

Drakes Estero Aquaculture Center  
Concept Design v1.0  
29 April, 2009





Client:

Drakes Bay Family Farms  
Kevin Lunny, Director  
Inverness, California  
<http://drakesbayfamilyfarms.com>



Design Architect:

Ecological Design Collaborative  
Sim Van der Ryn, Buddy Williams  
Inverness, California  
[www.ecodesign.org](http://www.ecodesign.org)



Conceptual Structural Engineering:

Tipping Mar Structural Engineers  
David Mar  
Berkeley, California  
[www.tippingmar.com](http://www.tippingmar.com)

Booklet assembled by Buddy Williams

# *introduction*

Drakes Bay Family Farms asked the EcoDesign Collaborative to re:invision their existing oyster processing facility so that it may better meet the needs of their operations and mission in the 21st century.

Our scope of work for this stage was to formalize the building program, understand the best uses for the site and to derive a conceptual design and master plan that reflected the values, priorities and future aspirations of Drakes Bay Family Farms.

This project has many variables to contend with; our hope is that this initial vision can add inspiration to the overall goal of creating a world-class processing building and visitor's center that enhances the natural ecosystems and cultural resources of our Point Reyes National Seashore.



*existing — looking south-west*



*existing — looking north to north-west*



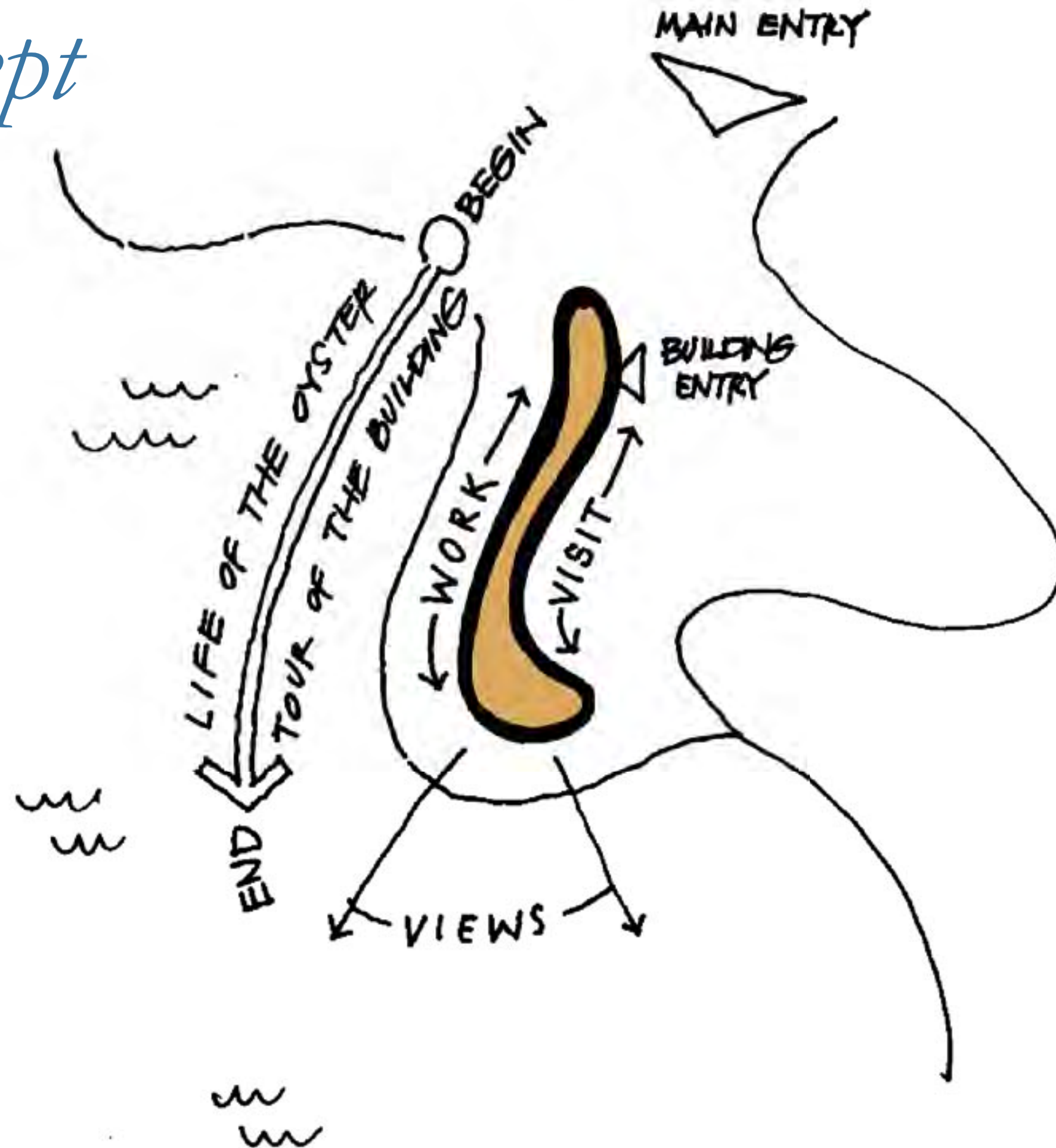








*concept*

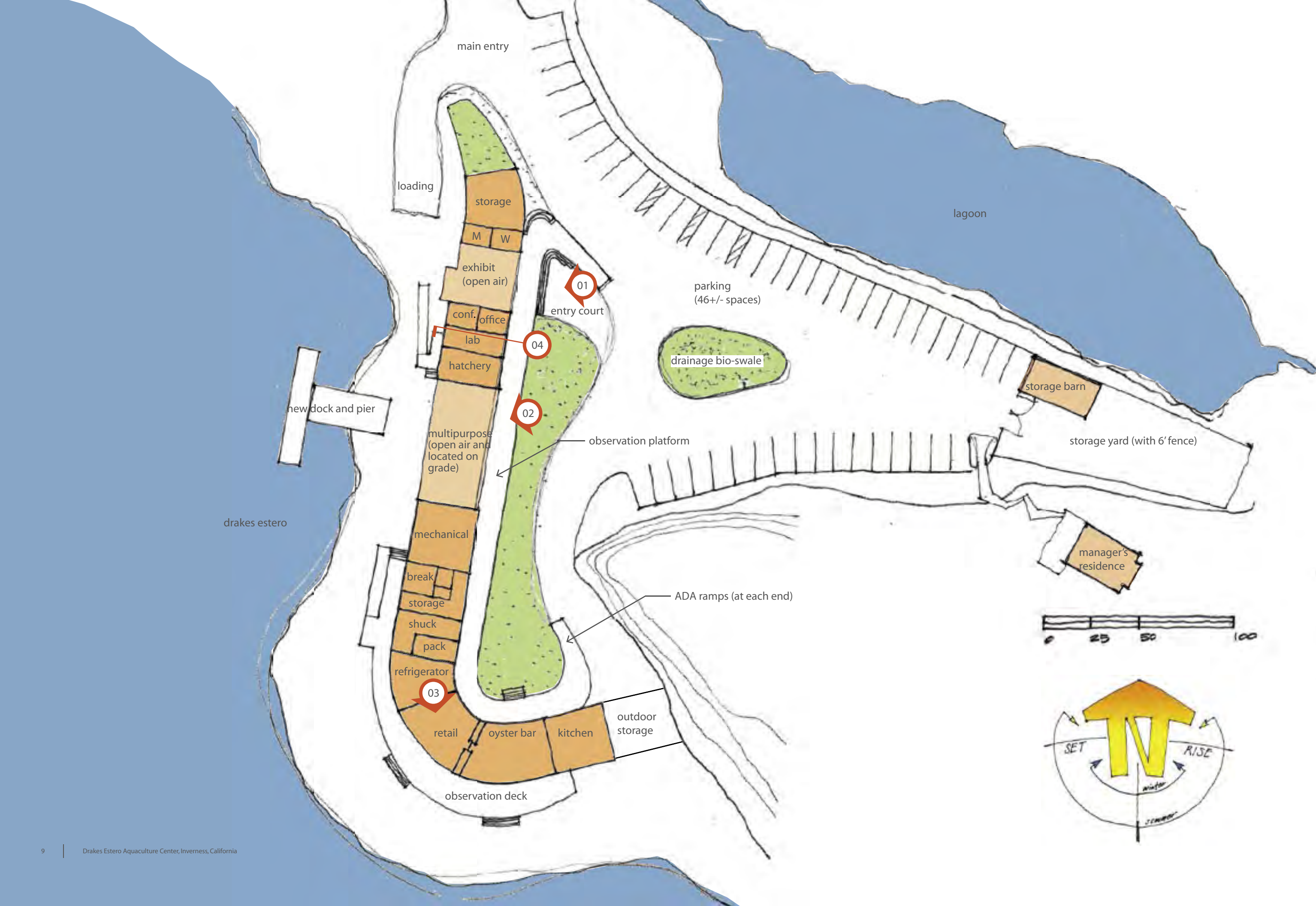




# *the big ideas*

- the plan of the building is arranged in sequence to the life stages of the oyster
- organic form works with the flow of the ocean and the land
- low-profile building with a green roof that hugs the shoreline
- all of production is placed under one roof
- the visitor's experience is placed alongside the employee's activities, without interfering with the worker's duties
- "future-proofed" building rests on piers, which raises the floor plate above a potential global warming sea rise
- very little of the building touches the ground
- simple, robust marine-grade construction
- inspiring green architecture - the building itself is a teaching tool







# program

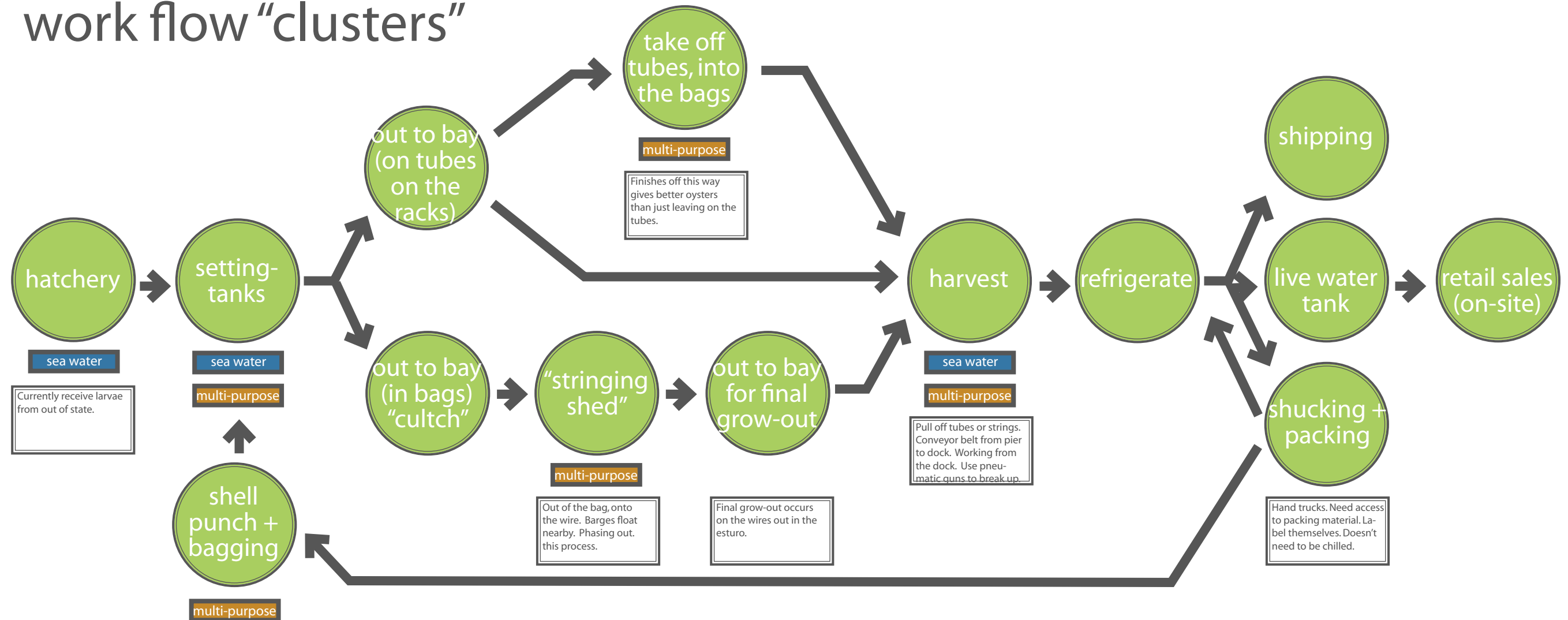
## Building program and conceptual square footage outline

building program	(sq. ftg.)	size (sq.ft.)	sq.ftg. "non- conditioned space"
PROCESSING FACILITY			
storage (inside of berm)		32 x 20	640
restrooms	320	32x 10	
visitor's center / introduction		32 x 32	1024
small conference	200	12.5 x 16	
office (includes storage)	312	19.5 x 16	
lab	512	32 x 16	
hatchery	512	32 x 16	
setting and wet storage		32 x 40	1,280
multipurpose space		32 x 40	1,280
mechanical room	1,024	32 x 32	
break (includes 64 sf. unisex bathroom)	288	16 x 14	
storage	480	10 x 32+	
shuck + pack	768	32 x 24	
refrigeration	704	30 x 18	
retail	960	32 x 30	
cafe / events	1,280	40 x 32	
catering kitchen	1,024	32 x 32	
total sq. ftg. "enclosed space"	8,384		
total sq. ftg. "non-con space"			4,224
total gross sq.ftg. processing facility	12,608		
OTHER STRUCTURES			
site managers residence	1,500		
storage building	816	34 x 24	
total gross sq.ftg. other structures	2,316		
total gross square footage	14,924		

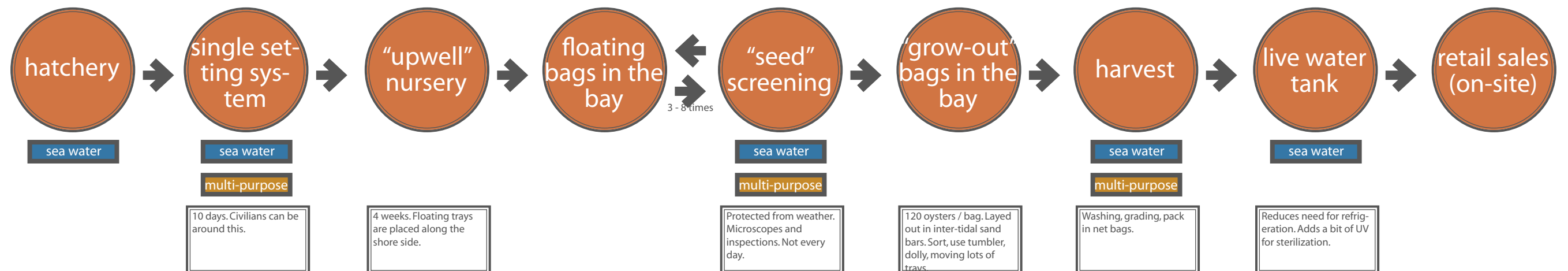


# The current pacific oyster “workflows” are outlined below:

## work flow “clusters”



## work flow “singles”







Looking towards the visitor's entry court and exhibits.

01





Visitors can overlook the multi[purpose space and watch the workers harvest the oysters.

02





In the retail shop looking south out to the estero.



# building section

solar photovoltaic glazing; doubles as visitor's shade canopy to filter light and provide some rain protection

16-17'

cantilevered observation platform; less visible clutter (no supporting columns) and reduced site disturbance

lightweight green roof (solar photovoltaic glazing over the multipurpose work area)

hi-performance modular "store front" wall assembly

exposed wood structure (held separate from exterior wall) with simple "barn-like" construction

pre-cast modular concrete beams, piers and hollow-core floor slabs; reduces site disturbance, long lasting and raises finish floor above a potential rise in sea level.

04



*existing*





*proposed*

