Electric Monitoring Strawmen for Consideration

- Midwater Trawl for Catcher Vessels Delivering At-Sea
- Midwater Trawl for Shoreside IFQ Deliveries
- Vessels Participating in Trawl Rationalization Program Using Fixed Gear
- Bottom Trawl
- Large and Small Footrope, including Flatfish Trawl

Midwater Trawl for Catcher Vessels Delivering At-Sea

Maximum Retention / Full Accountability Fishery:

- Non selective discards only
- Regardless of why or how the discard happened, the vessel will be held accountable for the discard and deductions will be debited from IFQ vessel accounts.

Electronic Monitoring Plans (EMP):

- Each camera system application will have elements unique to the vessel (similar to the catch monitor plan for first receiver site licenses)

System Components:

- Tamper Proof System, Secure/Watertight Data Storage, Digital Cameras, Encrypted Data, Sensors, Deck/Stern Lighting, Bridge Monitor, GPS, VMS, Geo Fencing, E Log Book, Maximum Retention, Non Selective Discards only, Video Analysis by SFD/PSMFC

System Configuration:

- Consistent with previous standards, i.e. EFP and PSMFC pilot.
- E logbook compatibility

Data Analysis:

- Responsibility of SFD and PSMFC.
- Models to consider;
  (1) A system similar to the one used by Archipelago (labor intensive),
  (2) Software analysis model being developed and tested by Alaska Science Center (minimum of 4 years to perfect).
  (3) Others?
- Will need regulations or other administrative process to determine methodology for estimating discards, large and small, for deducting vessel accounts
- For now we go with the labor intensive strategy reviewing tape manually and employ software analysis techniques as they become available
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Regulation Considerations:

- Time and Area Restrictions
- Use Amendment 10 Draft as template
- Update equipment specs to reflect upgrades in the technology.
- Use specs approval process to update technology specifications in the future
- Will need regulations or other administrative process to determine methodology for estimating discards, large and small, for deducting vessel accounts
- Others?

E Log Book:

- Verification of randomly selected video against log book entries allows for audit procedure that reduces the need to review 100% of the video data
- Log Book is a self reporting component that along with camera establishes trust and verification of the data
- Compatible with camera, i.e. timestamp and GPS
- E Log Book will use state log book as template and convert format from paper to electronic, i.e. same approach used in e fish tickets
- Emulate same process used in creating e-fish ticket program
- Federal and state regulations will need to be addressed making groundfish log books a Federal Requirement.
- State long books will need to be modified for reporting discards and expanded specifications.
- E Log Books have a significant "value added" component to their development and implementation.

Biological Sampling

- Presume the pre-IFQ NW Science Center sampling program will continue.
- Observers deployed on a percentage basis, with data extrapolated across the fleet.

Midwater Trawl for Shoreside IFQ Deliveries

Maximum Retention / Full Accountability Fishery:

- Non selective discards only
- Regardless of why or how the discard happened, the vessel will be held accountable for the discard and deductions will be debited from IFQ vessel accounts.

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Vessels Participating in Trawl Rationalization Program Using Fixed Gear

Maximum Retention (non selective discards only) / **Full Accountability Fishery:**

- Regardless of why or how the discard happened, the vessel will be held accountable for the discard and deductions will be debited from IFQ vessel accounts.
- May only need full retention on IFQ species, or, Rockfish and Sablefish

Electronic Monitoring Plans (EMP):

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Halibut Viability:

- Option 1. All halibut considered dead under the camera option.
- Option 2. Long-term potential for developing a different type of halibut viability model (additional research required)
- Others?

Bottom Trawl
Large and Small Footrope, including Flatfish Trawl

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- Cameras, to date have not proven adequate for species id let alone length and weight calculations.
- For trawl, passing under a camera using some type of measurement scale has proven feasible at this time.
- Could prove to be extremely labor intensive which increases the cost significantly.
- Software analysis may provide mechanism for id and catch accounting, but years away from implementation

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Going Forward:

- We need PSMFC cameras on bottom trawl vessels this summer!!!!
- Fishing at night. As yet, no system has proven to be effective in capturing video at night.
- One potential would be a species id camera/software system deployed in the net itself. A Potential application of the research being done by Alaska Science Center, but we are years away.
- Full retention regulations, and no fishing at night gets us closer, but with no history on camera deployment on bottom trawl we are operating at a severe disadvantage.