Mitigation Plan

Established Conservation Measures

* Shellfish activities will not occur within 25 horizontal feet of eelgrass (pg1)
* Shellfish activities will not occur above +7 ft (pg1)
* Shellfish activities shall not occur above +5 ft. (All activity will occur at or below +3ft).(pg1)
* Herring egg incubation time will be avoided in general (Jan 16 – Apr 30). If bag removal must occur between this time, all monitoring conditions will be met. (pg2)
* If on-bottom bag removal or maintenance activities (site prep?) occurring August 1 – March 31 will have a spawn survey conducted within the work area by an approved biologist prior to the undertaking. (pg2)
* All shellfish gear that is not actively in use will be stored off-site. (pg2)
* All gear shall be clearly, indelibly and permanently marked to identify the permittee
* All gear shall be tightly secured to prevent loss. (pg2)
* Beaches will be patrolled for debris removal in accordance with Measure 22. Any retrieval will be in close communication and coordination with DNWR. (pg2)
* The applicant has identified site access routes and locations that will avoid eelgrass (pg3)

Site-specific Stewardship Measures

* Limited gear us in starting operations: Will not exceed 5 acres in first 2 years. Outcomes from monitoring will inform phased expansion (what monitoring? Who is writing the protocol?) (pg3)
* Gear placement/removal and out planting (7-15 people) will **generally** align with original recommended timeframes.
  + Occur over a single low tide cycle every few months. (pg3)
* During the sensitive periods, activity would **mostly** involve on-bottom bag maintenance and harvest (3-6 people) during negative low tides with 2-3 visits per low tide cycle (4-6 visits per month) (pg3)
* Oyster bags stacked for harvest are retrieved at high tide using a mechanized lift – “there is no corresponding onsite activity (how is that not an onsite activity?) (pg3)
* Hydraulic winch motor will be insulated to reduce noise (<50 dB). (pg3)
* Farm workers will use headlamps (500 – 1000 lumens) with down casted light (4-6 site visits per month at negative tides). No other light sources will be used. (pg3)

Monitoring Plan

Monitoring activities will be used to evaluate potential impacts associated with farming activities. If "more than minimal" adverse impacts are not identified based on statistically-supported evaluation, then the applicant reserves the right to expand activities to "Phase 2" (in years 3 - 5) and "Phase 3" (beyond year 5) operations as outlined in the JARPA. (pg4)

Who is conducting the “statistically-supported evaluation” and monitoring? What experts are they using to create disturbance protocols? What about cumulative impact vs incremental change to the area by phased approach? Who is deciding what “more than minimal” equals statistically? We do not have a baseline of waterfowl/shorebird activity specifically associated with the site. We only have general surveys of the area. How will they determine if there is change (e.g., movement to a less suitable portion of the beach)? (pg4)

**Eelgrass surveys** will extend 200 ft. from the boundary of the lease parcel to serve as a reference site. If survey data identifies that eelgrass within the lease parcel retreats by more than 50% buffer distance (i.e., >37.5 ft. from the edge of the oyster farm), but equivalent retreat is not observed in the reference site (of similar density, tidal elevation and substrate), then the distance will be increased by the measured distance of the eelgrass retreat. Such eelgrass buffer expansion will occur until eelgrass retreat is no longer identified in the survey data. Survey records and eelgrass delineation maps will be available upon request to Clallam County, USACE, USF\l\.,S and NOAA. (Will the original buffer be maintained regardless of eelgrass retreat? What if it only retreats by 25%, will they be able to push into those original buffer areas? What if it is a bad year for eelgrass and the area outside also retreats by 50%, will they push into the original buffered area? (pg4)

**Forage Fish Spawn Surveys** will be conducted by a WDFW-certified tribal forage fish biologist before removal or maintenance of on-bottom bags outside of the approved work windows2. If any forage fish spawn is present no farm activity will occur in the area where spawning has occurred until the eggs have hatched. f spawn is detected, USACE and USFWS will be notified. (pg4)

**Brant-Farm Interaction Observations** will be recorded monthly by a shellfish farm worker, Tribal biologists and/or an Audubon volunteer on brant and shellfish farm interactions. A log will be kept that includes the date and time of observation, tidal height, number of brants observed and a description of interactions observed (i.e., type of activity occurring and brant response behaviors). If observation logs indicate any persistent (e.g., recurring over the length of the migration season) negative behavioral responses from brant to specific farm activities, those activities will be evaluated and mitigation measures will be put into place to minimize or eliminate the adverse. Who is conducting the “statistically-supported evaluation” and monitoring? What experts are they using to create disturbance protocols? What about cumulative impact vs incremental change to the area by phased approach? Who is deciding what “more than minimal” equals statistically? (pg4)

**Shorebird counts** will be conducted monthly within and adjacent to the lease parcel by a shellfish farm worker, Tribal biologists and/or an Audubon volunteer. A log will be kept that includes the date and time, tidal height and number and species of shorebirds observed within and adjacent to the lease parcel. Observation logs will be available upon request to Clallam County, USACE, USFWS and NOAA. (additional people and/or time on site = increased disturbance). (pg5)

OPERATIONS PLAN

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Timing | Duration (hrs) | # Visits  Per mo | #people  Per day | Tide Range | Activity |
| Gear Placement/Removal | Late Apr. – May & Mid Oct. – Mid Nov | 4-6 | 5-6 | 7-15 | +1 - -2.5 | Set up/remove on-bottom bags |
| Bag Maintenance | Year Round | 4-6 | 2-6 | ~3-6 | +1 - -2.5 | Manually flip bags |
| Harvest | Year Round | 4-6 | 2-6 | ~4-6 | +1 - -2.5 | Harvest beach or bag oysters |

\*Outplanting? What does the approximation mean? How many additional people could be used before they are outside of the range of the approximation? Do the site visit numbers include site access for retrieval of harvested bags?

The table makes it look like Maintenance and Harvest are separate activities requiring separate visits, but the write-up makes it look like they are overlapping activities. Not sure if maintenance and harvest activities occurring together would require 6 or 12 people. Need to ask the applicant for clarification.

Depending on response there could be 6-12 people in a closed area during the most sensitive periods 6 times/month.

Their gear placement and removal periods meet our original timeline, but do not meet the amended timeline based on additional information re: Brant and Shorebirds. Given that this activity requires more people, and more time on site, it would need to occur during the May 15 – July 31 timeline, in order to reduce impacts to wildlife.

Need to ask if they anticipate that 80,000 bags can be manually flipped by 6 people, or if these #s are for the 1st phase of the project.

When tribe provided the application materials they provided the SEPA and JARPA docs, and the two attached reports