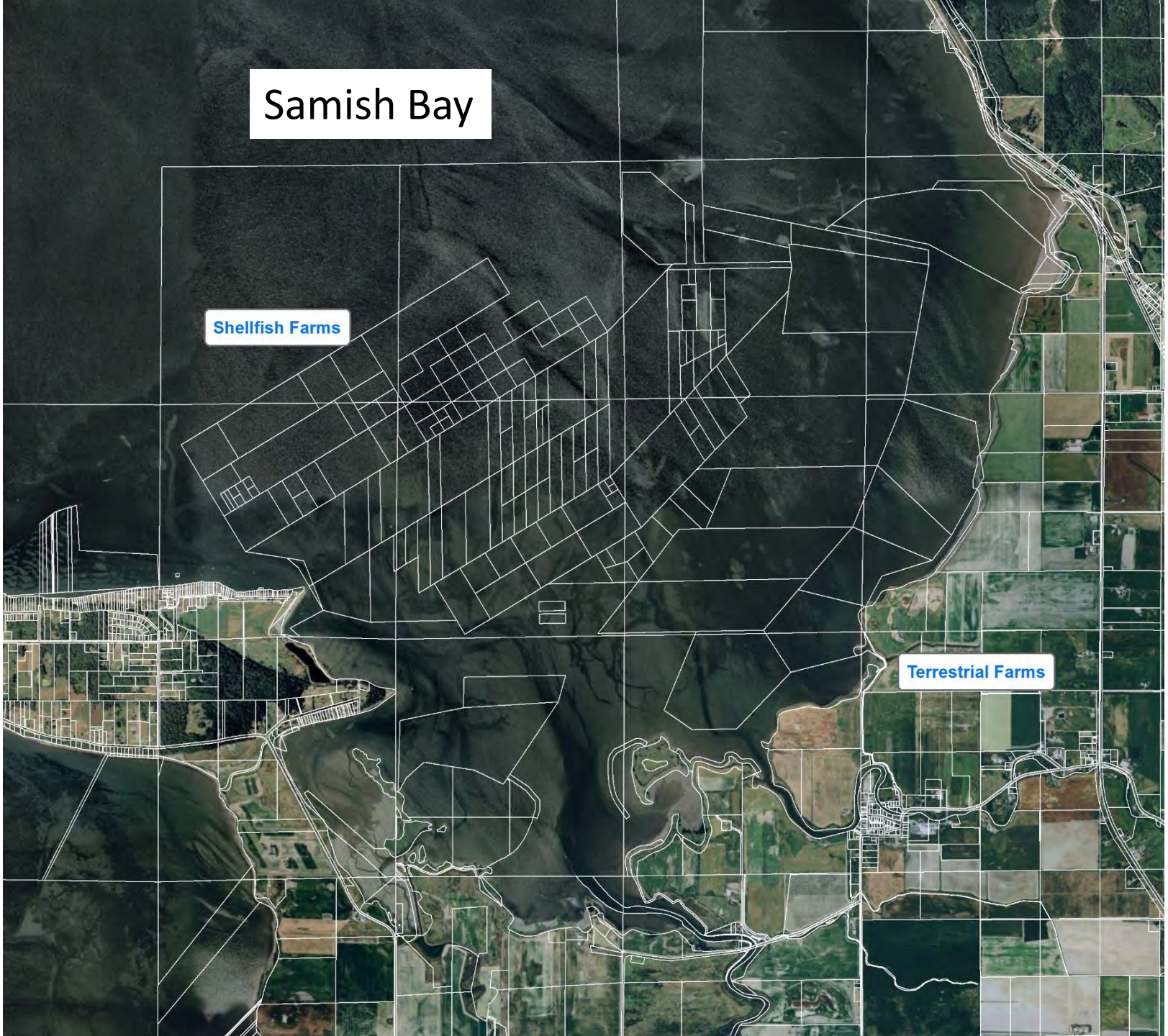
Bill Dewey
Director of Public Affairs

Samish Bay Shellfish Aquaculture

Farmed shellfish economic contribution

- Washington state leads country in farmed shellfish production
- $184 million to Washington's economy
- 2,700 direct & induced jobs
  - $37 million direct wages
  - $40 million induced wages
  - Largest private employer in Pacific County
  - 2nd largest (?) private employer in Mason County
  - Significant employer in Thurston, Kitsap, Jefferson, Grays Harbor, Clallam, Skagit, Island, Whatcom and Pierce counties

Planting baby geoducks


Samish Bay
Shellfish Farms
Terrestrial Farms

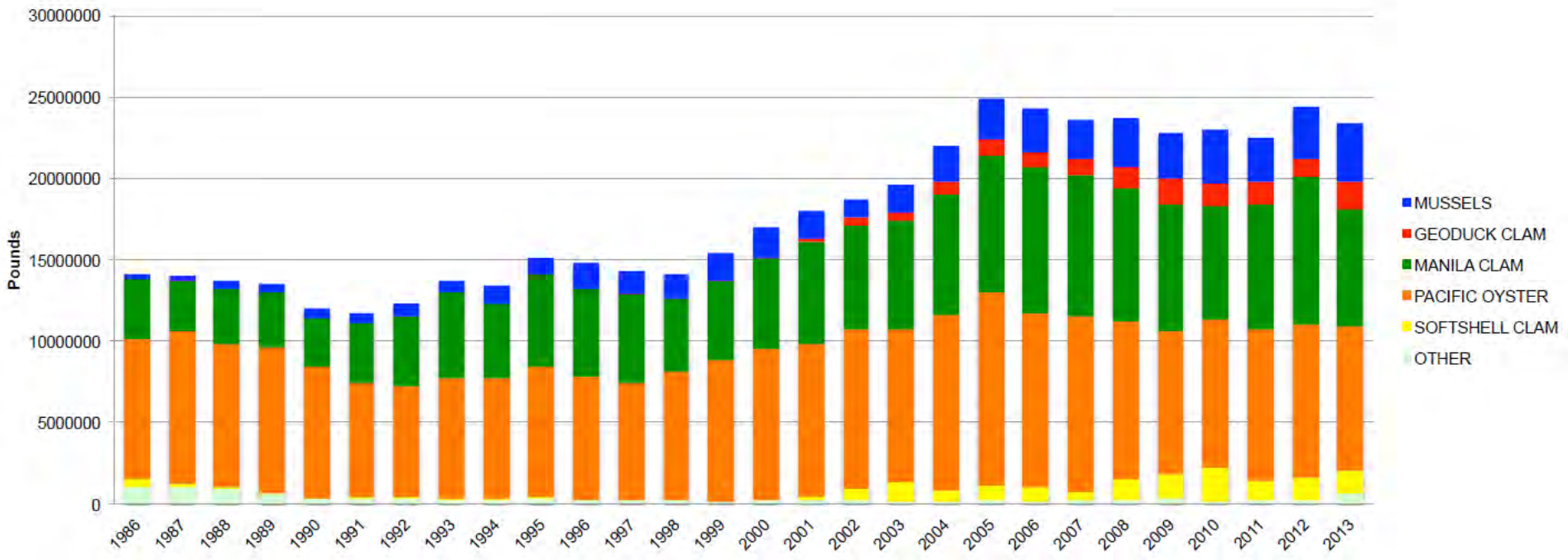
U.S. West Coast Farmed Shellfish








Washington shellfish aquaculture production by species 1986 - 2013



Source: Patterns in the Economic Contribution of Shellfish Aquaculture, Kevin Decker, WSG 2015

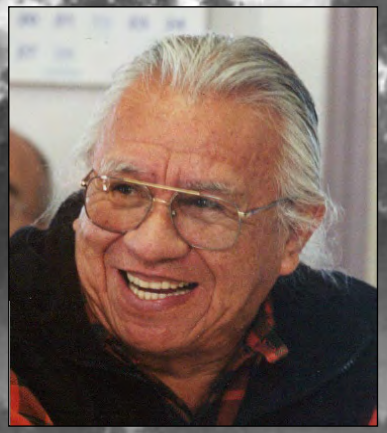
Samish Bay by the numbers…

- ~ $2 million annual payroll
- ~ 70 Full Time Equivalents employed directly by farms
- ~ $6 million wholesale oysters, clams and geoduck annually
- ~ $3 million retail sales
- Shellfish served in local restaurants, part of local heritage
- Tourism draw for region (retail stores, festivals etc.)
- Water quality challenges – failing onsite sewage systems, commercial and non-commercial livestock, dairies etc. result in periodic closures for shellfish harvest

Oyster Run motorcycle rally

Photos from Bivalves for Clean Water's post

in Mobile Uploads



Billy Frank, former Chairman
Northwest Indian Fisheries Commission

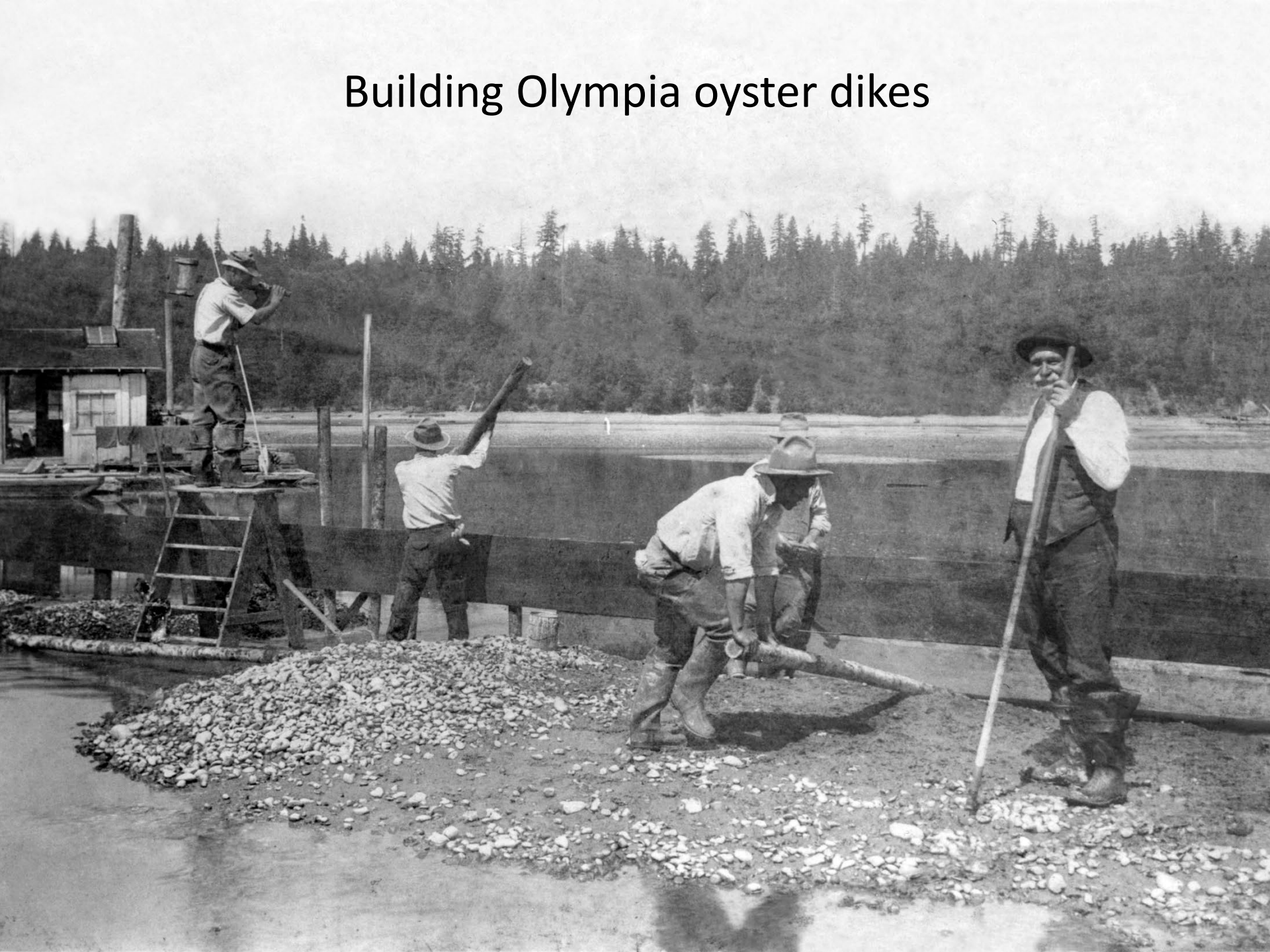
"Shellfish are central to the culture of tribes in Western Washington. Healthy shellfish populations and a strong shellfish industry mean a healthy Puget Sound. Shellfish also help keep Puget Sound's waters clean. They have an important place in the Sound's ecosystem."

Shellfish farming is culturally and historically important to the region


Olympia oysters

Olympia oyster dikes - 1910

Building Olympia oyster dikes




Pacific oyster - *Crassostrea gigas*

Oyster seed shipped annually from Japan

Oyster seed crates circa 1930 from the Padilla Bay Oyster Company (courtesy Astrid Aamot)

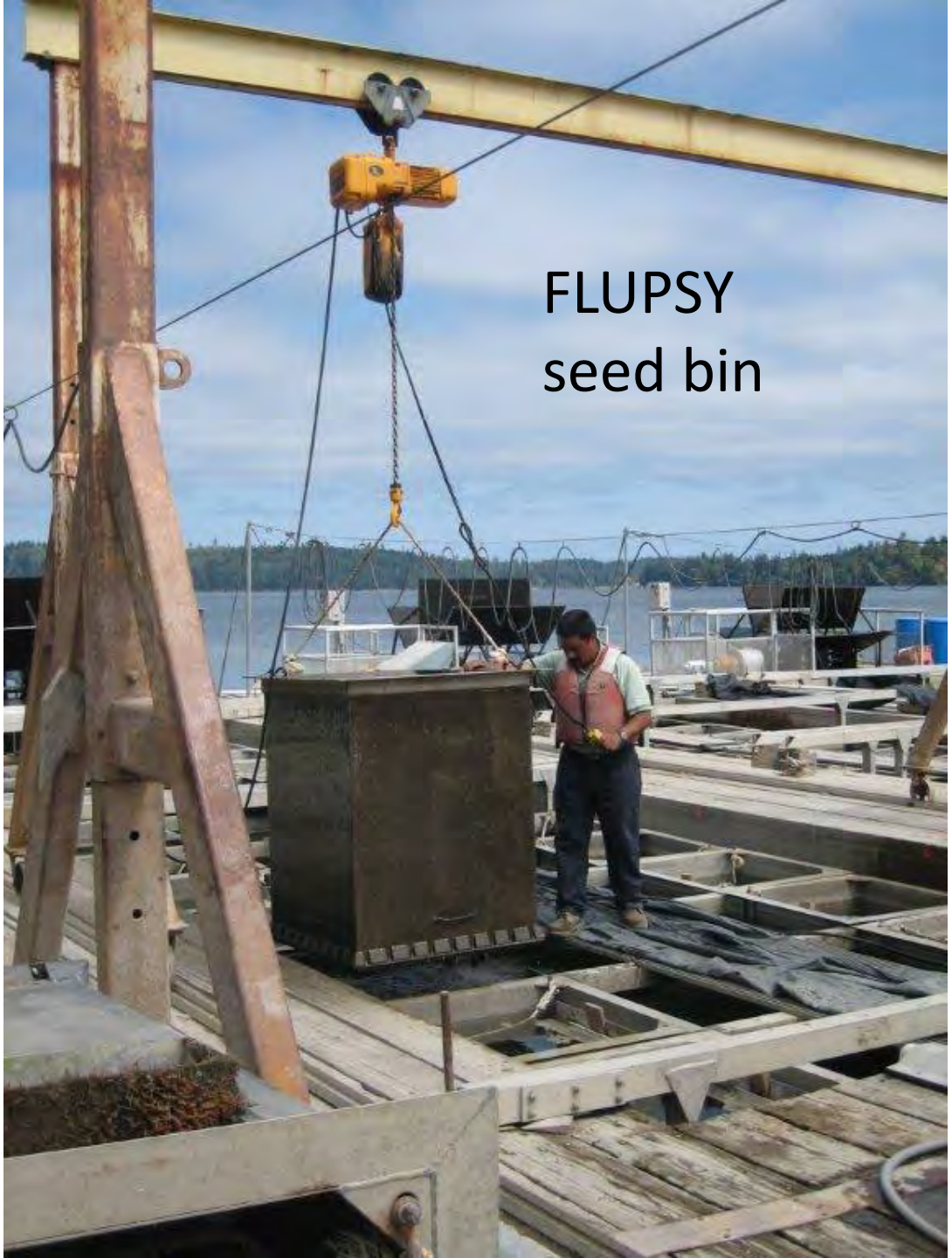

Taylor Shellfish Farms hatchery, Dabob Bay, Washington


Oyster larvae
Gary Braasch

Algae culture


PURE
BIOMASS

Taylor Shellfish FLUPSY seed nursery
Oakland Bay, Washington


FLUPSY
seed bin

Oyster seed grader

Grading single oyster seed


Oyster seed

Oyster shells!

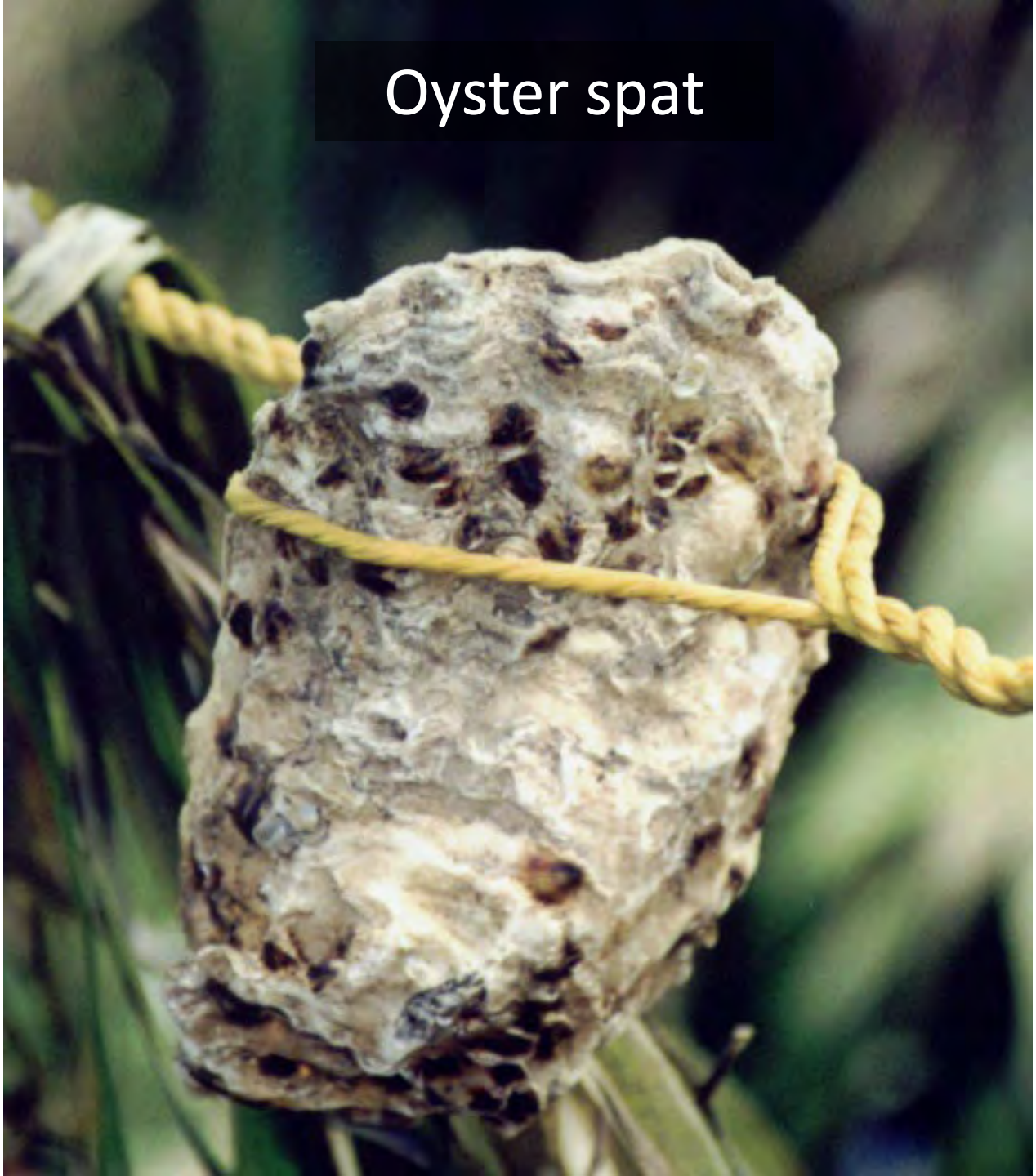

Bags of oyster shell ready
for re-seeding


Baby oysters on shells = “spat”

Janet P planting oyster seed in Samish Bay


Pacific oyster bed Samish Bay


Pacific oyster longlines Samish Bay


Oyster spat

Oyster cluster on longline

Aerial view of oyster beds in Samish Bay

Loading empty oyster harvest tubs

Harvesting oysters Samish Bay

Nighttime oyster harvest

Harvested oysters are retrieved at high tide

Shucking!

Shucked oyster meats


Bed of single oysters
Totten Inlet

Shigoku (flip bag) oyster culture, Samish Bay


Shigoku oysters


Shigoku oyster


Taylor
Shellfish
Farms
"The Ultimate Oyster"
SHIGOKU 至極
OYSTER

Floating bag culture


Manila clams


Clam seed raceway

Clam harvest – Hood Canal


Geoduck


Geoduck nursery net tubes


Baby geoduck siphons


Geoduck seed

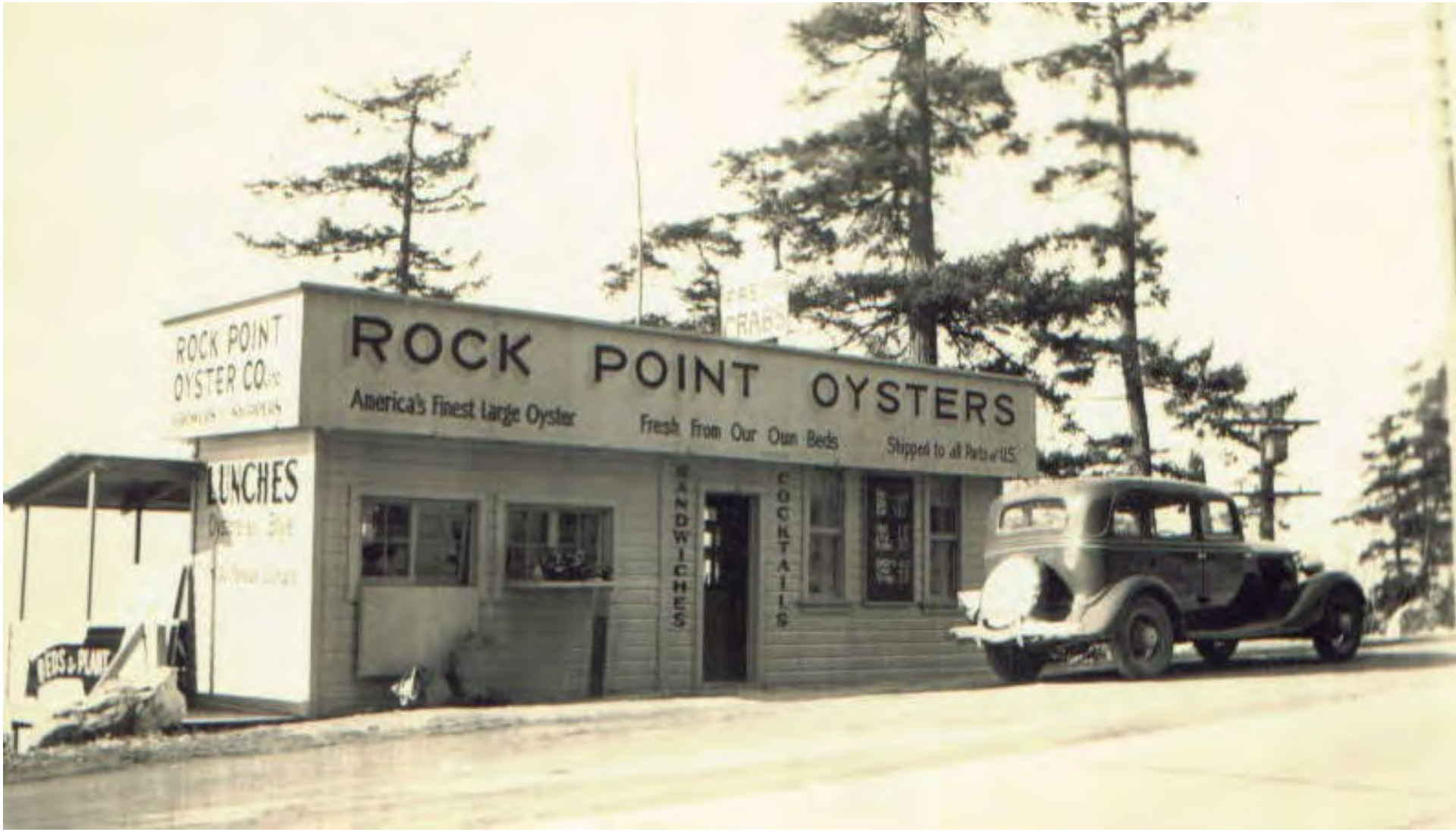
Recreational geoduck harvest


Geoduck harvest

Geoduck dive harvest

Samish Bay 8+ pound geoduck

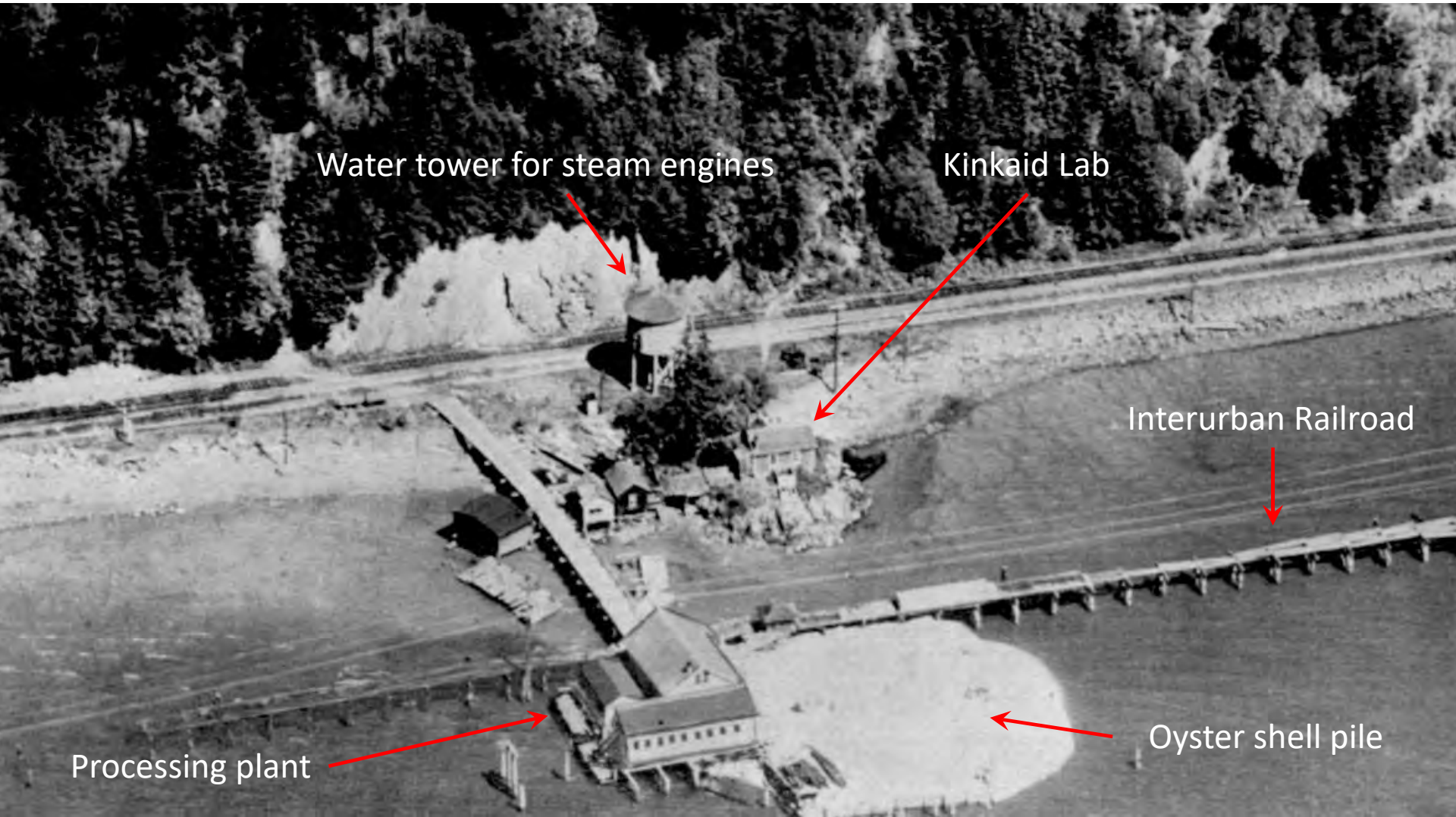
Oyster Bar before it was the Oyster Bar



The Oyster Bar

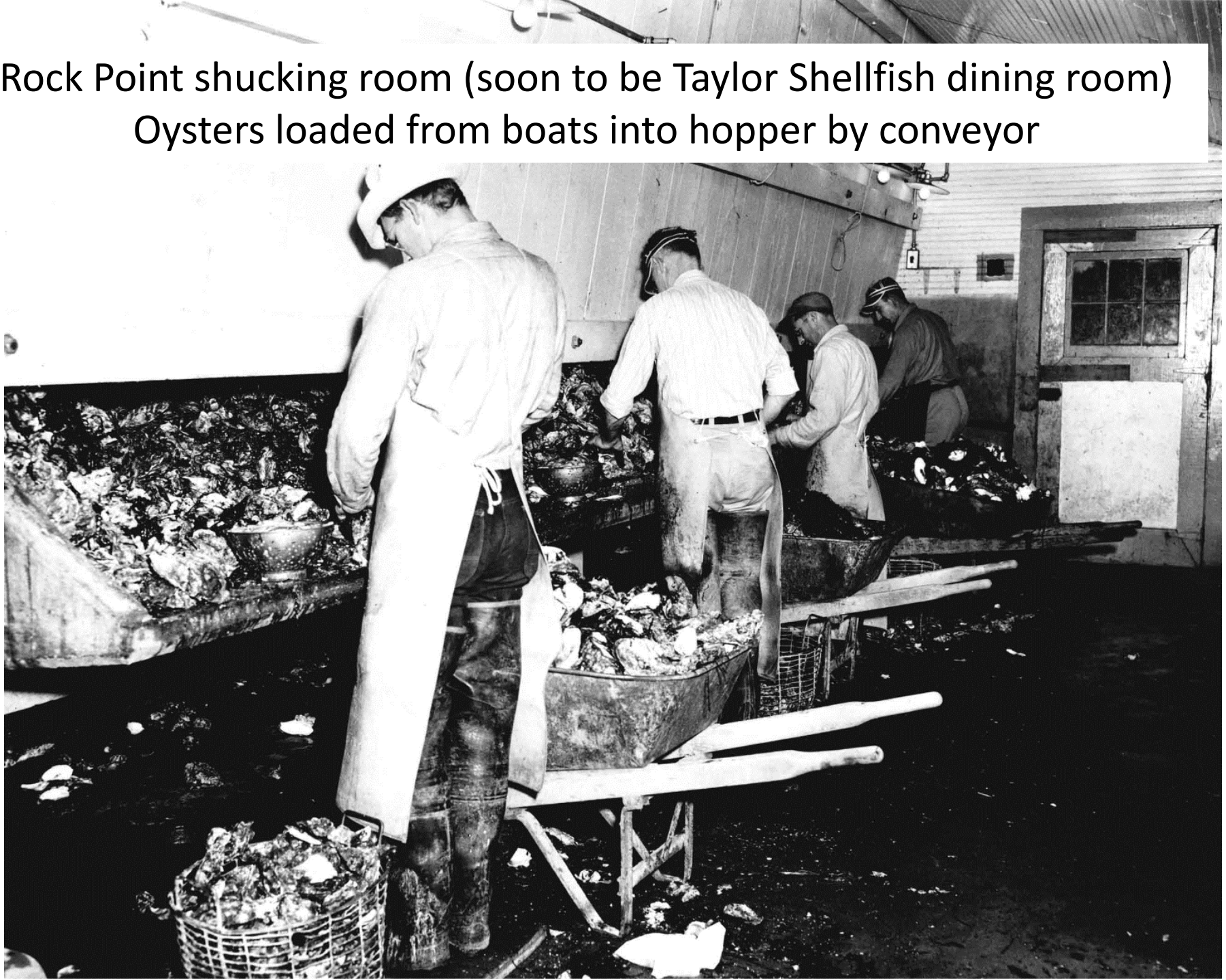
Oyster Creek Inn

Historic aerial view of Rock Point Oyster Company



Rock Point shucking room (now dining room)
Oysters loaded from boats by overhead trolley with dumping bin

Rock Point shucking room (soon to be Taylor Shellfish dining room)
Oysters loaded from boats into hopper by conveyor



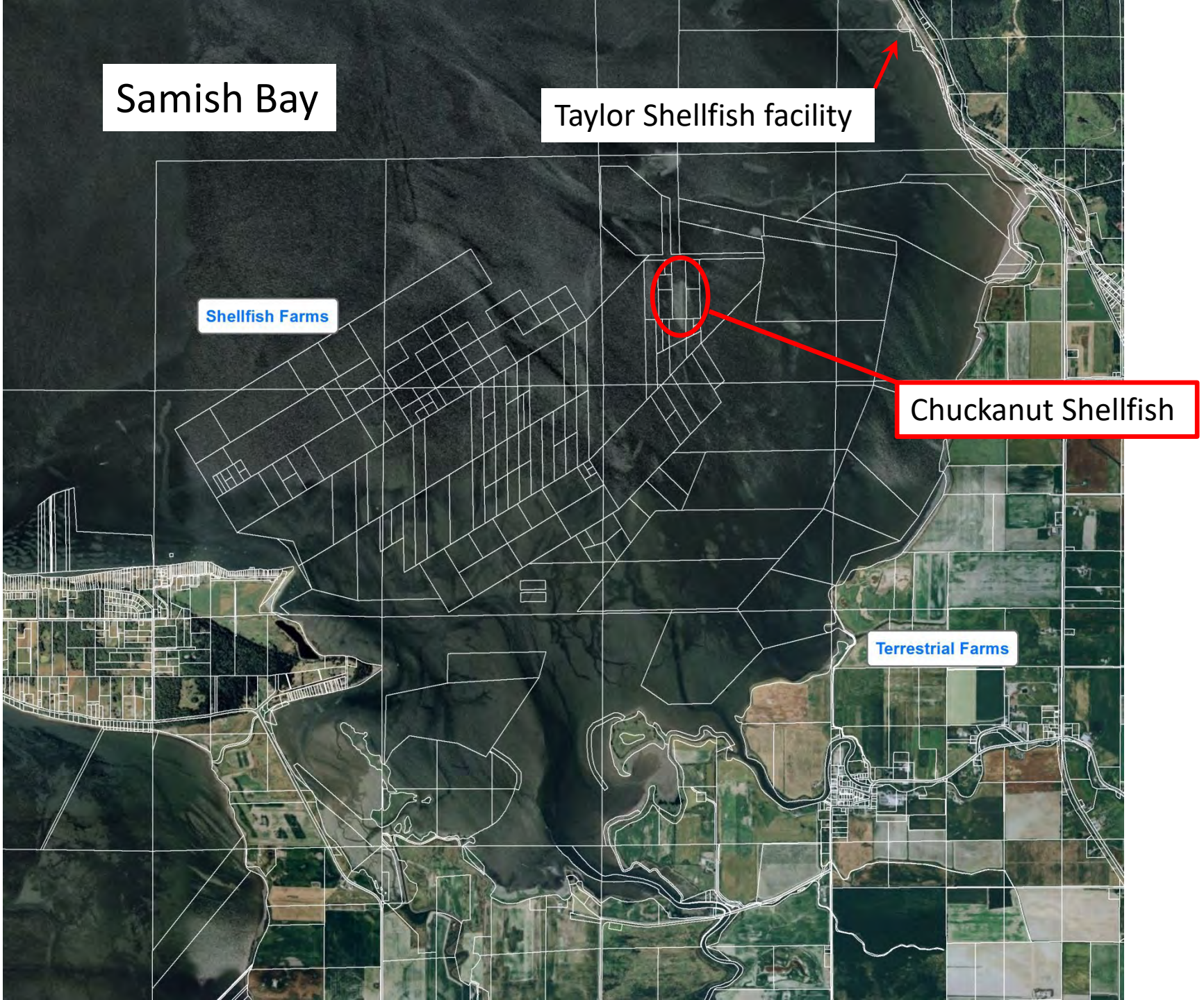

Rock Point packing room (now Taylor Shellfish retail store)

Taylor Shellfish processing facility, Shelton, Washington

Shucking!

Shucked oyster meats

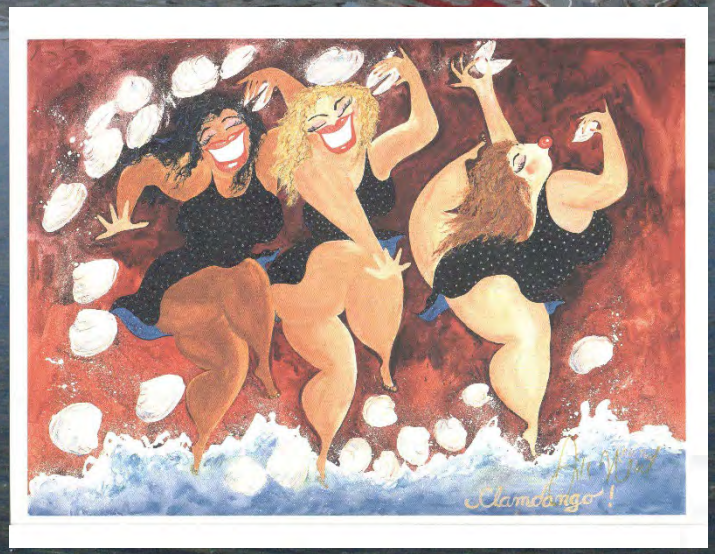
Chuckanut Shellfish
Samish Bay Clam Farm


Samish Bay
Taylor Shellfish facility
Shellfish Farms
Chuckanut Shellfish
Terrestrial Farms

The farm at low tide

(it is under 8-10 feet of water at high tide)

Clamdango!



Installing rows of predator exclusion netting


Clam seed

Planting clam seed


Sea lettuce growing on
predator exclusion netting
May, 2006

Sweeping algae off predator exclusion nets

John Roozen with tulip bulb harvester in Washington Bulb greenhouse (2001)

Mechanical clam (tulip bulb/potato) harvester

Mechanical clam (tulip bulb/potato) harvester


Freshly harvested rows of clams

Herons perched on pallets of harvested clams

Taylor Shellfish clam harvesting machines

Retrieving the harvest

Post clam harvest on returning tide

Installing geoduck nursery tubes

Installing geoduck nursery tubes

Planting geoduck seed

~6 years

Algae growing on geoduck nursery tubes


KEENE

Water quality challenges

Shellfish growing area classifications

1. Approved – no harvest restrictions
2. Conditionally approved – rain = temporary closures
3. Restricted – no harvest for market. Shellfish must be moved to clean bay for set period of time before harvesting for marketing (relay)
4. Prohibited – no harvest for market. Only seed production allowed


UNCLASSIFED
APPROVED
CONDITIONALLY APPROVED
CONDITIONALLY APPROVED
UNCLASSIFIED
PROHIBITED
Padilla Bay Growing Area
SAMISH BAY
SAMISH ISLAND
Samish Island
LLINGHAM BAY
273
84
363
76
77
362
78
364
361
79
80
311
310
92
71
86
85
90
91
87
81
322
94
82
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88
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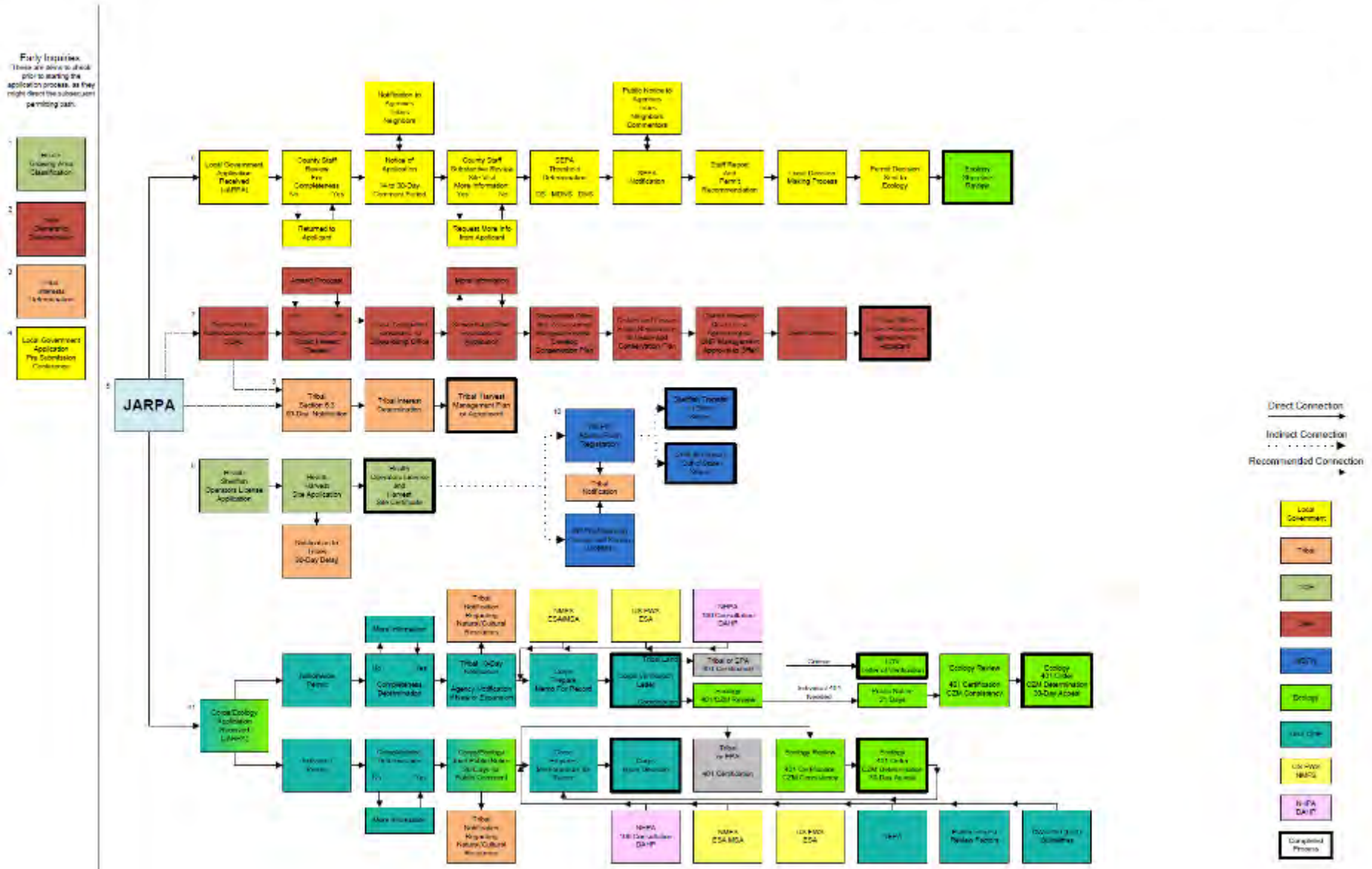
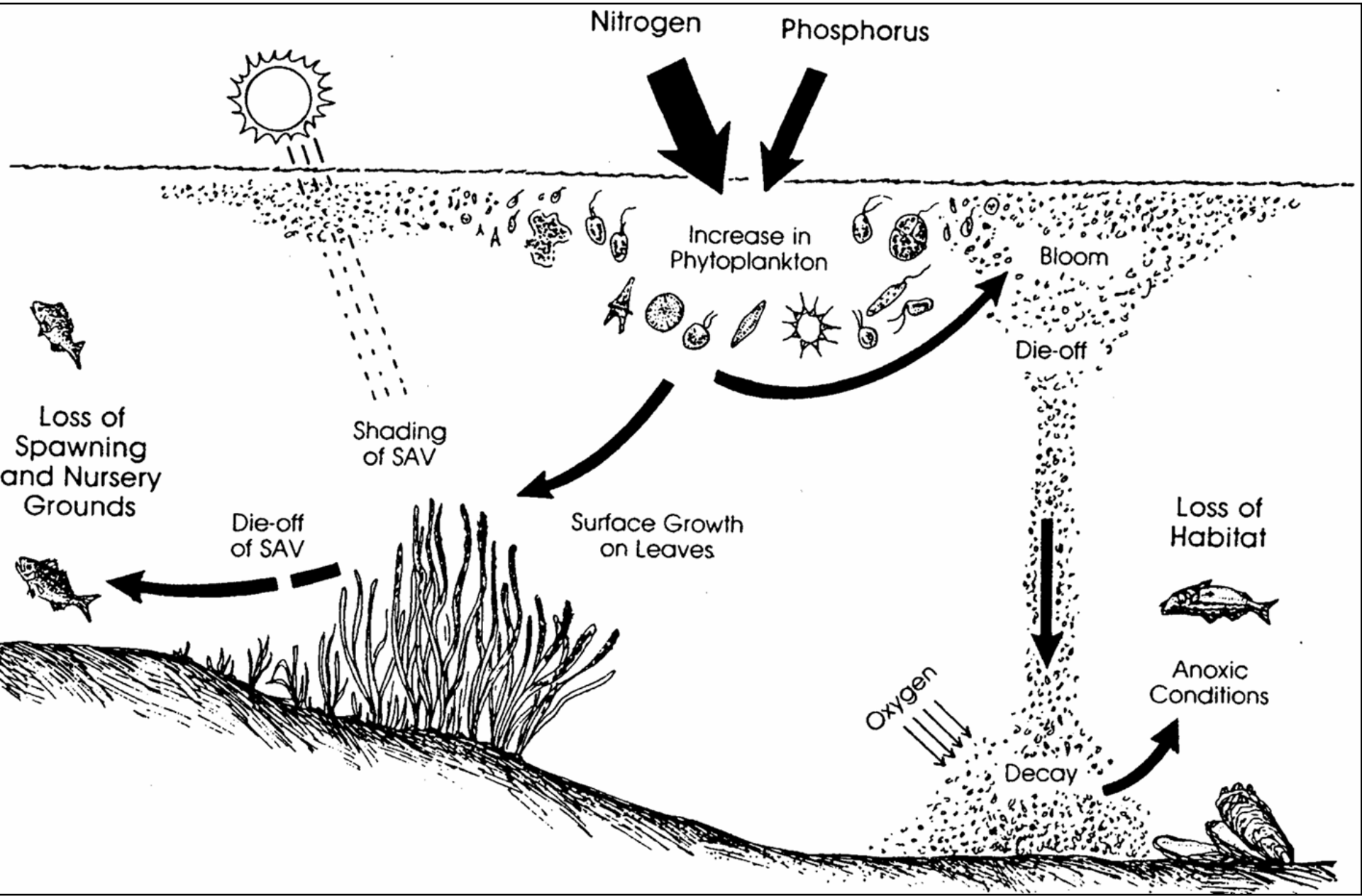
324

Existing steps to permit shellfish aquaculture in Washington State

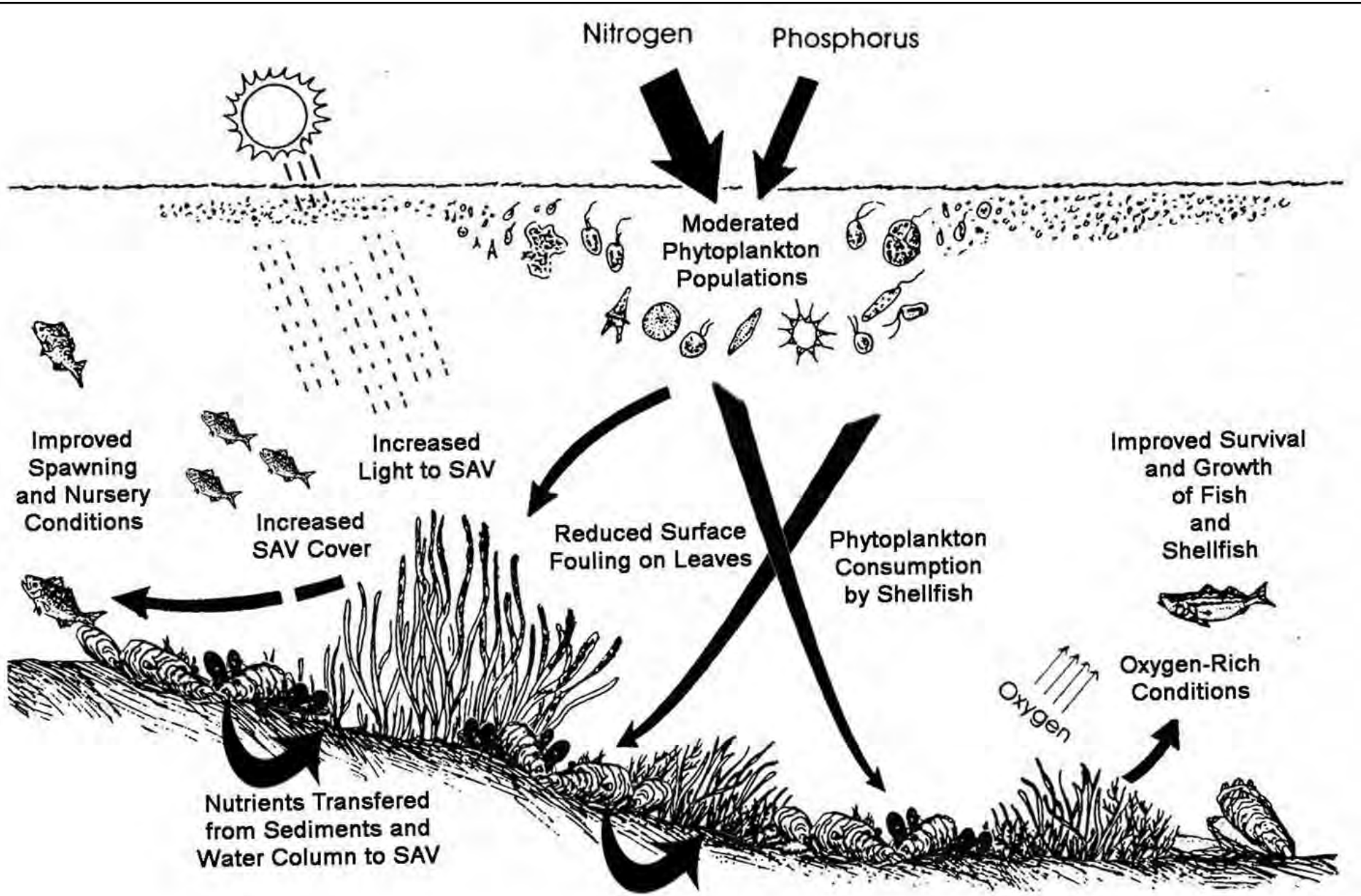
September 2014



Shellfish absent



Shellfish present



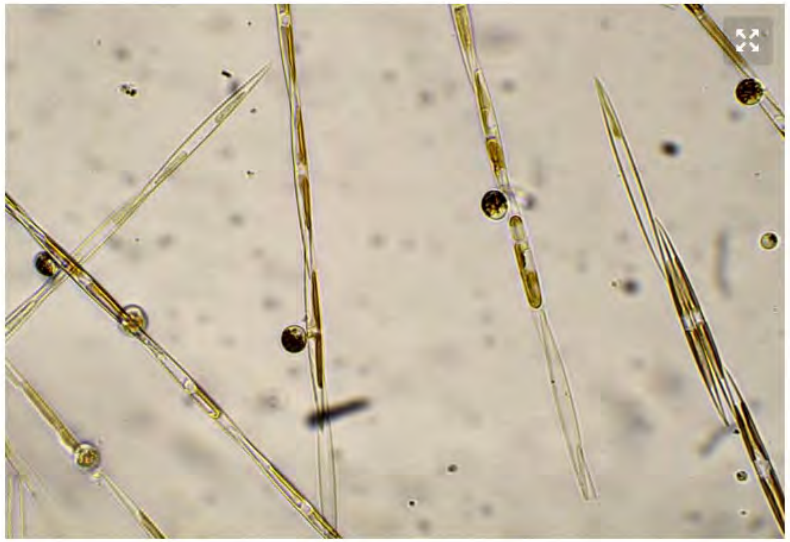
Amazing water filters!

Harmful Algae Blooms (HABs) & naturally occurring bacteria

The Seattle Times

Toxic algae bloom might be largest ever

Originally published June 15, 2015 at 9:05 pm | *Updated June 16, 2015 at 11:41 am*



A close up of the diatom that produces the marine toxin domoic acid. (NOAA)

Scientists onboard a NOAA research vessel are beginning a survey of what could be the largest toxic algae bloom ever recorded off the West Coast.

Long history of water quality advocacy

February 25, 1957

More Oyster Suits

North Bay-Allyn Growers File Against Rayonier

Three more damage suits against Rayonier Incorporated have been filed by Mason county oyster growers, bringing the North Bay-Allyn oyster growing area into the picture for the first time.

Suits filed in Tacoma added $128,120 to the more than a million dollar total previously asked in suits filed by eleven Mason and Thurston county oyster growers.

The latest suits were brought by Clem and Dolores [illegible] $41,520; Leslie and [illegible] $42,300; and Nels Chr[illegible] for $42,300. All own[illegible] North Bay-Allyn [illegible] charge the beds have [illegible] by wastes discharge[illegible] onier's Shelton mill [illegible] where they are no lo[illegible] ing Olympia oyster cr[illegible] to two years ago, [illegible] yielded as high as [illegible] oysters annually.

Oystermen Seek Hearing To Discuss Pollution Problems

FEB. 25, 1957

SHELTON (Special)—A hearing to discuss pollution problems has been requested by the Olympia Ovster Growers Association before the Washington Pollution Control Commission.

Addressing the request to Earl Coe, director of the pollution agency, Herb Nelson, president of [illegible]nen's group, said that [illegible]mmediate attention to [illegible]t."

[illegible]aid the oystermen de[illegible]l the state agency of [illegible]on problem as it af[illegible]roduction of Olympia [illegible]ower Puget Sound. He [illegible] the bivalve industry

Oyster Growers Give Up Pollution Case

THE BELLINGHAM HERALD

Vol. LXXIV, No. 222 * Bellingham, Washington, Thursday, September 19, 1963 10 Cents Per Copy

JFK Urg[illegible] Public [illegible] Tax Bill

News Summary

Group Says State Dra[illegible] Its He[illegible]

September 19, 1963

"Group Says State Dragging Its Heels"

The Clean Samish Initiative is a coalition of federal, state, and county governments, Indian tribes, Non-Governmental Organizations, shellfish growers, and private citizens dedicated to reducing fecal coliform pollution in he Samish Bay Watershed. Our team works to find and fix sources of pollutio in the watershed, with a special emphasis on linking landowners with resources to help them reduce the risk of pollution from their property.

https://www.skagitcounty.net/Departments/PublicWorksCleanWater/cleansamish.htm


Taylor
Shellfish
Farms
Thank You For Helping
Keep Samish Bay Clean
www.TaylorShellfishFarms.com

Shellfish Seed Sales

"Local sale aims to focus attention on water quality issues"

LOCAL

Skagit Valley Herald

City desk: 360-416-2160 / news@skagitvalleyherald.com

Will shellfish plant seeds of knowledge?

Local sale aims to focus attention on water quality issues

By MARY EVITT
Staff writer

How do you grow shellfish?

Obviously, not like a sunflower, yet seed is involved.

The trouble is people with a small strip of tidelands usually can't drop in to a seed store and buy what they need.

But that changes for three hours on Saturday, July 12, when Taylor Shellfish Farms for the first time locally sells seed to the general public for growing oysters, clams, mussels and geoduck.

Timing is important for shellfish gardeners because they need to walk on the tidelands to plant the seeds, said Irene Fadden, manager of Taylor's shellfish farm in Bow.

The low tide anticipated for Saturday is a doozie. Planting conditions will be right because of a minus 2.8 low tide at 10:41 a.m. that day.

Taylor Shellfish isn't selling seed to tideland gardeners for a new source of revenue, said Bill Taylor, president of the company.

"This isn't a sale for commercial growers, it's really for people who want to grow a few shellfish," Taylor said.

"The primary intent is more shellfish growing out there makes people more aware of pollution and of what's going on in the Sound," he said.

Taylor is the first to say water quality is important to his industry. After all, he grows shellfish in the waters of Samish Bay and off Shelton, in southwest Washington. Taylor has held seed sales at the Shelton Farm for a number of years.

Taylor said about 250 people attend the sales held three times a year. Many are regulars who like to gather at the sale to swap tales about their experiences and pick up tips on aquaculture.

"We are excited about shellfish and we want other people excited about shellfish," Taylor said.

Part of the sale proceeds Saturday will benefit the Skagit Conservation Education Alliance. Bill Dewey is the president of the newly established nonprofit organization. The membership includes representatives of businesses, agencies and individuals with a common interest in water quality issues.

The group's purpose is educating the public about nonpoint pollution, or contamination not coming out a pipe, Dewey said. Nonpoint pollution can include failing septic tanks, agricultural waste and urban runoff, he said.

Dewey is a former manager of the Bow Farm who now works at corporate headquarters in Shelton. He also grows 20 acres of clams in Skagit waters. Yes, clean water has implications for aquaculture but also for every purpose, he said.

The alliance plans to hold the first Samish Bay Bivalve Bash and Low Tide Mud Run on Saturday, July 19, the second of the public awareness events taking place this summer.

Separately, as a nonprofit organization, the alliance can apply for grants that Skagit County, as a government entity, isn't eligible to seek.

Preventing pollution is part of what the alliance hopes to achieve. The state issued a list earlier this week of waters that could be closed to shellfish harvesting if conditions don't improve. Samish Bay is not on the list. It was on a "threatened" list in 2001 and has gradually improved. Health officials promise this to the installation of a community drainfield in Edison and several new individual septic systems in Blanchard that helped eliminate fecal coliform contaminating shellfish beds.

"We are trying to avoid closings all together," Dewey said.

Mary Evitt can be reached at 360-416-2147 or at mevitt@skagitvalleyherald.com.

Frank Vargo / Skagit Valley Herald

Irene Fadden, manager of Taylor Shellfish Farms in Bow, arranges bags of oyster shells that contain seed on the tidelands Thursday.

Shellfish seed sale

- **What:** Oyster, clam, mussel and geoduck seed sale.
- **When:** 8 a.m. to 11 a.m. Saturday, July 12.
- **Where:** Taylor Shellfish store, 2182 Chuckanut Drive, Bow.

Outdoor event

- **What:** Samish Bay Bivalve Bash and Low Tide Mud Run, with music, food, games and other events.
- **When:** 12:30 p.m. to 8:30 p.m. Saturday, July 19.
- **Where:** Taylor Shellfish Farms, 2182 Chuckanut Drive, Bow.
- **For more:** www.taylorshellfish.com.

Pacific oyster larvae that have grown to seed or spat status are ready for planting.

Samish Bay Green Crab Team Dewey

Skagit Valley Herald
SATURDAY
AUGUST 29, 2020
A family owned newspaper serving Northwest Washington since 1884
$1.50
WWW.GOSKAGIT.COM

TAKING ON GREEN CRABS

KIMBERLY CAUVEL / SKAGIT VALLEY HERALD

Local shellfish farmer Bill Dewey pulls a trap from the water Thursday during an ongoing effort to trap invasive European green crabs that have been found in Samish Bay.

The battle has moved into Samish Bay

By KIMBERLY CAUVEL
@Kimberly_SVH

The invasion of the European green crab in local waters continues.

In Samish Bay, what began as the discovery of a few of the crabs in Taylor Shellfish Farm's aquaculture beds in January 2019 has this summer grown into a full-fledged trapping effort. As of Thursday, 88 non-native crabs had been pulled from the water.

"These are all signs that this could be a new situation that we want to keep a pretty close eye on and intervene if possible," Washington Sea Grant Crab Team Program Lead Emily Grason said.

The green crab has been found along the West Coast for decades, and made its debut in the Salish Sea in 2016. In September 2016, the first was found in Skagit County: a lone green crab in the mud of Padilla Bay.

KIMBERLY CAUVEL / SKAGIT VALLEY HERALD

Local shellfish farmer Andy Dewey holds an invasive European green crab Thursday that was the 70th caught in a Samish Bay trapping effort in which he is involved. It brings the number of the crabs found in the bay to 88.

Through 2018, intensive monitoring led by the Crab Team, state Department of Fish & Wildlife and Padilla Bay National Estuarine Research Reserve turned up a few green crabs in Skagit waters. Six were found in Padilla Bay and one empty shell called a molt was found in Fidalgo Bay.

Now there have been dozens found in Samish Bay and one was again found in Padilla Bay — discoveries that have sparked concern among local businesses and scientists.

"The reason we're very concerned about the European green crabs is because in some of the other places they've invaded and reached high densities, they've destroyed large areas of salt marsh and eelgrass meadows, largely through their burrowing," said the Padilla Bay National Estuarine Research Reserve's Roger Fuller, who found the single invasive crab in Padilla Bay last week during regular monitoring of the reserve's wildlife.

"And they have sometimes also devastated native species including shellfish and crabs."

They threaten aquaculture, too, particularly clams.

"One of my real concerns is that they will eat clams, which I grow on my farm," said Bill Dewey, spokesperson for Taylor Shellfish Farms and owner of Chuckanut Shellfish.

More CRABS | A9


Questions?