Climate Adaptation and Hazard Management in East Honolulu
Workgroup Meeting #3

May 12th, 2016, 6:30pm - 8:30 pm
Hawaii Kai Library

1. Welcome and Introductions, Kem Lowry

2. Presentation: Green Infrastructure, Judith Stilgenbauer, ASLA, School of Architecture, UH Manoa

- Require green roofs as part of building code.
- East Honolulu has steep, short watersheds with a difference in rainfall from 200 inches to 20 inches / year. No room to really slow water flow to the sea.
- Changing standards is a good step forward. Not sure how to do this. The watershed was blocked in Manoa and the current standards don't prevent flooding.
- Invasive species are still a problem. Also fruit trees versus ornamentals are a concern because of rodents etc
- East Honolulu protected by reef – can use living shorelines as a soft defense system. Other areas of Oahu would be difficult due to exposure from wave action.
- Rebuild by Design vs. Anticipate by Design. Host a design competition in the same way New York has after getting hit with disasters. Results can affect policy as much as what actually gets built

3. Q&A response to Judith Stilgenbauer presentation:

- Doesn't development need to plan to hold 10 year storm water by code? I somewhat recall it came up in a recent meeting by George Atta on the Paiko Ridge development (over >4 acres).
- Building wetland is like an "if they build it they will come" scenario. Rebuilding wetland could reintroduce wildlife and potentially regulations from the US Fish and Wildlife Service (USFWS) back into the urban area.
- We must overcome fear of the unknown. We can deal with problems as they come. Softscape can bring back birds but it *may* attract rats (which are already here). Fear of unknown should not be a reason to not consider it.
- How do we make these "Transition decisions"? How do we get from where we are to wetlands, or from Waikiki to Venice?
- City must become more of a developer. Acknowledge there is a problem and spend to retrofit. Look at the lifecycle of the building and those in vulnerable

areas. When do you buy the easements or land? Timely retreat. Inventory buildings and compare with vulnerability map.

- When you fix something or touch something do it right, do it for 100 years. But improvements to existing infrastructure and homes are only piecemeal.
- Gary Chock is submitting recommended changes to the building code in 2018.
- A managed retreat is an option to SLR. But to do it you need to plan 50-75 years out. We also need to be more intervention minded, not just piecemeal.
- It is an operational strategy that we need. Not a hard-line master plan of what is saved or moved.
- Some of this can be done when shopping centers redevelop like they need to.
- 20 or so years ago Queen Emma Trust hosted a design competition which proposed to reintroduce green space back into the middle of Waikiki. It would serve partly an ecological function. Didn't pan out as the mayor host a competing design competition for the same area for what became International Marketplace.
- What can be done to hardened East Honolulu canals? Find land adjacent to the canals that are undeveloped. The more decentralized the stormwater management the better. You can introduce new policy to set back development certain distances from the canal. Require plantings adjacent to the canal to intercept runoff. Many of these are beyond the reach of USACE.
- We can use parks. Not a lot of undeveloped adjacent parcels other than parks.

4. Presentation: Next Steps, Bob Stanfield, DPP

- This working group does not begin and end with the Sustainable Communities Plan. You are welcome to continue meeting to discuss these important issues and would be willing to have a presence at those meetings.
- DPP is not ready to propose policies and guidelines for the regulations that should be imposed on private development subject to SLR impacts or for what climate adaptive neighborhood plans and designs should be implemented to protect, adapt or relocate uses along our coastlines.
- However, we are ready to propose "no regrets common sense" policies and guidelines for what to do in response to climate change based on the limited information we do have.
- More specifically, for East Honolulu, we are proposing to encourage East Honolulu communities to be more disaster resilient and to protect and conserve water resources by recommending adoption of the following policies/guidelines as part of a revised East Honolulu Sustainable Communities Plan.

1. Disaster Resilience
    a. Consider coastal erosion and flooding due to SLR in setting required shoreline setback
    b. Require developers of public and private projects in the shoreline area to analyze the impact of sea level rise on their project and incorporate appropriate measures to reduce vulnerability and increase resilience during the life of the project
    c. Require developers of new public and private projects to insure their projects have:
        i. Adequate Outdoor Warning Signal coverage;
        ii. Adequate Evacuation Routes; and
        iii. Adequate Emergency Shelter Access.
    d. Survey and retrofit DOE and other public buildings to make up for the shortfall in hurricane resistant emergency shelters.
    e. Design and build any new City buildings which could provide public shelter to withstand a Category 3 hurricane.
    f. Provide incentives for private organizations to provide hurricane resistant shelters and for homes to include safe rooms.
2. Water Resources Protection and Conservation
    a. Use xeriscaping, favoring Hawaiian plants
    b. Protect against water contamination
    c. Support water infiltration, and efficiency and conservation of water use.
    d. Develop, where practical, alternative water supplies, and encourage use of technologies conserving water and using renewable energy.
    e. Require use of Low-Impact Development (LID) Best Practices by new projects and redevelopment of existing projects to promote aquifer recharge and retention of storm waters, and to reduce storm water sedimentation and pollutant flows
    f. Reduce sedimentation and pollutant flows by:
        i. Addressing stream erosion problems
        ii. Encouraging and requiring best management practices for erosion reduction and storm water handling; and
        iii. Establishing vegetated stream buffer zones

5. Workshop adjourned at 8:30pm