

## TESTIMONY IN SUPPORT OF BILL 1898

Hugo de Vries  
Manager, Kaelepulu Wetland Bird Preserve  
Kailua, Hawaii 96734  
Phone: 226-0746

**LATE TESTIMONY**

### **Flood Control**

Before the Army Corps diverted water flow from Kawai Nui, there was a continual flow of fresh water into the bay at Kailua Beach Park. This natural muliwai provided flood control for the entire Kailua waterway system. When heavy rains came, this trickle would turn into a wider stream moving more water into the bay thus preventing flooding.

Because there is no longer a natural flow a large sand dune now builds up and blocks the ocean end of Kawai Nui stream. Last year the Fire Department and Red Cross had to respond to several floods in the area across from Kailua Beach Park as a result.

The City and County excavate the sand dune once a month, but often it closes up again in a few days or even a few hours. A restored natural muliwai, with a natural water flow, will prevent the need for many of these expensive interventions.

### **Habitat Protection**

Along with flood control to protect residents, we must consider the effects of flooding on endangered water birds. At Kaelepulu Wetland, we have three species of ground-nesting endangered water birds. Two years ago a flood destroyed countless nests, and our 'Alae Ke'oke'o (coot) population was almost cut in half. There were few surviving chicks that year.

The 'Alae 'Ula (gallinule) is the most endangered of Hawaii's water birds, and we have one of the highest concentration of breeding birds on Oahu. Many of their nests were destroyed by this same flood.

### **Pollution Control**

Every time the C&C bulldozer opens the sand berm after a heavy rain, the Beach Park is closed to local residents and visitors alike, due to concentrated outflow of accumulated pollutants. These are primarily non-point-source pollutants such as road run-off, lawn fertilizer run-off etc.

A constant stream flowing into the ocean would not allow these pollutants to accumulate to the concentrations that require beach closings. Remember, these pollutants go to the ocean regardless. It is much better when they can disperse slowly and not in concentrations that could create hazardous health conditions at the beach.

### **Ecosystem Restoration**

The Kailua Waterways form part of a complex ecosystem that has been seriously degraded by the diversion of water from Kawai Nui Marsh. There are many species of fish and other organisms that have a life cycle requiring a stay in brackish or fresh water. Let's take the mullet for example, the stream used to be alive with mullet. This important food fish needs the brackish and fresh water upstream before it returns to the sea.

Although the monthly berm openings allow some salt water and fish to flow into the waterways, wave action sometimes closes the opening in a matter of days. A natural stream that is open most of the year is much more effective.

### **Invasive Species Control**

When *Selvenia molesta* was discovered in Kailua's waterways several years ago, it took a huge effort of volunteers to eradicate it. According to biologists in Florida, this was the only successful eradication they had heard of. The prevailing thought is that the influx of salt water was key. *Selvenia* could not tolerate the salinity.

This is not the only invasive plant that is kept at bay. As manager of the Kaelepulu Wetland Bird Preserve, we protect three species of endangered Hawaiian water birds. We must constantly clear invasive plants from the habitat, and the salinity is a natural ally.

This affects not only Kaelepulu wetland, but also Hamakua Wetland, another very important endangered bird habitat located in Kailua.

### **Predator Control**

The imported American Bullfrog is a major predator of the endangered Hawaii Stilt chicks, sometimes swallowing two at a time. At Campbell National Wildlife Refuge they have started a massive trapping program, with huge success. At Kaelepulu Wetland we also trap, but we noticed that as salinity increases, the bullfrogs disappear. A more constant brackish water quality may have positive effect on endangered bird populations by eliminated these predators.

This could be achieved by re-directing water flow from Kawai Nui back to the Kailua waterways, and keeping the muliwai open. High tides could then once again bring salt water to the wetland.

## **Conclusion**

While the flood control issues of the original water diversion have certainly been achieved, we're now seeing some un-intended consequences, primarily increased flooding at the bird preserve and down stream at Kailua Beach Park..

I believe that this bill will have a very positive impact on the environmental issues, while still maintaining the flood protection of the Coconut Grove area. In fact it may even greatly reduce the flood danger suffered by residents across from Kailua Beach Park in this past year.