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Attorneys for Petitioners

BEFORE THE LAND USE COMMISSION

OF THE STATE OF HAWAI'I

In the Matter of the Petition ) DOCKET NO. A15-798  
of: )  
) DIRECT TESTIMONY OF BARRY D.  
WAIKAPU PROPERTIES, LLC; MTP ) NEAL  
LAND PARTNERS, LLC; WILLIAM S. )  
FILIOS, Trustee of the William )  
S. Filios Separate Property )  
Trust dated APRIL 3, 2000; and )  
WAIKALE 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) 3- )  
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) 3-6-002:003 )  
(por), (2) 3-6-004:006 and (2) )  
3-6-005:007 (por). )

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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  
4 meteorological consulting firm. My company provides consulting  
5 services in the fields of air quality and applied meteorology to  
6 governmental agencies, engineering firms, and persons or  
7 companies that are seeking to develop property. Applied  
8 meteorology uses weather and climate information to find  
9 solutions to problems facing businesses, cities, and  
10 agricultural operations. Air quality measures the degree to  
11 which air is free from pollution.

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

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

18 In 1988, I formed B.D. Neal & Associates. For the  
19 past almost 30 years I have focused on air quality studies in  
20 Hawaii. My studies have involved monitoring, modeling and  
21 assessing impacts on air quality. I have conducted over 200 air  
22 quality studies during my professional career and provided  
23 testimony as an expert witness on several occasions.

1 I am a member of the American Meteorological Society  
2 (AMS) and a member of the Air & Waste Management Association,  
3 and I hold the designation of Certified Consulting Meteorologist  
4 from the AMS.

5 A copy of my resume is attached as Exhibit "35."

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

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

16 An important part of an air quality study is the  
17 effect of traffic on the area being studied. For the Waikapu  
18 Country Town study, I used traffic forecasts for 2026 that I  
19 obtained from the project traffic study ("Waikapu Country Town  
20 Transportation Impact Analysis Report", December 2014). I used  
21 those forecasts because that is when the project is expected to  
22 be completed and fully occupied.

23

1           To assess the potential long-term impact of emissions  
2 from project-related motor vehicle traffic operating on roadways  
3 in the project area after construction is completed, a  
4 computerized air quality modeling study was undertaken. The air  
5 quality modeling study estimated current worst-case concen-  
6 trations of carbon monoxide at intersections in the project  
7 vicinity and predicted future levels both with and without the  
8 proposed project.

9           After I completed my work, I prepared the *Air Quality*  
10 *Study for the Proposed Waikapu Country Town Project* (December  
11 2016). A copy of my study, which is Appendix C to the Final  
12 Environmental Impact Study for the Waikapu Country Town, is  
13 attached as a part of Exhibit "25."

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

17 **Affected Environment**

18           Regional and local climate together with the amount and  
19 type of human activity generally dictate the air quality of a  
20 given location. The climate of the Project area is very much  
21 affected by its elevation near sea level and by nearby mountains.  
22 The predominant trade winds tend to be channeled through the area  
23 by the mountains to the east and west.

1           Temperatures in the Project area are generally very  
2 consistent and warm with average daily temperatures ranging from  
3 about 68°F to 81°F.

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

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

15 **Probable Impacts and Mitigation**

16           Short- and/or long-term impacts on air quality will  
17 occur either directly or indirectly because of Project  
18 construction and use. Short-term impacts from fugitive dust  
19 could occur during the Project construction phases. To a lesser  
20 extent, exhaust emissions from stationary and mobile construction  
21 equipment, from the minor disruption of traffic, and from workers'  
22 vehicles may also affect air quality during the period of  
23 construction.

1 State air pollution control regulations require that  
2 there be no visible fugitive dust emissions at the property line.  
3 Hence, an effective dust control plan must be implemented to  
4 ensure compliance with state regulations.

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

15 After construction, motor vehicles coming to and from  
16 the proposed development will result in a long-term increase in  
17 air pollution emissions in the Project area. To assess the  
18 impact of emissions from these vehicles, a computer modeling  
19 study was undertaken to estimate current ambient concentrations  
20 of carbon monoxide at intersections in the Project vicinity and  
21 to predict future levels both with and without the proposed  
22 Project. During worst-case conditions, model results indicated  
23 that present 1-hour and 8-hour carbon monoxide concentrations

1 are well within both the state and the national ambient air  
2 quality standards.

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

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

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

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

22 In sum, based on my experience, the Project will have  
23 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.

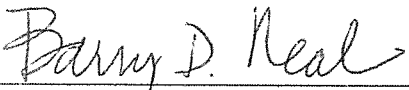
4 Thank you for the opportunity to speak to you.

5 DATED: Kailua-Kona, Hawaii, October 31, 2017.

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BARRY D. NEAL