Mancini, Welch & Geiger LLP

Paul R. Mancini 1198-0
James W. Geiger 4684-0
305 East Wakea Avenue, Suite 200
Kahului, Hawaii 96732
Telephone: (808) 871-8351
Facsimile: (808) 871-0732

Attorneys for Petitioners

Before the Land Use Commission

of the State of Hawai‘i

In the Matter of the Petition of:

Waikapu Properties, LLC; MTP Land Partners, LLC; William S. Filios, Trustee of the William S. Filios Separate Property Trust dated April 3, 2000; and Waiale 905 Partners, LLC,

To Amend the Agricultural Land Use District Boundaries into the Rural Land Use District for certain lands situate at Waikapu, District of Wailuku, Island and County of Maui, State of Hawaii, consisting of 92.394 acres and 57.454 acres, bearing Tax Map Key No. 2-6-004:003 (por) and to Amend the Agricultural Land Use District Boundaries into the Urban Land Use District for certain lands situate at Waikapu, District of Wailuku, Island and County of Maui, State of Hawaii, consisting of 236.326 acres, 53.775 acres, and 45.054 acres, bearing Tax Map Key No. 2-6-002:003 (por), 2-6-004:006 and 2-6-005:007 (por).

Docket No. A15-798

Direct Testimony of Barry D. Neal
DIRECT TESTIMONY OF BARRY D. NEAL

1 My name is Barry D. Neal.

2 I am a certified consulting meteorologist.

3 I am the owner of B.D. Neal & Associates, a
meteorological consulting firm. My company provides consulting
services in the fields of air quality and applied meteorology to
governmental agencies, engineering firms, and persons or
companies that are seeking to develop property. Applied
meteorology uses weather and climate information to find
solutions to problems facing businesses, cities, and
agricultural operations. Air quality measures the degree to
which air is free from pollution.

4 I received my Bachelor of Science degree from San Jose
State University in 1976.

5 After college and until 1983, I worked as a
meteorologist for Bechtel Group, Inc. in San Francisco, focusing
on air quality. From 1983 to 1987 I worked for Amartech, Ltd,
again focusing on air quality.

6 In 1988, I formed B.D. Neal & Associates. For the
past almost 30 years I have focused on air quality studies in
Hawaii. My studies have involved monitoring, modeling and
assessing impacts on air quality. I have conducted over 200 air
quality studies during my professional career and provided
testimony as an expert witness on several occasions.
I am a member of the American Meteorological Society (AMS) and a member of the Air & Waste Management Association, and I hold the designation of Certified Consulting Meteorologist from the AMS.

A copy of my resume is attached as Exhibit “35.”

In December, 2015, I was contacted by Michael Summers on behalf of Waikapu Properties to conduct an air quality study for a proposed development on Maui in the Waikapu area. The purpose of the study was to describe existing air quality in the project area and to assess the potential short- and long-term direct and indirect air quality impacts that could result from construction and use of the proposed facilities as planned.

In performing the study, I was provided the general project description along with the project traffic study and the wastewater treatment report.

An important part of an air quality study is the effect of traffic on the area being studied. For the Waikapu Country Town study, I used traffic forecasts for 2026 that I obtained from the project traffic study (“Waikapu Country Town Transportation Impact Analysis Report”, December 2014). I used those forecasts because that is when the project is expected to be completed and fully occupied.
To assess the potential long-term impact of emissions from project-related motor vehicle traffic operating on roadways in the project area after construction is completed, a computerized air quality modeling study was undertaken. The air quality modeling study estimated current worst-case concentrations of carbon monoxide at intersections in the project vicinity and predicted future levels both with and without the proposed project.

After I completed my work, I prepared the Air Quality Study for the Proposed Waikapu Country Town Project (December 2016). A copy of my study, which is Appendix C to the Final Environmental Impact Study for the Waikapu Country Town, is attached as a part of Exhibit “25.”

Measures to mitigate potential project impacts were suggested where possible and appropriate. I will briefly summarize the findings of my air quality study.

**Affected Environment**

Regional and local climate together with the amount and type of human activity generally dictate the air quality of a given location. The climate of the Project area is very much affected by its elevation near sea level and by nearby mountains. The predominant trade winds tend to be channeled through the area by the mountains to the east and west.
Temperatures in the Project area are generally very consistent and warm with average daily temperatures ranging from about 68°F to 81°F.

Rainfall in the project area is only moderate with an average of about 26 inches per year. Except for periodic impacts from volcanic emissions (vog) and possibly occasional localized impacts from traffic congestion and local agricultural sources, the present air quality of the Project area is believed to be relatively good.

There is very little air quality monitoring data from the State of Hawaii Department of Health for the Project area, but the limited data that is available suggests that concentrations of particulate matter are generally well within state and national air quality standards.

**Probable Impacts and Mitigation**

Short- and/or long-term impacts on air quality will occur either directly or indirectly because of Project construction and use. Short-term impacts from fugitive dust could occur during the Project construction phases. To a lesser extent, exhaust emissions from stationary and mobile construction equipment, from the minor disruption of traffic, and from workers' vehicles may also affect air quality during the period of construction.
State air pollution control regulations require that there be no visible fugitive dust emissions at the property line. Hence, an effective dust control plan must be implemented to ensure compliance with state regulations.

Fugitive dust emissions can be controlled to a large extent by watering of active work areas, using wind screens, keeping adjacent paved roads clean, and by covering of open-bodied trucks. Other dust control measures to consider include limiting the area that is disturbed at any given time and/or mulching or chemically stabilizing inactive areas that have been worked. Paving and landscaping of project areas early in the construction schedule will also reduce dust emissions. Exhaust emissions can be mitigated by moving construction equipment and workers to and from the project site during off-peak traffic hours.

After construction, motor vehicles coming to and from the proposed development will result in a long-term increase in air pollution emissions in the Project area. To assess the impact of emissions from these vehicles, a computer modeling study was undertaken to estimate current ambient concentrations of carbon monoxide at intersections in the Project vicinity and to predict future levels both with and without the proposed Project. During worst-case conditions, model results indicated that present 1-hour and 8-hour carbon monoxide concentrations
are well within both the state and the national ambient air quality standards.

In the year 2026 without the Project, worst-case carbon monoxide concentrations were predicted to decrease (improve) despite an increase in traffic, and concentrations would remain well within standards. This is because emissions from the increase in traffic will be more than offset by the retirement of older, more-polluting vehicles over time.

With the Project in the year 2026 and with proposed roadway improvements, estimated worst-case carbon monoxide concentrations indicated only minimal or no impact compared to the without the Project case. Concentrations would remain well within standards.

Due to the negligible impact that the Project is expected to have on air quality, implementing mitigation measures for long-term traffic-related air quality impacts is unnecessary and unwarranted.

The Project water reclamation facility will be designed and operated to keep emissions of odorous gases at the facility boundary below the odor threshold. Thus, offsite odor nuisance is not expected to be an issue.

In sum, based on my experience, the Project will have some short-term impacts from fugitive dust during the
1 construction of the Project which can be mitigated and is
2 expected to have negligible long-term impacts on the air quality
3 of the Project area.
4
5 Thank you for the opportunity to speak to you.
6
8
9 Barry D. Neal
10 BARRY D. NEAL