

# 2021Citizen Science Herring Spawn Data Sheet

Email/hardcopy send with photos to Anne Shaffer [anne.shaffer@coastawatershedinstitute.org](mailto:anne.shaffer@coastawatershedinstitute.org), CWI, and Todd Sandell, WDFW; [todd.sandell@dfw.wa.gov](mailto:todd.sandell@dfw.wa.gov); Questions call Anne Shaffer 360.461.0799

Note: Quadrat should be square, 1/2 meter on a side. Photos please include at least 3 quadrat photos

Name/Email/Phone:

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Date:
Notes:

Location: Site name:

Latitude:

Longitude: \_\_\_\_\_

White water	Photos	Date and time	Number taken	Latitude	Longitude
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Type

Shoreline length of whitewater (number of paces)\*:

Number of paces per 10 feet (estimate):

<u>On the ground</u>	<u>Photos</u>	<u>Date and time</u>	<u>Number taken</u>
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Type

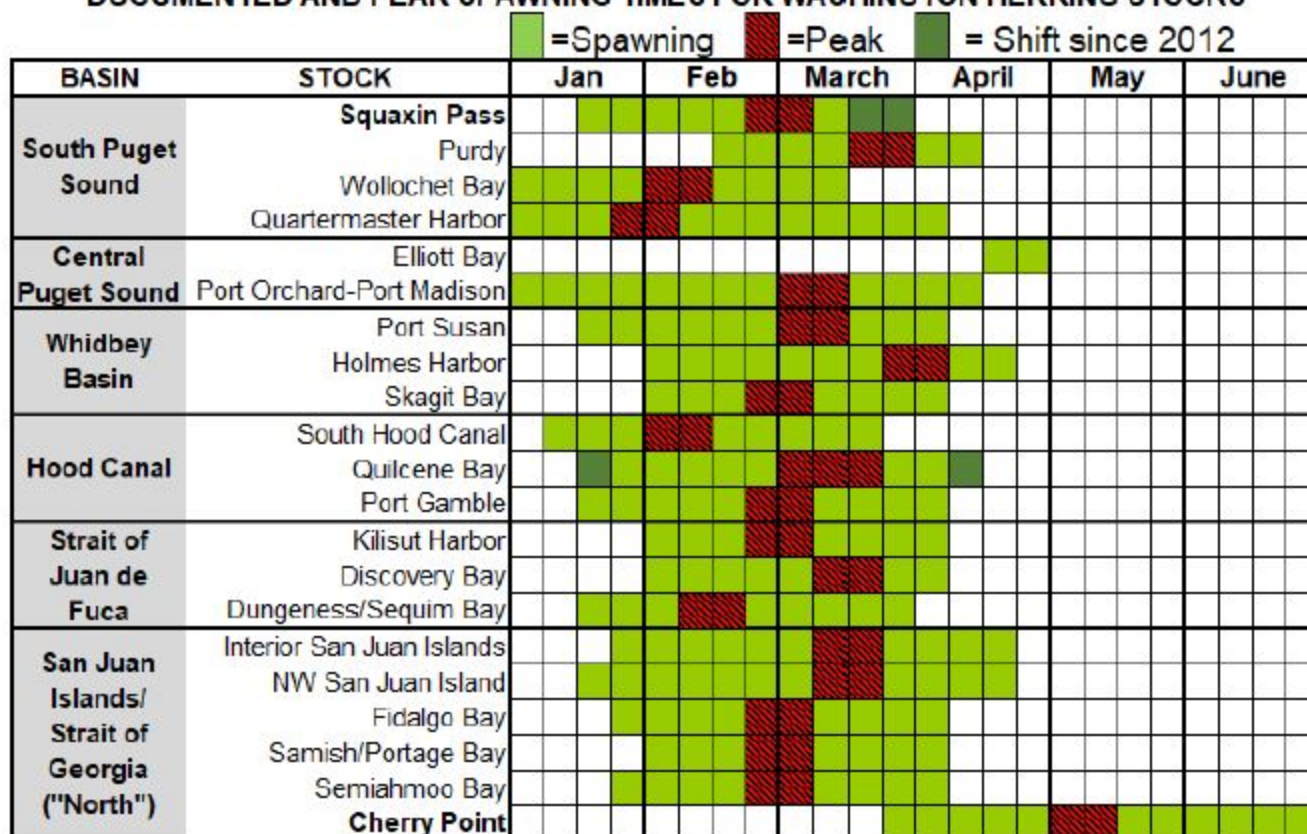
Quadrat* number	Vegetation type	Quadrat % cover vegetation	Percent of quadrat with eggs	Percent of vegetation with eggs	Notes
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[illegible]

### Examples of herring spawning events: aerial views

[Note: **Herring spawn in Puget Sound mainly from January-April**. One unusual stock spawn in central basin later in April, and the Cherry Point stock (Strait of Georgia) spawns very late, in April-mid June. Events similar to the ones depicted below occurring during other parts of the year are likely shellfish or other forage fish (smelt, sandlance) spawning events]

## DOCUMENTED AND PEAK SPAWNING TIMES FOR WASHINGTON HERRING STOCKS





Above: Small spawning event at Birch Head 2019



Jackson cove drone footage, Hood Canal, 2019 (**extremely heavy** spawn, rare in Puget Sound)



Above: small “spot spawn” at Pt Whitehorn, 2019 (picture taken from the bluff)



Above: Discovery bay spawn 2017

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Examples of **false herring spawn events** (often these are wave action mixing up shoreline sediment, rainfall runoff point sources creating off-color plumes, or sometimes phytoplankton blooms. Clams and

other benthic organisms also have large scale, coordinated spawning events that can resemble herring “whitewater”.



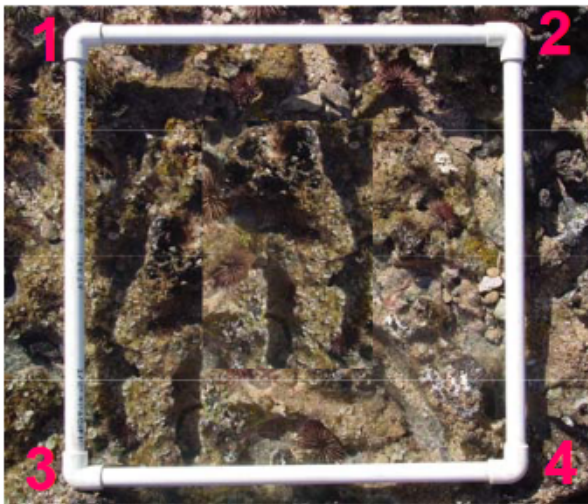
Above: SJI- algal (phytoplankton) bloom in upper left. Note greenish cast. Also, herring spawn on aquatic vegetation in the nearshore (0-20 feet in general), so events in deep water are unlikely to be herring spawn, as are events on sandy spits with no vegetation present (plumes in these locations tend to be generated by wave action).



Above: Wave action along left (South) side of Mud Bay, SJI. Not herring spawn.



Above: false spawn near Lopez ferry dock, SJI. Likely a sediment plume caused by stormwater runoff- unusual to see the center of herring “whitewater” extend out into deeper water than either of the edges.



Quadrat (0.5m per side).

