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To: State Land Use Commission
PO Box 2359
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Contact: Dan Davidson

Re: Comments on DEIS for Proposed Olowalu Town Master Plan
TMK (2) 4-8-003: 84, 98-118 and 124

Aloha Land Use Commissioners and Staff

Maui Tomorrow Foundation, Inc appreciates the opportunity to offer comments on the DEIS for the Proposed Olowalu Town Master Plan, TMK (2) 4-8-003: 84, 98-118 and 124. As we understand, this DEIS was prepared in order to review the impacts and mitigations that would result from the reclassification of 636 ac. of agricultural land into the State Urban land use boundary and the subsequent construction of 1,500 new residences, a wastewater treatment plant, commercial areas, a realignment of Honoapiilani Hwy, construction of other roads, parks, new wells and other infrastructure.

In general, we are appreciative that many of the topics we and others commented on in the EISPN , have been discussed in some form in the DEIS. However, a number of significant topics are still omitted, avoided, or the information given has insufficient factual basis provided. We would ask that the following topics be clarified.

Proposed Boundary Amendment Action- Compliance with LUC Rules:

§15-15-77 HAR: Decision-making criteria for boundary amendments, in Section 5. of 15-15-77 asks that decision making include consideration of: “The representations and commitments made by the petitioner in securing a boundary change, including a finding that the petitioner has the necessary economic ability to carry out the representations and commitments relating to the proposed use or development;”

Past commitments have been made by co-applicant, Olowalu Elua LLC to existing homeowners and county regulatory agencies. Many of these commitments have been ignored. It is likely that this was due to the cost of compliance. These past actions, should cause the Commission to question whether the many complex and expensive actions referred to in the applicant’s DEIS will actually be implemented if the Boundary Amendment is granted. Since all of these measures would be vital to mitigate the impacts of this proposed development, the LUC should consider the proposal in light of that track record. In other words: if many of the proposed mitigating actions do not actually occur, would this project still make sense in this extremely sensitive

location? This is an especially important consideration since the cost or scope of many of those vital commitments are not clearly pictured or discussed in the DEIS. A few key points:

- **DEIS does not discuss how existing homeowner parcels, owned by other entities, will be connected to the proposed community.**
- The proposed project will cause major changes to the original design of the existing Olowalu Mauka subdivision plan, which was accepted by Maui County in 2002.
- These impacts should be clearly identified on comparative maps, and discussed.
- For example, extensive green way easements surrounding Olowalu Mauka are recorded on the 2002 subdivision maps, as well as a second ingress/egress route for the community. Most of these disappear in the Olowalu Town plan.
- The DEIS states that its scope covers an area of approximately 700 acres, and includes lands beyond the 636-ac project footprint, but there are no details how the existing Olowalu Mauka will be serviced in the new community.
- One greenbelt area is pictured on maps in the Olowalu Mauka vicinity, but the others, clearly marked as easements on the subdivision map, appear to be replaced by proposed Rural subdivisions. This impacts existing property owners.

The Land Use Commission is presented maps showing the 23 parcels involved with the proposed project. These and other documents do not make it clear that the majority of lands proposed for the new project Olowalu Town, were also part of the former 39 lot subdivision (“Olowalu Mauka”) created in 1999- 2001.

- **The 39 agricultural parcels were created under Maui County Ordinance 2372 which amended MCC Title 18.04.20 Subdivision procedures to allow “consolidation and re-subdivision” of existing “developable lots” of 1,500 sq. feet or more.**
- Olowalu Mauka was not required to go through the County’s formal subdivision review process.
- Instead, the county allowed twenty-nine Royal Patent or Grant parcels, four formerly subdivided parcels, two road remnant lots and 3 portions of other lots, all of which had existing TMK, to undergo “consolidation and re-subdivision” into Lots 1 through 39 of the new Olowalu Mauka subdivision.
- **This resulted in a one-time “lot line readjustment” with a prohibition on further consolidation and re-subdivision provided in Ordinance 2372.**
- It is our understanding from the DEIS and, based upon 2002 Olowalu Elua Plat map for the Olowalu Mauka lot line adjustment, a number of these formerly consolidated and re-subdivided lots, such as lots 16, 17, 19, 20, 22, 23, 24, 38, 36, 39, are being proposed to be re-subdivided as part of the Olowalu Town Master Plan process, and further broken down into other rural, urban and ag house sites.
- We are aware that the County has informed the applicants in recent years that their SMA permit for the 39 parcels is no longer valid and that conditions of SMA approval have

- not been met.
- **It is unclear if the 23 subdivided lots that are the basis of this proposed action actually fully exist in a legal sense, since they have never been formally subdivided, and the intention of the streamline procedure of Ordinance 2372 is not to create additional developable lots.**

Whether further subdivision of these lands, is or, is not a permissible action, under existing County law should be clarified by State and county agencies.

It also appears that several of the lots may have been sold to the Olowalu Mauka homeowner's association, but never utilized for their intended purpose. Now these same lots appear to be proposed for a boundary amendment consideration and further use for rural subdivisions, roadways or other improvements without consultation with the owners involved. Whether or not this is the case, should clearly addressed in the FEIS.

There should be a clear map provided to the LUC in the FEIS that overlays the original parcels involved in the Olowalu Mauka subdivision and indicates which parcels or portions thereof, are under jurisdiction of the homeowner's association or other private owners , and what their role would be in the Olowalu Mauka Master Plan. Impacts to existing residents must be discussed in the EIS to comply with HRS Ch 343.

Maui Island Plan Consistency:

HRS CH 343 requires an EIS to fully discuss viable project alternatives. This DEIS has failed to do that on the most basic level of consistency with Maui County Community and General Plans.

Maui Island Plan maps are included in an obscure Appendix ("O") at the end of Vol. II of the DEIS, with no discussion of the discrepancies in the recommendations shown for Olowalu Town on the three maps.

LUC rules also require the proposed District Boundary Amendment (DBA) to be consistent with State and County long range plans.

- The West Maui Community Plan shows the subject parcel as Agricultural and strongly recommends that continued status.
- The draft Maui Island Plan (MIP) has not yet been adopted.
- **Three MIP maps show different recommendations of West Maui Urban and Rural Growth Boundaries. The proposed project, as shown on maps throughout the DEIS, does not conform with any of these three recommendations. This fact is not mentioned in the DEIS. In fact, the document states in various chapters that the Olowalu Master Plan has been recommended by both GPAC and Maui Planning Commission MIP review.**

In explanation:

1. General Plan Advisory Committee (GPAC) MIP Map: Shows mauka portions of Olowalu Town in a Rural and Urban grown boundary, but deletes the northern makai section of the project. No map or text in the DEIS discusses this alternative design.

2. Maui Planning Commission MIP Map: Shows mauka portions of Olowalu Town in a Rural and Urban grown boundary, but deletes the entire makai section of the project. No map or text in the DEIS discusses this alternative design.

3. Maui Planning Director MIP Map: shows only the existing uses in the Olowalu area. Planning Department has consistently not supported including the Olowalu Town in the Rural or Urban growth Boundary. No map or text in the DEIS refers to this being the case.

4. The Olowalu Town DEIS does not reveal that all versions of the MIP West Maui directed growth maps show a surplus of several thousand units over the actual projected housing demand if Olowalu is included.

Viability of Project Unfolding as Presented in DEIS:

In general, the Olowalu Town DEIS, which is the primary opportunity for citizens and agencies to comment on the project's potential impacts and propose mitigations, is consistently vague about a wide variety of important topics. This makes meaningful comments challenging.

The LUC should also consider one very important fact: Olowalu Town is proposed for an area with no existing public infrastructure and potentially high impacts to natural and cultural resources. Many expensive and non-traditional design options are being proposed to "prove" that the project will do no harm and provide beneficial services. If these proposed actions are not followed during the development process, it is almost certain that serious impacts will occur and that promised benefits will not be realized. Unfortunately, time has proven in Olowalu that what has been promised in the past, has not always been delivered.

It is not uncommon for projects to promise review agencies wonderful benefits on paper, and later change course. Several other major projects on Maui, such as the 1,000 acre Makena Resort community, the 1,500 acre Maui Lani community have travelled this **ame** path and given assurances that they will implement rigorous design standards, infrastructure improvements, public benefits or resource management strategies to mitigate the potential impacts.

Historically, after LUC and County approvals are given with appropriate conditions, the projects are sold to others, sometimes passing through successive ownerships. The succeeding owners often petition authorities to be relieved of the very same conditions that were considered essential to mitigate public and agency concerns. The result is environmental degradation and loss of promised public benefits.

In the case of Olowalu Town, the LUC, State and County all need to ask the hard questions. We see from comments in the DEIS that both the County and State Planning offices asked for much

more detailed maps and other needed information to be included in the DEIS. In general, these requests appear to be overlooked in the DEIS. This could be an indication of the strategy this project may consistently pursue.

Key issues:

Affordable Housing

How will Olowalu reliably provide the 50% affordable housing mentioned on p. 24? The DEIS offers no specifics. In other portions of the DEIS, there is no firm commitment, only vague assurances that the developers will comply with county statutes, which are constantly under attack to lower percentages of affordable housing required. The DEIS mentioned that the average market priced home is expected to be \$600,000 and that the project would comply with the County's Residential Workforce Housing Policy. However, this policy now provides that developers where market price units are \$600,000 or less only need to supply 25% of the unit count within the HUD affordable guidelines. The DEIS does not make clear if a firm agreement will be signed that obligates the present owners and any future owners to provide 50% affordable units, irregardless of County statute provisions allowing less units to satisfy affordable housing requirements. This should be clarified.

Public Services:

Schools

Will Olowalu have onsite schools for its 462 students? Other developments of this size have substantial discussions with the state DOE in place by the time of their DEIS. This project appears to only be discussing "impact fees" with the DOE, not the building of future schools, yet all its literature describes children walking to nearby schools. Impact fees would suggest that students would attend schools in Lahaina, but the DEIS assumes schools would magically be onsite and does not account for traffic impacts of transporting the students to Lahaina schools or explain if there is a level of impact fee that could actually provide the facilities needed for the 400 plus students over a ten year horizon. Would the Olowalu schools be private? The DEIS alludes to this possibility, but a project that expects to be completed in 10 years should have a much firmer plan for this essential community amenity.

Fire Station

Olowalu is a high impact fire area. A number of major fires have burned Olowalu over the last decade. Simply developing the area and providing firebreaks will not free it from fire danger, as the majority of past wildfire came from lands either to the east or west, outside the subject lands and are fanned by high winds common in Olowalu. USGS Maui Hazard Maps rate the Olowalu area as a "high" fire risk. While the County Fire Department thought a fire station in the area would be a "good idea," key information, once again, is missing.

1. How much would it cost to build and staff such a facility?
2. Where would funding come from?
3. How long would it take to implement that process?

AMBULANCE

4. What impacts to existing Lahaina fire /emergency services are anticipated if Olowalu Town develops and no fire station is available on site? How will these be mitigated?

Also of key importance is the availability of **sufficient water supply for fireflow** requirements to serve an urbanized Olowalu area. While fireflow requirements in terms of number of gallons per unit, or number of hydrants needed are listed in various sections of the report, no overall fireflow water demand figure is mentioned. This information is usual in EIS documents.

Fireflow demand is listed, but not calculated to reflect in the project's potable or non-potable water use demand totals. If such figures were provided, based upon the standards listed in the DEIS, over 2 million gallons of (presumably non-potable) water would be needed over a 24 hour period to effectively control fire outbreak. The storage capacity of the existing reservoirs still used onsite is not given in the DEIS, but the historic reviews note that two reservoirs had a combined capacity of 1mgd. This is only half of what would be needed during a fire event.

The DEIS should make it clear how many of the 4 existing reservoirs are planned to be used; what their combined capacity is; what other mitigations are needed to provide adequate fire flow resources; and if provision of this amount of water for fireflow could impact ag, domestic or traditional and customary water uses in the project area.

None of these topics are discussed in the DEIS and should be . If Olowalu is being promoted as a "new town" with "town services" decision makers and the public need to know how realistic those claims may be.

Police Services

The existing Olowalu area has a low demand for police services. That will change if Olowalu Town proceeds. All we are told in the DEIS is that areas will be "provided" in the Master Plan for public facilities such as police station, library, fire station, schools, etc. The DEIS, once again should be specific about the projected building and staffing costs for these services; expected timing of any future police facility and what impacts the additional development areas at Olowalu to be "protected" would have **on existing Lahaina public safety services. The DEIS should also make it clear if land for future public safety facilities will be donated or offered for sale to the respective County departments.**

Infrastructure

Potable Water

Information provided in the DEIS regarding both demand and availability of potable water resources for the project is inconsistent and, most likely, unrealistic. The essential question of how much water the Olowalu hydrological unit (surface and stream water) has available and where it should go, is still left largely unexplored by this DEIS, even with the 21 page "Impact on Water Resources Report" in Appendix. C.

Several key assumptions in the Olowalu DEIS water study to not appear realistic, or supportable, or they have no discussion in the document.

1. The average Olowalu household will use between 250 and 550 gpd of potable water, and between 590 and 785 gpd of potable, non-potable and reclaimed water combined. This assumption is made, even if there is no proof given that households in Olowalu or other dry areas of West Maui maintain similar usage rates.
2. Olowalu Aquifer's sustainable yield of 2 mgd is underestimated and may be as high as 6 or 7 mgd due to recharge data, updated by USGS in a 2007 study. The DEIS does not refer to other USGS studies which show a trend of rainfall levels diminishing in West and Central Maui, or the latest USGS report (2012) which specifically re-evaluates the recharge data from the 2007 study downward in Olowalu.
3. The primary well for the Olowalu private water system, (which has never undergone substantial pumping for any period of time,) is capable of increasing its production ten fold and having no impacts on groundwater or stream flow. This assumption is made even though the Olowalu well is in close proximity to Olowalu stream and their water chemistry appears to link them to the same basal source.
4. Additional wells, planned in the vicinity of the existing well, proposed to serve the Olowalu system, will have no impacts on stream flows, cultural uses of the stream water or nearshore discharges of freshwater necessary for the marine ecosystem. It is difficult to evaluate this statement since little factual research is provided. General trends in the area would indicate otherwise.
5. Consistent low chloride levels in the low elevation Olowalu well will remain reliable. Even if pumping increases from 50,000 gpd to over half a million gpd, there will be no cumulative impacts on water quality. Once again, this premise has not been tested.
6. No drought water management plan for the development is discussed, even though world weather trends do forecast increasing drought conditions and the project's consultant acknowledged the plantation wells became too salty to use even for agriculture during a 1970's drought (with a pumping demand of several mgd)
7. The Olowalu Town water use analyses assumes that .7 mgd average, up to 1 mgd maximum of potable water will be withdrawn from Olowalu aquifer at project buildout. A recently released USGS water modeling study for West Maui, commissioned by Maui County, bases its calculations of safe yield for Olowalu aquifer on groundwater withdrawals of no more than .53 mgd by 2030. The difference is not mentioned in the DEIS. The FEIS should be updated to reflect this study.
8. Nearly five thousand residents, businesses and public facilities could be dependent upon the Olowalu well system for their only water supply. The DEIS fails to discuss any plans to install a monitoring well to track the health of the aquifer that currently has very limited data. It vaguely refers to Water Commission and DOH requiring monitoring data, but does not clarify

that his will consist of limited water testing and continuing pump reports, not assessments of the aquifer health and water levels.

9. No mention is made in water calculations if ‘ohana units will be permitted in Olowalu above the stated unit counts. Some public discussions of the project have left the impression that some ‘ohana units will be permitted. This could affect water calculations

Inconsistencies in Data Provided:

The DEIS informs us in several sections that current potable water use on the private Olowalu Water system is 75,000 gal/day (.075mgd). Then, we are informed that the water company relies on one well with a reported average pumping of 55,000 gal/day (.055 mgd).

It should be explained if .055 mgd or .075 mgd represents current average usage of the system, or if there is a factual error in the EIS regarding current use.

Potable Water Demand forecasts are Unrealistically Low

The State Water Commission, Maui Dept of Water Supply (DWS) and others have commented that the project’s projected potable water use of 250 to 550 gpd per dwelling unit, 590 gpd total water use for Multifamily and 785 mgd total use for SF units, is completely unsupported and does not reflect any recognized county planning standard.

1000 gpd/ household is a minimum standard in dry areas of Maui.

The Olowalu EISPN in 2010 projected a water use of .75 mgd.

The 2012 DEIS specifies .7 mgd., 500,000 gpd less. The difference is not addressed.

EPA estimates average American water use around 100 gal/day per individual for potable purposes. Olowalu Town DEIS is assuming that 930 residential units, both single and multi family will use less than 70 gal/person/day. While water conservation is desirable and needed, it is unlikely, without some sort of stringent “enforcement” that these idealized demand figures will be the norm. It is not made clear if this strict water budget will mean that private swimming pools (which require potable water) will be prohibited.

In short, the DEIS provides us a list of very low projected water demands both for potable water and for potable, non- potable and reclaimed water use combined (Table 12 in Append. C. Water Resources study), but does not inform us “how” they will be achieved, except by vague promises that the non-potable system providing stream water will relieve potable demand, but stream flows will remain the same, due to ditch repairs.

Will this strict water type separation need to be monitored or enforced? If so, by whom? We are not informed by the DEIS. If there is no enforcement proposed, the FEIS should examine project impacts based upon a more realistic potable and non-potable water demand

It appears that the “demand” calculations are being manipulated to not exceed the sustainable yield limits of the aquifer. This does not seem to reflect current use patterns.

Current Water Use Patterns in Olowalu:

Current use= 75,000 gal/day potable water
Existing residential hookups =25 to 30
plus the Plantation Manager's house venue, Olowalu store, restaurant and Camp Olowalu,
Estimated 35 users dividing up the 75,000 demand.
This would mean 2,142 gpd per hook up.

Conclusion: Current domestic users have access to well over 1000 gpd average per hookup.
Use figures shoot up in drier summer months.

Will future users be willing to limit their total use (potable & non-potable) to 600 to 785 gpd?
Is it realistic to assume that 1500 housing units will use 225-550 gpd of potable water
consistently. Will this be advertised on the project's brochures or will they emphasize a "reliable
private spring water system" and leave off the use restrictions?

The DEIS goes into great detail to justify completely unrealistic demand calculations for future
water users, but provides NO detailed use figures for present potable and non-potable system
users.

We know that Kapaiki Village has 13 hookups. Olowalu Mauka has 7. If the DEIS provided us
with use figures for these residences (which are readily available from company billing records)
we could have a better idea of realistic water use by future residents.

To complicate matters, the DEIS does acknowledge that the Olowalu Water Company has been
operating at a substantial loss over the past few years, and has recently sought and been granted a
rate hike by the PUC. Will the Olowalu Water Company realistically be able to invest in the
upfront infrastructure promised in the DEIS? Does it plan to sell shares? No strategy for its
viability is discussed, yet it will be the sole source for any future resident's water supply.

The FEIS should include two additional analyses of residential potable water use:

Analyses 1. Use of at least 500 gal/day /housing unit.

This would mean a total potable demand of .9 mgd and a peak demand of 1.35 mgd.

Comments from the Maui DWS Aug. 2010 letter noted: water demand would be between
900,000 and a little more than 2 mgd of water "according to system standards." The Department
reminded the applicant that the Olowalu aquifer sustainable Yield is 2 mgd.

Analyses 2. Use of 1000 gpd for the 450 units not served by non-potable systems = .45 mgd
and 500 gpd day for the 930 units that have access to dual systems =.465 mgd

This scenario would project a demand of 1.22 mgd with a peak demand of 1.83 mgd.

This scenario would project potable use at full buildout just at the present sustainable yield of the
Olowalu Aquifer. It should be discussed in the FEIS as this may prove to be the project's actual
water demand.

Given that the average water use of West Maui residents with no access to non-potable systems is 1200 to 1500 gpd or higher, the above scenarios should be considered.

Groundwater Impacts

Pioneer Mill wells in the area pumped brackish water during plantation operations. Olowalu Elua Water Company is stepping into uncharted territory and should conduct substantial testing of its existing wells before committing to a project of this size. While two abbreviated water quality samplings from two of the three system wells and Olowalu stream were included in the DEIS, they were expressed in a format that made it daunting to any but scientists to interpret them. It appears that the project's consultant is depending upon the Olowalu wells steady performance under low pumping demands to make the case that no further information about the aquifer characteristics are needed.

The DEIS states that the Water Commission , PUC and Department of Health will make sure the system is sound and functioning properly. MTF believes that 10 day well testing at successively higher rates should be conducted. The test should record chloride, Nitrate and head levels observed in the subject well, as well as fluctuations in stream flows. Test results should be included in the FEIS.

Stream Waters

Missing information:

1. No figure is given for current stream water withdrawals through the existing non-potable system. It would from information provided in the DEIS agriculture use discussion that at least 50,000 gpd is currently utilized for 30 acres of agricultural activities. Is it realistic to assume that only .39 mgd of stream water would be needed if two-thirds of the resident's are depending on non-potable water for irrigation, and some are engaged in agriculture on 161 acres set aside for that purpose? If present levels of agricultural water demands (1,600 gal per ac) extended to the 161 acres, agricultural water demand alone could be .268 mgd. If we combine this with the surface water allotted in the DEIS for Conservation lands: 112,500 gpd, the resulting total is .38 mgd would be required for these two activities, virtually ALL of the proposed supply. The FEIS should present alternative stream water use scenarios that may be more realistic and analyze potential impacts.
2. How much stream water is currently utilized by local residents with kuleana rights as well as OCR? Do they desire to use more, or are there unmet claims or needs? 112,500 gpd of stream water is allotted for "Conservation lands." in the water demand table. If kalo water use is included in that allotment, it should be made clear.
2. The DEIS Water Impacts report (Appen. C) concludes that a 6% reduction of coastal groundwater discharge in Olowalu would have no impact on the nearshore fisheries. No studies were given to support this conclusion. The Impact report quotes USGS gaging records from the 1960's that showed Olowalu stream flow reaching the ocean only 20% of the year. It

did not appear any effort was made to find post-plantation data on stream flows. USGS recently completed a West Maui groundwater study and included a model where stream flows were restored from Ukumehame to Honokowai to prolong aquifer life. The FEIS should consult with USGS staff and include any updated information available on Olowalu stream flows beyond the one visual observation referred to.

3. The water impact report also assumed that over the years hydrological conditions would remain rather static, even as increased groundwater pumping was needed. The FEIS should work with USGS who now have a completed computer model of West Maui hydrological conditions. Several scenarios of pumping and well location should be considered in light of impacts of well draws on “leakage of high level groundwater.” (the consultant’s description) Such groundwater may be a part of an “unconfined aquifer “supplying Olowalu stream.
4. The DEIS did not mention it, but former Olowalu Plantation wells were located near reservoirs and may have depended upon them leaking for groundwater recharge. The FEIS should report on any current pump tests that show the backup viability of Pump O, now that the nearby reservoir is dry. Also, it should be determined how much leakage is occurring from the unlined reservoir still in use near the Olowalu Mauka subdivision; what its capacity is; and whether there are plans to line it as part of the ditch system repairs described?
5. Careful monitoring of the Olowalu aquifer and stream needs to be part of any development process. It has been noted in the DEIS that Olowalu stream has gaining and losing sections connected with what may be an unconfined aquifer. USGS studies point out that under light well pumpage (as the Olowalu Elua well has had) 100 percent of the water supplied to a well comes from ground-water storage. Over time, and heavier pumping, this can change as underground water sources for the stream are “captured” by the well. Over the course of years, the well’s dominant water source, particularly wells in an unconfined aquifer, commonly changes from ground-water storage to surface (stream) water and ”the stream flow in general is reduced as an effect of pumpage.”
6. The newest USGS (Gingerich & Engott, 2012) groundwater study of West Maui suggests that Olowalu stream provides 1.98 mgd of groundwater recharge to Olowalu aquifer. The report also notes that groundwater discharge at the coast in the Olowalu and Launiupoko areas has diminished over time. This updated information and consultation with USGS, should be incorporated into the project’s water planning model in the FEIS
7. Although it is assumed that Olowalu Town’s fireflow requirements will be met by non-potable surface water, this use was not included in the projected .39 mgd non-potable surface water use figure. The FEIS should address this issue, discuss actual cumulative amounts of water needed for fireflow, where it will be stored and any impacts the demand for 2 mg of fireflow over 24 hr would have on water resources over a variety of seasons. This is especially critical since low rainfall months where stream flows may be low, are usually high fire risk times.
8. There is no discussion of water operational needs of the proposed wastewater treatment facility. Will it entirely depend upon treated effluent for backwashing filters and other

standard maintenance or will surface water be needed to for operational use? If so, how much would be required, and where are these amounts shown in the project's water demand calculations?

9. No specific discussion of the proposed hydro-electric facility was included in the DEIS. Would such a facility require additional diversions or modifications? Would there be impacts to stream life? The project consultant suggested that "due to high amount of ground seepage, even if dam were removed, the stream would still be intermittent" (Nance 2011) but offered no proof. Would any future hydro-electric installation preclude additional stream flow restoration? Please discuss in the final EIS.
10. The applicant's water consultant refers to Olowalu Stream having a base flow of 4 mg between 1911-1967. It is also clear from reports on file and company records that the plantation was often short of stream water, hence the drilling of the groundwater wells. The FEIS should acknowledge that rainfall conditions in Central and West Maui post 1967 have steadily declined, according to USGS report-5103 (Engott and Vana, 2007). Is it prudent to conclude that baseline flow would be expected to be 4 mgd today without a solid research effort?
11. Reduction of demand for stream water in the Olowalu project to .39 mgd is dependent in part on production and availability of reclaimed waster water from the project's residential wastewater being treated at the new wastewater facility. The DEIS (p. 158) gives a figure of .24 mgd of treated effluent that will be available for irrigation, but does not specify how many residences would need to be in place before that amount would be reached.

A different figure of .391 mgd of available effluent is given in Appendix C. Table 2: "R-1 treated Effluent available for Irrigation Re-use". Could the FEIS clarify which figure is correct?

Would there be a transition period where landscaped areas are established and need to be irrigated, but sufficient effluent is not yet available? If so, would additional demand for stream water be part of the project's first five years of buildout or more? Is there a "back up plan" if the community develops more slowly than expected and only minimal effluent is available for many years. Would landscape design be modified accordingly? The FEIS should discuss the timing, phasing of pipe infrastructure to deliver the reclaimed water, and residential buildout level necessary to produce enough effluent to relieve pressure on stream resources.

Wastewater

1. No costs are given for the proposed state-of-the- art wastewater facility.
2. In Appendix B (Preliminary Engineering Report- p. 9) estimated dry weather wastewater discharge was 533,000 gal day. In Appendix C. (Table 2) it is stated that 391,380 gpd of Wastewater Effluent is available for Irrigation. In the body of the DEIS the figure of 24,000 gpd of irrigation effluent is given. Is there an explanation?
3. The DEIS refers to a 2-acre constructed wetland in conjunction with the WTF for storm

events. Then it is stated that the wetland will use .14 mgd of effluent. Is that the wetland's capacity, if not, what is? Will the wetland function year round, or only for storm events?

4. The WTF Plan (p.166 fig 19) does not show the proposed wetlands in relationship to the WTF. The WTF plan also does not show the distance to ocean. Is the proposed plant within 100 mtrs, 1000 mtrs? Where is the wetlands located? Will it be subject to sea level rise? The proposed Olowalu sewer system relies on pumping: is there back up generator incorporated into the plan if power supplies fail? The FEIS should include this important information to inform agencies and citizens.

5. Where does the sludge or "bio-solids" from the WTF go? How much will be generated?

6. How large is the WTF's R-1 water storage tank? How does a "soil aquifer treatment system" function? How many existing Olowalu residences and businesses have septic systems? Will they all be able to hook up to the WTF, or will infrastructure design only serve certain areas? What is the expected cost to hook up? Please address in the FEIS.

7. The DEIS Water report concludes: (on p. 13) that the availability of R-1 wastewater will "significantly reduce demand for ground water resources". Since no integrated information is provided in the DEIS re: existing use of stream water in the Olowalu system by either cultural reserve users, farmers or homeowners, can we conclude there will be significant reduction? Will single family homeowners be legally able to use the reclaimed water for landscaping? The FEIS should provide more specific comparison figures, if it intends to make this claim.

8. It appears that there are several natural drainage ways in the proposed vicinity of the WTF. Will these affect the plant's performance or put it at risk to overflow during storm events? The facility's general location is not discussed, except in terms of its proximity to the County waste transfer station.

Drainage

1. P. 4 of the Preliminary Engineering Report (Append. B) refers to natural features in the Olowalu area such as "Pu'u Kaiwaloa." It would seem that the report may be referring to Pu'u Kilea, which is a natural feature, while Wa'iwaloa is a heiau site. If this is an error, it should be corrected to avoid others assuming it is correct and repeating it.

2. Appendix B also refers to "several un-named drainage ways including Olowalu stream." (p. 5) Obviously Olowalu stream is a named drainageway. Several other gulches in the Olowalu area appear to have names on Maui County's large format resource maps of the area. The report should reveal that Olowalu stream drainage has been altered from its original path. The existence of the existing ditch and reservoir systems should also be included in the drainage discussion.

3. The Brown-Caldwell report (appendix B-1) in the DEIS spoke to the need to "aggressively implement" BMP's outlined in report due to the project's location adjacent to "one of the most significant, accessible coral reef systems on the island of Maui."

MTF requests that the FEIS include an analyses of what the potential impacts would be if the Olowalu project is approved and these practices are only partially implemented, or implementation is delayed. The FEIS should also discuss the cost of implementing all recommended BMPs: how much will this effect the cost of a single dwelling?

4. The Brown and Caldwell report concludes with the statement that their conclusions are “Based upon info provided by Olowalu Town, LLC. Unless otherwise expressly indicated, consultants have made NO INDEPENDENT INVESTIGATION AS TO VALIDITY, COMPLETENESS OR ACCURACY OF SUCH INFORMATION.” Shouldn’t independent investigation be required for a project that bills itself as “ahupua’a based.”

5. On p.19 of Appendix C the report assumes that the construction of retention basins may actually “improve runoff conditions in Olowalu during smaller storm events.” This is often stated in various EIS documents, yet no empirical proof from West Maui has been offered. The FEIS should either offer proof, or delete the statement as unsupported and misleading.

6. The DEIS states that the project has 140 ac of “green space” available for drainage use, of which 15 to 20% will be used for stormwater retention basins. The DEIS should have included a map indicating the design of basin system. Does any of the “green space “ proposed for drainage include or lie adjacent to the cultural preserve areas, burial areas, cultural sites etc. Are they in a separate protective zone? MTF requests that the FEIS include a MAP of retention areas overlaid on cultural site locations to clarify and avoid any unintended consequences.

7. On p. 8 Appendix -B the DEIS states:

Onsite and underground detention basins located within park and green space will have a storage capacity of 105 ac ft and are expected to reduce present run off by 10%. Overflow from the basins will continue down stream at “no greater than pre-development rates” therefore there will be no “adverse affect on downstream properties.” This statement does not analyze if there are already adverse affects to the shoreline and marine environment under current conditions?

Is the goal of a project like Olowalu to merely not make the status quo worse?

The DEIS does not mention who or what monitoring program will be used to evaluate the effectiveness of the basins and other BMP practices? Other questions:

1. Who is responsible for maintaining the basins?

2. Will homeowners be able to afford the upkeep? Other retention basins in West Maui have proven very ineffective because they were neglected.

The FEIS should clarify monitoring and maintenance efforts. Without them, we have not really done the job promised.

8. A statement is made that Olowalu’s marine life, reefs and nearshore waters have had “limited” impact from human activities, therefore a water quality report was prepared to address any potential impacts. Unfortunately, the DEIS dismisses the possibility that lowlying areas of the project site, have functioned in the past as intermittent wetlands, which provided run-off filtration areas during storm events. These areas are now being proposed for high-density residential development. Will retention basins placed elsewhere on the property provide the

same capacity to protect the reefs? Could the project be designed to avoid development in natural, low lying retention areas?

MTF asks that the FEIS address these topics under the “Alternatives” Section.

Traffic Impacts

It appears that the substantial traffic impacts of this project are also being ignored in the DEIS’s Traffic Impact Analyses Report. (TIAR)

Key Points:

1. Impacts to Honoapiilani Hwy are not discussed, except to sing the praises of the relocated segment of the Hwy proposed to pass through the project. The traffic bottlenecks that will occur at either end of the new alignment are not mentioned.
2. It appears the same complex justification process used to come up with the “right numbers” in the project’s water demand figures was applied to the TIAR’s traffic generation figures. This allowed the TIAR to reach the predetermined conclusion that most folks going to Olowalu would end up within the project’s roads and not add to the gridlock on Honoapiilani Hwy. Unfortunately, this is unlikely to be what would actually happen if the project was constructed. The conclusion in the TIAR that the new highway would have level of service “C” does not make sense. This premise should be questioned by state and county officials.
3. The Olowalu TIAR assumes that Honoapiilani Hwy will become four lanes on the Lahaina side of the project. Even though this widening project may be on a STIP list, it’s unclear if or when there would be funding available. The likelihood that this road will be build concurrent with any future Olowalu project should not be treated as an assumption or an automatic mitigation for the major traffic impacts that urbanization of Olowalu will bring to the area’s only through road.
4. The Olowalu DEIS states that the existing Honoapiilani Hwy will become a “ low-volume, low speed coastal roadway.” It appears from the maps included that the applicants propose to remove several segments of the road and merge the former State ROW lands into their project lands. The DEIS does not discuss if this removal would create confusion among oldtimers and lead to coastal access challenges.
5. The phasing for various road way infrastructure projects is not discussed. Would portions of Olowalu be built before Honoapiilani Hwy is moved inland? What are the impacts from the disruption in traffic patterns on the existing Honoapiilani Hwy? Once construction began. how many phases would it have. The DEIS is a disclosure document. It should have this information
6. Highway safety on the existing Honoapiilani Hwy is already severely impaired. Since it is not clear whether the Olowalu project may have new residential neighborhoods before the realigned roadway is constructed, the DEIS should discuss impacts and mitigations, such as a

temporary traffic light during high use times to allow pedestrians and bicyclists to cross the road safely. Impacts of construction vehicles in the area should also be discussed.

7. The DEIS notes that the newly aligned Honoapiilani Hwy will have two primary access points. From the map provided in the DEIS, it appears the public is going to have a far more confusing web of roads to navigate to visit Olowalu. It also seems ironic that this new “small town” built around “walking” will be separated by a 200 ft wide road right of way.

Natural Environment:

Flood and Tsunami Hazards and Sea Level Rise

Missing information:

The Olowalu area faces multiple natural hazard risks that should not be glossed over in the EIS. No manner of mitigation can change the fact that it is an area of high winds, wild fires low lying , erosion-prone coasts, subject to flooding from storm events, tsunami inundation and seismic activity. The DEIS downplays these factors and emphasizes compliance with County building codes as the only needed mitigation. Avoidance of high impact areas should also be discussed.

1. The DEIS (p. 8) stated “ In Olowalu, Erosion rates and potential impacts from sea level rise have not been identified.” This does not appear to be entirely accurate. There are historic(1912-1997) coastal erosion rate maps for Olowalu compiled by SeaGrant staff. they are posted at: <ftp://soest.hawaii.edu/coastal/webftp/Maui/Posters/Olowalu.jpg>
2. USGS also has a good synopsis of impacts affecting Olowalu in their web-based “Index to Technical Hazard Maps” The region is described as “moderate to high” in the USGS Overall Hazard Assessment due to “ the low coastal slope.” The tsunami hazard is ranked “high along this entire low-lying coast.” The report concludes that the “erosion threat is ranked moderately high” beyond Hekili Pt. and “sea level and volcanic/seismic hazards are moderately high because of the low coastal slope and Olowalu’s location within seismic hazard zone.” To be accurate, information such as this should be incorporated into an environmental document, as it describes the surrounding environment as assessed by hazard management professionals.

A map should be provided in the DEIS of the proposed housing unit locations, parks, open space etc. overlaid on the FEMA Special Flood Hazard Areas, as well as the County Planning Department’s Sea Level Rise Maps. The State Office of Planning asked for such a map to be included in their 2010 EISPN comments., but no action was taken.

Coastal Access

The DEIS repeatedly refers to a 150 ft set back along the shore. It should be clarified if this 150 buffer includes an 100 ft-wide state beach reserve along much of the oceanfront portion of the Olowalu of property. If it does, it would be more accurate to describe a fifty-foot shoreline setback buffer beyond the existing beach reserve. The FEIS should discuss why a two hundred ft building setback is not proposed: 100 ft State reserve and a 100 ft buffer beyond that.

It is not made clear in the DEIS how many additional coastal access points would be created, how much parking area would be provided or even if current cultural and recreational access would be impacted by the proposed Honoapiilani road realignment and removal of road segments. Would the land that was public road right of way remain public? Where would new camping areas be established? The FEIS should provide more specific information comparing present and future coastal access in the Olowalu area.

Coastal Zone Impacts

The DEIS showed the SMA zone in a map, as affecting very little of the proposed project, Maui County Planning Department points out that the entire project area will need to comply with SMA permit review. The FEIS should make this clear and discuss strategies to meet coastal zone policies, including improved access.

While the DEIS promises the project will have “minimal grading” no specific amount of cubic yards moved etc is given to qualify that statement as accurate. Coastal grading is already going on what appears to be Olowalu Elua land near Camp Pecusa. Is this part of the Master Plan?

Wetlands

On p. 27 the DEIS claims the project “does not endanger any wetland” and affirms that there are no wetlands nearby or in project area. It is our understanding that, lands in Ukumehame are considered wetlands. An area of “gley soils” consistent with intermittent wetlands is found near burial site no. 4693 in the Makai section of Olowalu Elua land. The area is recorded in Fredricksen’s 1999 AIS. It is disappointing that the function of the coastal lands of Olowalu as intermittent wetlands is explained away by consultants and the Army Corps of Engineers. Olowalu needs functional wetland areas to keep its reefs and oceans healthy.

Marine Resource Impacts

Background on West Maui’s Most Important Reef System:

Scientists, researchers, recreational users and regulatory agencies agree that the reef system from Olowalu to Ukumehame is outstanding in its variety of species and biological importance. They also agree that this is the last well functioning reef system on the West Maui coast.

The importance of this reef was so great that in 2000 Native Hawaiian group Na Kupuna O Maui attempted to intervene in the SMA permit process for the proposed Olowalu Mauka subdivision. As a result of a private settlement for the intervention, Na Kupuna O Maui was given around \$20,000 to use for a marine resources baseline study of the area’s reefs, marine water quality and biological diversity.

Dr. Eric Brown was contracted to do the study which was designed to span both wet and dry seasons. The study results were published in 2003 and were included in the Olowalu Town EISPN (2010) . It was the understanding of Na Kupuna O Maui that periodic updates of the baseline study would be done to monitor the effects, if any, of the development of the Olowalu

Mauka subdivisions and the two makai subdivisions. The funding provided was sufficient for a two year process and appears to have been utilized.

Unfortunately, no additional monitoring work appears to have been done until the recent study by Dr. Dollar. It is essential that the FEIS discuss the applicant's plans for ongoing monitoring of the marine ecosystem in Olowalu and adaptive management strategies to deal with any impact trends identified.

Comments on Appendix D- Marine Resources Report:

The Olowalu Town DEIS includes a report dealing with marine resources and analyses of potential impacts to near shore waters. The project consultant appears to have spent four days surveying the area, conducting one water quality sampling during the time, and his conclusions tend to downplay any special importance or significance to the area.

Earlier baseline studies of this same reef from ca. 2000-2001 (Brown, et al, 2003) included varied seasonal components, but they and their conclusions are not referred to at all in the DEIS. It appears that the strategy is to try have the current marine resource study results support a forgone conclusion of "no impacts" as long as Best Management Practices (BMP) are implemented.

The consultant does not discuss what would happen to nearshore waters if BMP's are not followed, or do not prove effective. This is the key information required under Ch 343 guidelines, and it is missing. Without this topic included, the discussion of impacts is incomplete, since it is based upon an unproven assumption.

Experience shows that each successive West Maui coastal and coastal uplands development has made the same assumption: Retention basins would be in place. BMP's would be followed. There would be no impacts.

The result is that the reefs of Honolua are fighting for survival. The reefs of Napili have been degraded. The reefs of Kahekili have declined sharply in the last decade. The reefs of Kaanapali are a shadow of their former diversity. Only the Olowalu reef has held its own.

None of this is mentioned in the Appendix D report on Marine Waters and Biotic Resources. Nor is it mentioned that Olowalu's marine consultant was a frequent consultant on the former projects at the former locations where his reports also reached the conclusion that with proper mitigation, there would be no impacts.

The facts are: mitigations are rarely adequate, and **THERE ARE IMPACTS**. There is abundant factual material to support this observation, but it is excluded from this DEIS.

The FEIS should clarify some of the claims regarding impacts to nearshore waters by including information from various marine science professions with long experience in the Olowalu area

who are sending in their comments. We would like to address the shortcomings of a few of the common assumptions made in the DEIS Marine Resources studies.

1. The nearshore “mixing zone” for groundwater and seawater is restricted to 10’s of meters from shore.

Experienced divers have observed that daily afternoon wind and waves will mix this surface freshwater into the water column beyond this nearshore groundwater discharge area, where it certainly can, and will, interact with the reef ecosystem. Studies underway at Kehekili reef in Kaanapali have illustrated this phenomena. Ground water does get beyond the “mix zone.”

2. Natural ground water currently entering the ocean in the project area is already high in nitrogen, therefore increased nitrogen-laden discharges from land won’t affect the marine ecosystem.

Scientists have observed elevated nitrogen levels at many natural dry land areas on Maui. One explanation given is that many common plants fix their own nitrogen (ie. Kiawe) and this excess nitrogen enters into the ground water. Areas like Olowalu, may have fairly high nitrogen levels entering the system and this has likely been the case for hundreds of years. As a result, the ecosystem has likely adapted to this condition. The local fish and sea urchins step in to keep the nitrogen fed limu population down. Changes to this system, like alterations in the amount and location of groundwater discharges can have a substantial impact on the reef ecosystem that has evolved in that area. The key here is we probably can not predict what these impacts will be. The DEIS does not acknowledge even the possibility of these future impacts.

3. Groundwater discharges will likely decrease 6% but that will have no effect on marine ecosystems, since the consultant concluded that “at present, groundwater is so restricted in distribution that there is no effect on marine community structure.”

Dr. Dollar and Tom Nance offered no sound scientific proof of this assumption. Nature, especially the water element, is not yet well understood by humans. Future development patterns may cause groundwater now discharged in one location to be reduced, but in other locations discharges may be increased from irrigation, and other alterations on land. A city of 1,500 dwellings will significantly increase the water use on land and all that water will seep into the ground and enter into the water somewhere. These changes are very likely to affect the marine ecosystems in some form. The DEIS ignores the need to consider the likely effect of changes in groundwater discharge patterns, by avoiding any in depth research and offering an unverified assumption, as if it were a known and proven fact.

4. Use of treated effluent for irrigation, replacing stream water will have no influence on marine ecosystems.

Treated effluent will still seep into the ground and work its way into the ocean. The concern is: will this happen in locations that may not be adapted to this type of groundwater discharge? This important question is neither posed nor researched by the Olowalu marine consultant.

5. Aggressive use of retention basins will improve conditions resulting in less sediment run-off

While sediment retention in the Olowalu area can be absorbed, it certainly needs to be improved after over 100 years of sugar farming, it's also important to note that Olowalu's low lands are mostly undeveloped at this point. This allows heavy rainfall to flood the area with less impact on residents and the nearshore waters and be absorbed.

Development proposed for these lowlands will change this pattern, resulting in the need to deal with run off. There is no guarantee that this will be done in a way to allow for complete water retention and minimize impacts of flooding, in spite of the best intentions the applicants may have. It is a given that increased urbanization means more roads, homes, lawns and other surfaces that do not naturally retain rainfall. Water will move down slope quicker than it currently does, and this will tend to result in increased land based pollution reaching our reefs.

In spite of the engineering claims made in the DEIS, it is unlikely that a major development of this scale will improve overall conditions. This is another "paper" assumption.

6. Individual residences and structures will use rain gardens etc to minimize run-off, and this will minimize any impacts the project would have on the nearshore water quality.

Building and landscape design and individual efforts have an important role to play in minimizing non- source pollution and runoff impacts. But no solid evidence is offered regarding what proportion of residents will participate and how many structures will not be able to incorporate these measures into their design and maintenance. It should be acknowledged that under the most likely scenario, there will be an overall increase in impervious surfaces that will likely increase run-off. The DEIS should actually evaluate the impacts of this run-off rather than taking the position that it simply will never reach the ocean. This has not been demonstrated anywhere on Maui.

7. Numbers of large fish on the Olowalu reef area were very low, most likely due to fishing pressure.

Dr. Dollar's observations, taken over such a brief span do not match with the observations of ongoing researchers in the area. These researchers characterize Olowalu as one of Maui's "prime marine ecosystems." Researchers point out that overall, the fish biomass in Olowalu is equal to that of most of our Marine Life Conservation Districts, where fishing is prohibited or strictly regulated.

Olowalu's offshore reef structure is described as: "very healthy, diverse and provides excellent structured fish habitat. Even with heavy fishing pressure, we regularly see large parrotfish in this area."

The question the DEIS should examine is: "Would a major new development change these existing marine ecosystem conditions?" A number of researchers feel it would be highly likely.

More people living in the immediate area would mean more fishing pressure. Increased likelihood of land based pollution could easily result in decreases in the overall habitat health and therefore its ability to support abundant fish life.

Unless every thing works out perfectly for this development, nearshore waters will be affected. Unlike the project consultant, local marine researchers characterize Ukumehame/Olowalu nearshore reef complex as “the last well functioning large coastal reef flat along the leeward side of Maui.”

It is also home to some of the rarest coral species that still remain on Maui, a fact overlooked or denied by the consultant as a result of his brief survey of the area. Marine scientists, cultural practitioners and researchers urge policy makers to seriously consider the consequences of their actions on this issue and err on the side of precaution, for once.

The conclusion of Dr. Dollar, the Olowalu marine resources consultant: that as long as BMPs are utilized and retention basins maximize sediment trapping, “there is no rationale to indicate potential changes that could be considered negative impacts to the marine environment” is not based on sufficient research and does not take into account other reviews of the area such as Dr. Brown’s earlier baseline study.

In Conclusion:

The Olowalu Town DEIS is missing or misrepresenting essential information needed to evaluate the project’s impacts to local residents, natural resources and existing infrastructure. As such it does not comply with HAR 11-200-16:

“The environmental impact statement shall contain an explanation of the environmental consequences of the proposed action. The contents shall fully declare the environmental implications of the proposed action and shall discuss all relevant and feasible consequences of the action.”

It does not conform to the West Maui Community Plan, (1996) and this fact is not fully discussed.

It ignores the major changes in project design recommended and shown in adopted maps of both citizen advisory groups who reviewed the project for inclusion in the Maui Island Plan, (MIP) yet repeatedly refers to the fact that both bodies recommended the project be included in the MIP growth boundaries.

The Olowalu Town DEIS does not review, describe or consider any meaningful Alternative designs, density or configurations for the project that could reduce its environmental impacts.

Such alternatives could include:

1. A smaller project footprint and unit count to avoid impacts to groundwater supplies;
2. Deletion of development areas maikai of current Honoapiilani Hwy

(as recommended by Maui Planning Commission and adopted in their MIP map)

3. Project redesign to avoid development in low lying regions along the existing highway.
4. Minimizing Urban elements of the project into a smaller footprint
5. Proposing a similar project design in a more inland location.

Because the DAR does not discuss any of these alternatives, it does not comply with disclosure and discussion standards required under HAR 11-200-17:

- (f) “The draft EIS shall describe in a separate and distinct section alternatives which could attain the objectives of the action, regardless of cost, in sufficient detail to explain why they were rejected. The section shall include a rigorous exploration and objective evaluation of the environmental impacts of all such alternative actions. Particular attention shall be given to alternatives that might enhance environmental quality or avoid, reduce, or minimize some or all of the adverse environmental effects, costs, and risks.”

including:

- (3) Alternatives related to different designs or details of the proposed actions which would present different environmental impacts;

In each case, the analysis shall be sufficiently detailed to allow the comparative evaluation of the environmental benefits, costs, and risks of the proposed action and each reasonable alternative. For any agency actions, the discussion of alternatives shall include, where relevant, those alternatives not within the existing authority of the agency.”

The DEIS also dismisses the idea that the project could have secondary and cumulative impacts even though, the project proposes urbanizing an area that last had significant population several hundred years ago. For these reasons, the LUC should find the DEIS incomplete and unacceptable.

Mahalo for the opportunity to comment

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