

## APT Committee

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**From:** Shay Chan Hodges <shay.chanhodges@gmail.com>  
**Sent:** Tuesday, March 16, 2021 9:25 AM  
**To:** APT Committee  
**Cc:** Ian Chan Hodges  
**Subject:** Please see attached  
**Attachments:** ESG Water Systems Solutions- All Stakeholders.pdf

Shay Chan Hodges

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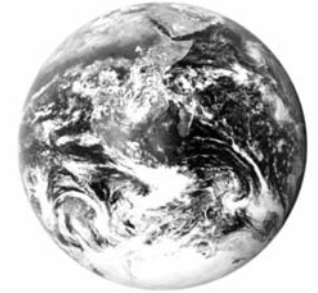
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*March 2021*

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## ESG WATER SYSTEM SOLUTIONS FOR ALL STAKEHOLDERS



**RESPONSIBLE**  
Markets LLC

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## NEXT STEPS: DEPLOYING CAPITAL TO MEET COMMUNITY NEED



01

Build on knowledge and relationships nurtured over the last year to develop actionable ESG business models.

02

Emphasize the “S” in ESG — social care — including addressing the impacts of COVID-19.

03

Develop opportunities for local control over or direct benefit from productive assets that build generational wealth.

04

Develop opportunities for creating jobs that are not reliant on outside discretionary spending such as tourism.

Source: Responsible Markets

## THE COUNTY & COMMUNITY HAVE A UNIQUE OPPORTUNITY TODAY TO ENVISION A NEW FUTURE FOR ITS PRIVATE PLANTATION WATER SYSTEMS

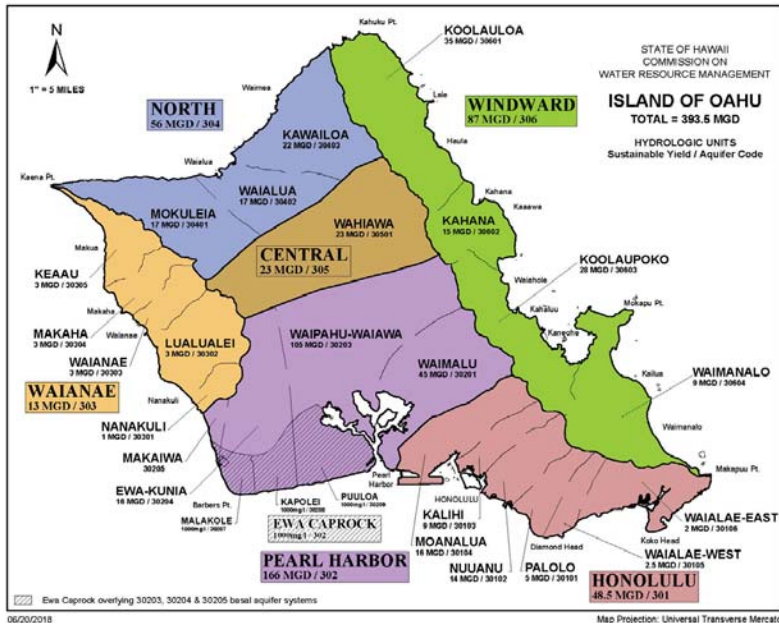
With so many residents dependent upon stream water and shifting weather patterns, it's time to use traditional knowledge, new technology, and new economic models to create a just and common-sense restructuring to manage the Maui watershed lands for Maui's long-term vision.

In the fall of 2020, Na Moku Aupuni O Ko'olau Hui mapped out roads and intakes/diversions, gates, and infrastructure; cleaned and maintained stream access, and collected data about streams in East Maui. Providing local jobs, along with training and skills building, Na Moku networked with technology and hydrology experts.



Source: IoTask & Responsible Markets, Strategic Assessment for Maui County, 2020, Photocourtesy of Maui Nui Marine Resources Council and Na Moku Aupuni O Ko'olau Hui

# MAUI DOES NOT HAVE THE GEOLOGICAL WATER STORAGE CAPACITY OF OAHU



**DUE TO THE LIMITED RESEARCH REGARDING MAUI'S WATER RESOURCES, WATER MANAGEMENT IS PARTICULARLY IMPORTANT**

- Oahu principal source of fresh water in Southern Oahu, is the **most intensely studied area of the Hawaiian islands**. Honolulu and Pearl Harbor areas have received detailed attention since **the early 1900s**.
- Aquifer capacity is a function of geological 'storage'. The **older islands tend to have a geology developed to store more water**.
- Northern and southern ground-water systems in central Oahu **contain large quantities of basal ground water**, in which a body of ground water floats on a body of salt water.
- Oahu also has **free-flowing artesian wells** near the coast and from springs near the basalt-caprock contact, which have **trapped water surrounded by layers of impermeable rock or clay**.
- **Pearl Harbor** (165 mgd Sustainable Yield) and **Waipahu Aquifers** (100 mgd SY) have this "**capstone**" layer, which **boosts storage capacity**.
- On Maui, **only the lao and Waihee aquifers** of Wailuku sector (36 mgd SY) **have been extensively studied**.
- **Though Maui's other two aquifer regions:** Koolau (152 mgd) and Hana (79 Mgd) have **possible large water capacity, but they are unverified**.
- **Koolau Aquifer** may be mostly discharged into streams and therefore, **may not be available as ground water**.

Source: Water Resources Projected Plan, 2019 Update, Lucienne de Naie

## A COMMUNITY ENGAGEMENT PROCESS THAT ASKS & ADDRESSES VITAL QUESTIONS IS CRUCIAL TO CREATING A COMMUNITY-DRIVEN SOLUTION

### WHAT IS "THE" COMMUNITY?

- Only those who live along the system?
- Only those who are dependent upon it?
- Other areas of Maui?
- How are community shareholders defined?

### HOW SHOULD THE WATER SYSTEM BEST SERVE "THE COMMUNITY"?

- For a well-managed water system, what would "meeting the cultural, environmental, agricultural, and other needs of your community" look like?

### HOW SHOULD THE WATER SYSTEM BE IMPROVED?

- Once an engineering study is completed and the condition of a specific system is known, would the community like to see investments in the system? If so, what kind?

### WHAT IS NEEDED FOR PRO-ACTIVE MANAGEMENT AND RESTORATION OF THE WATERSHEDS?

- What is the community's vision of engagement in the watershed regarding access, stewardship, and data collection?

### HOW SHOULD A COMMUNITY OWNED GOVERNANCE STRUCTURE INTERACT WITH GOVERNMENT AGENCIES?

- Commission on Water Resources
- Dept of Land & Natural Resources
- Dept of Hawaiian Home Lands
- US Geological Survey

### IF A COMMUNITY OWNED CORPORATE STRUCTURE WERE DEVELOPED, WHAT SHOULD BE INCLUDED IN A CORPORATE CHARTER?

- What key requirements need to be included to ensure accountability and protect the public trust while supporting efficient and effective management?



# KEY WATER SYSTEMS VARIABLES HAVE BEEN IDENTIFIED FOR EVALUATION BASED ON ESG OBJECTIVES



## ENVIRONMENTAL

- Watershed preservation
- Resilience, including water conservation, production, and storage
- Improve efficiency, reliability and safety of water delivery
- Reduce wastage and increase wastewater reuse
- Preserve species diversity of native fish and plants
- Just allocation of water resources between stakeholders with varied priorities, rights, and usage
- Clean Energy (hydro-electric, solar, wind)
- Sustainable Agriculture/Food Security
- Climate resilience, including protection from flooding and other water damage



## SOCIAL

- Native Hawaiian land and water rights
- Economic participation by stakeholders
- Cultural preservation and support of traditional agricultural practices including cultivation of traditional crops
- Jobs Training, including for example environmental science, digital, and project management skills and Mentoring
- Entrepreneurial Support
- Creation of environmentally and culturally appropriate 21st century jobs, particularly in remote communities and for women, native Hawaiians, Pacific Islanders, and other vulnerable populations
- Community and worker safety

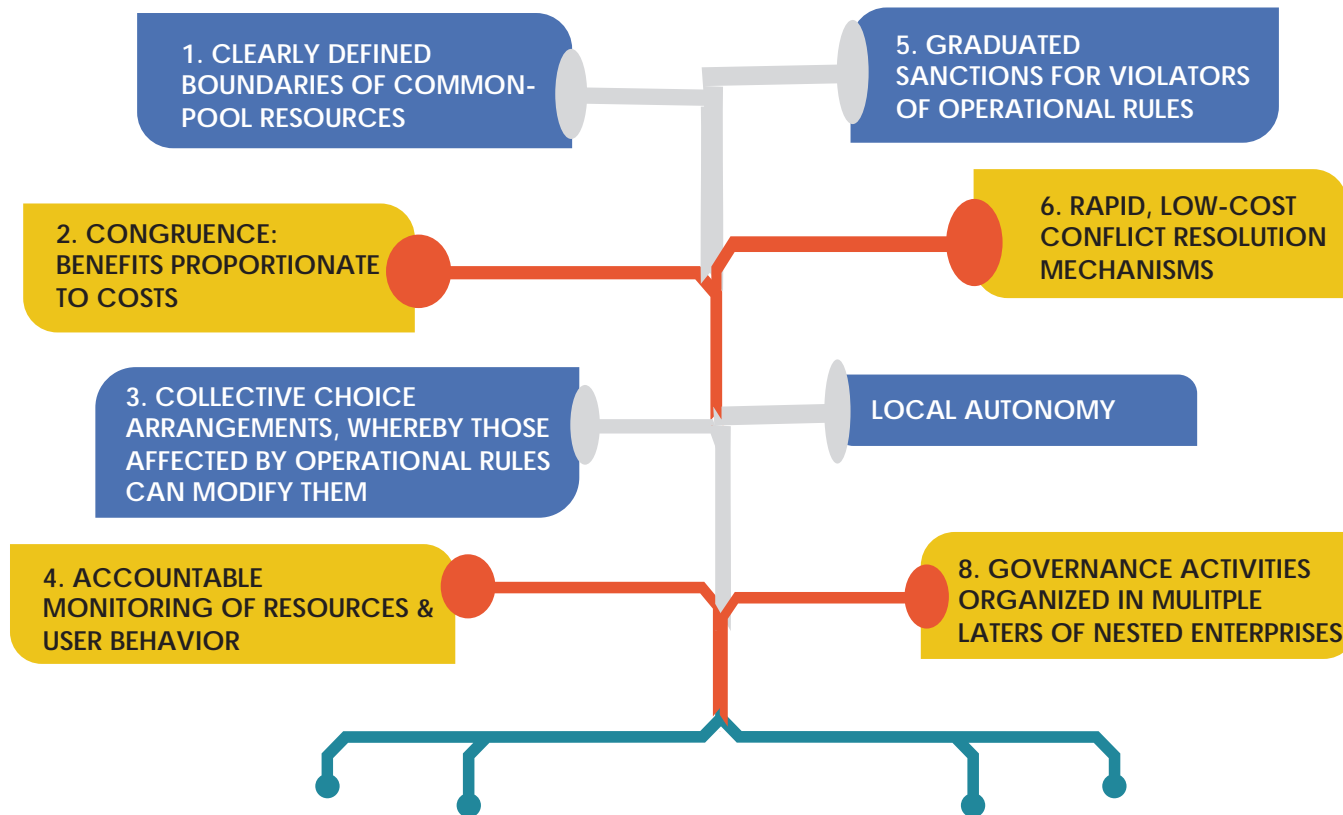


## CORPORATE GOVERNANCE

- Transparent with stakeholders and government agencies
- Support for utilization of 21st century research and data
- Community co-management and ownership of watershed resources
- Support for mechanisms that ensure accountability to all stakeholders (ESG Audit)
- Incorporation of Hawaiian water rights
- Recognition of labor organizing rights
- Productive engagement in public policy deliberations, rather than lobbying for narrow interests



# A GOVERNANCE STRUCTURE THAT INCLUDES THE FOLLOWING DESIGN PRINCIPLES ENSURES EFFECTIVE COMMUNITY CONTROL



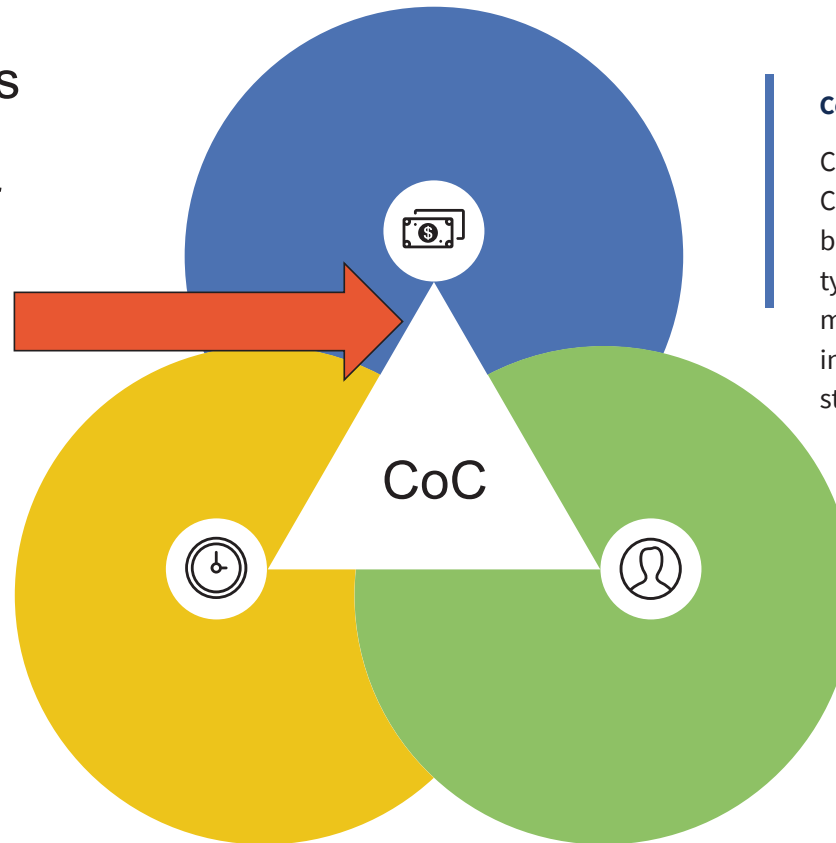
Source: Elinor Ostrom 2020



WE ARE PROPOSING INNOVATING AND CUSTOMIZING FOR THE MAUI CONTEXT BUT IN FAMILIAR WELL ESTABLISHED STRUCTURE WITH PRECEDENT

INNOVATING

Community-owned entity is at the intersection of common practice approaches



**Corporations**

Corporations both C-corps and Public-benefit corps are typical management and investment structures

E.g.

- Most capital investment in business is done via corporations

E.g.

- Indiana Toll Road
- Rapid Bridge Replacement Project
- Laganardia Airport

**P3s**

Public-private Partnerships are quite common in Europe & the US Mainland

**Community Owned**

Community owned structures are common worldwide.

E.g.

- Maori Miraka Dairy Farms
- Commons-based forest
- Water cooperatives

# A COMMUNITY OWNED COMPANY (COC) IS ONE OF THE FEW WAYS TO PROVIDE THE COMMUNITY THE ABILITY TO SHAPE ALL OF THE DESIGN PRINCIPLES

A Community Owned Company is a public-private structure that aligns all stakeholders by including community, investors, government, and management in the ownership structure.



In a community owned company, the community is the founder.



The COC builds equity and value in Maui for all the stakeholders including the Community.



COC ensures ESG objectives through corporate charter – e.g. renewing and maintaining public trust for water.



There are less conflicts and contention due to purposeful structural alignment in COC

Source: IoTAsk Analysis 2020

### Water Cooperatives, US:

- Close to 3,300 water cooperatives in the U.S. are consumer-owned utilities.
- 89% of the population that is served by public water systems is served by either a publicly owned, municipal water system or a cooperative utility.
- Each water system customer is a member-owner of the cooperative.
- Water cooperatives are democratically controlled enterprises either on a one-meter/one-vote or a one-member/one-vote basis.

### Māori-Owned Miraka Dairy, NZ:

- Over 140 employees, turnover more than \$250 million.
- Business decisions guided by cultural values.
- Ownership: Wairarapa Moana Incorporation, Tuaropaki Trust, Waipapa 9 Trust, Hauhungaroa Partnership, Tauhara Moana Trust & Huiarau Farms.
- Strategic partners and investors: Te Awahohonu Forest Trust Limited, Vinamilk, Global Dairy Network bring experience & knowledge in sales and marketing.
- Milk supply comes from 104 local farms within an 85km radius of factory; farmer shareholders incentivized with strong emphasis on sustainability.

Source: University of Wisconsin, Center for Cooperatives, Research on the Economic Impact of Cooperatives, <https://reic.uwcc.wisc.edu/water/> <https://www.miraka.co.nz/miraka-is-milk.html>  
<https://www.ruralnewsgroup.co.nz/dairy-news/dairy-general-news/miraka-boss-setting-off-on-a-new-adventure>

In January 2020, CIFOR studied community owned forests in Mexico, Guatemala, Nepal and Namibia, highlighting the importance of government recognition of communities' rights to manage natural resources and of promoting investment in these initiatives. Some findings:

Worldwide, more than a quarter of forests in developing nations are managed by local communities. The rights to govern and profit from these forests are often held by indigenous peoples.

Not only are community forests a proven mechanism for conserving forests and biodiversity, but their earnings are reinvested in social services and development within the communities.

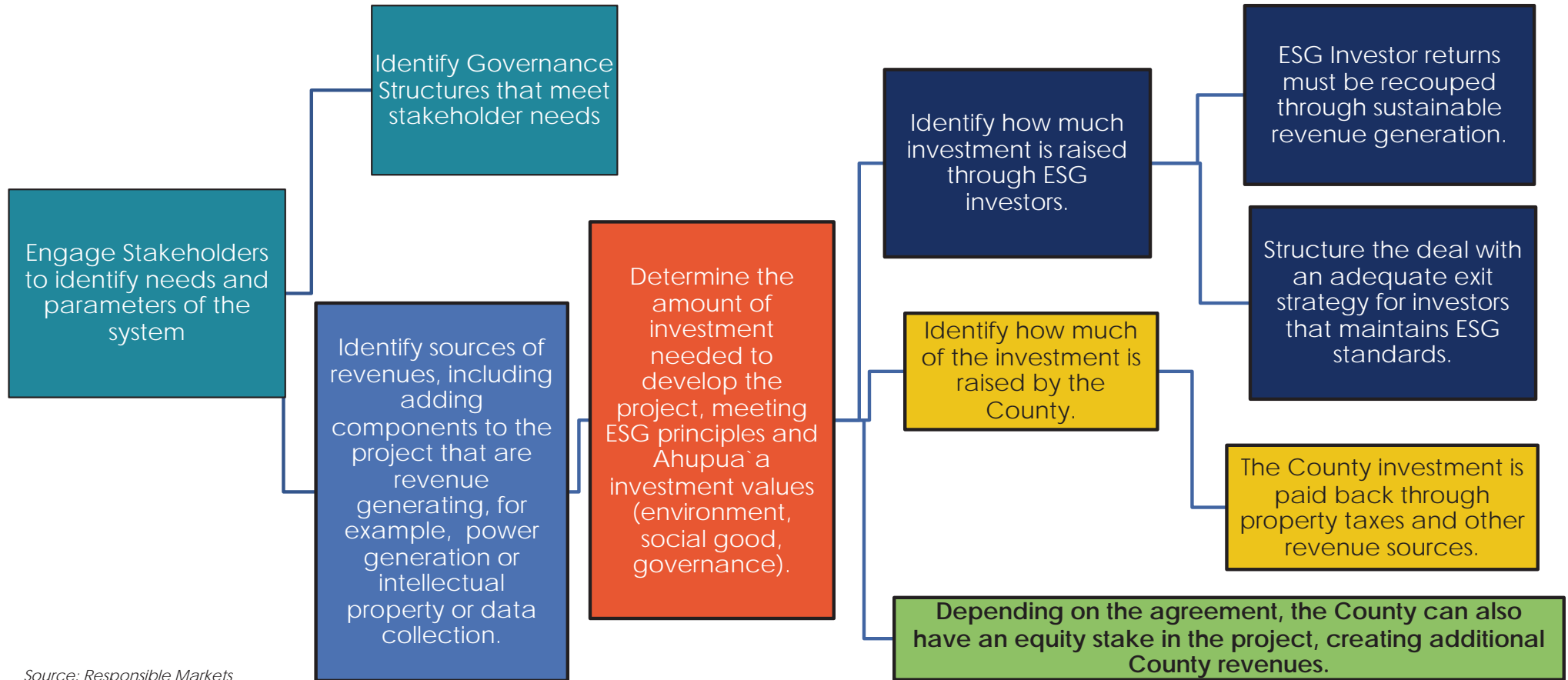
Private sector investment in commons is increasing.

Commons-based investment readiness is conditional on the level of assurance stakeholders have that the obligations of each party will be met.

Community rights have fostered investment that recognizes the social character of commons ownership and delivers environmental and social returns, as well as profits.

Source: [https://www.cifor.org/publications/pdf\\_files/infobrief/7499-infobrief.pdf](https://www.cifor.org/publications/pdf_files/infobrief/7499-infobrief.pdf), <https://www.bkconnection.com/bkblog/jeevan-sivasubramaniam/five-community-owned-businesses-that-are-thriving>, <https://news.mongabay.com/2020/05/community-forest-enterprises-provide-win-for-forests-and-people-study/>

# EMPLOYING ESG INVESTMENT STRATEGIES TO DEVELOP WATER SYSTEMS THAT MEET COMMUNITY NEEDS IN A SUSTAINABLE MANNER



Source: Responsible Markets

## Months One to Three

### COMMUNITY DESIGN PROCESS:

Working Groups are formed to reach out to communities to identify issues that need to be addressed related to water systems

### COUNTY SUPPORT OF PROCESS:

Council takes actions to support community ownership of the system, including support of community design process

## Months Three to Six

### GOVERNANCE STRUCTURE & BUSINESS MODELS:

Community is provided with expertise in corporate governance, ESG investment, bonding, as needed; identifies governance ownership structure and parameters of business model options

### BUDGET ALLOCATIONS:

County Council approves budget items related to water system acquisition, continued community education, and seeding of Community Ownership Structure



## Months Six to Twelve or later

### COMMUNITY ESTABLISHES AND INCORPORATES NEW OWNERSHIP GOVERNANCE STRUCTURE PER PARAMETERS IDENTIFIED BY WORKING GROUPS:

- Deal Management Company appointed to complete design and incubate new water entity
- Continued community governance & financial education
- Incorporation and completion of business plan
- Establishment of new entity and community ownership

(These processes require County or other funding.)

### COUNTY TAKES OVER WATER SYSTEM AND PREPARES FOR TRANSFER TO COMMUNITY-GOVERNED SYSTEM

- Memorandum of Understanding between County & new entity, contingent upon acquiring assets and community development of viable business plan
- County acquires water system assets
- Interim Management company hired prior to transfer
- New entity (with support from county) negotiates contracts with current workers, whose knowledge of the system will be essential to continued operation after transfer
- Other community efforts (such as crowdsourced measurement) may be rolled up into the entity as they reach maturity.

# TRANSFERRING WATER SYSTEM TO COMMUNITY-DRIVEN GOVERNANCE STRUCTURE

- County grants concession for operation of system to new water entity.
- County assigns water leases to new entity.

## TRANSITION OF ASSETS

- Deal Management Company presents Public Private Partnership (PPM) to investors.
- Deal Management Company procures first equity investments.
- New entity purchases system from County immediately or over time.

## PROCUREMENT OF INVESTMENT

- Deal Management Company works with Working groups re: integration of community stewardship with operating team.
- Deal Management Company recruits operating team.
- New entity approves operating team and begins operations.
- Infrastructure investment deployed.

## ESTABLISHING OPERATIONS TEAM

The State of Hawaii's responsibilities and involvement would not change substantially with changes in ownership structure.

There would be a presumption of serving the public interest with public entity ownership, which would increase potential access to private and federal grants.

# POTENTIAL REVENUES FROM EMI WATER DELIVERY SYSTEM BASED ON ECONOMIC ANALYSIS IN THE EAST-MAUI WATER-LAND ECOSYSTEM & WATERSHED ROADMAP

Acquisition costs depend on ultimate determinations (Mahi Pono purchased 50% ownership for \$2.7 Million)

Real cost of turning system into viable ESG + Ahupua'a going concern is much higher. Includes anticipated \$160 million in required infrastructure upgrades.

Decisions on the 30-year water leases are pending. Rates have historically been kept artificially low, impacting state, DHHL, and OHA revenues.

Water delivery at current agricultural rates can yield \$24 million annually, while returning more than 55% of water requested under Mahi Pono lease to the streams.

Additional recurring revenues can be obtained from for ex., installation of micro-hydropower plants at 6 restored reservoirs, generating \$9 million per year.

Recurring revenue flows can support investment issue of \$200-250 million to finance (potentially a bond by Maui county)

- Infrastructure upgrades
- Installation of micro-hydro plants

## A SIMILAR ESG REVENUE MODEL IS POSSIBLE FOR WAILUKU WATER COMPANY – THIS DOES NOT EXIST TODAY

Assessment gives us a cost of \$11 million for acquisition. Asking price is \$9.5 million.

The real cost of turning the system into a viable ESG + Ahupua'a going concern is much higher and includes \$6 million to \$77 million in infrastructure upgrades required.

Any new revenue model will require additional investment, for example: \$30-50 million in ancillary technology and ESG investment to develop a project; \$2 million in startup costs

WWC has experienced significant revenue losses in recent years and is currently operating at a loss. Revenues need to increase by approximately one third, excluding capital expenditure.

Revenue-producing projects need to be identified that meet the needs of the community (likely ruling out a rates rise.)

Source: : Responsible Markets, IoTask Analysis 2021, Photo by VitaleBaby at Wikipedia

## Development of Governance & Financial Structure

### Engineering Analysis

- Estimate: \$200,000-\$275,000

### Incubation & Advisory Services

- Estimate: \$225,000

### Legal Services

- Estimate depends on in-house verses out-sourced and scope

### Watershed Pilot

- Estimate: \$360,000 per full-time six-person crew for one year (includes \$30K equipment and software)
- Ultimately funded by systems revenue
- Community-based Measuring & Monitoring of the Streams

### Stewardship Model



# Incubation & Advisory Services

- Data Gathering/Research
- Customer/Stakeholder Requirements/Feedback Gathering
- Revenue Streams Design
- Organization/Operations Cost Design
- Risk Management Design
- Financial Model
- ESG Impact Model
- Financial Structuring
- RFP & Contract Draft/Support
- Presentation Packaging
- Stakeholder Education/Consensus Process
- Investor Outreach





Provide feedback on a framework for the County of Maui to take the lead in community-based investments.

Provide expertise and advice to community members about fundable ESG and Impact investments.

Provide input on an ESG COVID tracking process to measure the "S" in ESG (tracking businesses responses to the virus and economic impacts, such as paid family and sick leave, PPE protocols, community support, etc.)

## INITIAL MEMBERS:

- Rob Day, Springlane Capital
- Michael Perri, Lincoln Crowe
- Delilah Rothenberg, Predistribution Initiative
- David Wood, Harvard University
- Kirstin Punu, AES Distributive Energy
- Rehana Nathoo, Spectrum Impact
- Luke Bailey, Hawaii Gas
- Lindy Backeus, PhD, Eastern College
- Emily Grubert, Georgia Tech
- Barbara Van Scoy, Heron Foundation
- Eric Glass, Alliance Bernstein
- Michael Perri, Lincoln Crowe
- Christina Borsum, New Energy Nexus
- Gita Swamy, IoTask

# APPENDIX

**VERY FEW FORMS PROVIDE FLEXIBILITY ON ALL COMMUNITY DESIGN PRINCIPLES WHILE ENSURING AN EFFICIENT EXECUTIVE STRUCTURE TO ENSURE ECONOMIC AND ESG SUSTAINABILITY**

Governance Structure	Shareholder owned (Example, A&B)	Private Equity controlled (Example, Mahi Pono)	Co-op	Municipal Water Authority	Hybrid (private sustainable business corporation with majority government ownership)	Independent Public Water Authority	Community Owned Corporation
1. CLEARLY DEFINED BOUNDARIES	X	X	X	X	X	X	X
2. CONGRUENCE			X	X	X		X
3. COLLECTIVE CHOICE ARRANGEMENTS			X				X
4. MONITORING			X	X			X
5. GRADUATED SANCTIONS			X				X
6. CONFLICT RESOLUTION MECHANISMS				X	X	X	X
7. LOCAL AUTONOMY				X	X		X
8. NESTED ENTERPRISES							X

## A COMMUNITY OWNED COMPANY WOULD PROVIDE THE COMMUNITY WITH THE RIGHTS, PRIVILEGES AND PROTECTIONS OF COMMON SHAREHOLDERS

### Building Equity and Value in the Community

1. Ownership in a Portion of the Company.
2. The Right to Transfer Ownership.
3. Right to Share in Profitability - An Entitlement to Dividends.
4. Right to Buy New Shares

### Ensuring ESG and Ahupua`a Values through Corporate Charter & Other Governance Structures

1. Right to Vote - Voting Power on Major Issues.
2. Right to Influence Management - through the Board
3. Opportunity to Inspect Corporate Books and Records
4. The Right to Sue for Wrongful Acts.
5. Additional Corporate Governance - through company policy
6. Shareholder Rights Plan - protection against takeover

# IN THE INCUBATION PROCESS, THE COMMUNITY MAKES DECISIONS REGARDING ITS APPROACHES TO SHAREHOLDER MANAGEMENT

1

## Define Community Stakeholder

Typical practice is to either create an entity that holds all community shares in trust and handles distributions Or to distribute shares at individual level. The definition of member of community is decided a-priori and should include all participant stakeholders.

2

## Acquisition Owner Shares

Typically either trust entity or individual stakeholder will acquire shares at par value. This value is a very very low (~0) threshold that is set at inception .

3

## Exit/Divestation Owner Shares

Typically when a community owner leaves the community, they will exit their share back to either the company (ROFR) or an outsider moving into the community (like partnership shares). Some typical scheme is used for exit valuation (e.g. NAV).

4

## Board Selection & Shareholder Meetings

Typically board selection and shareholder meetings are decided in the corporation charter. This is similar to appointing a trustee for the community trust. Shareholder meetings and process are also part of the charter and all shareholders can attend. The charter mandates minimum number of annual meetings and process for shareholders to call meeting.

5

## Shareholder Rights

Typically standard shareholder rights are determined at inception using a shareholder rights agreement (SRA) and corporate charter. Shareholders may interact with the company and exercise rights according to SRA but may not interfere with day to day operations. A majority of shareholders can vote to fire/replace the board.

# THANK YOU



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