For Discussion by EMC 6/22/22 *G Adams Draft and EMC comments from 5/25/22*

Proposed Components of an Integrated Wastewater Master Plan

Vision Statement –

Aspirational: No contaminated water is discharged to the environment.

DEM practices sustainable wastewater resource management on Hawaii Island.
[jurisdiction solely for operation and maintenance of county-owned sewer systems]

Ramzi 4/27/22: to convert materials recovery from solid waste and wastewater into energy and agricultural sustainability

Guiding Principles -

1. Apply Life Cycle Assessment principles to minimize adverse impacts to health, safety, and financial security short and long term for all affected stakeholders and the environment. "Sustainable"
2. Think water resource management vs wastewater management. Preserve water resources through reduction of use, reuse and recovery of treatment byproducts.
3. Affordable and reliable (don't over-engineer)
4. Sustainable for communities and expected growth
5. Flexible to new technologies
6. Continuous improvement toward vision
7. Work with public and private entities to achieve goals.

Ramzi 4/27/22: Our mission is to provide a responsible, comprehensive, safe and efficient management of wastewater and solid waste resources by building and replacing the dilapidated facilities with the new technologies that maximizes water reclamation and put it back to use gas generation, biosolids and green waste composting.

Strategies

I. Identification and Assessment of Planning Areas
   a) Local Physical Environment - including natural disaster risks (eruption, earthquakes, hurricanes, sea level rise, etc.)
   b) Population Trends, including tourism
   c) State of Current Integration (jurisdiction and actual management)

II. Assessment of Existing Facilities *Current* and *Projected* Ability to Meet Demographic Needs

a) Capacity Information and Condition Assessment prioritized by risk of failure and capacity inadequacy

b) Financial Health - including staffing, maintenance and planning and implementing improvements

c) Regulatory Compliance Challenges

III. Alternatives for Collection and Treatment Systems - Evaluation by district/region

IV. Improvement Plans - facility-specific plans and how they contribute to the vision and incorporate guiding principles

a) Current System Improvements/Repairs
b) 5-Year Improvement Plans
c) 10-Year Improvement Plans
d) 15-Year Improvement Plans

Include discussion of how long facilities should last and maintenance to achieve adequate lifetime, in addition to improvements

IV. Financing and Funding Options

a) Enterprise Fund
b) DBOOT or design, build, own, operate, and transfer where after the assets have used up taxable depreciation for private investors, the County buys it out several years later. The transfer part allows for operations to be taken over by union employees after receiving the training and certifications needed.

VI. Opportunities and Challenges

a) Partnerships
b) Legal and jurisdictional
c) Social
d) environmental challenges – climate change, volcano, hurricane, etc.…
e) Master Schedule – overall schedule and how it will be managed

VII. Conclusions and Recommendations

Appendices

- Master Projects Schedule (including public communication plan)
- Detailed facility and sewer line plans

Comparable County model for mass transit: http://heleonmasterplan.com/wp-content/uploads/2018/08/180813-FINAL-FULL-REPORT-reduced.pdf