

EXECUTIVE SUMMARY

Brief Description of the Proposed Action

The Proposed Action constitutes the issuance of one long-term (30-year) Water Lease from the Board of Land and Natural Resources (BLNR) that authorizes the lessee the "right, privilege, and authority to enter and go upon" the License Area for the "purpose of developing, diverting, transporting, and using government owned waters" through the existing East Maui Irrigation (EMI) Aqueduct System which supplies water to domestic and agricultural water users. The Water Lease, which will be awarded by public auction, will enable the lessee to enter upon lands owned by the State of Hawai'i in order to maintain and repair existing access roads and trails used as part of the EMI Aqueduct System, and will allow for the continued operation of the EMI Aqueduct System to deliver water to the County of Maui Department of Water Supply (MDWS) for domestic and agricultural water needs in Upcountry Maui, including the agricultural users at the Kula Agricultural Park (KAP) and the planned 262-acre KAP expansion, as well as for the Nāhiku community, which, through the MDWS, draws between 20,000 to 45,000 gallons per day (gpd), depending on weather, directly from the EMI Aqueduct System. It will also allow the continued provision of water to approximately 30,000 acres of agricultural lands (formerly in sugarcane) in Central Maui where it will be used to support diversified agriculture.

No construction activity will be required to implement the Proposed Action in East Maui or to the MDWS systems delivering water from the EMI Aqueduct System. In the agricultural fields of Central Maui, Mahi Pono will prepare fields and conduct farming operations for diversified agricultural crops. Current plans include new accessory structures to support agricultural operations such as washing and packing areas, storage, etc. However, Mahi Pono's farm plan as described in this Draft Environmental Impact Statement (DEIS) is, like any responsible farming plan, a fluid and responsive plan that responds to the ever-changing agricultural market demands and the type of agricultural activity to be pursued (i.e. orchard crops, tropical fruits, row and annual crops, energy crops, pasturage etc.), as well as responding to other variables such as the availability and cost of water for crop irrigation, and the need to be sensitive to the existing local farming community. Mahi Pono's goals for its diversified farm plan in Central Maui will be guided by its core principles of using reasonable and environmentally responsible "best management practices" (BMP), planting non-GMO crops, and growing food for local consumption. For the purpose of this DEIS, Mahi Pono's Farm Plan projects use of the total amount of water available after compliance with the IIFS requirements of the CWRM D&O, although it is understood that the Department of Hawaiian Home Lands (DHHL) will eventually convert its water reservation to active use.

Independent of the Proposed Action, on June 20, 2018, the Commission on Water Resources Management (CWRM) issued a decision on Petitions that had been filed in 2001 to establish Interim Instream Flow Standards (IIFS). The CWRM Findings of Fact, Conclusion of Law, and Decision and Order (CWRM D&O) in Docket No. CCH MA 13-01 established IIFS for numerous streams and tributaries of streams in the License Area, which includes water originating and flowing from both State and privately owned lands within East Maui.¹ The CWRM D&O

¹ CWRM found that there are 24, not 27, streams that were subject to the IIFS contested case because: (1) Waikani is not a stream but a waterfall of Wailuānui Stream; (2) Alo is a tributary of Waikamoi Stream; and (3) Pua'aka'a is a tributary of Kopili'ula Stream.

establishes a quantity of water that must remain in each stream at specified locations. The CWRM D&O ordered full stream restoration for 10 streams and partial flow restoration on 12 additional streams (Please refer to Section 1.3.4). The maximum amount of water that can be awarded through the Water Lease is what is available for diversion after implementation of the CWRM D&O.

The amount of water awarded by the Water Lease is also subject to all applicable requirements under Hawai'i Revised Statutes (HRS) § 171-58, which articulates terms for the disposition of a water lease. HRS § 171-58(e) requires that any new lease of water rights "shall contain a covenant that requires the lessee and the department of land and natural resources to jointly develop and implement a watershed management plan. The board shall not approve any new lease of water rights without the foregoing covenant or a watershed management plan." The content and parameters of a watershed management plan related to the proposed Water Lease are unresolved at this time, but will be resolved before BLNR can issue the Water Lease.

The Water Lease is also subject to the rights of the DHHL to reserve water sufficient to support current and future homestead needs as provided by Section 221 of the Hawaiian Homes Commission Act. Until that reservation is physically claimed, however, the water will remain available for use by the lessee under the Water Lease.

Alternatives Considered

Various alternatives that could potentially achieve the objectives of the Proposed Action were evaluated, regardless of their cost and with particular attention to those that could enhance the environment or minimize adverse environmental effects. Some of these alternatives were considered but dismissed as they were not feasible or would intensify adverse environmental effects. Those alternatives that were considered feasible were comparably evaluated with the Proposed Action.

Alternatives considered but dismissed included certain water source alternatives, including use of groundwater and use of reclaimed water, as well as additional water storage. A change of ownership of the EMI Aqueduct System was similarly considered but dismissed from further study. The reasonable alternatives that were comparatively analyzed with the Proposed Action were the: (1) Reduced Water Volume Alternative, where the Water Lease would be issued allowing the lessee to use less water than is permitted under the CWRM D&O; (2), Water Lease with Different Terms, which consists of two scenarios, (a) an Alternative Lease Duration scenario, where the Water Lease would be issued for a term of years other than the 30 years contemplated under the Proposed Action; and (b) the Modified Lease Area scenario, where the Water Lease would allow the use of the same amount of water as under the Proposed Action, but the geographic boundaries of the Lease Area would be reduced in size sufficient only to maintain the public safety and integrity of the EMI Aqueduct System. The No Action aka No Water Lease alternative, where the EMI Aqueduct System would only divert approximately 30% of the water available from the Collection Area², plus the water presently diverted from streams on private lands beyond the License Area, was also analyzed.

² The Collection Area refers to the approximately 50,000 acres of land from which the surface water is collected. Of those 50,000 acres, approximately 33,000 acres are owned by the State of Hawai'i, and the remaining approximately 17,000 acres are privately owned.

Significant Beneficial and Adverse Impacts (Including Cumulative and Secondary Impacts)

The Water Lease would allow the use of government-owned waters from the License Area through the EMI Aqueduct System. Use of that surface water would allow the continued provision of water to enable approximately 30,000 acres of farmland in Central Maui to remain in agriculture. The Water Lease would also allow the continuation of a supply of water to the MDWS, which in turn provides water for domestic and agricultural water needs in Upcountry Maui, including agricultural users at KAP and the planned 262-acre KAP expansion, as well as for the Nāhiku community, which draws 20,000 to 45,000 gallons per day, depending on weather, directly from the EMI Aqueduct System.

The MDWS's Upcountry Maui Water System is the second largest in the County. It services the communities of Kula, Pukalani, Makawao Ha'ikū, Hali'imaile, Waiakoa, Kēōkea, Waiohuli, 'Ulupalakua, Kanaio, Olinda, 'Ōma'opio, Kula Kai, and Pūlehu. The Upcountry Maui Water System is estimated to serve over 35,000 people, and the service area includes several businesses, churches, Kamehameha Schools, Hawaiian Homelands and government facilities. The County anticipates that the population served by the Upcountry Maui Water system will grow to approximately 43,675 by 2030. Continued water service to the MDWS through the EMI Aqueduct System as anticipated under the Proposed Action provides a significant cost avoidance benefit to the County of Maui because the costs of developing new wells is significant. There are also beneficial agricultural and fiscal impacts related to the continued water service to the Upcountry Maui Water System. It is estimated that under the Proposed Action approximately 1,510 acres of land in Upcountry Maui would be farmed by 2030, generating crops sales and new jobs.

Moreover, the proposed Water Lease will ensure that the EMI Aqueduct System, which enabled the cultivation of naturally non-arable lands in Central Maui, will be maintained to continue to serve the community, continue Maui's rich agricultural heritage, and to enhance the sustainability and diversity of Maui's economy. Mahi Pono's objective is to transition as much of the former sugarcane land as possible to diversified agriculture. Under the Proposed Action, the utilization of waters delivered from the EMI Aqueduct System will be an essential element to the success of any such diversified agricultural pursuits. Several benefits arise from proposed diversified agriculture in Central Maui. At full implementation and operation, the Mahi Pono farm plan is projected to generate more than 338 pounds per year of crops, generating \$155.9 million per year in annual food sales and \$329.5 million per year in combined direct and indirect sales. Pastures will support some 7,300 cow-and-calf animal units, producing over 4,300 calves per year and together with crop sales will result in total farm sales of about \$160.7 million per year. The Mahi Pono farm plan is also anticipated to create some 790 jobs on-site and another 350 indirect jobs for a total payroll of \$45.3 million per year. This is projected to support 2,550 Maui residents and generate \$4.5 million per year in State revenues through taxes. Diversified agriculture will increase the amount of local food production and enhance Hawai'i's food security. The Mahi Pono farm plan also includes a utility scale renewable energy component that will further Hawai'i's goals of having 100% renewable energy by 2045. Diversified agriculture in the 30,000 acres in Central Maui will also keep the fields open and green, which is something many view as beneficial, and is consistent with State and County planning and zoning.

The amount of water available through the Water Lease will be limited by the IIFS established under the CWRM D&O. Therefore, the cumulative effect of the Water Lease includes the implemented CWRM D&O.

- The CWRM ordered that all diversions on the following streams cease to primarily allow for all water to flow to the taro growing areas or for community and non-municipal domestic uses: Honopou, Huelo (Puolua), Hanehoi, Pi'ina'au, Palauhulu, Waiokamilo, Wailuānui, Waiohue, West Wailuāiki,³ and Makapipi. (CWRM D&O, at 268-269). All diversions for these streams are required to be modified so that no out of watershed transfers will occur from these streams, which will have uninterrupted free flowing water to the communities that depend upon them. It was not the CWRM's intent to regulate where and how much water will be used for traditional kalo agriculture or how the water will be apportioned amongst the kalo lo'i. The CWRM's approach does not automatically set precedents for other areas, but provides a model of water use that integrates traditional culture with modern natural resource management (CWRM D&O, Conclusions of Law (COL) 138-145).
- The CWRM ordered full and partial restoration of streams it concluded to have the potential to benefit greatly from the restoration of flow to 64% of the median base flow (BFQ₅₀), which generally represents the flow necessary to restore 90% of the habitat in a stream (H₉₀), based on the biological diversity and habitat that already exists. Restoration of these streams (Pi'ina'au, Wailuānui, Honomanū, Waikamoi, Nua'ailua, East Wailuāiki, Kopiliula, and Waiohue) was ordered to allow the stream species to flourish and reproduce, benefitting not only the natural environment but also allowing for better opportunity for the exercise of traditional and Hawaiian right (CWRM D&O, COL 131). -
- The CWRM concluded that West Wailuāiki (that was ordered for full restoration) presents a unique research opportunity to collect valuable information regarding the impact of full restoration of a stream versus habitat restoration (H₉₀). East Wailuāiki (that was ordered for H₉₀ restoration) and West Wailuāiki lie in close proximity to each other and have similar biological values and similar habitat biota. Therefore, the CWRM intends for these two streams to be studied in the future in combination with one another to see the impact, if any, of full restoration versus habitat restoration (CWRM D&O, COL 135).
- Honomanū Stream, which was ordered for H₉₀ restoration above Hana Highway, is a gaining stream from above the Lower Kula Ditch to Spreckles Ditch. Below the Spreckles Ditch it becomes a losing stream most likely as a result of the diversion. Honomanū Stream, despite having several diversions on it, has a high biological rating with a potential for high natural habitat gains with the restoration of flow to the dry reaches. Thus, the CWRM concluded that Honomanū Stream should have full streamflow restoration below

³ West Wailuāiki was ordered to be fully restored because it presented a unique research opportunity to collect information on full restoration vs partial (H₉₀) restoration of nearby East Wailuāiki Stream which has similar biological values and similar habitat and biota.

the Lower Kula Ditch diversion, which provides water for the MDWS system that is used for domestic and agricultural uses. (CWRM D&O, COL 136).

- Various streams within the License Area have low biological ratings and or do not have the potential to improve drastically with increased flows. These streams were set at connectivity flow which is twenty percent (20%) of the instream flow (CWRM D&O, COL 30). Streams that are set at connectivity flow are: Kapā'ula, Pa'akea, Pua'aka'a, Puohokamoa, Ha'ipua'ena, Nua'ailua, and Hanawī. (CWRM D&O at 268-269). None of these streams have registered diversions for taro cultivation nor is there taro cultivation known to occur on these streams (CWRM D&O, COL 147).
- The CWRM acknowledged that in the context of a proceeding to set IIFS, it does not have the authority to determine how much water may be used for noninstream use for municipal and agricultural uses. That authority lies with the BLNR in issuing a water lease pursuant to HRS § 171-58, subject to the IIFS set by the CWRM. (CWRM D&O, COL 148). Recognizing that the noninstream uses, especially municipal use, are valued uses, the CWRM set the IIFS to allow the MDWS to continue to divert water through its Upper and Lower Kula Pipelines. (CWRM D&O, COL 149). In not requiring full restoration of all streams, the CWRM has allowed some streams to continue to be diverted so that the BLNR may continue to license the diversion of water not needed to meet the IIFS from those streams for noninstream use. The available water would also include freshets and stormwater which are not included in the calculation of the IIFS. (CWRM D&O, COL 150).
- The CWRM recognized that the EMI Aqueduct System remains a valuable asset that delivers noninstream public trust benefits, such as drinking water, as well as other reasonable and beneficial uses. The reduction in diversions does not, by itself, compromise the structural integrity of the EMI Aqueduct System so long as it continues to be maintained as a single coordinated system. The CWRM considered factors that contribute to the operational capacity of the existing EMI Aqueduct System by allowing some water diversions from streams in the higher elevation eastern portion of the watershed. (CWRM D&O, COL 151).

The diversion of surface waters from the License Area in East Maui to the agricultural fields in Central Maui under the Proposed Action, as well as delivery water to the MDWS to service Upcountry Maui and Nāhiku, would not involve the construction of any new facilities, hence, it is not anticipated that there would be any unavoidable impacts or probable adverse effects. Past access into the License Area to construct the EMI Aqueduct System may have resulted in the inadvertent introduction of invasive species. In the future, with continued access for maintenance of the EMI Aqueduct System, the possibility of inadvertently introducing additional invasive species remains.

In the Proposed Action, the amount of water that can be conveyed by the EMI Aqueduct System will be limited to the amount available after compliance with the CWRM D&O. The CWRM D&O limits the amount of water that can be diverted, particularly when streams in the License Area are

naturally running low during seasonally dry weather conditions. Hence, the amount of water that can be diverted during dry weather conditions would be substantially less than when sugar was being cultivated. As a result, dependence on groundwater resources during such conditions may increase and/or water conservation measures may be required. Future climate change could also exacerbate the frequency and length of periods of low rainfall.

The Water Lease will authorize the use of diverted surface water, resulting in certain streams having less flow than under natural conditions. However, the Water Lease will also be subject to the CWRM D&O, which identified the streams most important for biological habitat purposes and mandated certain minimum flows to support those streams. As such, the biological impacts of the Water Lease are far less than the impacts that were in place at least since the time of the completion of the EMI Aqueduct System (in 1923), if not even earlier, e.g. the completion of the first portion of the EMI Aqueduct System in 1878.

Additionally, Mahi Pono's proposed agricultural operations include a high-efficiency irrigation system to reduce water usage. Therefore it is anticipated to use less water than what was previously used during sugarcane operations, thereby leaving more water in the streams. However, by using less surface water to irrigate the Central Maui agricultural fields, it is expected that there will be a lower level of groundwater recharge to the region's groundwater aquifers as discussed in Section 4.2.2. Consequently, the lower level of groundwater recharge in combination with periods of lower rainfall, could result in lower levels of groundwater supply in the Central Maui aquifers. Beneficial impacts to the soils in Central Maui are expected as they are improved through the removal of volunteer (i.e., rogue) sugarcane and weeds, and related soil preparations for diversified agriculture. These preparations include the application of effective micronutrients, plastic removal, pH adjustments, and the application of organic matter as discussed in Section 4.1.2.

Mitigation Measures

With regard to the maintenance of the EMI Aqueduct System, when maintenance activities are undertaken within the License Area in pristine areas, such as on cliffsides, near waterfalls, or in other native species dominated areas, the following avoidance and minimization measures will be employed:

- A qualified biological monitor should be on site to ensure that no listed or candidate species are impacted.
- The monitor should have familiarity with the plants of the area, including special-status species, familiarity with natural communities of the area, including special-status natural communities, experience conducting floristic field surveys, and experience with analyzing impacts of development on native plant species and natural communities
- To avoid the introduction or transport of new invasive plant species into more pristine portions of the License Area during EMI Aqueduct System maintenance activities, all equipment and vehicles arriving from outside the License Area should be washed and inspected prior to any maintenance activities on cliff sides, near waterfalls, and in other native species-dominated areas in the License Area. Such washing and inspecting should be done at a designated location.
- Construction materials arriving from outside Maui should also be washed and/or visually inspected (as appropriate) for excessive debris, plant materials, and invasive or harmful non-native species (plants, amphibians, reptiles, and insects). When possible, any raw

materials used in maintenance activities should be purchased from a local supplier on Maui to avoid introducing non-native species not present on the island. Inspection and cleaning activities should be conducted at a designated location. The inspector must be a qualified botanist/entomologist able to identify invasive species that are of concern relevant to the point of origin of the equipment, vehicle, or material.

Mahi Pono will clear the former sugarcane fields in Central Maui to transition to a diversified farm operation. Applicable BMP and erosion control measures will be implemented to ensure no adverse impact to the existing geology and topography. Once diversified farming commences, appropriate BMP will be used to comply with applicable State Water Quality Standards as specified in Hawai'i Administrative Rules (HAR) , Chapter 11-54 and HAR, Chapter 11-55 Water Pollution Control, Department of Health. The proposed structures to support Mahi Pono's agricultural operations will obtain all applicable permits and approvals for site preparation and building construction, including the National Pollutant Discharge Elimination System permit for the management of storm water during construction.

When water service is provided to the planned 262-acre expansion of the KAP, grading and grubbing work prior to cultivation will disturb soils but with intent of facilitating cultivation and to conserve soil and water. The County will be responsible for complying with all applicable permit requirements.

The Cultural Impact Assessment (CIA), prepared by Cultural Surveys Hawai'i, Inc., suggests that cultural informants may have an unclear understanding of how the CWRM D&O and the awarding of the Water Lease may affect cultural resources and practices. However, it should be acknowledged that due to the reluctance of many to participate in the CIA consultation, much of the information relied upon in the CIA is documentation that was provided to the CWRM during the IIFS proceedings, and therefore is information that was given some years before the issuance of the CWRM D&O. Nevertheless, the CIA provides recommendations, some of which are addressed through the preparation of this DEIS

- A qualified professional should address questions or clarification on stream flow, water diversion, and climate statistics.
 - To the extent of analyzing the Proposed Action, the DEIS addresses these concerns in Chapters 2 (Section 2.1.2) and Chapter 4 (Section 4.3.1).
- A biologist or similar qualified professional should provide an assessment of the impacts of water diversion to indigenous freshwater species (*ōpae*, *o'opu*, and *hīhīwai*) within the License Area.
 - The implementation of the IIFS under the CWRM D&O has the potential to reduce or eliminate this cultural impact. Furthermore, Trutta Environmental Solutions, LLC and SWCA Environmental Consultants, Inc. prepared reports assessing the impacts of the Proposed Action, particularly impacts on indigenous freshwater species, and terrestrial flora and fauna. The impacts of the Proposed Action to freshwater species are discussed in Section 4.2.1 and the impacts to terrestrial flora and fauna are discussed in Sections 4.4.1 and 4.4.2. Moreover, the two reports are appended to the DEIS (See Appendix A and Appendix C).
- A botanist, ethnobotanist, or similar qualified professional should provide an assessment of the ideal conditions of water flow and water temperature needed for kalo growth in comparison to the current water flow and water temperature of impacted areas in order to understand and address the stated impact.

- The implementation of the IIFS under the CWRM D&O has the potential to reduce or eliminate this cultural impact
- Any personnel involved in access, maintenance, or any other related activities within the License Area should be informed of the possibility of inadvertent cultural finds, including human remains. In the event that any potential historic properties are inadvertently discovered within the License Area, these discoveries should be reported immediately to State Historic Preservation Division (SHPD). In the event that *iwi kūpuna* and/or cultural finds are encountered, consultation with lineal and cultural descendants of the area is also recommended.

The Social Impact Assessment (SIA), prepared by Earthplan, recommends measures intended to establish an ongoing working relationship between the community, Mahi Pono and EMI, and related public agencies, as well as work towards resolution with East Maui communities.

The SIA recommends that clearly defined interest groups, or stakeholder groups are established that include geographic communities, environmental, agriculture and business interests, and public agencies. Each group would be encouraged to reach consensus on their own needs, concerns, opportunities and possible solutions.

These groups should then be equitably represented in a “Core Working Group” that would serve as a forum for exchanging ideas and collaborative efforts, as well as to provide feedback and suggestions to Mahi Pono. Each member of the Core Working Group would be expected to reach out to their own networks to extend the discussion beyond the Core Working Group. While there would likely be strong differences in perspectives and opinions, the Core Working Group would need to find ways to establish core principles, common ground and manageable solutions.

The fundamental value that will help bring people to the same table is trust. Use of the water through the EMI Aqueduct System for sugarcane cultivation has elicited skepticism and distrust over many decades. Developing trust among the various groups is expected to be challenging, but being open about intent, plans, and activities can begin to establish credibility and open the door to dialogue.

Additionally, for the Ke‘anae – Wailuānui community to move past historical impacts, there needs to be established a point of departure. Mitigation needs to go beyond the physical restoration of streams and needs to address the social context and include apology and reconciliation. This needs to be done within a cultural foundation that binds the community together, and key players, including Mahi Pono, public agencies and elected officials. The manner and forum for this process should be defined by the cultural leaders integral with the process.

Compatibility with Land Use Plans and Policies

The relationship of the Proposed Action to potentially applicable land use plans and policies was evaluated. It was determined that the Proposed Action is supportive or consistent with numerous applicable plans and policies. The following plans were evaluated:

- The Hawai‘i State Plan, Chapter 226, HRS
- State Functional Plans
 - Agricultural State Functional Plan
 - Conservation State Functional Plan
 - Education State Functional Plan
 - Employment State Functional Plan
 - Energy State Functional Plan

- Health State Functional Plan
- Higher Education Functional Plan
- Historic Preservation State Functional Plan
- Housing State Functional Plan
- Human Services State Functional Plan
- Recreation State Functional Plan
- Tourism State Functional Plan
- Transportation State Functional Plan
- The State Land Use Law, Chapter 205, HRS (including the provisions regarding Important Agricultural Lands)
- Forest Reserves, Chapter 183, HRS and related administrative rules
- Natural Area Reserves, Chapter 195, HRS and related administrative rules
- The Hawai'i Coastal Zone Management Program, Chapter 205A, HRS
- Governor Ige's Sustainability Initiative
- The Hawai'i Environmental Policy Act, Chapter 344, HRS
- The State Water Plan
 - Draft Maui Island Water Use and Development Plan (March 2019)
- The Maui Countywide Policy Plan
- The Maui Island Plan
- Maui County Zoning
- Maui Island Community Plans
 - Hāna Community Plan
 - Pā'ia-Ha'ikū Community Plan
 - Makawao-Pukalani-Kula Community Plan
 - Wailuku-Kahului Community Plan

Listing of Permits and Approvals

The Proposed Action constitutes the issuance of a Water Lease after public auction by the DLNR/BLNR. Thus, the BLNR approval is necessary to implement the Proposed Action. While it is anticipated that the terms of the Water Lease would govern any modifications to the existing EMI Aqueduct System, there are no immediate plans for the construction of any additional facilities that would expand the EMI Aqueduct System within the License Area. Any work on the EMI Aqueduct System would be limited to repair and maintenance activities. Consequently, no additional permits and approvals are anticipated to be required to implement the Proposed Action.

Should the Water Lease be issued according to the Proposed Action, surface water will become available for the various domestic and agricultural uses. This would, in turn, will lead to construction activities such as for expanding the KAP and building facilities in support of diversified agriculture in Central Maui. Such construction would be subject to various permits and approvals, depending on its location, proposed use and type of construction activity involved.

Irretrievable and Irreversible Commitments of Resources

The issuance of the Water Lease will not result in the irreversible use of the water resource because the Water Lease will be for a term, and not perpetual. Additionally, the Water Lease will be subject to the IIFS and the reservation in favor of the DHHL, meaning that the water resource will not be exclusively and permanently committed to the Water Lease. For the term of the Water Lease the water resource will be available to the identified uses, such as providing water to the agricultural fields in Central Maui and continuing to provide water to the MDWS for Upcountry Maui and Nāhiku. To the extent such uses are not made, the water will not be diverted and will remain in the streams.

The impacts of use of the surface water resources associated with the Proposed Action will be offset by the considerable economic, social, and environmental benefits to the residents of the region, the County of Maui and the State of Hawai'i that would be supported by the issuance of the subject Water Lease, as discussed in Section 4.7.

The Water Lease does not involve new construction within the License Area. The operation of the EMI Aqueduct System does not require the use of nonrenewable resources because the transmission of water through the EMI Aqueduct System is conducted through gravity rather than through water pumping stations that require the use of nonrenewable energy sources for operations. The diversified agricultural operations planned for the Central Maui agricultural fields will involve the commitment of some resources for the modifications of the fields' irrigation system and the construction of fencing, agricultural operating facilities and potentially renewable energy facilities. Building materials (concrete, wood, metal, etc.) will be used along with energy resources related to the construction of those items. The use of such fuels and resources is not expected to be significant and the use of the Central Maui agricultural fields for diversified agriculture is considered to be beneficial because there would be considerably more green open space in Central Maui in the form of farms and irrigated pasture, a reduction in wildfires, and approximately three times as much food production, including greater food self-sufficiency and more exports, should the Water Lease be issued.

The implementation of the Proposed Action is consistent with existing and adjacent land uses, and would not prevent or curtail any uses allowable under applicable land use policies or controls. The amount of water allowed to be diverted by the Water Lease will be significantly less than the amount diverted for sugar cultivation. Mahi Pono's farm plan is based on the amount of water that will be available through the Water Lease. However, if more water were available, more crop options would also be available. The issuance of the Water Lease should not curtail the use and access to adjacent lands (e.g., for recreation, environmental research, etc.) as the EMI Aqueduct System has been in place for over 100 years.

The implementation of the Proposed Action is not associated with activities that could directly trigger potential environmental accidents, nor pose a significant risk for potentially triggering environmental accidents. Moreover, it is not anticipated that there would be any unavoidable impacts or probable adverse effects. The EMI Aqueduct System has been operating for over 100 years, and issuance of the Water Lease should ensure contained operations and maintenance of the EMI Aqueduct System.

Relationship Between Local Short-term Uses of Humanity's Environment and the Maintenance and Enhancement of Long-Term Productivity

The Proposed Action is the issuance of a Water Lease for a 30-year commitment of government-owned water collected by the EMI Aqueduct System from the License Area for various uses, including domestic and agricultural uses served by the MDWS in Upcountry Maui, the KAP and the Nāhiku community in East Maui; diversified agricultural operations on approximately 30,000 acres in Central Maui; and, preservation of the EMI Aqueduct System. While the Water Lease would be a new commitment of government-owned water diverted through the EMI Aqueduct System, the Water Lease essentially continues an activity that has been in place for over a century. In this new commitment, however, the amount of government-owned water that may be diverted out of the License Area has been limited by the CWRM D&O.

Considering the Water Lease as a short-term use of humanity's environment, the beneficial gains over the term of the Water Lease include the benefits accrued to the various recipients of the water for domestic, commercial and agricultural uses. The Water Lease will maintain the lifestyle and livelihood of those who receive their water through the MDWS in Upcountry Maui and Nāhiku. In Central Maui the Water Lease will provide irrigation water for Mahi Pono to develop diversified agriculture on former sugar land, with associated economic gains from the sale of crops, job creation and increased local food sustainability.

As previously stated, the Water Lease will be limited by the requirements under the CWRM D&O. Through the CWRM D&O, CWRM ordered full restoration of ten streams for primarily taro growing areas for irrigation and for community and non-municipal domestic uses. Five "habitat streams" were ordered to have 64% of their BFQ₅₀ restored, which generally represents the H₉₀, based on the biological diversity and habitat that already exists. Seven were ordered to have 20% of their BFQ₅₀ restored to provide connectivity for migrating stream fauna. While the Water Lease would have a term of 30 years, the IIFS requirements under the CWRM D&O and the associated benefits to the kalo growing areas, communities and environment, would not be affected by the Water Lease term and if not otherwise revised by the CWRM, the IIFS requirements will continue indefinitely.

Without the Water Lease, even if EMI could find it economically feasible to continue maintaining the EMI Aqueduct System to divert non-governmental water for diversified agriculture in Central Maui, there may not be enough water to allocate much or any to the MDWS. This lack of water would exacerbate the effects of drought when other surface water sources are unreliable for the KAP and the Nāhiku, this could eliminate their primary source of water. Insufficient water delivered to the County through the EMI Aqueduct System could have significant effects on health and safety of those who currently rely on that water delivery.

Without active, irrigated agriculture in the Central Maui fields, natural arid conditions would return, making the Central Maui fields susceptible to wind erosion and airborne dust, which could create a nuisance or potential health hazard under windy conditions. Dry windy conditions would also increase the potential for wildfires.

Unresolved Issues

Unresolved issues for the Proposed Action have to do with the steps that must be completed before the BLNR can issue the Water Lease.

The Water Lease must accommodate a reservation in favor of the DHHL, but that amount has not yet been determined and approved by the CWRM, and the DHHL's timing for calling upon its reservation is not known. Similarly, the content and parameters of a watershed management plan are not known at this time. However, both the DHHL reservation and the watershed management plan will be addressed before the BLNR can issue the Water Lease.

Other unresolved issues include the requirement for the BLNR to set the upset rental through appraisal of fair market value, and the requirement for the Water Lease disposition to be by public auction. As such, at this point the amount of rental payment that will be required under the Water Lease, the identity of the awarded lessee, and the specific terms of the Water Lease are unknown, but these issues should be resolved prior to the issuance of the Water Lease.

Consultation

Various agencies, organizations, and individuals were consulted in scoping the DEIS, including scoping that took place prior to the preparation of the EISPN, and during the 30 day public comment period on the EISPN in the form of formal written consultation pursuant to HRS Chapter 343 and HAR Title 11, Chapter 200. Consultation also included meetings with elected officials, agencies, and stakeholders including two public scoping meetings held on Maui during the 30 day EISPN public comment period. A list of those who participated in the consultation process is provided in Chapter 9 and the comments, including the transcripts of the public meetings, and responses are reproduced in Appendix J. Moreover, those who submitted public comments on the published EISPN, and the corresponding responses are reproduced in Appendix M.