Name: Mark Deakos
Agenda Item: C.2. Goal 2.3| Ready and Resilient Systems
Received: 1/8/2022 via email

Rob,

I wanted to get you some feedback on the proposed policies and actions around climate change to be discussed at your next CPAC meeting. I've attached some comments with highlighted text in the policy document.

With regards to actions/goals surrounding managed retreat strategies, I think there needs to a success story in order to get buy-in rather than an attempt to put together a universal global document that should apply to any managed retreat project. Having a funded team of experts take a real situation such as Kahana Sunset and working with the property owners and the planning department and possibly others on a strategic plan for relocating structures on that property could turn a disaster situation waiting to happen into a success story that others can gain confidence in the process. I believe $25M has already been allocated to the State to put together a working group focused on managed retreat strategies. I think there are opportunities out there to develop some very effective and financially viable strategies for this complex issue but in order to get there we need to switch focus away from beach nourishment to serious relocation of infrastructure.

Hope this is somewhat helpful and happy to discuss more if needed.

Good luck!

Mark

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Definitions

The following terms are used throughout the Plan, and it is important to understand their definitions and use for planning.

The State-recognized **sea level rise exposure area (SLR-XA)** is defined as the Hawai'i Climate Change Mitigation and Adaptation Commission's recognized planning target or threshold for sea level rise exposure. Currently, the recognized planning threshold is 3.2-feet of sea level rise. The planning threshold may change over time based on best available scientific information.

The **Erosion Hazard Line** is defined as the County of Maui's recognized planning target or threshold for coastal erosion. The County's recognized planning threshold for coastal erosion is 3.2-feet of sea level rise as identified in the Hawai'i Sea Level Rise Viewer (Coastal Erosion, https://www.pacioos.hawaii.edu/shoreline/slr-hawaii/). The planning threshold may change over time based on best available scientific information.

Cross-cutting topics:

- Climate change and Resilience
- Cultural Resources
- Hazards
- Historic Preservation
- Infrastructure
- Land Use
- Environment
- Emergency Services
- Other Services and Facilities

Policies

Climate Change and Sea Level Rise

2.3.1 | To minimize impacts from future coastal erosion to development, new permanent structures must be located landward of the State-recognized sea level rise exposure area (SLR-XA) with coastal erosion, except a minimum buildable area must be provided. This restriction does not apply to structures needed as part of an approved beach restoration project or cultural project such as loko i'a. and which must be evaluated on a case-by-case basis.

Summary of Comments on CPAC-Draft-Section policies goal 2.3_md_8JAN2022.pdf

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Author: kcomc Subject: Text Box Date: 1/9/2023 9:02:02 AM
Name: Mark Deakos
Agenda Item: C.. Goal 2.3| Ready and Resilient Systems
Received: 1/8/2022 via email

Status
kcomc None 1/9/2023 9:03:28 AM

Author: markdeakos2 Subject: Highlight Date: 1/8/2023 9:02:12 PM
In 2014, 3.2 feet was the worst case scenario for 2100 from the IPCC. The new NOAA "intermediate" models use 3.9 feet, which will likely get incorporated into the updated SLR-XA, maybe in the next 2 years. Despite 3.2 feet being an underestimate of expected SLR, there is tremendous push-back against the EHL it creates, exposing many properties that are at risk, which is not good for certain businesses. Despite the inconvenience of the EHL based on best available science for certain industries, it's important that this information be shared with the public to keep people out of harms way and prepared for the challenges ahead.

Author: markdeakos2 Subject: Highlight Date: 1/8/2023 9:04:07 PM
rewrite for better clartiry

Author: markdeakos2 Subject: Highlight Date: 1/8/2023 9:25:53 PM
I advise caution on how beach restoration is treated as a mitigation measure against SLR. DLNR is trying to pass a one-size fits all general exemption for all beach restoration projects that are less than 25K cu.ft. of sand so they can be fastracked. There are many ecological impacts associated with dredging sand offshore and bulldozing it onto an existing healthy beach that impact the donor sand ecosytem, the ecosytem of the beach receiving the sand, and associated benthic, invertebrate, fish, plant, and coral ecosystems. Adding T-groins to the project adds an entire additional layer of ecological impacts that I don't think are properly addressed in the DLNR FEA-FONSI. This CPAC policy document clearly puts an emphasis on managed retreat, which is the only long-term solution that protects a living beach/shoreline, preserves the coastal resource, while keeping people out of harms way (the purpose of the CZM Act and the SMA rules). By providing beach restoration as an alternative to managed retreat will derail the immediate need to develop proper, compassionate, manage retreat strategies as all property owners under threat will look to a publicly subsidized artificial beach before they give any thought to a viable retreat plan.

Deferred because Tara said d is not enforceable

2.3.2 | For redevelopment and new developments within the SLR-XA, developers must:

a. Proactively coordinate with the Maui County Planning Department and adjacent or near-by property owners to understand possible collective relocation options for at-risk structures;

b. Incorporate results of coordination into development plans by siting any new planned structures out of harm's way;

c. Not hold the County of Maui and State of Hawai'i liable for any and all future costs associated with maintaining or protecting the property developed within the SLR-XA, including costs associated with retreat, hazard mitigation, and cleanup costs to maintain the health of the nearshore marine environment from material debris originating from the ocean or from the structures' own deterioration or failure; and

d. Recognize that permit approvals from the County of Maui will be ~~conditioned~~ to prohibit future shoreline hardening for their ~~property~~ or project.

public preservation and restoration of

2.3.3 | Protect the access to and ecological function of wetlands, shorelines, beaches, and dunes by preserving waterfront land within the SLR-XA as undeveloped ~~space, greenways~~, stormwater management facilities, or parks ~~wherever possible~~.

2.3.4 | Support ~~amendments~~ to the Maui Island Plan and Community Plan, and changes in Zoning ~~for new development~~ in Mā'alaea on land mauka of Hauoli Street and the SLR-XA for existing makai development retreating inland because of impacts from ~~sea level~~ rise or other coastal hazards.

affected

2.3.5 | Support coastal retreat of South Maui structures currently located in the shoreline setback area and the SLR-XA.

2.3.6 | Encourage redevelopment and new development related to strategic relocation and increased resilience in preparation for and in response to climate change or natural disasters.

2.3.7 | Avoid development or redevelopment within Special Flood Hazard Areas (SFHA).

2.3.8 | Support expansion of community-supported renewable energy deployment, including small-scale community options, all of which include plans for maintenance and disposal that do not burden County landfills and decommissioning at the end of the project's intended use.

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Author: Rob Weltman Date: 1/4/2023 10:23:14 PM
Deferred because Tara said d is not enforceable

Author: markdeakos2 Subject: Highlight Date: 1/8/2023 9:29:28 PM
I do think managed retreat should be a case by case evaluation looking at variables such as the time available before structural damage can occur, the age of the building, the substrate beneath the structure and at the mauka end of the property, and the availability of land mauka of the existing property. These data should be taken into consideration when developing a managed retreat strategy that applies to each unique scenario.

Author: markdeakos2 Subject: Highlight Date: 1/8/2023 9:34:01 PM
What to allow with regards to repair and replacement for existing structures that become compromised from chronic erosion and SLR is a complex issue that needs to balance the hardships that the property owner may suffer if denied a repair permit with protecting the public trust (beach) and keeping people out of harms way, which is the primary purpose of the CZM and SMA rules. Maui County Planning is working through these challenges in their new SMA rules.

Author: Rob Weltman Date: 1/4/2023 10:57:17 PM
public

Author: Rob Weltman Date: 1/4/2023 10:57:47 PM
preservation and restoration of

Author: markdeakos2 Subject: Highlight Date: 1/8/2023 9:37:25 PM
I can't see any logic in allowing new developments to occur makai of the EHL knowing with 90 - 100% probability that these structures will be underwater by 2100 and likely much earlier.

Author: Rob Weltman Date: 1/4/2023 10:23:41 PM
affected

Author: Rob Weltman Date: 1/4/2023 10:24:02 PM

Fire and Emergency Management

2.3.9 | Require all development to incorporate defensible space around its perimeter and provide ongoing maintenance as per recommendations of the Maui Fire Department.

2.3.10 | Improve the resilience of the transportation system to natural hazard events and climate change-related hazards such as sea level rise, flooding, and wildfires, including the development of additional roadways in and out of South Maui to improve safe evacuation during hazard events.

2016 - https://dlnr.hawaii.gov/forestry/files/2018/04/2016_SouthMauiCWPP_HWMO.pdf

2.3.11 | Consult and apply as appropriate the goals, objectives, and actions of the South Maui Community Wildfire Protection Plan and the Maui County Multi-Hazard Mitigation Plan Update

2020
Says almost none of the 2015 actions have been implemented, most "Progress has yet to be made on this action"
"11 Establish an alternative route to and from West Maui for use during disasters....September 2020 - October 2025"!
https://www.mauicounty.gov/ArchiveCenter/ViewFile/Item/27524

2.3.12 | Encourage the development of fire breaks and bioswales that can be used for recreational paths and greenways around existing communities, and between new and existing communities.

2.3.13 | Require new buildings that serve as emergency shelters to be built to hurricane standards and support existing buildings that currently serve as emergency shelters to be retrofitted to Enhanced Hurricane Protection Area standards.

Water

2.3.14 | Require new developments to install landscaping that reduces water use, with drought-resistant and micro-climate appropriate design and plants emphasizing native species. Use water catchment systems to support irrigation, and gray water where allowed by the State Department of Health.

2.3.15 | Support the protection, preservation, and management of South Maui's water sources including aquifers, recharge areas, and watersheds.

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Author: Rob Weltman Date: 1/4/2023 11:43:27 AM
2016 - https://dlnr.hawaii.gov/forestry/files/2018/04/2016_SouthMauiCWPP_HWMO.pdf

Author: Rob Weltman Date: 1/4/2023 8:00:51 PM
2020
Says almost none of the 2015 actions have been implemented, most "Progress has yet to be made on this action"
"11 Establish an alternative route to and from West Maui for use during disasters....September 2020 - October 2025"!
https://www.mauicounty.gov/ArchiveCenter/ViewFile/Item/27524

Author: markdeakos2 Subject: Highlight Date: 1/8/2023 9:43:15 PM
I think strategic swales on contour used to slow, spread and soak stormwater can recharge aquifers, mitigate brownwater runoff events, can also be used to grow trees such as wiliwili that create a fire break, stabilize the soils, capture and store carbon, and reduce the heat-island effect. With simple design changes in our community we can provide a multitude of problem solving functions with a single project.

Author: markdeakos2 Subject: Highlight Date: 1/8/2023 9:52:31 PM
As previously stated, using simple design modifications like swales on contour can provide a home-owner with stormwater management and aquifer recharge, revegetation with shading and cooling benefits and food production. Add dry-toilet systems to reduce one third of household water usage, onsite graywater treatments systems to treat another third of water use to be reused and infiltrated back into the aquifer, and applying rainwater capture to supplement potable and non-potable water needs. These regenerative designs need to be taught to builders and incentivized with creative Maui County policies. DOH needs to learn about and approve demonstrated and proven graywater and blackwater regenerative solutions.

Wastewater

2.3.16 | New developments in South Maui, including projects developed under Chapter 201H, Hawai'i Revised Statutes, and Chapter 2.96 and 2.97, MCC, must connect to County or private recycled water distribution systems when available; if recycled water infrastructure is not readily available, developments shall be designed to allow for future connections.

2.3.17 | Support the use of gray water and recycled water in County parks and community gardens.

2.3.18 | Support amendments to the Maui Island Plan and Community Plan, and changes in Zoning, for the acquisition of land outside of the SLR-XA for the construction of a new wastewater collection system and treatment options to serve the Mā'alaea area.

2.3.19 | Support the transition of the Mā'alaea area away from the use of wastewater injection wells to a new system that increases treatment and provides better options for reuse or disposal of wastewater.

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Author: markdeakos2 Subject: Highlight Date: 1/8/2023 9:56:56 PM
When designing a net-zero energy system, it's starts with maximizing efficiency to minimize the need for a large solar system. The same emphasis should occur when designing water systems to first maximize efficiency and eliminate water use where appropriate then address recycling the water that is used. Alway eliminate waste first before determine the actual need.

Author: markdeakos2 Subject: Highlight Date: 1/8/2023 9:58:56 PM
Strongly recommend exploring dry toilet systems to eliminate up to 40,000 gal per year per household, with some very sophisticated systems, including multi-family dwellings that turn their waste into a revenue stream with composting.