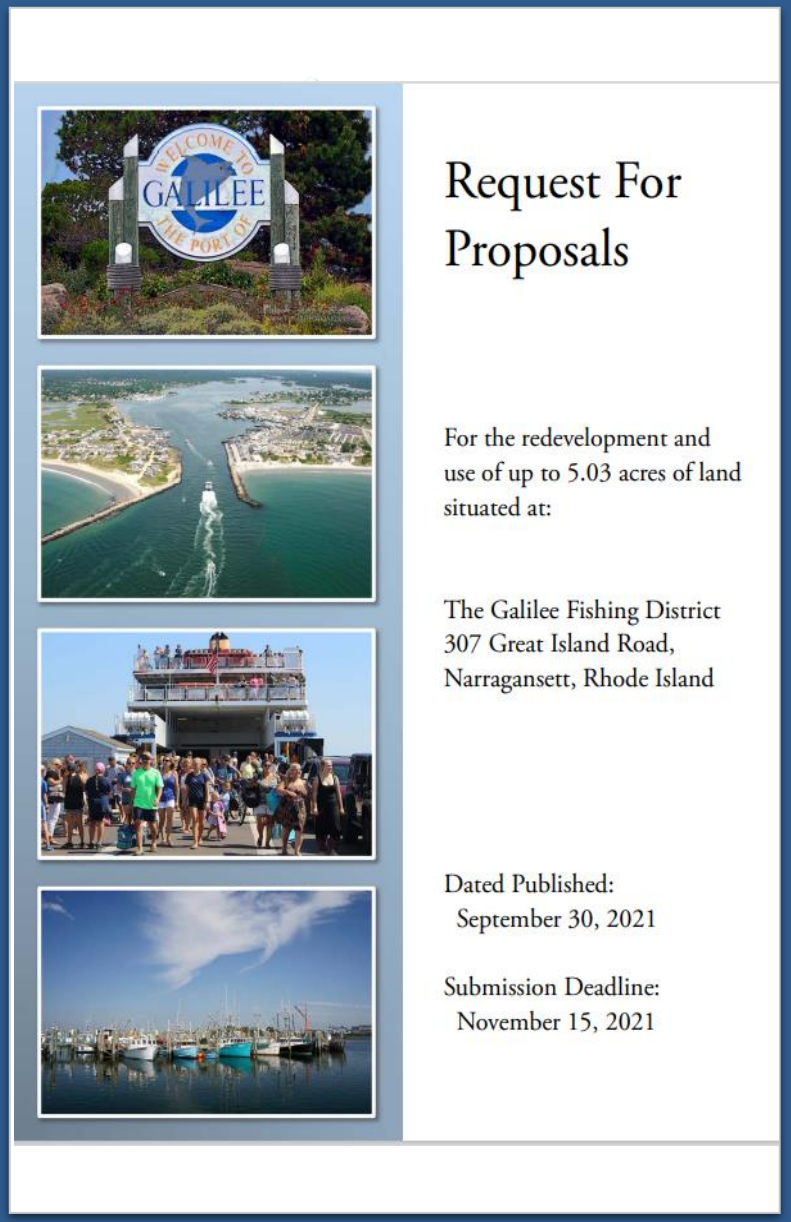


Galilee RFP Response

Presented by

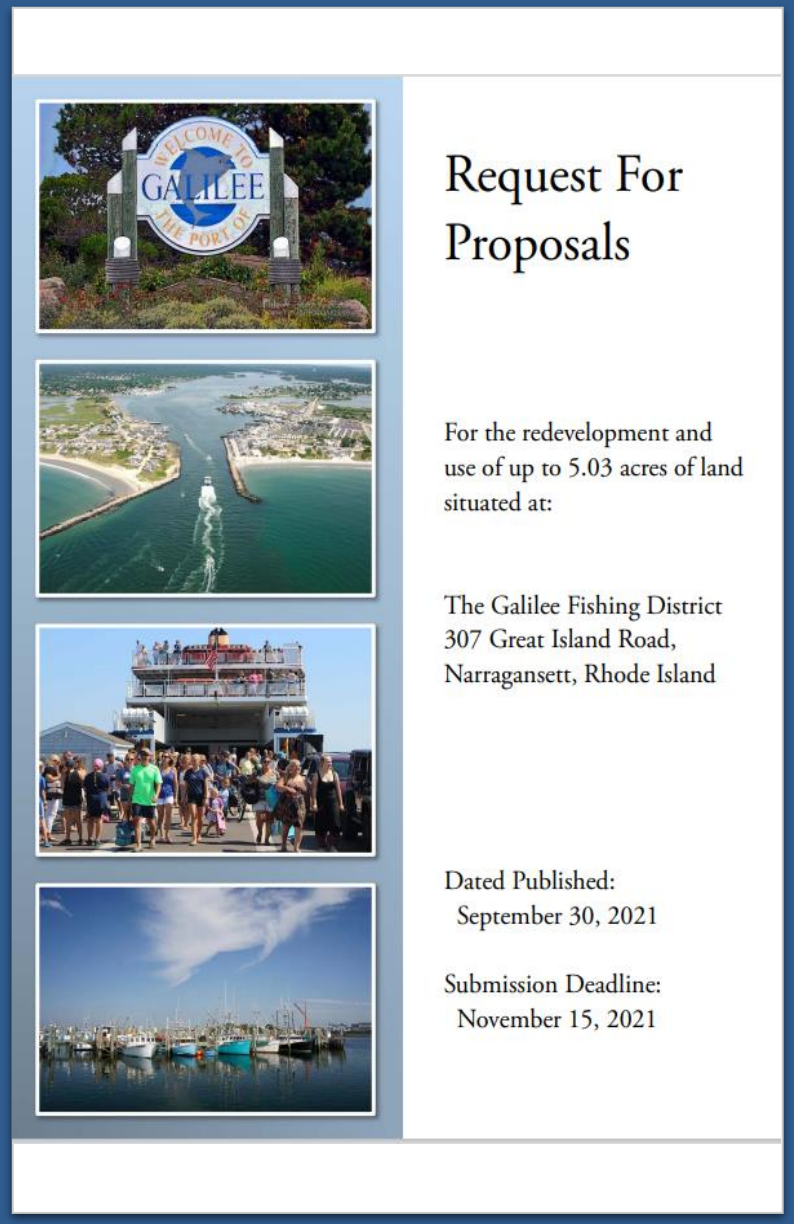
Quonset Area Aqua Development Inc.
[QAAD Inc.]
10 Davol Square
Providence, RI 02903

In Conjunction with iCell Aqua Inc.
A Water & Aquaculture Technology Funding Platform Company

For the development of the Galilee Site

Galilee RFP Response

- Slides 3-8
  - Response Summary & Project Overview
- Slides 9-11
  - Project Benefits Impact
- Slides 12-14
  - Facility & Overview
- Slides 15-19
  - How Water Infrastructure Impacts Value-Added Seafood
- Slides 20-28
  - Plot Plan, Processes, Purification Performance, Products
- Slides 29-35
  - $1 Billion Plus Economic Impact
- Slides 36-42
  - Credentials, Management Experience & Moving Forward



The following document addresses the key items as defined by the RFP.

1. Description of the proposed use and redevelopment: WATER INFRASTRUCTURE: Seafood processing facility with water recycle and nutrient recovery system for all seafood processors in Pt Judith

2. How much of the Site, if not the entire Site, is needed (express in square footage) for the proposal. All of the site will be used, however some of the land (up to 25% could be retained as public parking)

3. How the proposed redevelopment will impact the Port in terms of contributing to its expansion and enhancement of existing businesses including the commercial fishing industry, if any.
Extensive Financial Impact - $1Bil+ GDP impact over 10+ years of operation at capacity, in new landings, value added processing in the port, with year-round workers which support local businesses and tax base.

4. Employment opportunities generated by the proposed redevelopment, including the number of full-time jobs created, if appropriate. 25-45+ full time, year-round for the iCell Aqua business in Galilee, plus hundreds of additional jobs in regional Fishing, Fish Processing & Aquaculture which will also utilize the capabilities of the facility.

5. Timing to implement the proposed use. Build out 12 months following full permitting.

6. Contributions to the commercial fishing industry, Town of Narragansett, State of Rhode Island and the general public. Jobs, GDP Growth, More Landings, Clean Recycled Water, Sustainable Fish Production,

7. Details on the background and experience of the Respondent. Professional Profiles Included

8. Respondent's familiarity, history and experience with the type of proposed redevelopment.
Avg 25+ years of industry experience – multiple facilities already built by this team around the world.

9. Value of the entire proposed redevelopment and source of financing (debt and equity). Included

Galilee & RI Needs

The lack of sufficient water processing and the treatment of process water from seafood processing has halted the growth of the seafood processing industry in Rhode Island.

Lack of water processing means the State of RI *currently* loses 10's of millions of dollars every year in Revenue, Taxes, Jobs, GDP – and is inhibited from further growth as well.

These losses end up in the revenue coffers of other states and other countries.

Closing this water infrastructure ga; can not only capture this lost GDP, but it can create considerable GDP growth from industry expansion.

Rhode Island has the perfect location for development in Galilee to address these state and local needs.

Technology as a Solution

iCell Aqua Water Recycle & Protein Recovery Technology

iCell Aqua Inc.

& its local affiliate

Quonset Area Aqua Development Inc.

[QAAD Inc.,]
a Rhode Island company.

Can deliver a sustainable, environmentally friendly, process-water recycle solution that will enable the growth of Rhode Island's seafood industry.

Proposal Response:

To build a combination seafood processing facility *and* a centralized water purification, recycle & protein recovery facility.

- Fish Processing Capability:
  - Initial capacity up to 6,000,000 lbs/year of various fish species, with room for growth in the future.

- Water & nutrient purification system:
  - Up to 300,000,000 gallons water per year
  - Recover proteins in seafood process water from processors in the port, and from new Aquaculture projects planned at URI & Quonset – and provide clean water for recycle
  - Reduce load on existing Scarborough system

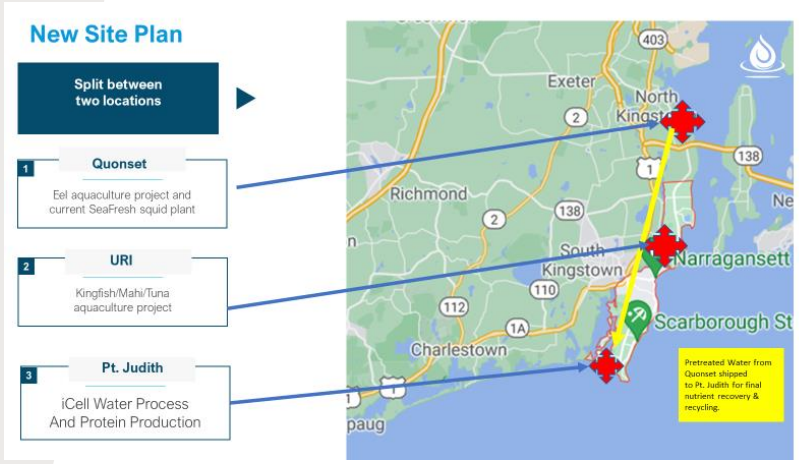
- Front of complex to have office space for the business and for State RI agencies: DEM or others and private Lease.

Galilee Development as RI Catalyst

- **At Galilee: New $30MM+ Water & Seafood processing facility**
  - Production & Processing capability of thousands of tons per year of fresh fish.
  - Increases Jobs in Pt. Judith from processing and the boat/fishing industry.
  - Purify and recycle seafood process-water from seafood/aquaculture. Cleaning & Recycling up to 300,000,000 gal/year of water
  - REDUCING ODORS in Pt Judith by keeping high volume water flow to avoid stagnate water going septic from existing processor.

ENABLES Additional Industry Investment Totaling $100MM

- 3 sites total (Galilee, QDC, URI)
- Two new aquaculture facilities at **$70MM+** Investment, including aquaculture water pretreatment at URI & QDC sites.
- Aquaculture, Seafood Processing, Nutrient Recovery & Water Recycle
- Office Space for RI Agencies
- Dozens of Direct Jobs and hundreds of indirect industry jobs.



Multi-Site RI Impact

Split between three locations

1 **Quonset**

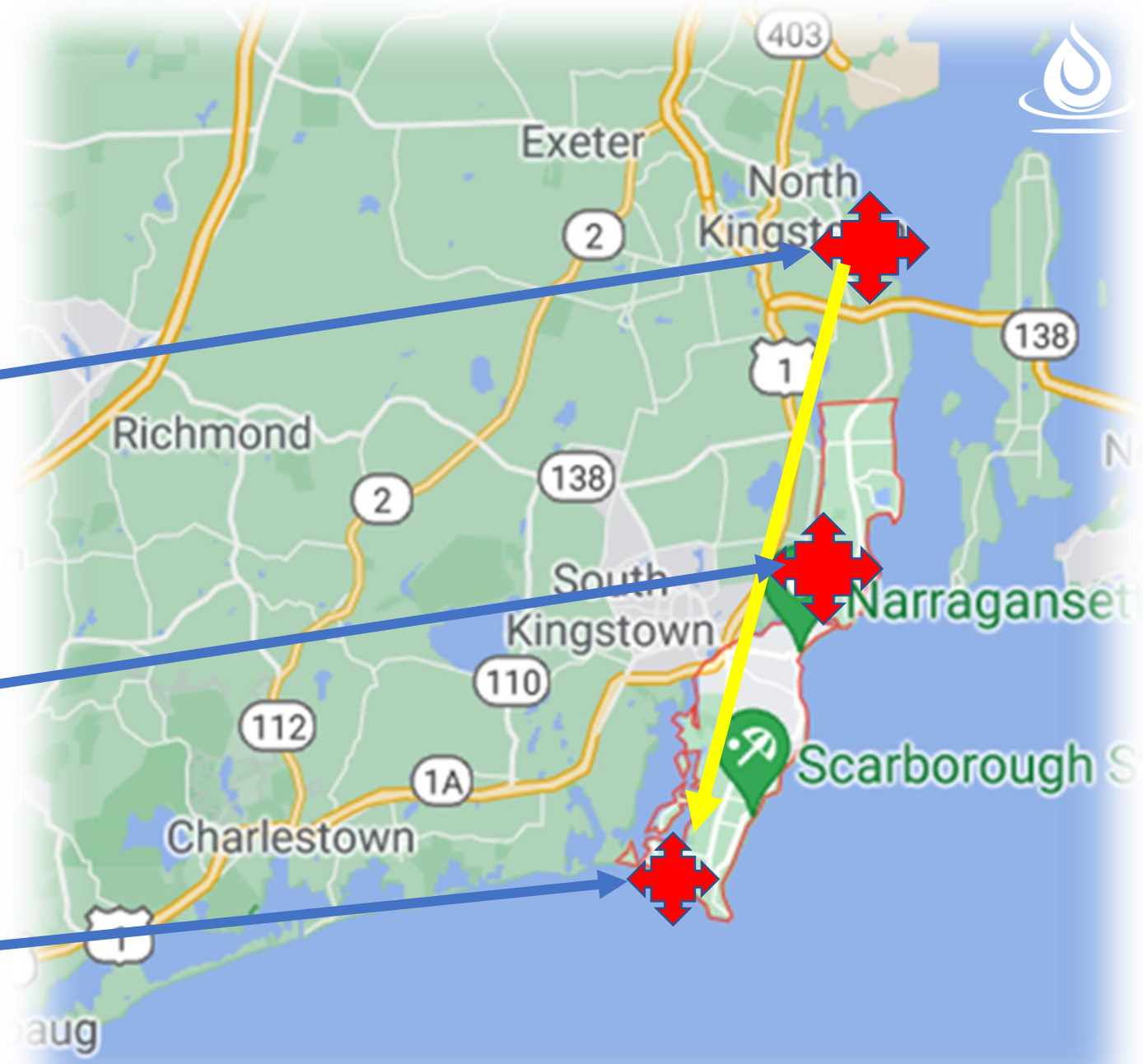
Eel aquaculture project and current SeaFresh squid plant

2 **URI**

Kingfish/Mahi/Tuna aquaculture project

3 **Pt. Judith**

iCell Process Water Recycle And Protein Production and new Fish Processing Capacity



Solution Benefits for RI

A Centralized Food Process-Water Recovery Facility located in Galilee for the recycle of food-based effluent and water

Not just for the seafood industry – protein recovery for almost any food or beverage process.

Recycled water will support land-based aquaculture farms for multi-species and create sustainable seafood grow out facilities.

Creates *Value-added* seafood industry employment jobs for the Southern RI region supporting a long-term tax revenue & employment base for the State of Rhode Island.

Supports the Administration's promise to provide more locally produced seafood products with a low carbon footprint.

Produces high quality, organic based feed ingredients for terrestrial animals.

Can help craft breweries deal with effluent issues and allow for the expansion of small-scale processors of poultry and pork products.

Benefits in RI

- Supports existing seafood processors and new expansion
  - More High Paying Local Jobs in all areas of fishing & seafood production
- Reduction of Odor in Pt. Judith
  - Treat “fresh process water” – prevent septic waste-water from developing.
- BOD Load Reduction on Scarborough Plant
  - A mobile collection system from non-toilet water could be organized with local restaurants – reducing the heavy organic loads from their sinks during tourist high season.
    - Further co-operation could be considered to build “municipal pre-treatment” and ran in parallel (but not mixing the water for used for protein production). Such an approach would require additional use of land and would be additional scope to what is proposed .
- Pre-treatment Program with non-Galilee sites
  - Lower volumes of water for hauling from QDC/URI to Pt. Judith.
  - SeaFresh at QDC still gets some recycle water from the portable pretreatment approach.
  - Allows more recycle of nutrients, lower organic loads on regional municipal plants

Benefits in Galilee

More Water Purification = More Scup Landings

- Providing a “Value added seafood processing” facility in Pt Judith will allow local fisherman to have a location to deliver Scup on a regular basis
  - Scup is best suited for “immediate processing” to create highest quality fillet - it does not freeze & thaw well for reprocessing.
- 4+ million lbs/year of quota is available from the shores of RI
- Maximizing landings requires a processing facility with integrated
  - Wet Processing for filleting/value added
  - Protein conversion for the HGT parts of the fish
- An integrated facility incorporating iCell for the water purification and recycle, filleting/processing along with conversion of the HGT materials will deliver a consistent and successful scup harvest in Pt Judith.

Building / Facility

Final Architecture & facade to be adjusted and approved based on meeting the definition of aesthetically consistent with a “New England Fishing Village” as noted in the RFP.

- Low Rise building for fish processing and protein recovery / water purification.

- 3 story area for office space
  - 1st Floor non-occupied / garage level
  - ~6,000 ft2 per floor x 3 = 18,000 ft2 total

  - Uses
    - ~6,000 ft2 DEM/RI Agency Office Space
    - ~6,000 ft2 iCell / QAAD Business Use
    - ~6,000 ft2 Lease

Water System Performance and Design for Galilee

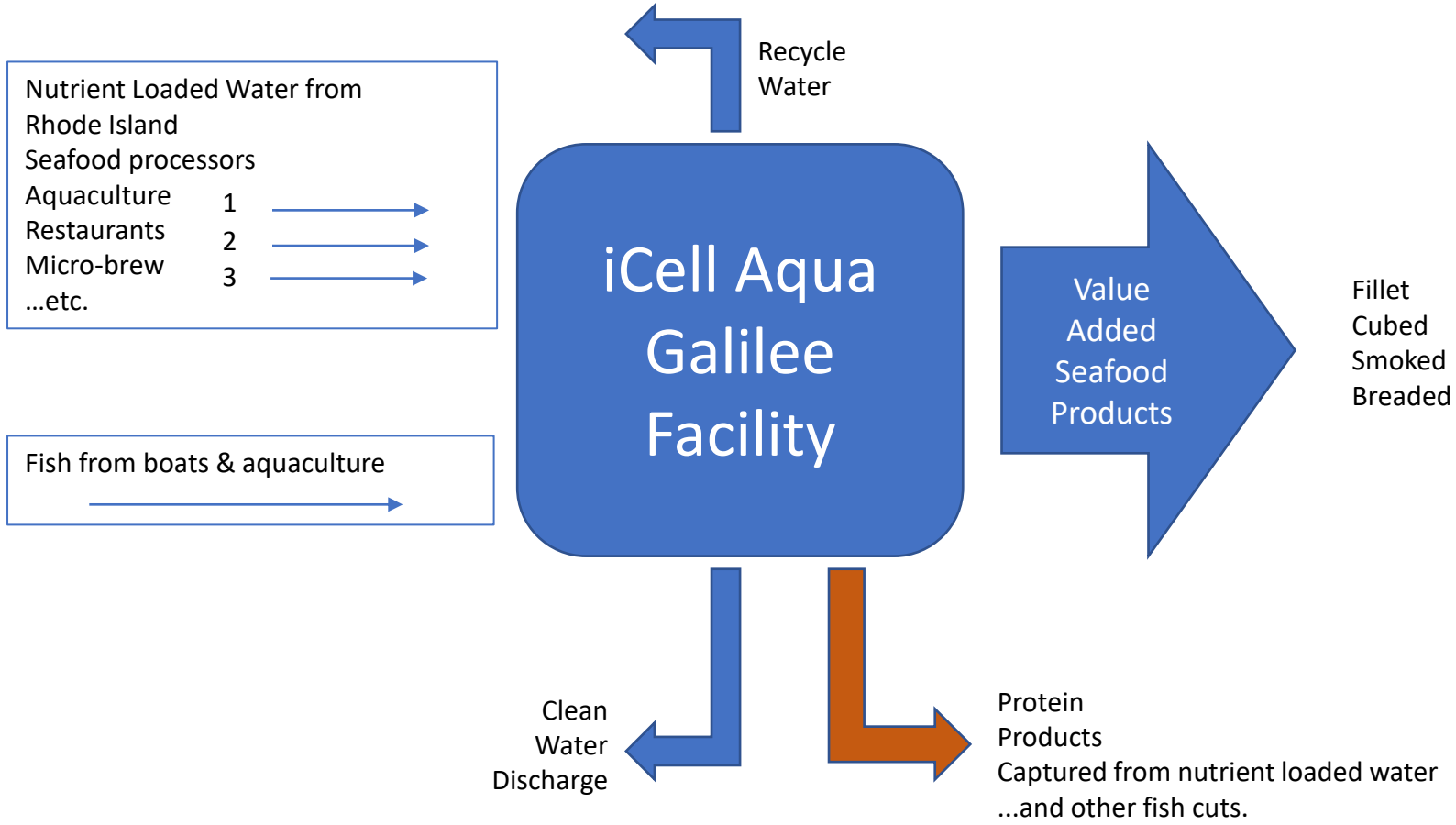
Capacity Plan

- Initial 250,000 gal/day of seafood process water treatment
  - at average BOD up to 5000ppm, up to 1 million gallons per day for lower BOD.
    - Capability to reach 1,000,000 gal/day as seafood processors will have “more dilute” BOD levels as they expand and have more access to recycle water for washdowns in the plants.
  - Large clarifier will handle expanded flow volumes in final separation
  - This is >15x the volumes that are currently generated by seafood processors.
  - This capacity increase is what allows current seafood processors to produce more “value-added seafood processing” on-site, rather than export to China or Massachusetts for post-processing.
  - Capacity will also be needed for nutrient recovery from the $70MM aquaculture projects

- Up to 50% of water can be recycled back to the Seafood processors & aquaculture for use in production processes.
  - Some water must always be released to avoid concentrating inorganics such as the naturally occurring salts, metal ions & minerals that come from the ocean water.

- Effluent water can be treated to less than 50ppm BOD.
  - Reduces current load to the Scarborough facility
  - Can meet levels that would be required for a RIPDES permit.

iCell/QAAD will develop a centralized site for water & nutrient recycling Explanation Video on www.iCellAqua.com



More detail…

the Industry, Processes, the Designs,
the Benefits,

…and the Complete Solution

Local *Value-added* Processing vs Exporting Jobs

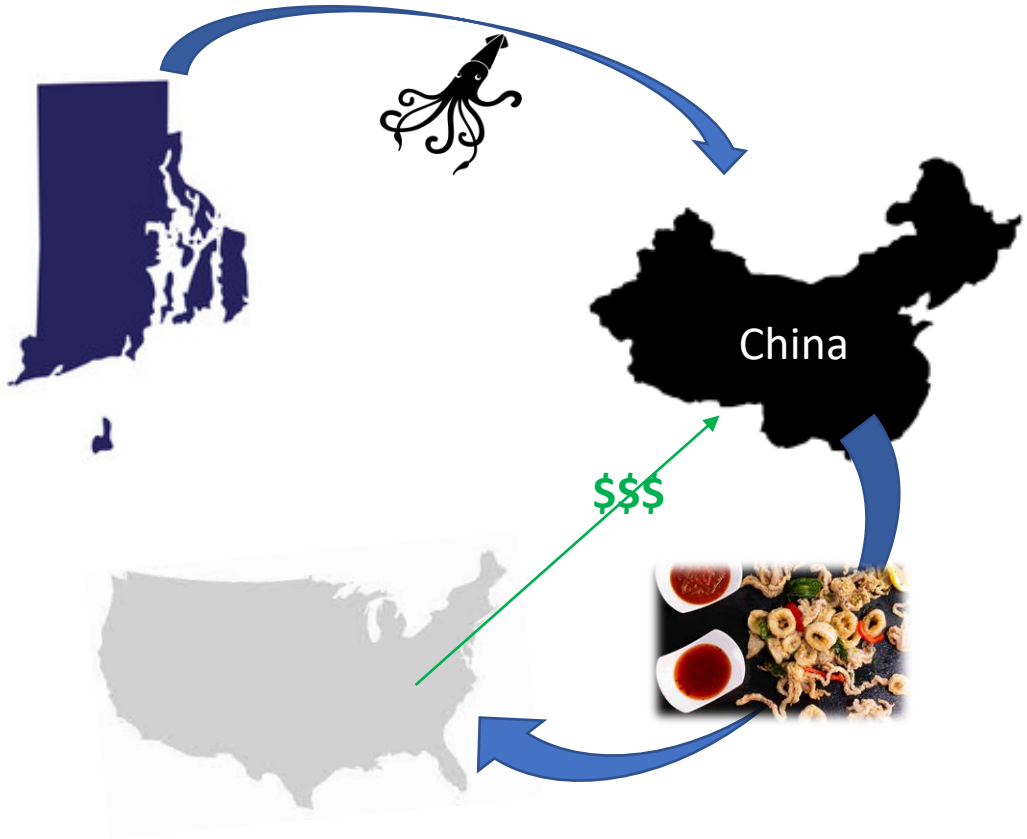
Today, large quantities of seafood products are frozen, exported from Rhode Island to low wage countries, thawed and then processed into"*value-added*" products.

These products are often re-frozen and shipped back to the USA.

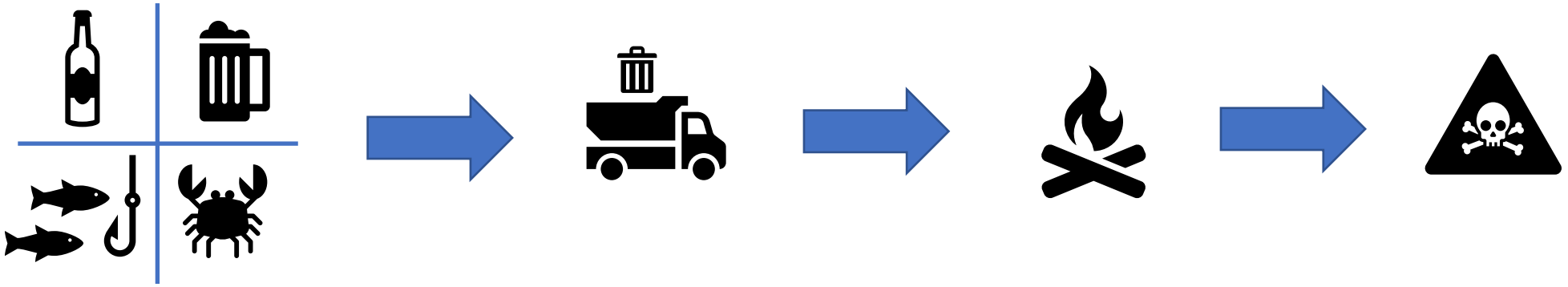
Other US states pay to China or Massachusetts, instead of paying to Rhode Island !

Conducting *value-added* fresh processing here, means keeping more economic activity in the State of Rhode Island, job creation, and local food security.

Rhode Island seafood processors want to process more fresh seafood ***today*** but the inability to treat higher levels of process-water prevents them from growing.



A combined 500,000,000+ lbs. of process water is discarded each year from 10 major regional seafood and beverage processors



This waste is often “burned” which requires significant energy and produces excess greenhouse gas.

Value-Added
Fresh Seafood Processing

Can provide
a >300% increase
of direct local jobs
for Seafood Product
that is processed
in Rhode Island
instead of being
shipped out “whole”
and processed
in another state
or country.

It requires lots of
labor & water
for value-added
processing.

If the
fresh cutting & processing
is done in Rhode Island

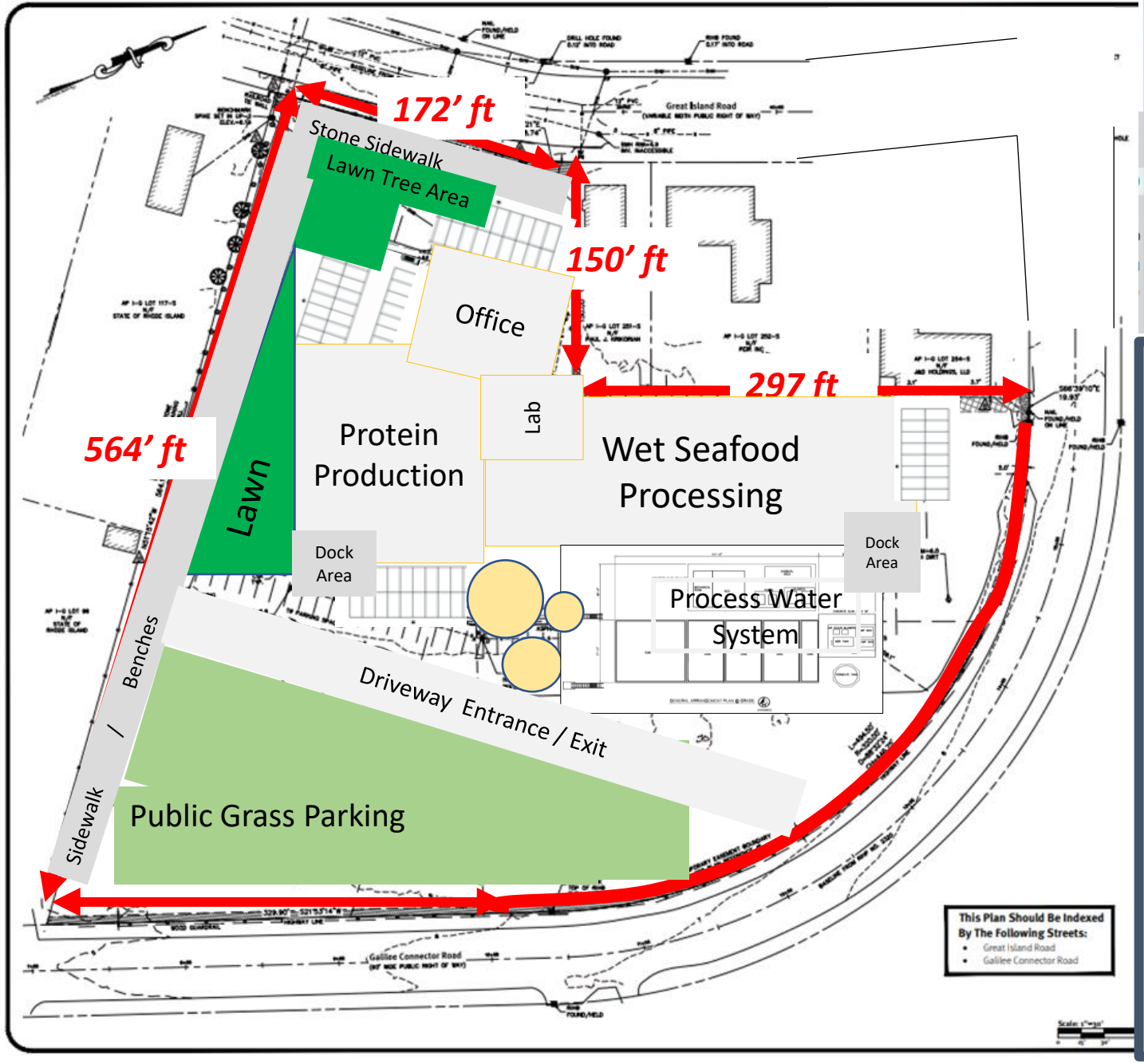
then even more value
added processing
can be added such as

Calamari Rings
Breaded & Frozen
Par-Fried

Squid Slicer (MDS-500B)

Seafood breading / frying line

Plot Plan
Processes
Products



DiPrete Engineering
Boston • Providence • Newport

Proximate Land Usage in feet.

Office ~75 x 90

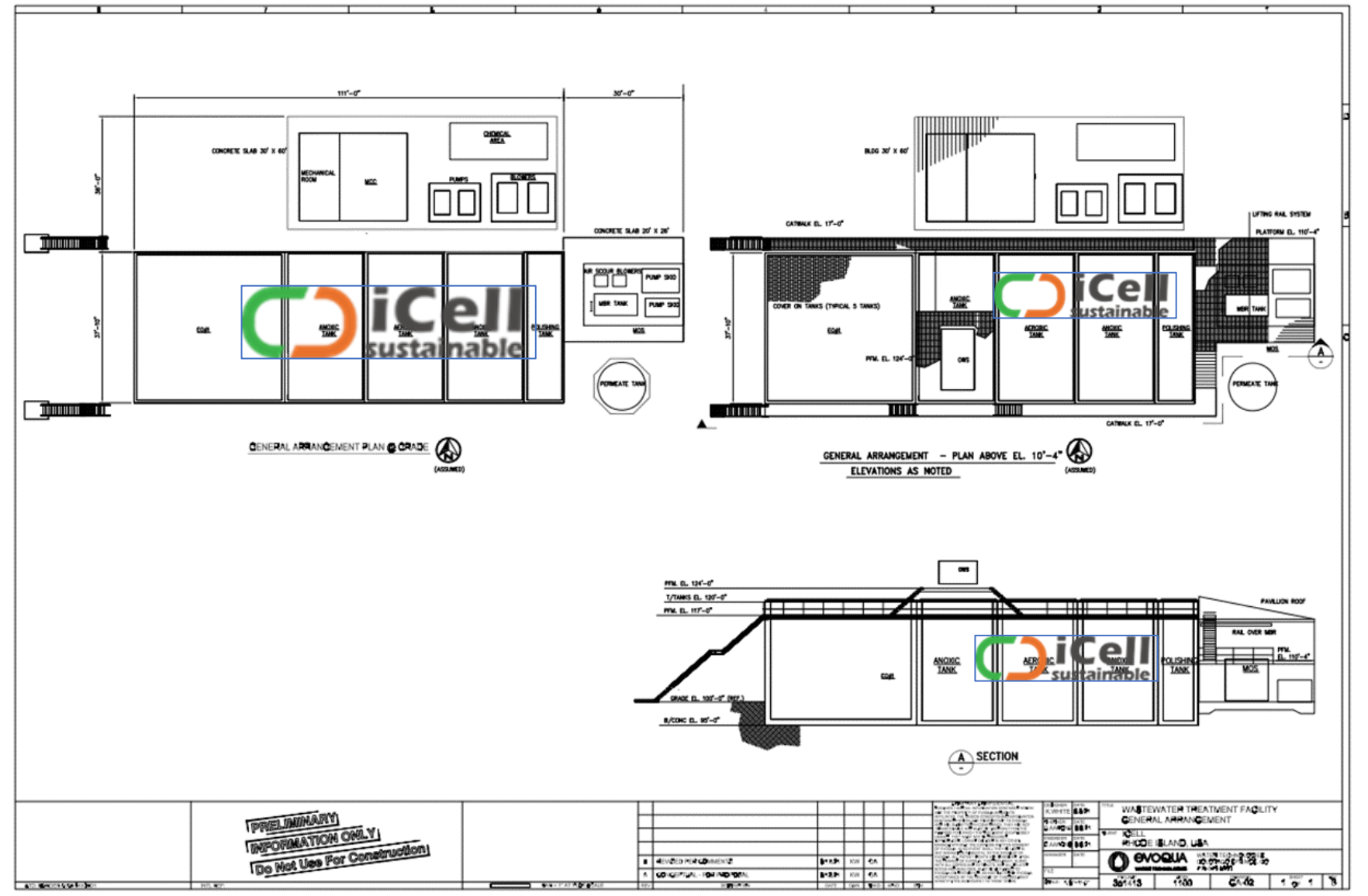
Water treatment footprint is ~180 x 100
+ Clarifier & Water Holding tanks external.

Seafood Processing ~300 x 100

Protein Production ~150 x 120

Note: The configuration can be adjusted in many ways – and QAAD / iCell are willing to work with the local agencies on site arrangement.

Process Water Purification Layout & Process Flow



Capability & Experience

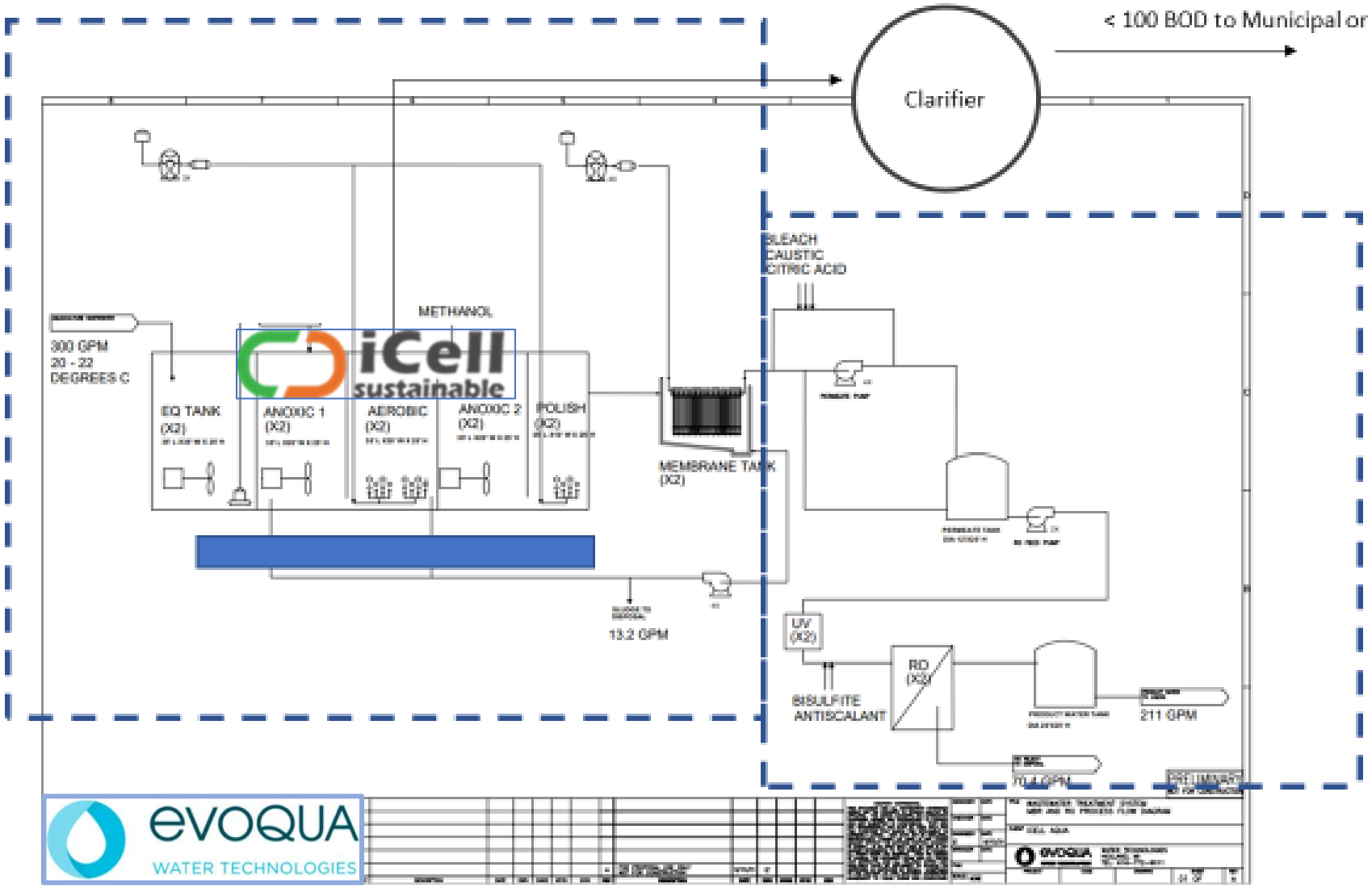
evoqua WATER TECHNOLOGIES

The $1.5Bil Evoqua Water company will support iCell Aqua on the final design and construction of the project.

Evoqua & its subsidiary companies have implemented hundreds of these types of water infrastructure projects over the last 3 decades.

Process Water Purification Layout & Process Flow

iCell Pretreat & Water Cleaning Process



Option Desal System can be added fresh water supply in Pt Judith is a limitation.

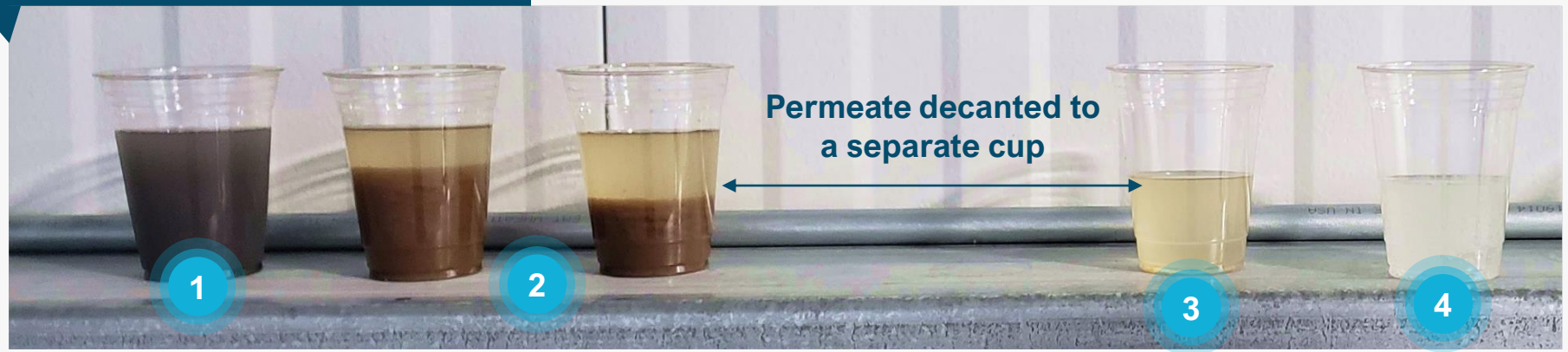
iCell Technology Validation in Rhode Island
Results for iCell Process at Quonset Qualification Run
Final Treatment and Conversion to Single Cell Protein

Woodruff & Howe, an independent water and environmental firm, was hired to conduct a pilot for QAAD at Quonset in October 2020.

The pilot was attended by Quonset Development Corporation, Department of Environmental Management, Rhode Island Food Policy Counsel, and key private company off-takers.

Process parameters and chain of custody analysis were performed by third parties, and the results were approved by the State of RI officials monitoring the pilot work.

iCell Aqua Production Samples



SeaFresh
Raw Squid Water
8,700 COD,
~5,000 conductivity
'fed to bacteria'

Fermentation.
The brown material
is the Single Cell Protein
after settling.

Permeate from
gravity settling
COD = 276

Same permeate with
100ppm bleach to
remove color

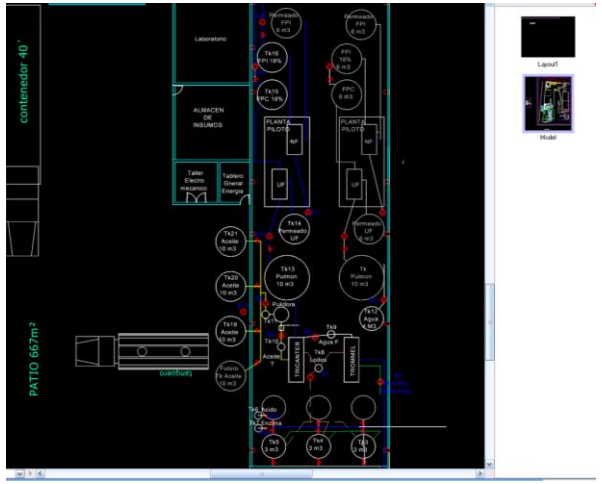
More Process

PROOF

iCell Process Validation Quonset, Oct 2020 DEM, RIFPC, Commerce

Pre-Treatment of seafood process water.

SeaFresh squid water ran through commercial pretreatment system
Reduces volume by up to 80% to be trucked from QDC to Pt. Judith for final iCell recovery of proteins in the water. Can apply to other food water as well.



Pt. Judith value added

Fish Processing (cutting, filleting, smoking)
Protein/Hydrolysate Lines – Petfood & Feed Ingredients

Stainless Steel, Sanitary construction of protein recovery

Stainless steel, sanitary designed, protein recovery from liquid processes
Creating Protein ***Ingredients for Petfood & Organic Animal Feeds***

Liquid Protein Processing System

Liquid Concentrates

Dried Protein Products

Economic Impact

Experience

Closing

Large GDP Multiplier Impact for RI

>$1Billion of GDP
over 10 years at capacity for the State of RI from surrounding activity

Water Infrastructure is critical for a Sustainable Protein Economy

Sources and basis of calculations

- RIEPC – aquaculture revenue and impact on Jobs
- Build Rhode Island – wages & benefits for various levels of workers in state of Rhode Island
- Construction Jobs – based on $30MM Galilee Project, 70% locally implemented. This will double with URI & QDC sites.
- Local Squid Processor interviews with SeaFresh & SeaFreeze – Added-Value information – employees per fresh value added processing.
- QAAD Jobs – based on operating personnel loads at Water plants, Proteins plants and Eel farms as historically managed by the QAAD officers & directors.
- Export Values – market values from known sales in the market

---

- University RI – Economic Impact of RI Fisheries & Seafood Sector – seafood landings, processing, labor.
  - 32 Jobs per $1MM vessel landing.
  - $51k revenue per fishing employee
  - 19 Fishing FTE's /$1MM vessel landings
- RIFPC – 2019 consultant study – top waste and water disposal volumes.

Main Two Areas of Economic Impact

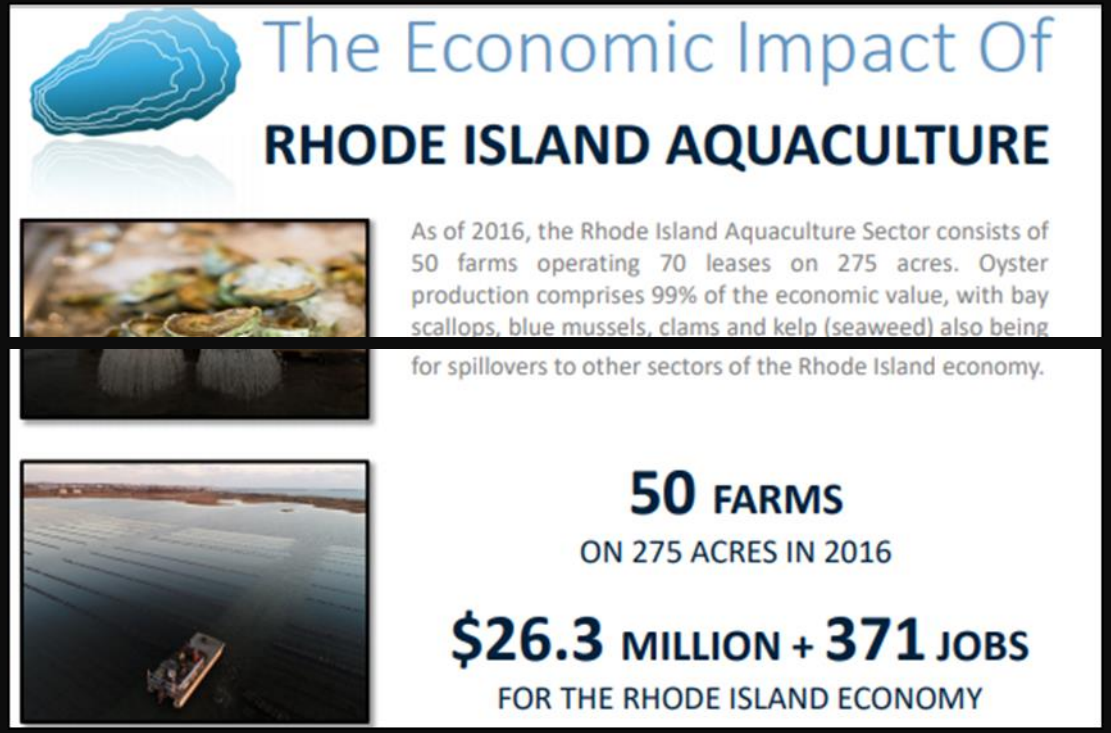
- **Direct [** non-Aquaculture **]**
  - Allows regional seafood processors to increase value added processing by 20,000,000lbs per year
  - $2.00/lb value added revenue/GDP

  - $40,000,000 per year of *fresh* value-added processing
  - $10,000,000 per year of additional landings
  - **$50,000,000 per year Fish & Processing GDP Impact**

- Aquaculture Businesses
  - **$70MM+/year** Water & Nutrient Recycle + Aquaculture in Phase 1.
  - 50% Growth with Phase 2 expansion.

GDP of Aquaculture in the State of RI

Source: RIEPR.org



A Galilee site

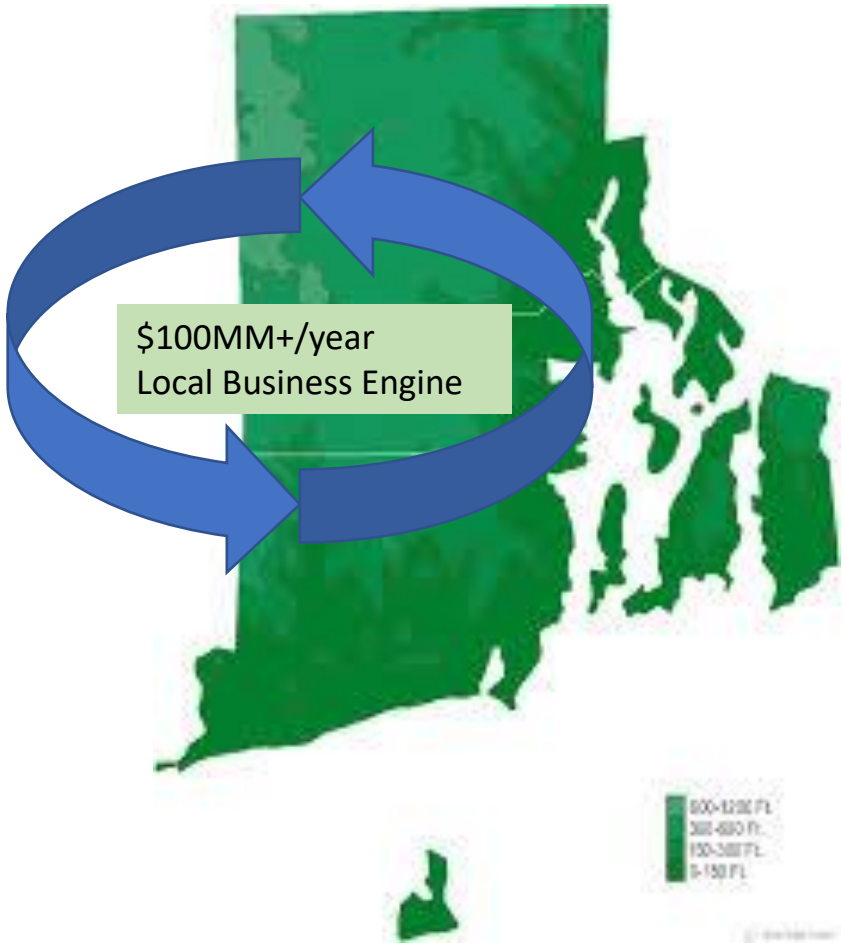
Can enable new Aquaculture to *triple* in Rhode Island

…on < 10th of the land

10+ year Aquaculture & Value Added Seafood Export Benefit at capacity

>95% Aquaculture production exported

$100MM+ between the two supported projects

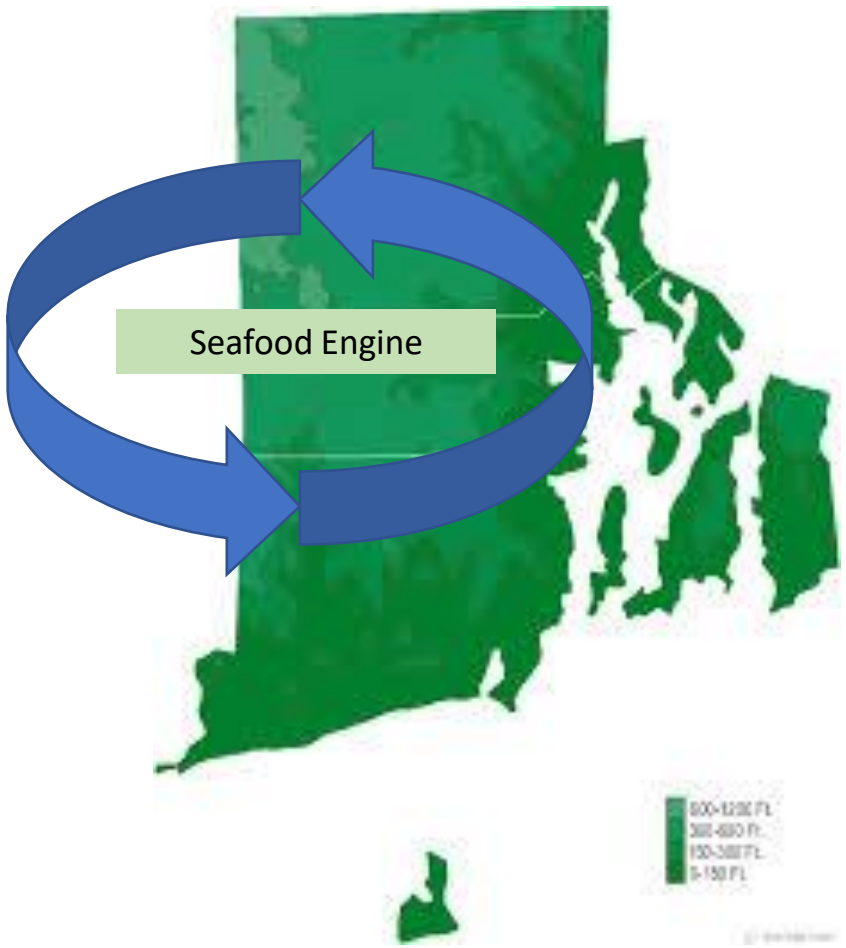


$100MM+/year
Local Business Engine

6,000,000+ lbs/year
Eel/Mahi/Yellowtail Export $8-$15/lb. Live
$15 to $30/lb Processed
Additional Value Added Wild Caught Exports

$1,000,000,000+
Money back into RI Economy

Summary of 10+ Year Impact at capacity



$15,000,000+ Direct Income + Sales Tax

$20,000,000+ Indirect Sales & Income Tax

$30,000,000+ Increased Squid Fishing

$250,000,000+ Direct + Value-Added Wages

$500,000,000+ Revenue from Aquaculture Exports

$300,000,000+ Revenue from *Value Added* Export

$1,000,000,000+ GDP impact to State Rhode Island

CREDENTIALS

Investment & Operating Companies behind the Project

Peritus Capital

www.PeritusCap.com

iCell Sustainable Nutrition Company

- www.iCellSustainable.com
- www.iCellAqua.com
- Patented Solution to Water & Nutrient Recovery
- Operator of facilities – not just equipment or IP

- Aqua Vida, Eel Aquaculture
  - www.avidallc.com
  - Land Based, Aquaculture / Farm Operator
  - Experienced European based eel farming

Evoqua Water

- www.Evoqua.com
  $1.5Bil USD Publicly Traded – Water Technology company with full EPC capabilities.

Executive Expertise with Real World Experience

iCell Aqua Brings Together a Talented Team

Mark Rottmann
Chief Executive Officer and Chairman of the Board

Terry Bradley, PhD
Advisory Board
Co-Founder & Board member, Greenfins Aquaculture

Nico Falke
Director of Aquaculture Operations

Dagoberto Sanchez, PhD
Advisory Board

Seth Terry, PhD
Advisory Board
Co-Inventor iCell Process

Andrew Logan, PhD
Advisory Board
Co-Inventor iCell Process

Hosn Song
Advisory Board
iCell Operations

Vivid Zhao
Advisory Board
iCell Operations

Kit Munday
Business Development Director and Aqua Vida Founder

Geoff Grant
Board Member

Yang Song
iCell Sustainable Nutrition Observer and Board Member

Howard Tang
Executive Director for Capital Raising and Board Member

Patrick Brueggman
Advisory Board
Water & Infrastructure Deployment

Peter Mottur
Greenfins Managing Director and Co-Founder

Scott Thomas Hattersley
Advisory Board

Full Profiles of the Executives, Managers, Engineers & Scientists behind iCell Aqua and QAAD can be found on the iCell Aqua website

www.iCellAqua.com

4 PhD's in Water/Aquaculture/Sciences

6 BS or Masters in Science/Engineering/Aquaculture

5 Business/Finance

Majority with 25+ years of industry experience

Deep Domain Knowledge and Expertise
in
Water, Aquaculture, Protein Production & Seafood Processing

How to move forward in 2022

- Site Confirmation and Approval is Critical to Finalize Designs and Funding
  - Companies and Investors cannot move ahead unless they know they can build.
- iCell Aqua / QAAD Inc.
  - Design, Build & Operate the iCell water-treatment, recycle & protein recovery process at Pt. Judith and related water pre-treatment operations.
  - State RI & Municipality do not have any on-going operating expense for the system

Funding Plan

a) Debt/Equity Ratio: 2:1

b) Industrial Revenue Bond

   a) Due to the water recycle elements of iCell Aqua design which can be used by multiple regional food processors, we have received a $37,000,000 Industrial Revenue Bond sponsored by the State of Michigan for a similar project located in Michigan.

   b) iCell & QAAD have met with Commerce RI, who indicate the same Bond approach can be used for the Galilee Site.

c) Equity

   a) iCell has an equity raise in progress for all international projects and would add the Galilee project to the Investor Memorandum.

   b) The Key for Investors to commit is to know that the site is approved for construction.

   a) The multi-site water treatment format will also qualify the project for Federal Grant Funding under ARPA, Build Back Better & various EPA programs that exist today.

Regulatory Items

a. State RI Agencies (mainly DEM)
   a. will also need to provide their "pre-approval" of the aquaculture and water-recycle / nutrient recovery projects.

   a. Private investors cannot commit to the Bonds or Equity if the projects are not confirmed that they can be built.

b. Key Permits/approvals
   a. Aquaculture permits
   b. Permits for the ovens/dryers inside the protein plant

   These items (a &b) were discussed with DEM in July 2020 and there were no objections raise by DEM personnel on the Video Call – but we still need the formal approvals for the site.

   a. Effluent Permits for the Pt. Judith Water Purification & Recycle Facility
      a. Either to local municipality or Pt Judith to have its own RIPDES
      b. If to municipality, then the price/cost to the project must be extremely low – since "clean water" is being sent.

Milestones

a. First 90 days
   a. iCell Aqua / QAAD to complete final designs with local 3rd party engineering firms
      a. Can initiate mobile pre-treatment for SeaFresh QDC
   b. Finalize engineering and site designs for Pt. Judith
   c. Finalize Permits with DEM
   d. Finalize Bond with Commerce RI.

b. 90-180 days
   a. Begin demolition of Lighthouse Inn
   b. Finalize Contracts for major equipment and construction at Pt Judith

c. 180-360 days
   a. Break ground on Galilee Water Treatment site
   b. Initiate additional pre-treatment for some of the existing water in Pt Judith to allow SeaFreeze and others to immediately expand production based on their current infrastructure.
   c. Move ahead with Aquaculture Projects at other sites

Closing

- Rhode Island has a WATER INFRASTRUCTURE gap
  - Not enough treatment capacity for sea food processing water and other food industry water which prevents industry growth.
- A Solution for Rhode Island can be located in Galilee
  - Using iCell Aqua Water & Nutrient Recycle to expand the seafood industry.
- This approach is an infrastructure investment that creates $1Bil+ GDP multiplier impact for Rhode Island in the coming years