SIERRA CLUB OF HAWAIʻI
MĀLAMA I KA HONUA. *Cherish the Earth.*

HOUSE COMMITTEE ON WATER, LAND, AND HAWAIIAN AFFAIRS

April 12, 2019 10:30 a.m. Room 325

In SUPPORT of SCR 184 SD1:

REQUESTING THE UNITED STATES ARMY CORPS OF ENGINEERS, STATE OF HAWAII, AND CITY AND COUNTY OF HONOLULU TO ESTABLISH A WORKING GROUP TO EXPLORE MATTERS RELATED TO THE ALA WAI WATERSHED.

Chair Yamane, Vice-Chair Todd and committee members,

On behalf of our 20,000 members and supporters, the Sierra Club of Hawaiʻi strongly supports passage of SCR 184 SD1.

SCR 184 SD1 responds to legitimate concerns by communities, individuals, and others who may be affected directly or indirectly by the Ala Wai Canal Flood Risk Management Project proposed by the U.S. Army Corps of Engineers. The Working Group established by this resolution would provide a neutral forum in which those concerns, and suggestions for design alternatives may be heard.

We recognize the need for proactive actions to prepare for, and mitigate, risks posed by climate change. In the case of Waikiki these risks include not only those posed by sea level rise, but also potential flooding caused by runoff from mauka areas. It is crucial, however, that such actions are environmentally and culturally appropriate, and provide for informed engagement by affected communities and individuals. An ahupua'a approach should be taken in the context of the entire Ala Wai watershed. The Working Group established by this resolution would support this approach.

In conclusion, **we strongly support SCR 184 SD1, and urge its passage.**

Mahalo,

Dave Raney
Sierra Club Marine Action Team

SCR-184-SD-1
Submitted on: 4/10/2019 8:56:55 AM
Testimony for WLH on 4/12/2019 10:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Michelle Matson	Individual	Support	No

Comments:

SCR-184-SD-1
Submitted on: 4/10/2019 11:51:44 PM
Testimony for WLH on 4/12/2019 10:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Kimberly	Individual	Support	No

Comments:

My name is Kimberly De Souza and I am a sustainability specialist who lives by Waiamao stream which will be affected by the detention basins (if they are built).

I am in SUPPORT of SCR184 and also want to request to see the following amendments or additions to the Resolution SCR184:
1. Addition of Neighborhood Boards (all 8 within the Ala Wai Watershed), Schools (Halau Ku Mana, Hokulani, Iolani, Ala Wai, and Anuenue) and affected stakeholders (landowners, adjacent and downstream property owners) be added to the Working Group otherwise it is almost the same groups as before, with little change;
2. Addition of a representative from the University of Hawaii - Civil Engineering Department (eco-restoration must include Civil Engineering and Architectural Planning);
3. A call for the Army Corp to put a hold on any further advancement of the Project until the very people who are suppose to benefit from the Project have had an adequate opportunity to consider and weigh in on the Project and alternatives to it (as stated in 6 NB Resolutions);
4. A call for DLNR to cancel the Right of Entry to State Lands for exploratory work and engineering (Halau Ku Mana has stated that the Army Corp sent 10 inspectors to survey the location of the Makiki Detention Basin);
5. We should recognize and call out the Army Corp be open to significant changes or a complete overhaul or re-scoping of the Project if necessary;
6. We should state as a recourse that if the Army Corp rejects the findings and the community developed alternatives established by the working group that the State of Hawaii will not fund or partner with the Project (in other words walk away from the Federal Funds);
7. If the Working Group is going be performed as a measure to meet the NEPA and HEPA then the Army Corp's Public Involvement Plan v.04 dated June 2013 should be utilized as a template with the inclusion of all affected stakeholders.
8. The State of Hawaii should not sign off or finalize the EIS under the Hawaii Environmental Policy Act (HEPA) unless the Army Corp’s Public Involvement Plan is followed as a means to protect the people of Hawaii.

Many people in our community have issues with the current food mitigation plan. Not only does it not protect the people it affects the most from flooding, it will tear up our

forests and destroy the natural streams..

We believe this Project violates the people of Hawaii's rights to due process, ignores the importance of engaging the community and believe there are many better alternatives with far less impact such as incorporating a flood gate and flood pump and other eco-friendly measure and alternatives.

Mahalo

SCR-184-SD-1
Submitted on: 4/10/2019 10:42:42 PM
Testimony for WLH on 4/12/2019 10:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Tyler Shiroma	Individual	Support	No

Comments:

Aloha,

My name is Tyler Shiroma. I live in Kapahulu near the Ala Wai Canal. I support this resolution. However, I believe it is extremely important include the amendments the Stop Ala Wai Project organization has proposed. We need to include more people from the public. Please consider making these amendments.

Thank you for your time,

Tyler Shiroma

SCR-184-SD-1
Submitted on: 4/10/2019 6:32:05 PM
Testimony for WLH on 4/12/2019 10:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Sidney Lynch	Individual	Support	No

Comments:

I strongly support adding Dave Watse's amendments to SCR184 to give it some teeth and not just make it a rubber stamp for the USACE project.

The working group is admirable but as the resolution is now the working group can come up with alternatives but the USACE can say 'sorry, our funding is to build the project per our EIS. We cannot accommodate changes unless there is other funding or a new project' Mr. Wyatt of USACE has already stated that only changes will be becuase of site unsuitablity or cosmetic.

Need the ability to cancel the project entirely if better alternatives exist and USACE will not accept. Suggest an independent peer review as hard for "Hawaii' voices to be heard. Too much old boy network.

SCR-184-SD-1
Submitted on: 4/11/2019 9:35:21 AM
Testimony for WLH on 4/12/2019 10:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Khloe Nakasone	Individual	Support	No

Comments:

Honorable Senators and Representatives

415 S. Beretania St.

Honolulu, HI 96816

April 11, 2019

Dear Honorable Senators and Representatives,

Hi, my name is Khloe Nakasone and I'm a fifth grader at Hokulani Elementary School. I am writing to you today to inform you on how your decision on SCR184 will affect stakeholders. I support Senate Concurrent Resolution 184. As you already know, Congress recently approved 345 million dollars to fund the Ala Wai Canal Project, and the state needed to fund their share of the project. Now they need a resolution for the flawed design for the 100 year flood.

Lots of stakeholders' homes will be destroyed and lots of schools will be affected. We have heard that there is only a one percent chance the 100 year storm will happen, if it doesn't happen, all that money will go to waste. Even if it does happen, there are other options that will benefit the community much more.

The group with representatives will ensure everyone has a say and no ideas will be ignored. Since they need to think of a better design for the project, all the representatives will state ideas and we will come up with a much better solution to this project. Thank you for taking time to read this.

Sincerely, Khloe Nakasone

SCR-184-SD-1
Submitted on: 4/11/2019 9:26:06 AM
Testimony for WLH on 4/12/2019 10:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Andy Lu	Hokulani Elementary	Support	No

Comments:

April 11, 2019

To the honorable Senators and Representatives,

My name is Yinze (Andy) and I am a 5th grader at Hokulani Elementary School. I am writing to you because I am submitting a testimony. I am for SCR184. Thank you for not funding the Ala Wai Canal project. I agree that we should form a group and talk this out, for there is a wide variety of alternatives. Once again, I am for SCR184 and thank you for not funding the watershed project.

Sincerely,

Andy Lu

SCR-184-SD-1
Submitted on: 4/11/2019 9:39:56 AM
Testimony for WLH on 4/12/2019 10:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Brennan Fong	Individual	Support	No

Comments:

Honorable Senators and Representatives

415 South Beretania St

Honolulu, Hi 96813

March 28, 2019

Dear Honorable Senators and Representatives,

Hello. I am Brennan Fong. I am in the 5th grade at Hokulani Elementary School. I like this plan to make a committee for this project and support your decision. I live on Koali Road and I will be affected.

It has a few major benefits I would like you to please consider. For example, I believe the Army Corps of Engineers wall plan is flawed and will allow Waikiki to be flooded anyway if the flood comes, but if there were people to double check them, then it would be much better. There are also many generations of people that could use their homes for their kids and now the Ala Wai Canal Project doesn't have to destroy, condemn, or put those homesat risk. People whose homes that aren't located that are near the project and won't have their homes taken away would've still be affected as a few schools are affected but if the comittee can work around it then it won't be sacrificing as many things. At Hokulani, some of the areas for recess or fire drill would've got shut down and replaced which could've also been a health hazard since there's mosquitoes. The Kanewai park just got a renovation and now it might be destroyed so all that money would've been wasted and the use of the park would just be destroyed entirely.

Hokulani Elementary School is one of the many schools that is involved in a stream cleaning, and now it can go on.

Finally, just as something to make sure not to doif this committee does happen, if you want to see make anything like a detention basin I have just one question, how will the tourists react when they see all these giant walls and pools of murky water? All of this in a nutshell is that the detention basins have the possibility it will destroy homes, jobs, native animals, and educations without a 100% assurance that it will work or if the storm will even happen since there is only a 1% chance that it will happen, but will have a group of people double checking it.

Just as an idea there should be a study on alternative solutions. There are people that came up with a few solutions that may be a better than the current solution. Please consider them. There is an idea that we can just build a floodgate with flood pumps to push water out faster. Another is that the government can just send stream workers to clean and collect trash to lower the chance of flooding. Finally if you are still going to make these detention basins then maybe you can like dig the stream deeper or (the harder and worse for the environment solution) just build walls around the stream. Please support our request to not take action without proper consideration and public debate on this issue.

Thank you for your time.

Sincerely,

Brennan Fong

SCR-184-SD-1
Submitted on: 4/11/2019 9:49:25 AM
Testimony for WLH on 4/12/2019 10:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
james	Individual	Oppose	No

Comments:

Dear Honorable Senaters and Representitives,

My name is James Iannucci and i am a 5th grader at Hokulani Elementary School.do you support or oppose senate concurrent resolution number 184? because i support it. i think this group is a good idea because they wiil take care of everyone's needs for the flood if it ever happens wich i don't it will. Thank you for your time, james.

ReplyForward

SCR-184-SD-1
Submitted on: 4/11/2019 9:56:24 AM
Testimony for WLH on 4/12/2019 10:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Brynn Watanabe	Individual	Support	No

Comments:

Dear Honorable Senators and Representative,

Hi my name is Brynn Watanabe and I am 11 years old. I attend at Hokulani Elementary School and I'm in 5th grade. I agree on the SCR184 because I like how your trying to form an advisory group to solve the Ala Wai Canal Project. The idea of the detention basin was a not so graet idea because homes and some schools were affected in it. If you try to form an advisory group and think of an idea that will protect Waikiki and not affect homes and schools then that will probaby be a good idea. So I think that forming an advisory group and to let eachother have his or her say is a great idea!

Sincerely, Brynn Watanabe

SCR-184-SD-1
Submitted on: 4/11/2019 9:56:22 AM
Testimony for WLH on 4/12/2019 10:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Isabella Lee	Individual	Support	No

Comments:

Dear Honerable Senators and Representatives,

Hello I am a 5th grader at Hokulani Elementary School and my name is Isabella Lee. I support SCR184,I think this is a good idea to form a working group to solve the Ala Wai Canal Project. I think putting minds together to solve this would be better than just one mind. Having more minds means having more ideas. Thank you for trying to think of a new way to build this basin and caring for the schools and stakeholders that were going to be affected by the detention basin. I really hope you form a working group to help with the Ala Wai Canal Project.

Sincerely,Isabella Lee

SCR-184-SD-1
Submitted on: 4/11/2019 10:06:02 AM
Testimony for WLH on 4/12/2019 10:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Sofia Sinnett	Individual	Support	No

Comments:

I support SCR184, Hi my name is Sofia Sinnett and I am a fifth grade student from Hokulani Elementary. I support SCR184 because I think that having a group to reperesent us and let us be heard is a great idea. I also support becasue the Ala Wai Canal project did not benefit Oahu and only benefited Waikiki and not other places. Thankyou very much, Sofia

Dave Watase, dwatase@hotmail.com, c. 728-0759, www.stopalawaiproject.com
FOR SCR184
Water, Land and Hawaiian Affairs Committee Hearing
April 12, 2019, Room 325, Time: 10:30 AM

SUBMITTED TESTIMONY: SUPPORT

Dear Chair and Members of the Water, Land and Hawaiian Affairs Committee,

My name is Dave Watase and I am a negatively impacted stakeholder in the Ala Wai Canal Project. I support forming a working group to explore alternatives to the U.S. Army Corps Project.

I believe there are many other methods and alternatives that can be incorporated into the Project to provide safe flood mitigation to both Waikiki and the areas Mauka of the canal.

The current design is pretty much a big and bad idea all around. The residents in the valleys don't want detention basins and the concept of building these huge dam like structures that are up to 40 feet high, hundreds of feet thick and wide, and will destroy up to a thousand feet of pristine natural stream per detention basin is really appalling.

Even the wall and levee system around the Ala Wai Canal has so many hidden issues that one really has to question if it even makes any sense.

Unlike the mainland where watersheds are thousands of miles long, tens of thousands of square miles big, and nowhere for the water to go, they have to build levees and dams. Here in Honolulu, our watersheds are only several miles long and relatively tiny in size to the mainland systems.

The Ala Wai Canal is only a quarter to a half a mile away from the ocean ... the objective is to get the flood water to the ocean as quickly as possible. It makes no sense to to build a wall to hold back the water by treating the canal as a reservoir.

Designed spillways, designed emergency conduits under roadways within a straight shot to the ocean, natural gravity flows where it can be accommodated or by using flood pumps to assist the movement of flood waters to the ocean are alternatives not considered.

Instead of detention basins build within the stream, destroying the streams and creating safety concerns, we can look to creating lateral (off to the side) underground detention storage system that are unseen, won't overtop, and won't be safety risks and only if needed.

Additionally, traditional Hawaiian flood water management systems should seriously be considers as viable and preferred alternatives. Targeted restoration measures to offset the large surge of highrise hotels and condominiums recently being built and with the planned Transit-Oriented Development (TOD) which will only insure that much more highrise structures are in the future, restoration measures are becoming sensible, needed, and viable.

Mahalo, Dave Watase, c. 728-0759, www.stopalawaiproject.com

Aloha State Senators and House Representatives,

My name is Dave Watase, I am a resident of Honolulu, I am a stakeholder in the Ala Wai Canal Project (Project). The Project Finalized by the United States Army Corp of Engineers (Army Corp) and funded by Congress has a direct negative impact to me and in my opinion I was not properly engaged according to National Environmental Policy Act (NEPA) and the Hawaii Environmental Policy Act (HEPA). I have a Bachelor's of Science degree in Civil Engineering from Kansas State University.

I am in SUPPORT of SCR184. I OPPOSE all funding measures by either the State, or City & County of Honolulu, or any combination of both and any such partnership agreements for the Ala Wai Canal Project for the following reasons:

- Last month on March 19, 2019 the Army Corp participated in a Town Hall Meeting at Manoa District Park. There were several hundred in attendance with a very strong showing of interest as well as a strong presence in opposition.

- There were presentations by others invited by the Army Corp that had nothing to do with the Project directly. The Army Corp gave a very short and very uninformative presentation of the Project itself.

- The Army Corp reiterated several times that they wanted to partner with us, they wanted to engage us, and that they wanted to listen to us but wouldn't say a thing about what they would do with the concerns and input of the community.

- The Army Corp emphasized that the Project was approved and vetted by several levels on the mainland before being Finalized and funded by Congress.

- The Army Corp gave no hint or willingness to change the plan or seek alternative measures. To date they have only mentioned aesthetic changes

- As far as we know the Army Corp has not put this project on pause as requested by 6 Neighborhood Boards.

- The Army Corps is in fact moving full steam ahead with furthering their engineering and exploratory work as they have already begun site inspection by sending a crew of 10 engineers and surveyors to Halau Ku Mana's campus. They've meet with Ala Wai Elementary for staging areas for equipment.

- The Project has major issues and community concerns. It is widely and well recognized that the valley residents and residents mauka of the Ala Wai Canal don't want the Detention Basins.

Regarding SCR184, I do have concerns that the actions of the working group will be just for show and only be a display of community engagement, evaluations, and discussions of other alternatives measures. In the mean while the Army Corp is not putting a hold on furthering their engineering. There is no demand in this Resolution to put a pause on any advancement of the Project by the Army Corp.

It is well known that many in our community have significant issues with the current plan and that the current plan will most certainly require major changes in the design or a significant overhaul in alternative measures or a complete re-scoping. This is very obvious!

Just the basic concept of detention basins 30-40 feet high constructed with mounds of dirt and boulders, over a hundred feet wide and up to a thousand feet long destroying the natural streams behind it are very unwelcomed thoughts to the average resident. There are 6 of these massive detention basins in our most precious valleys. Over 4 miles of an average 4-feet high concrete wall and earth levees around the Ala Wai Canal and Golf Course are equally repulsing to residents and visitors alike.

I would like to see the following amendments or additions to the Resolution SCR184:

1. **Addition of Neighborhood Boards (all 8 within the Ala Wai Watershed), Schools (Halau Ku Mana, Hokulani, Iolani, Ala Wai, and Anuenue) and affected stakeholders (landowners, adjacent and downstream property owners) be added to the Working Group otherwise it is almost the same groups as before, with little change;**

2. **Addition of a representative from the University of Hawaii - Civil Engineering Department (eco-restoration must include Civil Engineering and Architectural Planning);**

3. **A call for the Army Corp to put a hold on any further advancement of the Project until the very people who are suppose to benefit from the Project have had an adequate opportunity to consider and weigh in on the Project and alternatives to it (as stated in 6 NB Resolutions);**

4. **A call for DLNR to cancel the Right of Entry to State Lands for exploratory work and engineering (Halau Ku Mana has stated that the Army Corp sent 10 inspectors to survey the location of the Makiki Detention Basin);**

5. **We should recognize and call out the Army Corp be open to significant changes or a complete overhaul or re-scoping of the Project if necessary;**

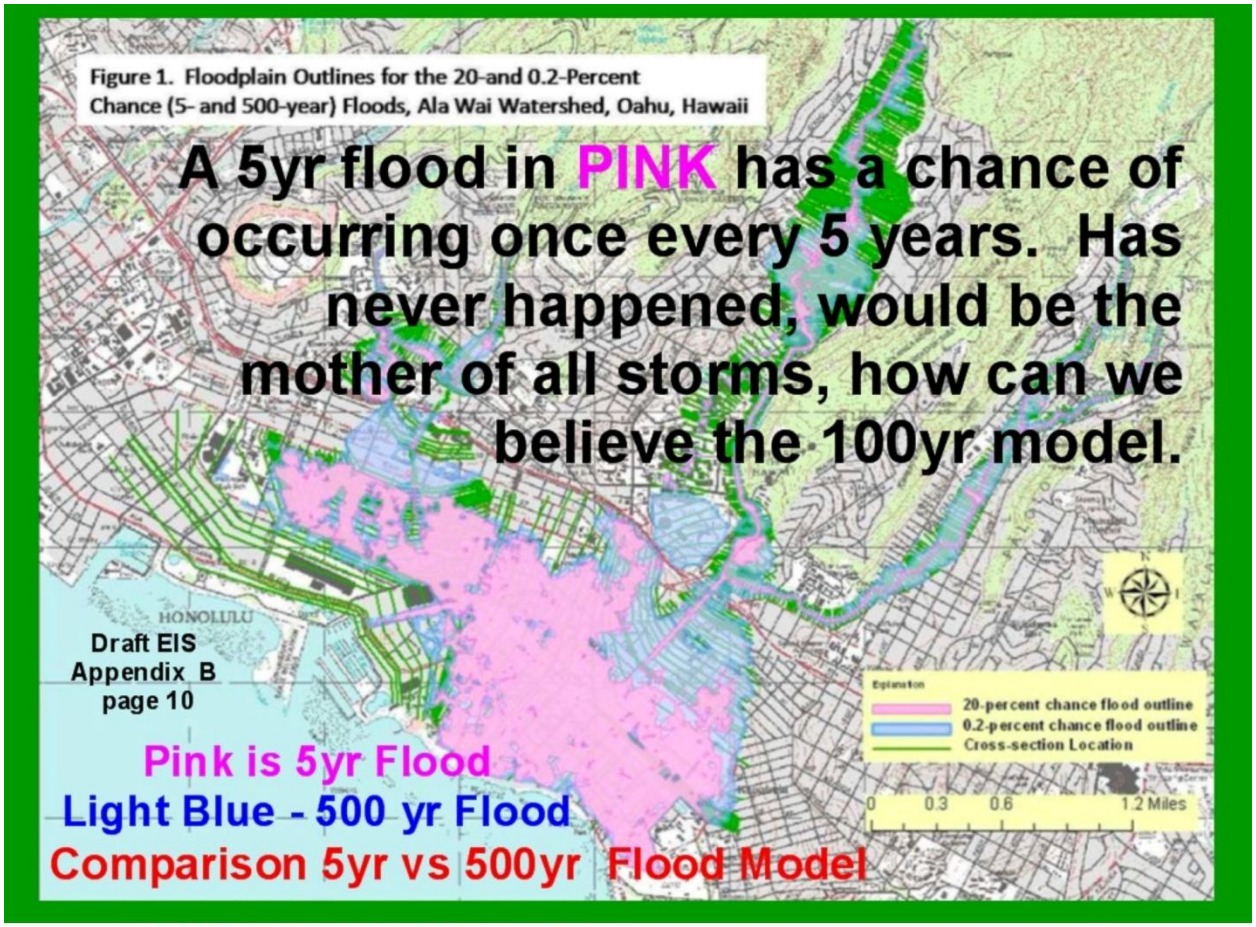
6. **We should state as a recourse that if the Army Corp rejects the findings and the community developed alternatives established by the working group that the State of Hawaii will not fund or partner with the Project (in other words walk away from the Federal Funds);**

7. **If the Working Group is going be performed as a measure to meet the NEPA and HEPA then the Army Corp's Public Involvement Plan v.04 dated June 2013 should be utilized as a template with the inclusion of all affected stakeholders.**

8. **The State of Hawaii should not sign off or finalize the EIS under the Hawaii Environmental Policy Act (HEPA) unless the Army Corp's Public Involvement Plan is followed as a means to protect the people of Hawaii.**

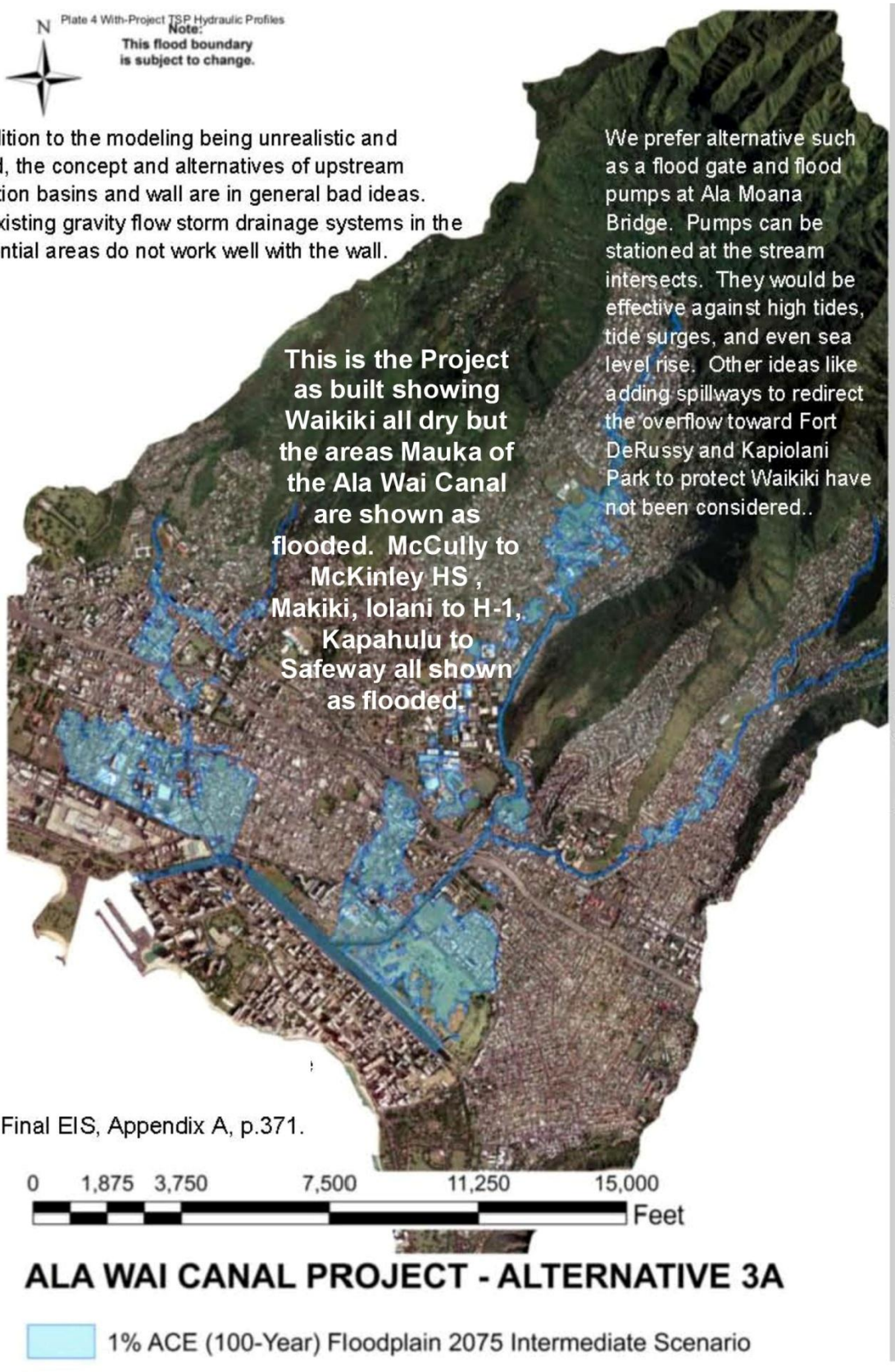
We believe this Project violates the people of Hawaii's rights to due process, ignores the importance of engaging the community and believe there are many better alternatives with far less impact such as incorporating a flood gate and flood pump and other eco-friendly measure and alternatives.
More information can be found at our website **www.stopalawaiproject.com**

Mahalo!
Dave Watase
c. 728-0759
email: dwatase@hotmail.com



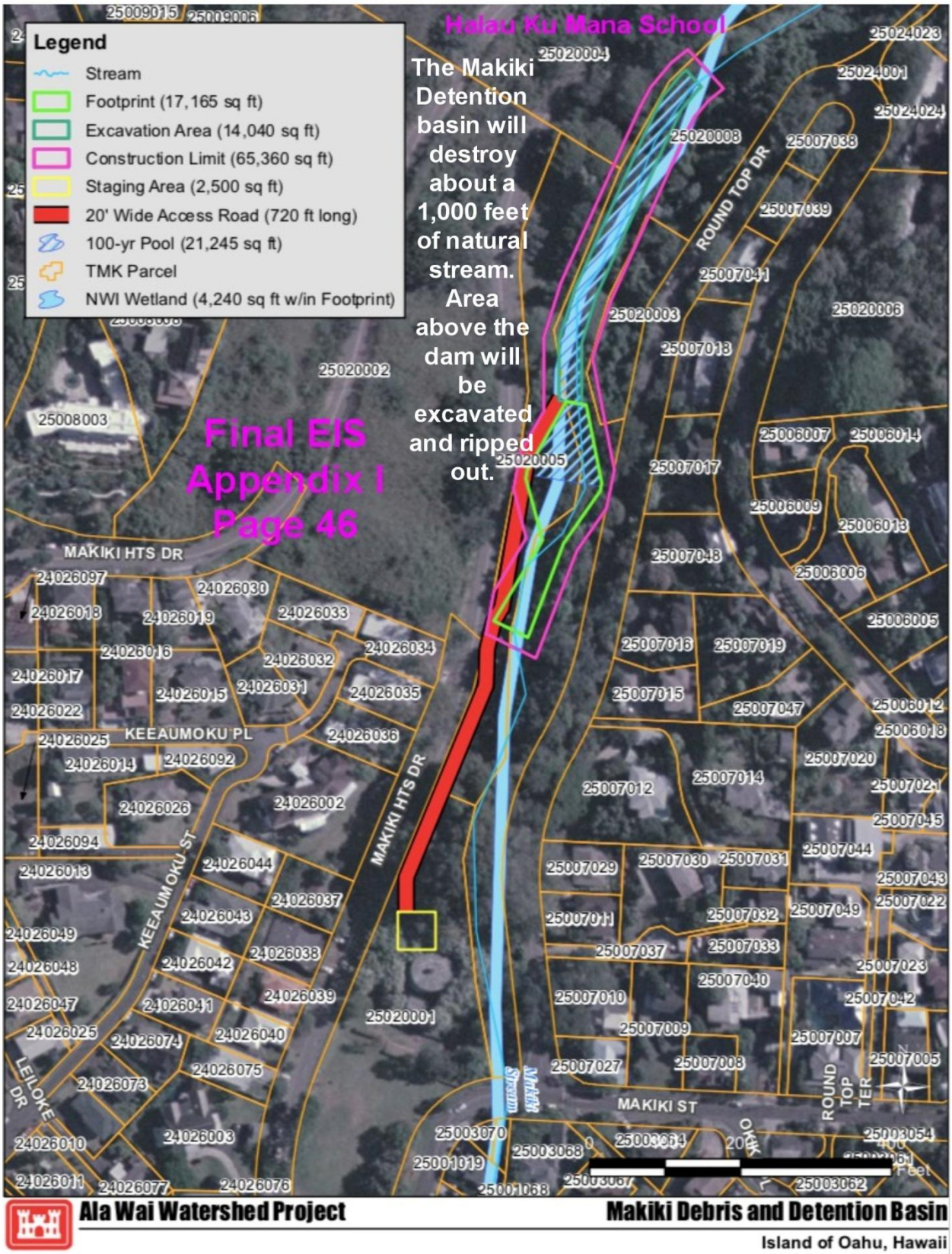
Your SUPPORT THROUGH ACTIONS are needed to make a difference. Please go to our website www.stopalawaiproject.com and sign our petition and it is very important to VOICE YOUR CONCERNS through testimony and emails.

Kanewai Park Detention Basin

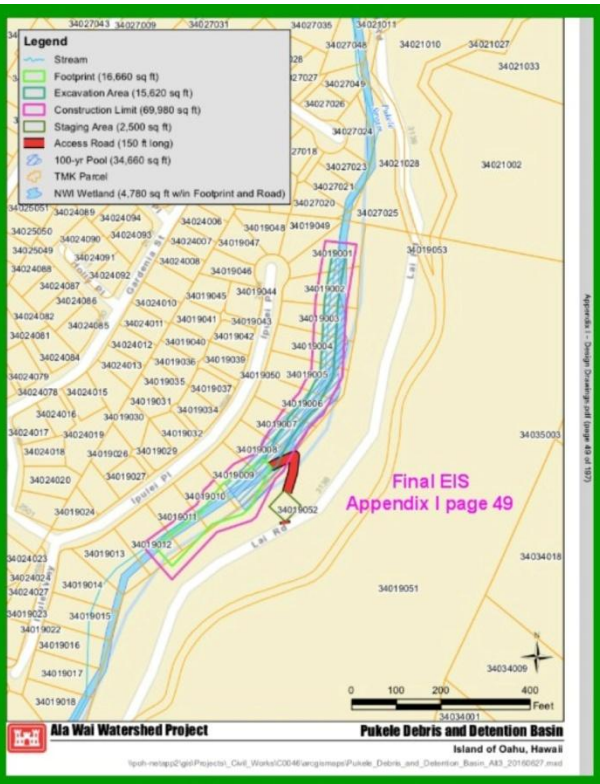


We encourage you to learn more about the Ala Wai Canal Project by reading through the Final EIS and Draft EIS to generate your own independent opinion. They can be found on our website www.stopalawaiproject.com under Resources. Mahalo!

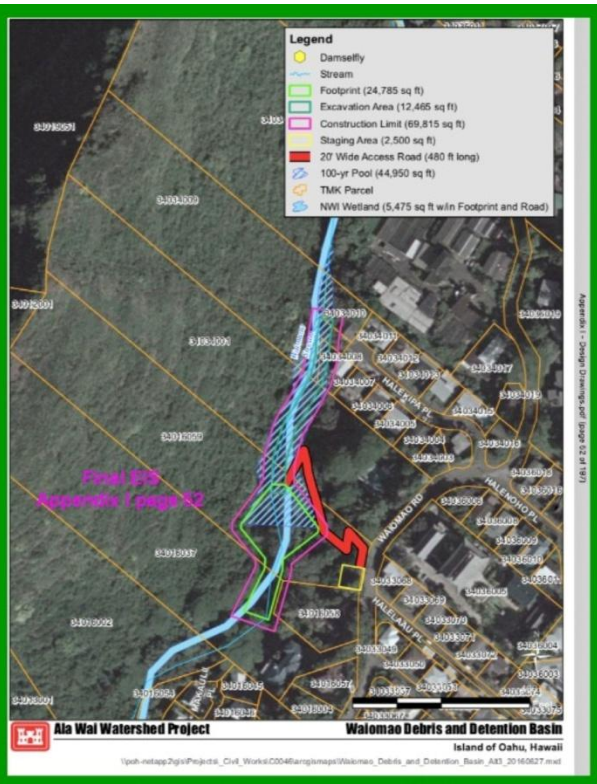
Your SUPPORT THROUGH ACTIONS are needed to make a difference. Please go to our website www.stopalawaiproject.com and sign our petition and it is very important to VOICE YOUR CONCERNS through testimony and emails.



The Makiki Detention basin sits on Halau Ku Mana Public Charter School property and will impact their useable classroom buildable space. They clean and maintain the stream. Mana Maoli is the leaseholder of the DLNR land.

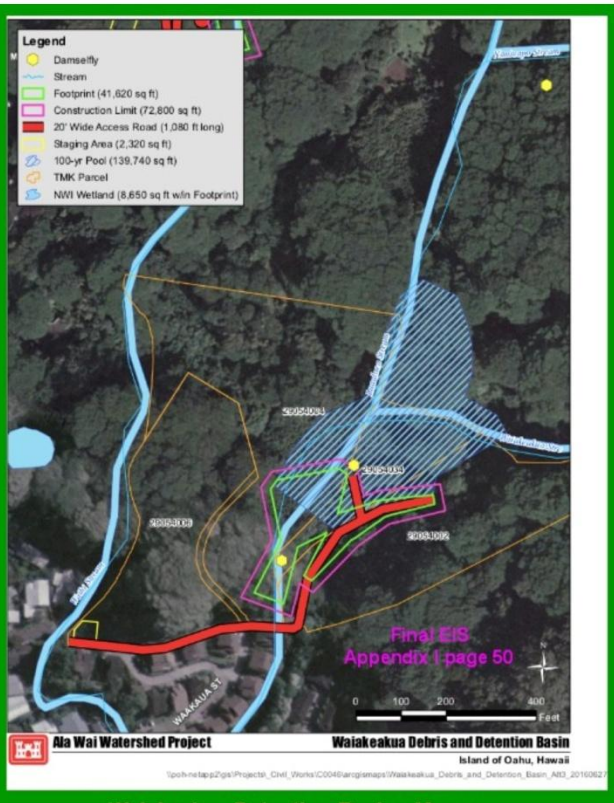


Pukele Detention Basin - Palolo
13 Private Properties directly affected

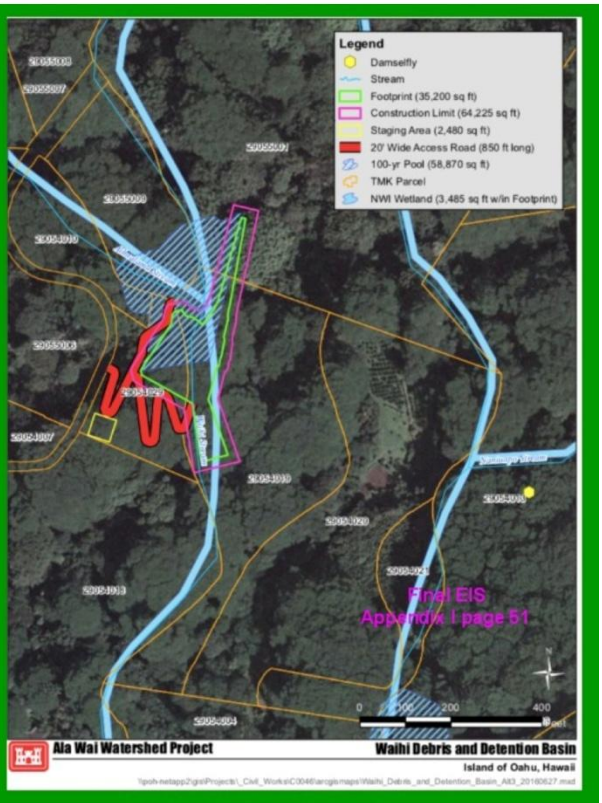


Waiomao Detention Basin - Palolo
6 Private Properties directly affected

We encourage you to learn more about the Ala Wai Canal Project by reading through the Final EIS and Draft EIS to generate your own independent opinion. They can be found on our website www.stopalawaiproject.com under Resources. Mahalo!



Waiakeakua Detention Basin - Manoa



Waihi Detention Basin - Manoa
Located immediately above Paradise Park

Woodlawn Detention Basin - Manoa

Figure 5-14. Concept of Woodlawn Ditch Detention Basin

Resident living around the detention basin were not notified

Your SUPPORT THROUGH ACTIONS are needed to make a difference. Please go to our website www.stopalawaiproject.com and sign our petition and it is very important to VOICE YOUR CONCERNS through testimony and emails.

Environmental Warning - Final EIS
Before and After

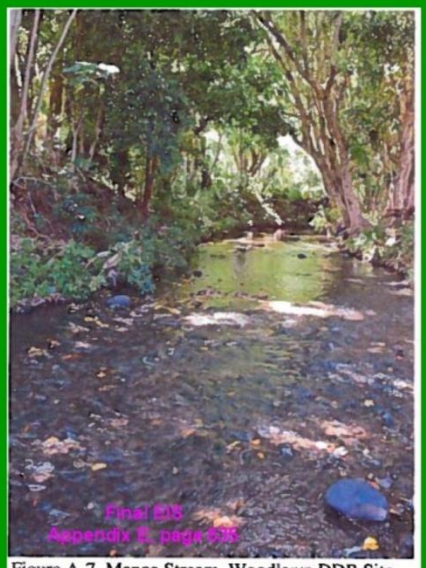


Figure A-7. Manoa Stream, Woodlawn DDB Site.

Manoa Stream

Figure B-4. Examples of Maintenance Dredging in Detention Basin Pool Area – Backhoe removing debris from stream.

Only examples - this detention basin is only a few feet high upstream detention basins are substantially larger

We encourage you to learn more about the Ala Wai Canal Project by reading through the Final EIS and Draft EIS to generate your own independent opinion. They can be found on our website www.stopalawaiproject.com under Resources. Mahalo!

Things to Consider

- The rights of the people of Hawaii were violated by not engaging us in discussion in the Draft stage of the EIS;
- Thousands of feet of natural stream will be destroyed;
- Detention basins with conduits are really concrete channelization except buried;
- Many areas mauka of the Ala Wai Canal will still flood;
- The 100-year storm modeling is fake and totally unrealistic;
- There are better alternatives that are more environmentally friendly that need to be considered;
- **DO NOTHING BUT TALK AND IT WILL BE BUILT OR TAKE ACTION, GET INVOLVED AND BE A PART!!!**

www.stopalawaiproject.com

THE SENATE

THIRTIETH LEGISLATURE, 2019
STATE OF HAWAII

S.C.R. NO. 184 H.D. 1

SENATE CONCURRENT RESOLUTION

REQUESTING THE UNITED STATES ARMY CORPS OF ENGINEERS, STATE OF HAWAII, AND CITY AND COUNTY OF HONOLULU TO ESTABLISH A WORKING GROUP TO EXPLORE MATTERS RELATED TO THE ALA WAI WATERSHED.

WHEREAS, the Ala Wai Watershed, located in the City and County of Honolulu, encompasses approximately nineteen square miles, or 12,064 acres, and extends from the ridge of the Koolau Mountains to the nearshore waters of Mamala Bay; and

WHEREAS, the Ala Wai Watershed is made up of Makiki, Manoa, and Palolo Streams, which drain into the Ala Wai Canal, a two-mile-long man-made waterway constructed during the 1920s, not for major flood control, but rather to drain coastal wetlands and allow for the development of Waikiki; and

WHEREAS, the Ala Wai Canal is owned and maintained by the State, and the United States Army Corps of Engineers (USACE) has coordinated with the State and City and County of Honolulu since 2001 to develop a plan to mitigate flooding in the Ala Wai Watershed in the event of a major, once-in-a-century storm; and

WHEREAS, an October 2004 storm that flooded Manoa Valley within the Ala Wai Watershed and was described as a twenty-five-year event caused an estimated $85,000,000 in damage; and

WHEREAS, the likelihood of flooding all of Waikiki and the canal's tributaries is approximately one percent, considered a one-hundred-year event, with potential estimated damage to three thousand structures and requiring more than $1,000,000,000 in repairs; and

WHEREAS, the USACE is currently negotiating terms of an agreement with the State and City and County of Honolulu to proceed with the Ala Wai Canal Flood Risk Management Project, which received approximately $345,000,000 in federal appropriations in July 2018; and

WHEREAS, the appropriation requires local matching funds in the amount of $125,000,000 and a local government sponsor in order to proceed with the project; and

WHEREAS, the Legislature has declined to provide the $125,000,000 in matching funds. Indicating its desire that the design of the project be reexamined; and

WHEREAS, structural elements of the USACE proposal includes six debris/detention basins in the upper reaches of the watershed's three major streams, one in-stream debris catchment structure, three multi-purpose detention basins, and flood control elements along the Ala Wai Canal including a three- to five-foot tall wall; and

WHEREAS, elements of the USACE proposal would directly affect properties in the watershed, impacting and in some cases displacing individuals and organizations that own or operate on such properties; and

WHEREAS, Oahu neighborhood boards were established by the City and County of Honolulu to increase and assure effective citizen participation in the decisions of government, and several neighborhood boards with boundaries within the Ala Wai Watershed and affected areas have expressed concerns over the proposed project through meetings and adopted resolutions; and

WHEREAS, issues related to the project have been brought to the forefront and have now become a major area of concern to members of the public, community stakeholders, and other interested parties; and

WHEREAS, while there have been opportunities for public input and engagement in the past regarding the Ala Wai Canal Flood Risk Management Project Draft Feasibility Study and Environmental Impact Statement, this body finds that further public engagement is warranted in order to consider those concerns; now, therefore,

BE IT RESOLVED by the Senate of the Thirtieth Legislature of the State of Hawaii, Regular Session of 2019, the House of

Representatives concurring, that the United States Army Corps of Engineers, State of Hawaii, and City and County of Honolulu are requested to establish a working group to explore matters related to the Ala Wai Watershed and, in particular, the Ala Wai Canal Flood Risk Management Project; and

BE IT FURTHER RESOLVED that the working group is requested to:

(1) Facilitate public meetings to encourage dialogue among members of the public, community stakeholders, representatives from the State, City and County of Honolulu, and United States Army Corps of Engineers, and other interested parties;

(2) Record and compile concerns submitted to the working group; and

(3) Develop and assess good design options to address community concerns, including but not limited to mitigating disruption to schools and institutions that have cultural or historical significance, minimizing adverse impacts on private property owners, and implementing appropriate traditional land management practices for ecosystem preservation and restoration including strategies for floodable development in lieu of hard structures and barriers; and

BE IT FURTHER RESOLVED that the working group is requested to include the following:

(1) A representative of the Mayor of the City and County of Honolulu's administration, who is requested to serve as the chair of the working group;

(2) A representative or representatives of the USACE;

(3) A representative or representatives of the Governor's administration;

(4) A member or members of the Hawaii State Senate;

(5) A member or members of the Hawaii State House of Representatives;

(6) A member or members of the Honolulu City Council;

(7) Researchers from the University of Hawaii, including a representative of the Community Design Center, **College of Civil Engineering,** and other experts knowledgeable in flood risk management or watershed and ecosystem restoration;

(8) A representative or representatives of the School for Examining Essential Questions of Sustainability; and

(9) **A representative or representatives of impacted privately owned properties, schools (including Halau Ku Mana, Iolani, Hokulani and others), occupied lands, culturally significant lands, and educational lands; and**

(10) A representative or representatives from impacted stakeholders including residents surrounding, downstream and adjacent to the project elements; and

(11) A representative or representatives from each neighborhood board in watershed; and

(12) Other persons as may be invited by the working group; and

BE IT FURTHER RESOLVED that the working group is requested to submit a report of its findings and recommendations, including any other actions taken pursuant to this measure, to the Legislature no later than twenty days prior to the convening of the Regular Session of 2020; and

BE IT FURTHER RESOLVED that the Legislature requests that the USACE suspend all work on the proposed project so that it can be fully open to any changes suggested by the working group's report; and

BE IT FURTHER RESOLVED that the Legislature requests that the Department of Land and Natural Resources, the City and County of Honolulu, and the Board of Water Supply rescind Right of Entry granted to the USACE; and

BE IT FURTHER RESOLVED that certified copies of this Concurrent Resolution be transmitted to the Commander and District Engineer of the United States Army Corps of Engineers Honolulu District, Governor, President of the University of Hawaii System, Mayor of the City and County of Honolulu, Chairperson of the Honolulu City Council, Director of the University of Hawaii Community Design Center, and Chair of the Governing Board of the School for Examining Essential Questions of Sustainability.

Testimony for SCR 184
March 25, 2019
Time 1:15 PM
Conference Room 229
(updated for April 11, 2019)

My name is Dave Watase I oppose the Ala Wai Canal Project and I am against the State funding any portion of the existing design elements in the Final EIS. I oppose SB77 and I am support SCR184. However, it should be noted that the USACE at all these hearings and at the recent Town Hall meeting on March 19, 2019 at the Manoa District Park has avoided any statements that would indicate major changes to their existing design. It sounds to me like a take it or leave it kind of deal. They say that they want to partner with us, they say that they want to hear from us but don't say what they will do with the input we provide to them. The only thing that they have said is that they will do aesthetic type of changes. This is unacceptable to our community. My greatest fear is that you will give them the keys to the car and they will hit the pedal to the metal and run us all over. This has all the marking of a mini RAIL project and the major motivation is to secure the Federal Funding.

These are my concerns and why I support SCR184:

1. It is not a comprehensive flood plan and many areas remain flooded in the USACE flood modeling (McCully to McKinley HS, Makiki, Iolani School to Puck's Alley, and Kapahulu to Safeway appear flooded);

2. To the left and right side of the Makiki Stream confluence at the Ala Wai Canal are the 4' concrete wall but no wall or flood gate over Makiki Stream;

3. The USACE determined that it was unfeasible to place a wall around Iolani School because it would require the wall around Waikiki to be higher and would impact the functionality of the Ala Wai Golf Course detention basin;

4. The Ala Wai Canal has over 50 storm drainage inlets that require mechanical capping to prevent backflow flooding. The EIS studies only show capping on 18" or larger outlets. Study does not address mechanical failure of the caps and dozens of mechanical gates that are required to be closed during a storm. All these elements require proper maintenance, testing, and cleaning to ensure reliability (what if a piece of garbage is blocking the outlet from being capped);

5. The EIS studies show Waikiki interior flooding for a 10-year storm when the interior storm drain outlets are capped and the interior flood drainage system in not functional. The flooding is understated because it was not done with the 100-year storm modeling;

6. While the 4' concrete wall (as high as 4.5') is designed to handle an overall much larger storm than the 100-year storm in the resiliency study they warn that because of the flashy and peaky nature of the storms that the wall can be overtopped and flooding occur in Waikiki;

7. There are concerns with the 4' reinforced concrete wall to be built around the Ala Wai Canal. It is not a simple wall easily built. Instead it will require steel pilings in front of the wall to prevent water infiltration through the porous coral substrate. It requires dewatering sub-pumps. It will require steel pilings underneath the footing because of concerns of the coral substrate liquefying. Concerns of building around the storm drainage outlets, trees, and other utilities without affecting the foundational key which prevents tipping and sliding of the wall. Concerns of damaging the historic Ala Wai Canal wall. No mention of traffic concerns during construction or of views blocked;

8. A major portion of the wall and levee around the Ala Wai Canal is to be built over the 72" force sewer main serving all of Waikiki. Concerns that the construction and vibrations could break the sewer main are mentioned and that it will be the contractor's liability (is this even a good idea to mess with and how will this impact the cost for construction when the contractor has to get insurance if even possible to protect him);

9. The earth levees and berm around the Ala Wai do not have scour protection and if breached will erode away and lead to catastrophic failure;

10. It should be noted that earthen berms, levees, and detention basins can become saturated during repetitive storms like the 40-days of storm in the 2006 and liquefy and lose strength;

11. The communities were not engaged in the Draft EIS stage between 2012-2015 and generally most are against large detention basins and concrete walls (6 Neighborhood Boards have passed Resolutions calling for the USACE to hold off from advancing the designs of the Project and for the State not to fund their portion);

12. The USACE did not evaluate eco-friendly or traditional Hawaiian flood management systems alternatives;

13. The USACE did not evaluate alternatives such a underground detention storage for Manoa District Park, Palolo District Park, Kanewai Park;

14. The USACE did not evaluate alternatives such as utilizing in stream existing capacities within already concrete culvert areas;

15. Many areas like the upper Palolo Valley areas which show a total of $7,000 property damage do not justify the large detention basins in the Pukele and Waiomao areas and could mitigate flooding using less expensive nonstructural measures;

16. Large upstream detention basins are large with a footprint of around 300' long with riprap and will require the excavation of up to 1000' of natural stream per detention basin. The detention basins and concrete walls are ugly and will destroy views forever;

17. The upstream detention basins are proven to become silt pits and with problematic maintenance issues. It will impact the water quality and downstream flows. They can easily be breached on very small storms by becoming plugged from debris from fallen trees coming miles above up the stream;

18. The USACE basic means for flood protection is by detention (holding water) which is suitable for the mainland with watersheds that are thousands of miles long and no place for the water to go;

19. The Ala Wai Watershed is around 5 miles long from ridgeline to ocean which is a short distance. The watershed is also relatively small. The Ala Wai Canal is a little over a quarter of a mile from the ocean and it makes no sense to be building up concrete walls when the simple objective is to get the water to the ocean;

20. The USACE rejected a flood gate and flood pump measure near the Ala Moana Bridge which would have been a one measure, impact to one location, and not require the 4' concrete wall or detention basins at a reduced price of $133 million;

21. While the flood pump and flood gate is an option. The preliminary design concept that the USACE has in their EIS can be greatly improved. The most compelling benefit to a flood gate and flood pump system is that it can also protect from high tides, tide surges, and sea level rise in the future.

22. The current USACE design with 4' wall does cannot protect from high tides and large tide surge which would fill the Ala Wai Canal and take away storage capacities. The only way the USACE design can be adaptive to sea level rise is to increase the height of the wall above the average 4'.

23. The benefit of a flood gate and flood pump is that instead of building a wall to create capacity, we will lower the water level in the Ala Wai Canal ahead of a storm to create the capacity. Example instead of building a 4' wall we lower the water elevation by 4' creating the same capacity. Note, we can lower the level even further if necessary for additional storage. We can also drain the canal for maintenance dredging which will most likely reduce the cost since heavy equipment can enter the canal like when it was originally built;

24. Should sea level rise become a reality a flood gate or gate lock system that will also allow paddlers and other recreational users of the canal access to the ocean. The Ala Wai Canal will remain below sea level and at an elevation to keep our existing gravity flow storm drainage system functional without major retrofitting and pumping on each outlet.

25. The USACE has recently commented that the pumps that would be required are unfeasible for the Ala Wai Canal and that 20,000 cfs pumps would be required. This is not necessarily true because first the USACE modeling is questionable and accused of being flawed and unrealistic;

26. The USACE has consistently stated that the Ala Wai Canal capacity is only of the 5-yr to 10-yr storm, yet it has only overtopped 2 times from storms and once from Iniki with a total recorded damage of $10,000 in 1967. The 1967 overtopping was blamed on a lack of maintenance and resulted in the dredging of the Ala Wai Canal. So, maybe in the almost 100 years that the Ala Wai has been in existence the capacities based on historic data and historic floods needs to be updated to reality which is to reflect the modeling of the 1965 and 1967 floods to be that of the 100-year and 50-year storms;

27. The USACE plan under utilizes the Ala Wai Golf Course's ability as a potential detention area to handle any size of storm to protect Waikiki from flooding. They basically using the existing topography of the golf course and building a berm around it. Some of the areas of very shallow and underutilized. What should be looked into is a large underground storage facility which can be designed below the water table or below the high tide mark of the Ala Wai Canal. It can be exclusively for detention flood storage or could have multipurpose uses like an underground parking garage. The idea is to place the golf course above the storage facility where no one can see it. Again, only if needed and only if needed to reduce the number of pumps needed to evacuate the water from the canal to a reasonable size;

28. The concept of flood gate and flood pumps can be further improved. The idea is that the flood gates can be closed before a storm tide surge and when the tide is the lowest to allow nature to drain the canal naturally as much as possible. Then the gates are closed and the pumping begins to lower the canal's elevation to create capacity;

29. If at any time the water level in the canal gets higher than the ocean level then the gates will be open to allow natural draining in addition to pumping the flows out to sea;

30. A cause for flooding from the Ala Wai Canal is from the high tides, tide surges which can have water entering the canal as storm water is trying to exit the canal. This causes the canal elevation to rise and possibly overtop, the bigger the surge or higher the tide or if the canal is not protected to sea level rise then the risk of overtopping from a smaller rated meteorological event type of storm becomes greater;

31. The other main problem with the Ala Wai Canal is that it is flat and with no slope you have no head (elevation force) pushing or pulling the water out to sea. With no slope you have no velocity so no matter how wide the Canal is or how deep the Canal is the flow is restricted to the self created slope of the Canal filling up higher than the ocean elevation;

32. The other issue is that the flood water once it hits the Ala Wai Canal has to travel a far flat distance before entering the ocean. The solution is to move the water more quickly from the Manoa Stream confluence straight to the ocean (the largest source) faster. This can be done by either intercepting it further upstream with head pressure and piping it to the ocean or intercepting it at or near the confluence and piping it straight to the ocean.

33. The pump stations can be smaller and located at the confluence of every major stream outlet or further upstream whatever is designed. For example, it seems as though Makiki has a build up near Kalakaua and King, a force main pumping station can be installed to pump the flood water under the existing concrete channel and under the Ala Wai Canal or any other route but to the ocean and bypass the Ala Wai Canal;

34. Further improvement can be done by intercepting flood waters laterally into a debris removal culvert near the Roosevelt HS field and using head pressure (gravity force main) or at the Mott-Smith/Lewalani Drive intersection under the roadway and piping it down Piikoi straight to the Ala Moana Park Lagoons thereby bypassing the Ala Wai Canal and protecting Makiki Stream from overtopping;

35. If needed to protect Manoa, underground detention storage can be designed for Manoa District Park that will actually level the park area and make it more usable. It can be a park enhancement and will leave the existing streams alone without having to block or cover it. It will not be an open pit with the dangers of overtopping have safety concerns with kids getting sucked up by the detention basins when filled and the same can be done for Kanewai Park only if determined to be absolutely needed;

36. Other options that can be considered for protecting Waikiki are designated spills ways. In other words creating lower elevation or underground culverts that will direct the water away or under Waikiki straight to the ocean either by gravity flow or pumping. Again, the ocean is ranges from ¼ to ½ mile away from the Ala Wai Canal. These emergency routes will only be utilized during big floods. Kapiolani Park spillway, a culvert under Kapahulu Blvd, a culvert under Kalanimoku/Saratoga, or a Fort Derussy spillway. Giant portable emergency pumps with hoses that would stretch from the Ala Wai Canal straight along the roadways to pump the canal waters to the ocean directly. Instead of hoses we can install underground pipes straight to the ocean.

37. Pumping station at the Ala Wai Golf Course would be ideal because there is plenty of usable space in between the holes and there is space to even add silting basins before pumping, screening of trash and floating oils can be removed before pumping out to sea. The pumping can be done through conduits under the Ala Wai Canal at any depth. The outlet can be at the harbor mouth or even further out to sea. If environmentally acceptable the water can be reversed flowed during non emergency times and to prevent the Ala Wai Canal waters from becoming stagnant.

These are just some of the points that I've quickly come up with that I think are the issues that will grab your attention. The Final EIS is thousands of pages long and the review and explanation would otherwise take several hours.

Mahalo,

Dave Watase

Dear Chair Yamane, Vice Chair Todd, and Members of the House Water, Land, & Hawaiian Affairs Committee,

I respectfully request that SCR184, which tasks the U.S. Army Corps of Engineers, the State of Hawaii, and the City & County of Honolulu to establish a working group to explore matters related to the Ala Wai Canal watershed, be passed WITH AMENDMENTS to include representatives of resident stakeholders who stand to be impacted and/or to lose their private property in the approved project as currently designed.

If you could have attended the Town Hall Meeting in Manoa Gym on Tuesday evening, March 19, 2019, you would have seen and heard for yourself the frustration, anger, and outrage of residents from Manoa, Makiki, Moiliili, and Palolo over the Ala Wai Canal Flood Mitigation Project. The US Army Corps of Engineers (USACE) speaks of a partnership with stakeholders, but clearly they have not heeded the outcry from the community in opposition to the design of this project and evidently had no intention of doing so. Three years ago, I was promised at two different community meetings held by the USACE that my letter in opposition to the proposed design, proposing alternatives and including a petition signed by 80 residents, would receive a written response from the USACE. I and various family members stand to have 9 private lots/homes adjacent to Pukele Stream altered or taken through eminent domain. To date, I have received nothing from the USACE. The project has secured federal funding, SB77 was passed by the Senate, but the bill was not scheduled for hearing by the House Finance Committee due to **overwhelming opposition from the communities that stand to be impacted**.

The manner in which the public and resident stakeholders were engaged in this "partnership" with the USACE was one-sided and farcical, if not illegal. If residents were partners at all, they were treated as "silent partners," deemed uninformed and impotent. Resident stakeholders have voiced their opposition, sought and offered alternatives but received ZERO feedback and their input made no difference before the project was presented to Congress. It has been an insulting, patronizing, and disheartening process. Our efforts have been futile and a complete waste of time and energy.

I say all this to ask that SCR184 include the representation of resident stakeholders and neighborhood schools who stand to be impacted by any alteration of the subject watershed. **Without such representation, this "working group" will simply be a vehicle to rubber-stamp the current project as designed by the USACE. SCR184 should not be used to run roughshod over resident stakeholders again and to present a "mandate" to the 2020 Hawaii Legislature that is crafted by the same players.** Obviously, there are too many residents to be included in this working group, but there should be at least one stakeholder from each of the schools and from among the residents who stand to lose their land adjacent to each stream in the watershed under the current project.

Thank you for not only hearing, but listening to, the concerns of resident stakeholders. We ask that we be included in the proposed working group, not merely as recipients of information, but as active participants whose input is seriously considered.

Sincerely, Wilma Wong Youtz

SCR-184-SD-1
Submitted on: 4/11/2019 1:02:43 PM
Testimony for WLH on 4/12/2019 10:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Colten	Individual	Support	No

Comments:

The reason I am supporting this is because this will take no money unlike using 125million dollars for a wall that will protect Waikiki from a one percent chance of a storm. Another reason is this benefits everyone not just Waikiki but the people asked to move out and get less of what they paid for their house. This bill is about trying to find another way to stop the flood.

SCR-184-SD-1
Submitted on: 4/11/2019 1:04:48 PM
Testimony for WLH on 4/12/2019 10:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Omeed Saberian	Individual	Support	No

Comments:

Hello my name is Omeed Saberian and I am a 5th grader at Hokulani Elementary School and I support SCR184 because having a group the represent us is good so we get heard. Thank you for your help.

Sincerely, Omeed

SCR-184-SD-1
Submitted on: 4/11/2019 2:19:09 PM
Testimony for WLH on 4/12/2019 10:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
brian lim	Individual	Support	No

Comments:

Dear honarobale repasenative and
senative

I am a 5th grader at hokulani school and I agreee because there has to be a saf way too bee protected.With the wall people might lose there house and property.So i agree with the SCR184 SD1.

SCR-184-SD-1
Submitted on: 4/11/2019 2:24:17 PM
Testimony for WLH on 4/12/2019 10:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Kanisha	Individual	Support	No

Comments:

Dear Honorable senators and representatives

My name is Kanisha. I am in Hokulani Elementary School. I am in 5th grade and i am 10 years old. I oppose SB77 because it would shut down the school. After I read the three articles, I was surprised that they are still thinking about building the detention basin. Even after we sent the letters to Mr.Donavan Dela Cruz about this. We spent so much time writing.

I know that you guys are doing this to protect. So you can get more tourists. But if Oahu turns into a island where there's a bunch of detention basins, no one will want to come here.

What if there is a detention basin but the storm does not come. All of those people will have have to give up their homes for nothing. Would they get their houses beck. If their houses are destroyed, will you build them new ones. Would you destroy all the detention basins. Where will they move.So if there is a detention basin in kanewai park and people who live their will lose their homes.

I hope you find another way for this. A safer and easier way. One that will not destroy houses and schools.

Sincerely,

Kanisha

SCR-184-SD-1
Submitted on: 4/11/2019 2:26:53 PM
Testimony for WLH on 4/12/2019 10:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Puaiohi DeFries	Individual	Support	No

Comments:

Honorable Senators and Represenatives,

I am for this bill. This is because the people of Hawaii don't understand the damage this bill could do to our Island. My school may shut down and many people could lose their homes. Nobody wants to wake up on the streets or with no education.

Sincerley,

Puaiohi DeFries

LATE

SCR-184-SD-1
Submitted on: 4/11/2019 4:11:52 PM
Testimony for WLH on 4/12/2019 10:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Laurie Luczak	Individual	Support	No

Comments:

People, communities, and entities, who will be impacted by any kind of construction should be contacted timely and included in the decision making process. We need to be involved because often times government entities are driven by the bottom line or the anticipated end result and not other outcomes or outgrowths. For example, when cement canals and such disrupt the ahapua'a system and streams that worked for centuries. We'd like solution to enhance nature, not shred it. Also, any kind of construction should not put children, faculty nor schools at risk. It is already difficult for children living in urban areas to get enough exercise. Taking over a park to build a detention center or otherwise restricting it's use will further impact children's fitness and increase obesity. This then creates another equity issue since the children whose families cannot afford to involve their children with organized sports will be less fit than children from families that have the financial means. Think beyond the obvious, quick fix, and the easiest method. Also, when a design is developed make sure that it also addresses the king tides which are more probable that a 1% storm.

LATE

SCR 184 Testimony
April 12, 2019
Time 10:30 AM
Room 325

Please Pass SCR 184 with Amendments

My name is Kari Watase. I support SCR184 and oppose the current plan of the Ala Wai Canal Project. I have attended SB77 hearings and the Town Hall meeting on March 19, 2019 at the Manoa District Park to hear the USACE. The USACE has avoided any statements indicating major changes to their existing design. The USACE says they want to partner with us and that they want to hear from us, but never say what they will do with the input we provide. The USACE has been stating they will only make aesthetic changes. This is unacceptable to our community. We do not want a 4-foot high wall around the Ala Wai Canal and certainly do not want to pay extra to make it a "pretty" wall. This has all the marking of a mini RAIL project and the major motivation is to secure the Federal Funding. Please ensure drastic changes are made.

Identified Plan Flaws

1. It is not a comprehensive flood plan. Crucial areas remain flooded under the USACE's flood modeling (McCully to McKinley HS, Makiki, Iolani School to Puck's Alley, and Kapahulu to Safeway are all under water);

2. The 4' concrete wall is on the left and right side of the Makiki Stream confluence at the Ala Wai Canal, but lacks a wall or flood gate over Makiki Stream;

3. The Ala Wai Canal has over 50 storm drainage inlets that require mechanical capping to prevent backflow flooding. The EIS studies only show capping on 18" or larger outlets. Study does not address mechanical failure of the caps and dozens of mechanical gates that are required to be closed during a storm. All these elements require proper maintenance, testing, and cleaning to ensure reliability (what if a piece of garbage is blocking the outlet from being capped);

4. The EIS studies show Waikiki interior flooding for a 10-year storm when the interior storm drain outlets are capped and the interior flood drainage system is not functional. The flooding is understated because it was not done with the 100-year storm modeling;

5.. The resiliency study warns that the 4' concrete wall can be overtopped and flood Waikiki due to the flashy and peaky nature of storms;

6. There are concerns with the 4' reinforced concrete wall to be built around the Ala Wai Canal. It is not a simple, easily built wall. The 4' reinforced concrete wall will require steel pilings in front of the wall to prevent water infiltration through the porous coral substrate. It requires dewatering sub-pumps. It will require steel pilings underneath the footing because of concerns of the coral substrate liquefying. Concerns of building around the storm drainage outlets, trees, and other utilities without affecting the foundational key which prevents tipping

and sliding of the wall. Concerns of damaging the historic Ala Wai Canal wall. No mention of traffic concerns during construction or of views blocked;

7. A major portion of the wall and levee around the Ala Wai Canal is to be built over the 72" force sewer main serving all of Waikiki. Concerns that the construction and vibrations could break the sewer main are mentioned and that it will be the contractor's liability. This does not sound like a safe idea and how will this impact the cost for construction when the contractor has to get insurance for protection);

8. The earth levees and berm around the Ala Wai do not have scour protection which can lead to clogging and eventual breaching.

9. Earthen berms, levees, and detention basins can liquefy and lose strength from becoming saturated during repetitive storms (eg. the 40-days of rain storm in 2006).

10. The USACE did not evaluate eco-friendly alternatives or traditional Hawaiian flood management systems;

11. The USACE did not evaluate alternatives such as an underground detention storage for Manoa District Park, Palolo District Park, and Kanewai Park;

12. The USACE did not evaluate alternatives utilizing existing in-stream capacities within already concrete culvert areas;

13. Many areas such as upper Palolo Valley show a total of $7,000 property damage. That amount does not justify the large detention basins in the Pukele and Waiomao areas and could mitigate flooding using less expensive, nonstructural measures;

14. Large upstream detention basins will have a footprint of around 300 feet long with riprap and will require the excavation of up to 1000 feet of natural stream per detention basin. The detention basins and concrete are ugly and will do irreversible damage.

15. The upstream detention basins are proven to become silt pits with problematic maintenance issues. This affects the water quality and downstream flows. They can easily be breached on very small storms by becoming plugged from debris from fallen trees coming from miles above up the stream;

16. The USACE basic means for flood protection is by detention (holding water) which is suitable for the mainland with watersheds that are thousands of miles long and no place for the water to go;

17. The Ala Wai Watershed is about 5 miles long from ridgeline to ocean which is a short distance. The watershed is also relatively small. The Ala Wai Canal is a little over a quarter of a mile from the ocean and it makes no sense to be building up concrete walls when the simple objective is to get the water to the ocean;

18. The USACE rejected a flood gate and flood pump measure near the Ala Moana Bridge that would reduce the project price by $133 million. This flood gate and flood pump measure would have been a one measure impact to one location and not require the 4' concrete wall or detention basins at a reduced price of $133 million;

19. The flood pump and flood gate preliminary design concept that the USACE has in their EIS can be greatly improved. The most compelling benefit to a flood gate and flood pump system is that it can also protect from high tides, tide surges, and sea level rise in the future.

20. The USACE's design with 4' wall cannot protect from high tides and large tide surges which would fill the Ala Wai Canal and take away storage capacities. The only way the USACE design can be adaptive to sea level rise is to increase the height of the wall.

21. The benefit of a flood gate and flood pump is that instead of building a wall to create capacity, we will lower the water level in the Ala Wai Canal ahead of a storm to create the capacity. Example: instead of building a 4' wall we lower the water elevation by 4' creating the same capacity. Note, we can lower the level even further if necessary for additional storage. We can also drain the canal for maintenance dredging which will most likely reduce the cost since heavy equipment can enter the canal like when it was originally built;

22. Should sea level rise become a reality, a flood gate or gate lock system will also allow paddlers and other recreational users of the canal access to the ocean. The Ala Wai Canal will remain below sea level and at an elevation to keep our existing gravity flow storm drainage system functional without major retrofitting and pumping on each outlet.

23. The USACE has recently commented that pumps are unfeasible for the Ala Wai Canal and that 20,000 cfs pumps would be required. This is not necessarily true because the USACE modeling is questionable admitted to being flawed and unrealistic in the EIS;

24. The USACE has consistently stated that the Ala Wai Canal capacity is only of the 5-yr to 10-yr storm, yet it has only overtopped 2 times from storms and once from Iniki with a total recorded damage of $10,000 in 1967. The 1967 overtopping was blamed on a lack of maintenance and resulted in the dredging of the Ala Wai Canal. So, in the almost 100 years that the Ala Wai has been in existence the capacities based on historic data and historic floods needs to be updated to reflect the modeling of the 1965 and 1967 floods to be that of the 100-year and 50-year storms;

25. The USACE plan under utilizes the Ala Wai Golf Course's ability as a potential detention area to handle any size of storm to protect Waikiki from flooding. They are only using the existing topography of the golf course and building a berm around it. Some of the areas of very shallow and underutilized. What should be looked into is a large underground storage facility which can be designed below the water table or below the high tide mark of the Ala Wai Canal. It can be exclusively for detention flood storage or could have multipurpose uses like an underground parking garage. The idea is to place the golf course above the storage facility where no one can see it. Again, only if needed and only if needed to reduce the number of pumps required to evacuate the water from the canal to a reasonable size;

More Efficient Alternatives

26. The concept of flood gate and flood pumps can be further improved. The idea is that the flood gates can be closed before a storm tide surge and when the tide is the lowest to allow nature to drain the canal naturally as much as possible. Then the gates are closed and the pumping begins to lower the canal's elevation to create capacity;

27. If at any time the water level in the canal gets higher than the ocean level then the gates will be open to allow natural draining in addition to pumping the flows out to sea;

28. A cause for flooding from the Ala Wai Canal is from the high tides, tide surges which can have water entering the canal as storm water is trying to exit the canal. This causes the canal elevation to rise and possibly overtop, the bigger the surge or higher the tide or if the canal is not protected to sea level rise then the risk of overtopping from a smaller rated meteorological event type of storm becomes greater;

29. The other main problem with the Ala Wai Canal is that it is flat and with no slope you have no head (elevation force) pushing or pulling the water out to sea. With no slope you have no velocity so no matter how wide the Canal is or how deep the Canal is the flow is restricted to the self-created slope of the Canal filling up higher than the ocean elevation;

30. The other issue is that the flood water once it hits the Ala Wai Canal has to travel a far flat distance before entering the ocean. The solution is to move the water more quickly from the Manoa Stream confluence straight to the ocean (the largest source) faster. This can be done by either intercepting it further upstream with head pressure and piping it to the ocean or intercepting it at or near the confluence and piping it straight to the ocean.

31. The pump stations can be smaller and located at the confluence of every major stream outlet or further upstream whatever is designed. For example, it seems as though Makiki has a build up near Kalakaua and King, a force main pumping station can be installed to pump the flood water under the existing concrete channel and under the Ala Wai Canal or any other route but to the ocean and bypass the Ala Wai Canal;

32. Further improvement can be done by intercepting flood waters laterally into a debris removal culvert near the Roosevelt HS field and using head pressure (gravity force main) or at the Mott-Smith/Lewalani Drive intersection under the roadway and piping it down Piikoi straight to the Ala Moana Park Lagoons thereby bypassing the Ala Wai Canal and protecting Makiki Stream from overtopping;

33. If needed to protect Manoa, underground detention storage can be designed for Manoa District Park that will actually level the park area and make it more usable. It can be a park enhancement and will leave the existing streams alone without having to block or cover it. It will not be an open pit with the dangers of overtopping have safety concerns with kids getting sucked up by the detention basins when filled and the same can be done for Kanewai Park only if determined to be absolutely needed;

34. Other options that can be considered for protecting Waikiki are designated spills ways. In other words creating lower elevation or underground culverts that will direct the water away or under Waikiki straight to the ocean either by gravity flow or pumping. Again, the ocean is ranges from ¼ to ½ mile away from the Ala Wai Canal. These emergency routes will only be utilized during big floods. Kapiolani Park spillway, a culvert under Kapahulu Blvd, a culvert under Kalanimoku/Saratoga, or a Fort Derussy spillway. Giant portable emergency pumps with hoses that would stretch from the Ala Wai Canal straight along the roadways to pump the canal waters to the ocean directly. Instead of hoses we can install underground pipes straight to the ocean.

35. Pumping station at the Ala Wai Golf Course would be ideal because there is plenty of usable space in between the holes and there is space to even add silting basins before pumping, screening of trash and floating oils can be removed before pumping out to sea. The pumping can be done through conduits under the Ala Wai Canal at any depth. The outlet can be at the harbor mouth or even further out to sea. If environmentally acceptable, the water can be reversed flowed during nonemergency times.

These are only a few project issues and alternatives that should grab your attention. The Final EIS is thousands of pages long and the review and explanation would otherwise take several hours. Please add the amendments proposed by the Stop Ala Wai Canal Project to SCR184. It is important to include more members of the public so we can make effective changes to the current plan.

Mahalo,

Kari Watase