

# Hugh Mitchell

Comment solicitation has precipitated attacks on my professionalism, scientific rigor, and affiliation. My comments are based on long term sound science and experience. I am an independent LICENSED veterinarian (with legal and professional obligations) and have dedicated my career to the health of both wild and farmed fish. To be accused of being unscientific by an organization of dubious and pretentious motives is not unexpected. Countless studies show that the nitrogen output of salmon farms is insignificant to the overall Nitrogen budget. A study by WDFW in 1990 cleared net pens of any significant discharge. In fact the study indicates that 100 sites could be put into Puget Sound with little impact. Although 30 years old, the science is sound. This permit change request is not to decide whether fish waste is a eutrophication threat. It isn't. That science has been decided long ago, despite allegations otherwise. It is to simply decide whether one salmonid's waste is significantly different enough from another's to deny the transfer. It isn't.

pollution and water quality risks posed by this industry are fully considered during the NPDES permitting process.

At the same time, your comments will continue to clearly demonstrate to public officials the diversity and intensity of public outrage of this proposal's threat to endangered species, water quality, and the greater health of Puget Sound.

**We've put together a guide with everything you need to know to submit comments, including background information, instructions on submitting, and important topics to consider while drafting your comments.**

[Learn more and submit!](#)

**Industry-funded scientists are submitting comments of their own, praising the net pen industry and denying well-established science and risks, including statements like:**

"...there is no evidence of significant impact on water quality or wild salmon populations. In fact there is ample evidence that there really is no impact."  
- Industry Veterinarian



**Help to ensure science deniers are in the minority.** In addition to submitting your own comments, please share this important action alert with your friends, family, and community members and encourage them to comment.

**COMMENT BY JUNE 8**



There are only **5 days** left to submit comments to the Department of Ecology on Cooke Aquaculture's application to continue polluting Puget Sound with their net pens.

**Fined \$2.75 million dollars last year for violations of the Clean Water Act**, Cooke Aquaculture is now working to modify their existing pollutant discharge permits in their efforts to expand and extend net pen aquaculture in Puget Sound.

Because these permits regulate the extent to which Cooke is allowed to pollute public waters, it's critical that the agency hear from as many individuals as possible during this public comment period to ensure the serious pollution and water quality risks posed by this industry are fully considered during the NPDES permitting process.

At the same time, your comments will continue to clearly demonstrate to public officials the diversity and intensity of public outrage of this proposal's threat to endangered species, water quality, and the greater health of Puget Sound.

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# Perspective:

## Organic Pollution from Net Pens

- Sowles and Churchill – lease requirements of benthic monitoring of Maine industry for 15 years – no permanent damage
- WA Dept. of Fisheries:
  - Modeled **worst case scenarios** (5 farms in an embayment area):
    - **0% increase in dissolved N above ambient in summer**
      - **0.57 % increase in winter**
    - **0.22% increase in phytoplankton & zooplankton in summer**
      - **0% increase in winter**
- Rensel (1988)
  - Worst case scenario – Large farm in shallow passage in Puget Sound
    1. Monitored phytoplankton density & growth rates on farm with and without fish.
    2. Monitored nitrogen levels downstream from farm.
  - **No diff. In #1 & some N increase was seen in one tidal flushing but not other; 30 m downstream 80% ammonia was nitrite**
    - therefore rapid decomposition.



# Perspective:

## Organic Pollution from Net Pens



- Husa, et al 2012

“Regional impact from fin-fish farming in an intensive production area (Hardangerfjord, Norway)” Marine Biology Research 10:3 – 241-252

- **70,000 MT annual production of farmed Atlantic salmon**
  - (vs. Puget Sound had 8000 MT at its maximum)
- **One of most intensively farmed areas in the world (309 sq. miles)**
  - (vs. Puget Sound surface area is over 1000 square miles)
- **Overcrowded low deep water flow fjord**
- **Studied impact between 2008 and 2010**
- **Studied intertidal macroalgal and benthic communities and chlorophyll-a values**
- **Findings: good ecological conditions of parameters studied**
- **Little evidence of regional impact despite intensive production level**



# Final Programmatic Environmental Impact Statement

## **Fish Culture in Floating Net-Pens**

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Washington Department of Fisheries



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January 1990