Recommended Protocol

The general intent of the document is to provide a protocol for agencies located within the District boundaries to make land use decisions for projects located near sources of TAC's. In addition, the document was created in response to the CARB Handbook which referred to the need for performing HRA's on sites within 500 feet to a source of

TAC's, but did not provide guidance on how the HRA's should be performed. The document, provides the specific protocol for how to perform health risk assessments.

SMAQMD notes that the document does not provide thresholds of significance for health risks for projects. However, specific tables are provided which take into account the prevailing air flow directions and peak hour traffic volume within the Districts boundaries and provide specific levels of particulate matter (PM) at specific distances from the roadways. At a level of 446 parts per million of PM, SMAQMD recommends a health risk assessment (HRA) be performed for sites that have portions which fall within this number. This protocol for performing HRA's methodology is outlined on pages 14 to 16 of the report. Page 14 indicates that many worst case assumptions were used, including constant 24-hour per day exposure and a 70-year life span.

Staff in part, utilized the distances from the PM numbers shaded in gray from Table 1 of this report as a guideline for the properties located south of I-80 to establish a level which would not require an HRA in accordance with the recommendations of SMAQMD. Staff provided a map which showed a distance of approximately 240 feet from the nearest lane of travel. This distance is based upon a noise threshold of significance and the established built envelope of the Willow Creek #3 subdivision built in the late 1990's. I-80 through Davis has a peak hour traffic volume measured at 11,600 vehicles per hour (Cal Trans, 2006). Table 1 in the SMAQMD report does not recommend that an HRA be conducted at a distance of 245 feet.

YSAQMD Handbook

The YSAQMD handbook was adopted in July, 2007 by the YSAQMD Board of Directors. The handbook adopted the recommendations of the CARB handbook for locating sensitive land uses in proximity to sources of air toxics. As such, YSAQMD would recommend avoiding locating residential uses within 500 from Interstate 80. They recommend further that any residential uses located within this area should perform an HRA. YSAQMD does indicate that their recommendation is advisory only and does not establish a protocol for performing an HRA.

Conclusions

Staff finds that the CARB and YSAQMD handbooks do not provide conclusive "answers" to land use decisions and health risk factors along freeways. The handbooks however, do provide information relative to elevated health risks for any project located within a specific distance. The additional health risk information provided by SMAQMD may be considered appropriate for additional health risk assessment recommended by both CARB and YSAQMD for the properties located within Davis south of I-80. Staff believes the SMAQMD protocol provides the necessary information to assess whether an additional HRA is necessary.

Staff finds that the Steering Committee should consider the materials in this addendum, along with General Plan land use location and noise policies, in determining the housing potential of sites near the freeway.