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March 15, 1995
RP:0168

Ms. Rae M. Loui
Commission on Water Resource Management
Department of Land and Natural Resources
P.O. Box 621
Honolulu, Hawaii 96809

Dear Ms. Loui:

Stream Channel Alteration Permit
Kawa Ditch Improvements
Koolaupoko, Kaneohe, Oahu

The proposed project consists of improvements to Kawa Ditch, a tributary to Kawa Stream. The Department of Public Works for the City and County of Honolulu intends to replace the existing ditch with a rectangular-shaped reinforced concrete channel capable of accommodating the 100-year peak flow.

We reviewed the Stream Channel Alteration Permit (SCAP) with the assistance of Paul Ekern, Emeritus, Agronomy and Soil Science; and Paul Berkowitz of the Environmental Center.

Soils

Within the project description portion of the document, the section on geology pertains more to soils than to geology. Later in Appendix 2, the Draft Environmental Assessment (EA) section, the soils are described in greater detail. The way in which these two closely related sections are divided makes the document somewhat difficult to follow.

In the Soils section (page 4, Appendix 2), the document erroneously refers to the Hanalei silty clay as a "Hanalei silty clay loam." Furthermore the Soil Survey, which is referenced in the document, ought to be examined more closely. In particular, we believe the EA ought to consider the low compactness of the soil, its tendency to shrink and swell, and the effect of these properties on the cohesivity and inflexibility of concrete.

Order of Events

The document does not discuss the rationale behind lining the channel before expanding the box culvert at Mokulele Drive. According to the proposed scenario, the 900-foot concrete-lined channel above the box culvert will be able to handle the 100-year flood, while the box culvert will not. In other words, until the box culvert is widened, the 100-year flood is likely to produce damage at Mokulele Drive rather than further upstream. Is this the most desirable way to approach the project, or would it make more sense to widen the box culvert first?

Presently the Department of Public Works does not have sufficient funding to widen the culvert box. When is this phase of the project likely to occur?

Unresolved or Unclear Issues

We have a few questions related to items which were discussed only briefly in the document. First, where will the excavated soil be placed? Second, the document mentions that prior erosion has exposed a sewage line on the project site. Will this sewage line be affected by the project? Third, what types of materials will be employed in emplacing the "silt curtain", and how effective is it likely to be in the event of a major rainfall during project construction?

Conclusion

Given the degraded nature of the aquatic resources in Kava Stream and Kava Ditch, we do not have many concerns pertaining to the natural environment. Our main concerns focus on how the project will be carried out. Has adequate attention been given to the area's soil characteristics? Should the project progress in the proposed order? We also believe the unresolved issues should be addressed before proceeding further.

Thank you for the opportunity to review this Stream Channel Alteration Permit and EA.

Sincerely

John T. Harrison
Environmental Coordinator

cc: OEQC
Roger Fujioka
Paul Ekern
Paul Berkowitz