

Comparing alternatives to monitor salmon bycatch

Tests during rockfish trawl deliveries to Kodiak plants

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How best to estimate salmon bycatch from trawl catches

- Compare human and electronic monitoring
- Observers sampling at sea
- Human samplers monitoring delivery sort
- Electronic monitoring (video) of delivery
 - Human review of video
 - Automated detection

Deliveries sampled at the 4 largest plants receiving rockfish deliveries



Human samplers and Video Monitoring



Initial sampling data

- Monitored deliveries May 7 – June 12
 - Three samplers and video in all four plants
- 51 of 80 rockfish program deliveries monitored
- 167 Chinook salmon in all 80 deliveries
 - At-sea estimate 128 – one salmon extrapolated
- 126 chum salmon
- 95 marked salmon added, increasing total salmon to 388

Video review ongoing

- Very few salmon detected by observers were not detectable in entry videos (where video available)
- Video recording and transfer problems
 - Video missing for several periods
 - Video transfer time was consuming
- Will attempt automated detection – low numbers
- Determine capability and constraints for detecting salmon with fixed video

Camera Chutes

Overall images did not separate Chinook vs. chum
Focused tail analysis separated well (spots?)



Next steps

- Need more clips with salmon to train automated detection
 - Collect during pollock deliveries (cameras in place)
- Test non-directed detection – human review
- Better recording systems
- Improve camera views (lighting? cleaning access?)
- Trials with improvements (May/June 2019)
 - Include other plants

The background of the image consists of a close-up, top-down view of water with numerous small, concentric ripples. The water is a light, silvery-grey color, and the ripples create a textured, shimmering effect across the entire frame. The lighting is even, highlighting the subtle variations in the water's surface.

Questions?