

RES24-204
Testimony

MISC. COMM. 369

ZONING (ZON)

ZONING (ZON) Meeting

Meeting Date: Aug 21, 2024 @ 09:00 AM

Support: 7

Oppose: 5

I wish to comment: 3

Name: Andrea Wagner	Email: rickandrea@gmail.com	Zip: 96821
Representing: Self	Position: Oppose	Submitted: Aug 17, 2024 @ 10:08 AM

Name: Edwin Tamaru	Email: tamarue001@hawaii.rr.com	Zip: 96821
Representing: Self	Position: Support	Submitted: Aug 17, 2024 @ 01:03 PM

Testimony:

The lower Wailupe Stream is overgrown with trees, bushes, vines & weeds and has always been a flood hazard. From 1/30/21 to 3/20/23, I emailed Mark Hashem, Stanley Chang, Tommy Waters & Dept. of Facility Maintenance(DFM) to clear lower Wailupe Stream. On 3/20/23, DFM initiated Service Request 40593 for clearing Wailupe Stream. Work began on 2/16/23 at the boulder basin along Hind Uka Drive to clear debris & overgrowth from the upper watershed to minimize debris from the upper watershed area from clogging the downstream areas. After the upper watershed was cleared , the lower Wailupe Stream was also cleared.

On 5/26/24, I emailed M. Hashem, S. Chang & T. Waters that the lower Wailupe Stream is again overgrown with trees, bushes, vines & weeds which creates a flood hazard and needs to be cleared every 2 years from 2025. On 5/29/24, Amanda Zepeda emailed me that my request has been submitted to DFM as RISR #2024-1416.

Wailupe Stream is the only remaining stream with a natural stream bed and must be improved with concrete lining to avoid another flood disaster.

Name: ANSON REGO	Email: regoa@hawaii.rr.com	Zip: 96821
Representing: Self	Position: Support	Submitted: Aug 18, 2024 @ 07:29 AM

Testimony:

I and my wife Meymo support this resolution. This Study should address the history of studies since the Dep't of Army Corps of Engineers May 1974 Draft environmental statement for Wailupe stream proposals re flood control improvements and other studies and risk assessments for flood control of Wailupe Stream and come forth with specific recommendations for flood control. The flood problem is the same if not worse today as it was then, as evidenced by the April 2018 flood. There have been no studies to my knowledge of the 2018 flood and how it could have been prevented. The potential for future predictable damages to life and residences requires approval of this Resolution. We thank you.

Name: Leslie Young Young	Email: leskyoung@gmail.com	Zip: 96821
Representing: Self	Position: I wish to comment	Submitted: Aug 18, 2024 @ 11:17 PM

Testimony: My home was flooded during the last big storm and it caused \$\$\$ damage on 730 Lawelawe St. Please be diligent in considering a solution.		
Name: John Simonds	Email: simondsj001@hawaii.rr.com	Zip: 96821
Representing: Self	Position: I wish to comment	Submitted: Aug 19, 2024 @ 04:12 PM
Name: Jeanne Ohta	Email: jyohta@hawaii.rr.com	Zip: 96821
Representing: Aina Haina Community Association	Position: Support	Submitted: Aug 19, 2024 @ 11:19 PM
Name: Joseph Rozmiarek	Email: rozmiarej001@hawaii.rr.com	Zip: 96821
Representing: Self	Position: Support	Submitted: Aug 20, 2024 @ 08:22 AM
Testimony: My property was under two feet of water during the 2018 flooding of Wailupe Stream, which left behind six inches of mud outside and a quarter inch of mud everywhere indoors. Despite repeated studies of the stream by the Army Corps of Engineers in the past, it seems that the only way to focus attention of the city and county on this continuing threat is to request yet another study. Accordingly I support this resolution.		
Name: Liz Morita	Email: email.hawaii808@gmail.com	Zip: 96824
Representing: Self	Position: Support	Submitted: Aug 20, 2024 @ 08:31 AM
Name: Lance Morita	Email: hi.live.aloha@gmail.com	Zip: 96821
Representing: Self	Position: Support	Submitted: Aug 20, 2024 @ 09:15 AM
Testimony: I support Resolution 24-204, which is intended to prevent future devastating flood damage from the Wailupe Stream		
Name: Chris Cramer	Email: maunaluafishponds@gmail.com	Zip: 96824
Representing:	Position:	Submitted:

Self	Oppose	Aug 20, 2024 @ 02:20 PM
Name: Kawika Winter	Email: kawikawinter@gmail.com	Zip: 96821
Representing: Self	Position: Oppose	Submitted: Aug 20, 2024 @ 07:10 PM
Testimony: Aloha to the Members of the Honolulu City Council, I am a resident of Wailupe Valley, and a university science professor. From both of these perspectives, I am vehemently opposed to RES24-204. Wailupe Valley is the last natural-bottom stream in East Honolulu. It also has at least three out of the five native species of 'o'opu and several other estuary species. All of these species are important both environmentally and culturally. Destruction of this natural stream through channelization will alter the environmental conditions so drastically as to no longer support these native species. Doing so will be a travesty for our community and our cultural heritage. I urge you to vote against this resolution. Mahalo for your consideration, Kawika Winter, Ph.D.		
Name: Maxx Phillips	Email: mphillips@biologicaldiversity.org	Zip: 96813
Representing: Center for Biological Diversity	Position: I wish to comment	Submitted: Aug 20, 2024 @ 09:36 PM
Name: Alyssa Miller	Email: greenwaveproductions@gmail.com	Zip: 96821
Representing: Self	Position: Oppose	Submitted: Aug 20, 2024 @ 10:03 PM
Testimony: 8-20-24 In Opposition to Resolution 24-204 Aloha Chair Waters, Mahalo for the opportunity to testify on the proposed planning and design agreement between the City and County of Honolulu and the Army, for Wailupe Stream Watershed flood control. This resolution should not be adopted, at least not as written. The project should not focus solely on flood control, nor should its participation be limited to the USACE and the Department of Design and Construction. Along its entire flow length, Wailupe Stream is the only unhardened, natural stream in the Maunaloa region. In the name		

of flood control, the other nine regional streams were straightened, concrete-lined and in some instances had their channel depth increased, resulting in the destruction of their flora, fauna and hydrology. Living streams and native species have been replaced by dead 'canals' which increase the local 'heat island' effect and are a magnet for homeless and graffiti artists. And even the largest concrete channel will not necessarily protect against a 100-year flood.

As others have reminded us, there have been several instances of USACE flood control studies of Wailupe stream, and all have concluded that hardening and other drastic stream channel modifications would not result in a net benefit to either the community or the environment. A different, holistic, watershed-based approach is required, one that combines flood management considerations with environmental ones, and which is culturally grounded. Everything in the watershed is connected. And effects don't just flow downhill. When you modify a stream in its lower reaches, the effects literally migrate upstream, the classic example being progressive stream cutting and bank erosion.

The resolution should be amended to reflect a broader, multi-faceted, partnership-based approach that involves the wider community, local organizations, and multiple county, state and federal agencies.

Here are some key areas that such a project must address :

1. Stream buffer areas and 'green infrastructure' projects. There are several management measures using natural materials and vegetative cover that can be implemented to protect stream banks, increase rainfall infiltration, and remove pollutants from runoff before it reaches Maunalua Bay, a 303(d) listed waterbody.. The establishment of buffer areas through both policy and informal means should also be investigated.
2. Protecting native species and restoring habitat. Previous USFWS and DAR biological surveys concluded that Wailupe watershed and its streams have the ability to support abundant terrestrial and aquatic life. The studies document presence of native fish and plants particularly the native dragonfly (*Pantala flavescens*) and the indigenous stream goby (*Awaous guamensis*), which was found using the lower portions of the stream as a migratory corridor for larvae and adult to travel from the ocean to upstream pools. USFWS noted that because *A. guamensis* is present in low and declining numbers on O'ahu, their habitat is important and should be conserved. Five types of native fish species were found to utilize this watershed. Wailupe watershed additionally contains critical habitat for the largest remaining subpopulation of the O'ahu endemic elepaio (*Chasiempis sandwichensis ibidis*) and the State of Hawai'i recognizes the upper elevations of Wailupe watershed as a highly critical habitat for numerous native threatened and endangered plant species, including *Bonamia menzeisii*, *Lobelia* species., five types of *Cyanea* species, and *Tetraplasandra gymnocarpa*.
3. Slowing the currently unchecked increase in impervious surface area, and removing impervious services where possible. Due to urbanization, nearly half the land surface (over 40%) of Wailupe watershed within the urban area has been covered by impervious surfaces (e.g., paved roads, driveways, rooftops, parking lots) that prevent rainfall from infiltrating into the ground. Imperviousness increases surface runoff and reduces its quality. Surface runoff flowing over impervious areas has a higher velocity than when flowing over surfaces covered in vegetation because impervious surfaces are smoother. This increase in velocity, along with the increase in runoff volume results in a quicker time of concentration of flows from the watershed to Wailupe Stream and the ocean. The end result is that peak flows increase, flooding is exacerbated and the transport of contaminants off the watershed accelerates, ultimately resulting in adverse

pollution impacts to the receiving waters of Maunalua Bay. The lack of stream buffers /allowing residential property owners to build right up to the edge of the stream channel has worsened this situation.

4. Addressing invasive plant species in the upper watershed areas, and controlling ungulates. Upland watershed areas are dominated by alien vegetation and contain feral ungulates, both of which increase erosion rates above background levels.

5. An ongoing education and outreach component is needed, to

- a) foster awareness about Wailupe Stream and watershed, and actions individuals can take to reduce flooding and pollution to Maunalua Bay.
- b) build community support for a holistic approach to planning for Wailupe Stream and for implementation of structural and nonstructural management measures.
- c) engage the community in do-it-yourself workshops, monitoring, and project planning in order to promote participation in installation, monitoring and maintenance of projects.
- d) build agency support, through essential networks and partnerships for Wailupe among USACE, EPA, DOH, DLNR, CCH-DES, CCH-DFM CCH-DTS, and others.

Thank you again for this opportunity to comment,
Alyssa Miller

Name:	Email:	Zip:
Kimeona Kane	kimeonakane@gmail.com	96795
Representing:	Position:	Submitted:
Self	Support	Aug 21, 2024 @ 01:35 AM

Testimony:

Aloha mai Kākou,

Kimeona Kane of Waimānalo, in support of this resolution for a few reasons.

I strongly believe that value can be added to processes as such, when there is stronger collaboration, particularly between government agencies, and also, with community. Studies conducted, should include cultural references and lived stories, from those documented in the past and those still alive today. A cultural impact study or something of its type, should be included in this work, to ensure that opportunities are allowed and information properly recognized. Many communities fit the description like Wailupe, needing cross agency collaborative learning and advocacy, highlighting and prioritizing our natural resources and ecosystems which should be a high priority for all. Flooding events attached to extreme weather events will continue to impact our communities, particularly in places where, over time, developments have pushed aside significant cultural infrastructure that aided in the safety of life, because of a deep understanding of it. Water capture through natural means have been negatively impacted, starting in the Ko’olaupoko moku, which could be capturing water better, if the native forests existed in entirety. I urge that a future study also focus attention on the native and non native flora that exists into the waonahele, as well as adequately recognize the issue of urban sprawl and gentrification, not too mention destruction of cultural infrastructure, not limited to loko i’a, lo’i, punawai, ‘auwai and others. These elements of our natural ecosystem, highlight the relationships our people and communities once shared. I

appreciate the effort to move, and caution that it be inclusive of cultural representation and not just high level engineering.

Mahalo nui for your time, service and the opportunity to engage,

Kimeona Kane

Name: Chris Cramer	Email: maunaluafishponds@gmail.com	Zip: 96824
Representing: Self	Position: Oppose	Submitted: Aug 21, 2024 @ 08:57 AM

Testimony:

I wish to provide oral testimony

I am writing in opposition to Resolution 24-204 to fund another study of flood risk management in Wailupe Valley. Wailupe Stream and watershed have been the subject of multiple studies dating back to at least the 1960s, when major storms caused flooding and heavy erosion of properties along the stream and led the City to seek assistance from the U.S. Army Corps of Engineers (USACE) to address stream flooding. What is needed now is to put those studies into action in coordination with local organizations already working to address watershed issues.

In May of 1973, a public hearing was held to discuss USACE plans to increase the capacity of Wailupe Stream by shaping and lining it with concrete from the existing debris basin to the mouth and 600 feet along the Kului Gulch Tributary. Residents were told that the plan would more than double the carrying capacity of the stream without exceeding existing stream widths and easements or altering existing bridges or home locations. When that hearing took place, the community was informed by USACE that the project would take twenty feet from properties along the stream. It was not clarified whether those twenty feet would be in addition to the ten or more feet already lost by some property owners in one storm alone during the late 1960s. The community, led by the Aina Haina Community Association, opposed the USACE's proposal on the basis that homeowners would have to relinquish part of their property, the project would deface the topography, and the USACE indicated that the finished project was not a guarantee that future flooding would not occur. That last admission was prescient as subsequent storms, most notably the April 2018 storm, have resulted in flooding in neighboring valleys that do have concrete-lined stream channels.

Since that initial USACE study in the early 1970s, there have been follow-up studies by USACE and others. Findings have included recommendations to enlarge the existing debris basin in upper Wailupe Valley, add a debris basin on the Kului Gulch Tributary at the east side of Hind luka, improve soil and water retention on valley walls, and engage residents and commercial interests to reduce water flow to the stream by reducing or mitigating hardened properties. Proposed stream project areas have been limited to that between the debris basin in the upper valley and the Kalaniana'ole Highway bridge (the area between Kalaniana'ole bridge and Maunaloa Bay is privately owned). USACE's continuing challenge has been that the cost to benefit ratio does not justify the expense of constructing and maintaining a concrete-lined channel in Wailupe Valley. Areas subject to ponding are generally outside the scope of these studies.

Concrete lining of streams is not a cure-all, as has already been acknowledged by USACE and experienced by neighboring communities in recent storms. As can be seen in the following images from East Honolulu streams, channelization means installation of concrete panels that become unstable over time as land settles and vegetation grows between panels, as well as sites of graffiti and homeless activity. Residents affected by flooding due to one channelized stream that failed said they had alerted the City to stream panel concerns for years without anything being done to correct problems.



Figure 1 Hahaione Stream View

Note graffiti along stream bank and vegetation growing on and between panels.



Figure 2 Niu Valley Stream

Note graffiti and vegetation growing on and between panels.



Figure 3 Waialae Kahala Stream

Note graffiti, homeless encampment, and vegetation between panels.

The time to study Wailupe Stream and watershed is past. Knowledge of the area has been collected. What is now needed is coordinated support and advancement of efforts to improve the Wailupe watershed and ease flood concerns related to the stream. Funds should be used intelligently to resolve community concerns, including actively engaging residents as part of the solution to valley problems. It does not appear that Resolution 24-204 will do anything more than expend funds on yet another study, further postponing action.

Statement by John E. Simonds of 5316 Nehu Place, Aiea 96821 before Honolulu City Council's committee on zoning hearing on Aug. 21 on Resolution 24-204 regarding the Wailupe Stream Watershed.

Thank you, Chair Waters and others, for focusing city attention and resources on a topic of ever-present concern and continuing jurisdictional confusion.

My personal support for this resolution does not assume that a study by the Army Corps of Engineers will answer all the questions neighboring residents have about the stream or clarify the roles of city agencies responsible for its different sections.

The city's Department of Design and Construction is in charge of the stream from the Hind Drive Bridge uphill into the valley. The section from the Hind Drive Bridge down to the Kalaniana'ole Highway Bridge, however, comes under the Department of Facility Maintenance. That is the section along which many of the 2018 flood victim-plaintiffs who successfully sued the city live.

It also is a section identified as a natural-bed stream, requiring more sensitive approaches to maintenance than the part of the stream above the Hind Drive Bridge, where rock revetments and concrete linings are permitted. This difference and the separate roles of the two city departments has been insufficiently explained to the public.

Also a semi-mystery is the jurisdiction over the stream once it passes under the Kalaniana'ole Bridge and blends with the sea. Some might assume it's the Corps of Engineers' kuleana, but longtime neighbors assert that shoreline residents have control of the

water at that point. An authoritative answer would be useful to have.

Who owns the stream? We, the taxpayers, apparently. But who's responsible for maintaining it? The city could be a lot more forthcoming in letting us know about the stream and its complexities.

If another Corps of Engineers study helps move the needle toward informing and protecting the public, ensuring Wailupe Stream remains a safe neighbor, then let's do it.

But meantime, the city has plenty of existing data that it could pre-emptively share. AECOM, an engineering consulting firm under contract to the city, developed considerable information about Wailupe Stream, including some low-profile state agency roles in its maintenance. Little of the data from that firm's work for the city has been shared with the public.

Below is an April 22, 2023, photo of the stream section from the Hind Drive Bridge facing the ocean, shortly after the banks and bed had been shorn of high weeds and other foliage. Regular trimming like this would help keep this lower section of the stream clear for sudden rainfall.

Thanks for this opportunity to comment.

John E. Simonds
(808) 373-3609
(808) 383-7984
simonds001@hawaii.rr.com





‘ĀINA HAINA COMMUNITY ASSOCIATION

c/o ‘Āina Haina Library, 5246 Kalanianaʻole Highway, Honolulu, HI 96821
ainahainaassoc@gmail.com; www.ainahaina.org

Jeanne Ohta, President • Melia Lane-Kamahele, Vice-President • Art Mori, Treasurer • Kathy Takemoto, Secretary • Directors At Large: Jeff Carlson, Wayson Chow, Meymo Rego, Marie Riley

August 21, 2024

To: Councilmember Calvin Say, Chair
Councilmember Tyler Dos Santos-Tam, Vice Chair and
Members of the Committee on Zoning

From: Jeanne Ohta, President

RE: Resolution 24-204 Relating to the Wailupe Stream Watershed Project

Position: Support with Comments

The Board of Directors of the ‘Āina Haina Community Association (AHCA) write in support of Resolution 24-204 Relating to the Wailupe Stream Watershed Project which would authorize an agreement with the Department of the Army to conduct a study of the Wailupe Watershed to conduct a study to plan and design flood control features at the Wailupe Valley area to prevent potential funding.

AHCA appreciates the City Council’s consideration of flood mitigation of Wailupe Stream. The residents of ‘Āina Haina have advocated for flood mitigation measures since the 1960s. I have been personally involved in Wailupe Stream issues since 2000 since I live next to the stream.

We support and encourage continued funding, planning, and community engagement and outreach to engage in collaborative ‘āina-based conservation and resource management. We support an approach that includes community involvement because many of the residents have valuable first-hand experience of the stream and past flooding.

We are also familiar with the numerous studies that have been conducted since the 1960’s. We are hopeful that this time the study will lead to solutions that can actually be implemented. Our experience with the Army Corps of Engineers (ACE) has been mixed. The last study and design project ended because ACE conducted a cost-benefit analysis of the project and concluded that because our homes were older, they were not valued enough to meet the cost-benefit minimum required by the federal government. When we asked to review the study, our request was ignored; when we asked again and again, the study could not be found, when I personally asked again after the 2018 flood, I was told no such study had been conducted.

We believe that in order to have a productive flood prevention plan, there must be collaboration that includes the residents who are affected by the stream. In addition, the study of the “watershed” must include the entire stream (about 2.5 miles), including the mouth of the stream. The most recent flooding occurred in the lower portion of the stream, an area that was not given any attention in the stream bank stabilization project after the flood.

We also ask that the planners and designers work with engineers that have been contracted to work on the stream in Malama Maunalua's Ridge to Reef grant project funded by the National Oceanic and Atmospheric Administration. We hope that this unprecedented federal grant, the city, and ACE will be able to work together to finally implement best-practices and unique solutions to reduce flooding in Wailupe Stream which remains the only unchanneled stream in East Oahu.

We will continue to be available as a resource on Wailupe Stream as we continue to have concerns about stream maintenance, flooding, bank erosion, and water quality of Maunalua Bay. Thank you for this opportunity to support Resolution 24-204 and express our concerns about Wailupe Stream.

August 19, 2024

Honolulu City Council
City and County of Honolulu
530 S King St, Room 202
Honolulu, HI 96813

Dear Honolulu City Council Members:

I am writing to express my strong support for Resolution 24-204

The proposed flood study is an important next step that Aina Haina residents have been eagerly awaiting since 1988, when the U.S. Army Corps of Engineers (USACE) first proposed the study following a historic flood event. With nothing done, 30 years later, the devastating flood of April 2018 caused significant damage to numerous homes in Aina Haina and further underscored the urgent need for this study to develop effective flood control measures.

Wailupe Stream is the only remaining stream with a natural stream bed, while all other streams in East Honolulu have been improved with concrete lining.

While some may argue that concrete lining of the Wailupe Stream walls will destroy the natural aesthetic of the stream, it is important to consider the extensive past flood damage and the practical realities. The City and County of Honolulu has struggled to regularly maintain the Wailupe Stream, resulting in overgrowth and an unmaintained appearance. Concrete lining will alleviate the need for regular maintenance by reducing the work required to control overgrowth. Additionally, the lack of maintenance has led to the weakening of the Wailupe Stream walls, resulting in the collapse of some sections over the years. Concrete lining will reinforce the walls and prevent future collapses, ensuring that properties along the Wailupe Stream are protected from the effects of flash floods that can erode the foundation of the stream walls.

Maintaining the Wailupe Stream is of paramount importance because the natural overgrowth in the stream currently presents significant risks of potential flooding. It is crucial that the Honolulu City Council finds ways to improve the maintenance and upkeep of the Wailupe Stream during the study period to mitigate these risks. Addressing these maintenance issues is essential to protect the community and prevent future disasters.

I deeply appreciate the Honolulu City Council for addressing the concerns of the community and for taking the time to consider the proper appropriations to mitigate future flooding and potential risks presented by the Wailupe Stream. The concrete lining of the Wailupe Stream will provide much-needed safety and well-being for the community and protect private property adjacent to the stream.

Thank you for your attention to this critical matter and for your continued efforts to ensure the safety and resilience of our community.

Sincerely,

Liz Morita

8-20-24

In Opposition to Resolution 24-204

Aloha Chair Waters,

As one of the families affected by previous floods, we thank you for the opportunity to testify on the proposed planning and design agreement between the City and County of Honolulu and the Army, for Wailupe Stream Watershed flood control.

Without amendments, the resolution should not be adopted.

The resolution should be amended to include extensive consultation with Native Hawaiians and the community at large throughout the planning and design process. Subsistence and recreational fishers and gatherers rely on Wailupe Stream and the nearshore of Maunalua Bay. Please give voice to those with expert and generational knowledge first before going any further and making agreements with the Army.

Excepting Wailupe, all neighboring valley streams along Maunalua Bay were destroyed by concrete flood control projects. Living streams and native species have been replaced by graffiti filled wastelands. Future flood control projects should require a net enhancement of the cultural and watershed values from mauka to makai.

Also missing from this resolution is the participation of the Dpt. of Environmental Services. They are working on an important project to reduce the thousands of gallons of raw sewage that spill into Wailupe Stream and Maunalua Bay after big rains infiltrate the sewer system.

Lastly, the City and County can mitigate flood hazards by enforcing a setback from Wailupe Stream. As seen in the photos below, landowners are dangerously building into the Wailupe Stream setback and even storing hazardous materials like propane in areas damaged by previous floods.

Mahalo for your consideration,

Chris Cramer

Wailupe

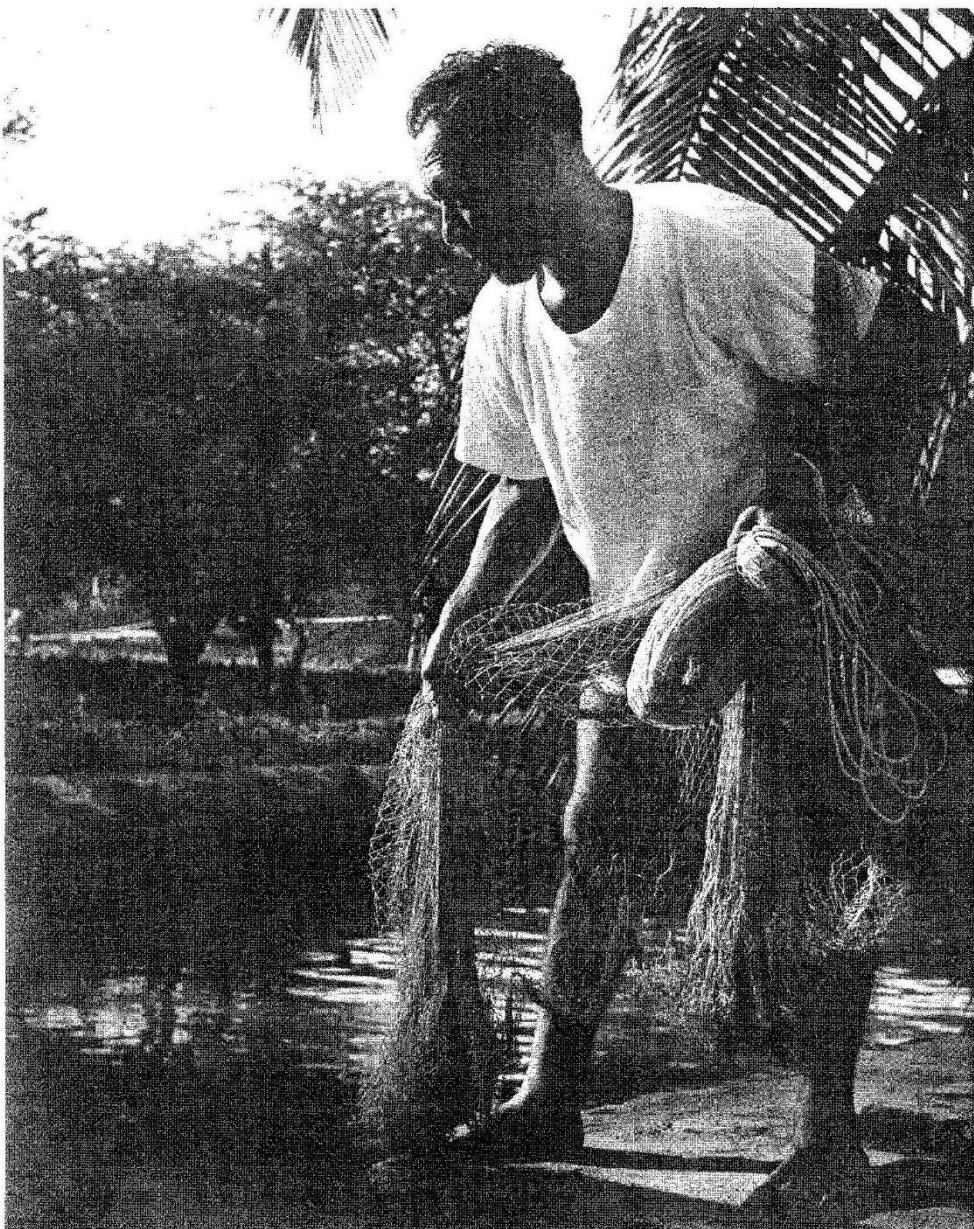


Wailupe Stream- New residence and propane tank in the stream setback. The stream wall section was rebuilt after the 2018 flood.





Crabbing- Wailupe Stream



Throw net fishing for mullet in Wailupe Stream circa 1930's with Uncle George Nakayama, a great fisherman. He had a fishpond and net house along Wailupe Stream.

George Nakayama - a great fisherman.



August 20, 2024

**HONOLULU CITY AND COUNTY
ZONING MEETING
Aug 21, 2024, 09:00 AM**

RE: Testimony Regarding Resolution Authorizing Intergovernmental Agreement for Wailupe Stream Watershed Study

Please accept the Center for Biological Diversity's comments regarding **Resolution 24-204**, which would authorize the Director of the Department of Design and Construction of the City and County of Honolulu to enter an intergovernmental agreement with the Department of the Army for the Wailupe Stream Watershed study.

The Center understands that this resolution is a response to the April 2018, flood when Wailupe Stream overflowed, resulting in significant damage and the destruction of numerous homes. Since this unprecedented event, community concerns have intensified as the city has struggled with ongoing stream maintenance. Residents are deeply apprehensive about the potential for another similar catastrophe, highlighting their urgent need for effective and thoughtful flood management solutions.

Cultural and Ecological Importance of Wailupe Stream

Wailupe Stream is a vital natural resource in East Honolulu, representing the last natural-bottom stream in the area. This stream is critical for supporting native aquatic species, including at least three of the five native 'o'opu species: 'o'opu naniha (*Stenogobius hawaiiensis*), 'o'opu 'akupa (*Osteomugil cunnesius*), and 'o'opu nākea (*Awaous guamensis*). These species are integral to the ecosystem and hold significant cultural value for Native Hawaiian communities.

Importance of 'O'opu and Their Struggles

'O'opu are unique and essential to Hawai'i's freshwater ecosystems. They are amphidromous fish, meaning their life cycle requires both freshwater and marine environments. They spawn in the ocean, and their larvae migrate back to freshwater streams to grow. Here are some crucial points about their current struggles:

On O'ahu, 'o'opu populations are facing significant challenges due to habitat degradation. Urban development, increased runoff, and stream modifications have led to the loss of natural streambed substrates—gravel and rocks essential for spawning and feeding. This habitat loss has resulted in declining populations and disrupted life cycles.

Many streams on O‘ahu have been altered with barriers such as culverts and dams, which obstruct the migration routes of ‘o‘opu. These barriers prevent fish from reaching critical upstream spawning and rearing habitats, further exacerbating their population decline.

Polluted runoff and sedimentation from urban and agricultural areas have deteriorated water quality in many streams. Poor water quality affects the health of aquatic habitats and the survival of native species, including ‘o‘opu.

Scientific surveys and studies have shown that populations of native ‘o‘opu are declining across O‘ahu. The combined impacts of habitat loss, migration barriers, and poor water quality have contributed to reduced numbers and weakened populations.

Concerns with Proposed Flood Control Measures

The proposed flood control measures outlined in the resolution could further exacerbate these issues. For example, the construction of flood control features could alter or destroy the natural streambed, essential for the spawning and development of ‘o‘opu. Such disruptions could lead to further declines in their populations. Additionally, engineering solutions may change water flow patterns and sediment transport, potentially harming the aquatic habitat and further impacting native species.

Alternative Recommendations

Given these concerns, we recommend the following alternatives:

- Forest Management and Restoration: Implementing improved forest management practices and habitat restoration in the watershed can address flood risks while preserving the natural environment. Restoring native vegetation and minimizing runoff can help protect stream habitats.
- Barrier Removal and Stream Enhancement: Addressing existing barriers to fish migration and enhancing stream habitats can support the recovery of native ‘o‘opu populations. Collaborative efforts to remove obstacles and improve water quality are essential.
- Community and Cultural Engagement: Engaging with local communities, including Native Hawaiian groups, to develop conservation strategies that protect both the environment and cultural heritage.

Conclusion

In conclusion, we urge the City Council to reconsider the resolution and explore alternative approaches to flood management that focus on nature-based solutions that prioritize the preservation of Wailupe Stream’s natural environment. Protecting this habitat is crucial for the recovery of native ‘o‘opu populations and the cultural integrity of Native Hawaiian communities.

We hope the City Council will take action to safeguard both our natural resources and cultural heritage.

Mahalo for your consideration,

/s/ Maxx Phillips

Maxx Phillips, Esq.

Hawai'i and Pacific Islands Director, Staff Attorney

Center for Biological Diversity

1188 Bishop Street, Suite 2001

Honolulu, Hawai'i 96813

MPhillips@biologicaldiversity.org