Chutes and Ladders

Navigating Florida's Aquaculture Permitting Landscape

- Dan Farkas, Founding Member @ HTH Full Spectrum Aquaculture

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Speaker Bio

- BA/MA in Economics & Marine Affairs, University of Miami 2009

- 13 years in Aquaculture Project Management & Operations

- Specific focus on startup and early life-cycle companies and their construction and subsequent operations

- Projects include Land-based Flow-Through, RAS Finfish, Large-Scale Bio-Floc RAS, and Shellfish/Crab RAS facilities

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The “Chute”

- With regards to permitting and site selection efforts…The RAS boom in FL and in the broader US “RAS gold rush”, its clear that several would be operators were overly confident. The assumption seemed to be that due to the “sustainable” nature of the projects, a proverbial red carpet would be rolled out by local stakeholders and officials. This has not happened, nor should we in the industry expect it to.

- Many projects outside of Florida & within have been delayed/derailed due to lack of due diligence and not adhering to the KISS/”Ladder” method (Keep It Simple Stupid)

“An in-depth knowledge of Federal, state and local permit requirements are key to reducing the high failure rate of RAS and other aquaculture operations in Florida”-***Full Spectrum Aquaculture***

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Permit & License Overview: Local

- Local emphasis is commonly placed on Construction & Building Permits (Grade/Fill, General Construction, HVAC/Electrical, Plumbing, Fire Suppression, etc).
- Many counties have varying degrees of exemptions or accelerated permit pathways for agricultural/aquaculture operations. Early engagement and identification of these process are crucial for ongoing operations and success. See case studies on subsequent slides.
- Local Stakeholder Permits or “Social Permits”: Once State and Federal permits regarding effluent or consumptive use enter the review/comment phase, ensuring that local stakeholder engagement began well before the comment period is crucial. In many cases these meetings do not result in the halting of a project, but they can mire it in legal challenges starting at a local/municipal level that eventually de-rail it.

Case Study #1:
University of Miami LSS/Platform Removal & Replacement

- Project Mandate was to remove current LSS systems as well as access platforms due to age/degree of degradation.
- Existing University PM/Permit team initially moved the process through normal MDC (Miami Dade County) permit pathways for traditional construction. This would require extensive planning and inspections at all phases/trades of the replacement (Foundations, Access platforms, LSS/Plumbing, Electrical)
- ZIP (Zoning improvement Plan) process identified by Full Spectrum Aquaculture. ZIP specifically applied to agricultural and aquaculture operations, removes the need for full Construction Document Submittal and Trade Review/Inspections.
- Requirements for submittal: Survey + Basic Drawings + Owner Application Form for ZIP submittal. Potential project savings in engineering/permit/mobilization fees on the order of $45,000-$50,000 (7%-9.5% of project cost)
- <u>Know your local codes and county's permit processes.</u>

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Case Study #2:
Aquaco Farms RAS Pompano Pilot Scale Facilty (Phase 1)

- Project Located in St Lucie County, Florida. Established in 2017, Aquaco Phase 1 is a 50 metric ton, Pilot RAS facility Raising Florida Pompano.
- Site was found in 2017 via Google Earth! Contact was made with owner and county records search indicated it had an IH (Heavy Industrial) zoning classification
- Site is operating under a long-term lease (30 years w/renewables), but the initial IH classification would have required a full suite of permits/submittals.
- Owner (Joe Cardenas) had early engagement with St Lucie County EDC during site selection, which allowed him to apply for and ultimately receive an Ag Exemption without re-zoning (owner retained property value of IH).
- This Ag Exemption allowed Aquaco to proceed with construction and operation under Agricultural Permit Exemptions (only inspection was an Electrical C.O once meter can was set). Contractors still required to sign affidavits regarding building code adherence with their respective trades. All of this resulted in substantial cost savings and increased project delivery speed
- <u>Know your local codes and county's permit processes.</u>

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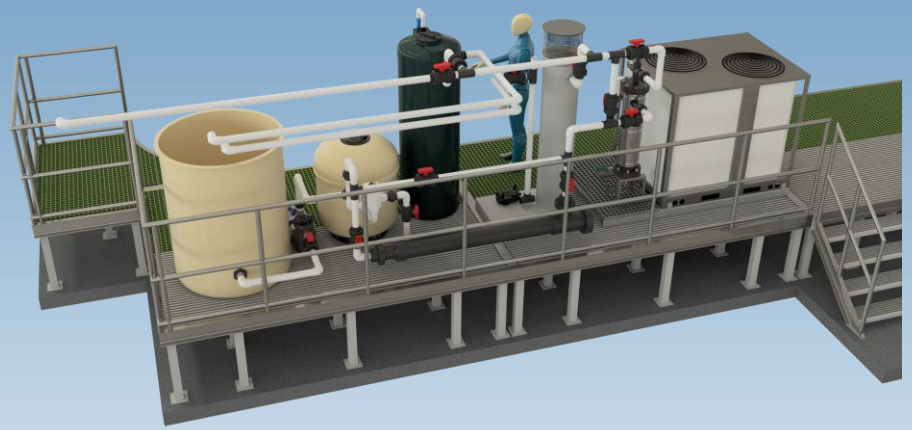
Permit & License Overview: Regional & State

- Common Areas of Focus are Local Water Management Districts and FDACS (Florida Department of Agriculture and Consumer Services)



- Local Water Management Districts in Florida are typically placed on equal footing or better when it comes to effluent management and permits (NPDES, Consumptive Use, etc).
- FDACS, which regulates aquaculture operations, typically defers to local and state compliance regarding effluent management, water usage, etc etc.
- Utilizing FDACS BMP manuals can help with leveraging state/regional water management districts in certain cases. In many cases, the “book” has not been written yet as it pertains to RAS Aquaculture.
- Early engagement with FDACS can also assist in shaping the conversation with WMDs. Engagement with local water management districts is best when pairing company compliance department with a 3rd party environmental firm. These firms often have existing professional relationships/familiarity with water management district staff (hopefully positive, do your homework!)

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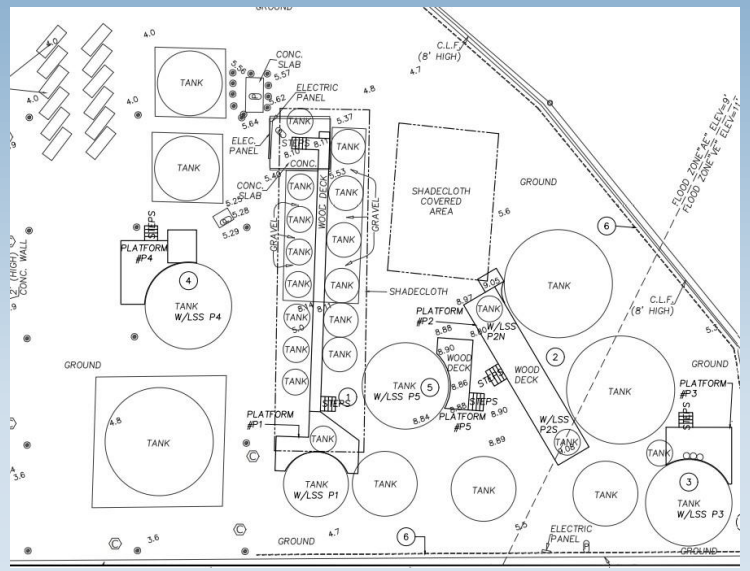
Permit & License Overview: Federal

- Common Focus is on DEP (Department of Environmental Protection) and ACOE (Army Core of Engineers) for effluent and any project components affecting surficial waters of the State.
- Depending on County or region, state entities often take “point” when engaging with end user regarding DEP/ACOE permits for effluent, land mitigation, intake/effluent piping, etc. Best practice is to use these local pathways and develop local relationships with regulators first as opposed to directly engaging with DEP.
- Relative to above UM case study #1: DERM/DEP involvement due to project’s proximity to shoreline was initially “suspected/assumed” by University PM team. However, after initial consult with local MDC permit office, it was quickly established that this project did not meet the necessary threshold for DERM/DEP involvement other than a N/A(Not Applicable) review and classification.

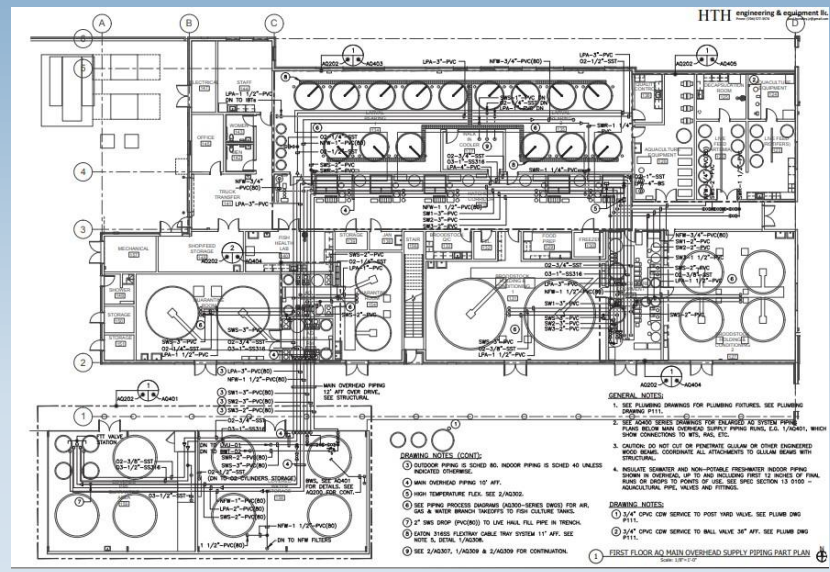
Conclusions:

- Local Engagement Early, look for well-established and legal shortcuts
- Engage 3rd party Environmental Engineers/Consultants with local repoire.
- Federal Engagement should be made in conjunction/through regional & state pathways (don't go around)
- The summary to the right is not speaking to the project as a whole! An appropriate LOD is critical to a successful RAS Design and operation.
- However, less is more when referring to providing plans & details to permitting offices at all levels. Over-sharing can cause complications and hold-ups due reviewer confusion

Strive to Submit This:



Plan to Build This:



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THANK YOU

- The “Ladder”:

1st Rung: Local & Social Level Engagement

2nd Rung: Regional & State Level Engagement

3rd Rung: Federal Level Engagement

- Questions/Comments

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