

Sediment Control and Fish Habitat Protection Provisions of the Federal Fisheries Act

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Overview

- DFO Ontario-Great Lakes Area
- Habitat & Pollution Protection Provisions of *Fisheries Act*
- Policy for Management of Fish Habitat
- TSS Dose/Response Relationship
- Prediction of Impacts from TSS on Fish



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■ District Offices:

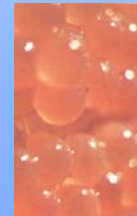
- Sarnia
- Burlington
- Prescott
- Peterborough
- Parry Sound
- Sudbury
- Sault Ste. Marie
- Thunder Bay - Kenora



The Fisheries Act

■ Defines Fish as:

“parts of fish, shellfish, crustaceans, marine animals and any parts of fish, shellfish, crustaceans or marine animals, and the eggs, sperm, spawn, larvae, spat and juvenile stages of fish, shellfish, crustaceans and marine animals”



The Fisheries Act

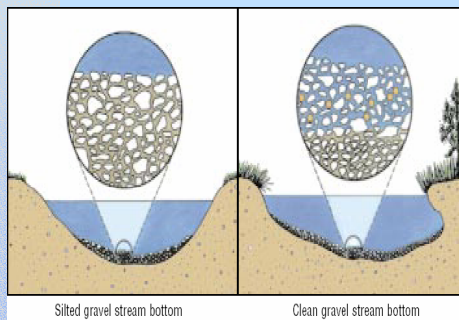
- Defines Fish Habitat as:



“spawning grounds and nursery, rearing, food supply migration and any other areas on which fish depend directly or indirectly in order to carry out their life processes”



The Fisheries Act Habitat Protection Provision



- Subsection 35(1)
 - > prohibits the harmful alteration, disruption or destruction of fish habitat (HADD)
- Subsection 35(2)
 - > permits Minister of Fisheries and Oceans Canada to authorize HADD



The Fisheries Act Pollution Prevention Provision



- Subsection 36(3)
 - prohibits entry of deleterious substances into waters frequented by fish
 - TSS a deleterious substance
 - Administered by Environment Canada in cooperation with DFO and provinces



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Policy for the Management of Fish Habitat (1986)

- Guides DFO in the administration of the habitat protection provisions of the *Fisheries Act (Sections 20-35)*
- Overall objective **Net Gain** of Productive Capacity
- Achieved through three Goals
 - > Conservation
 - > Restoration
 - > Development



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Policy for the Management of Fish Habitat

- Guiding principle of **No Net Loss** of productive capacity
- Defines **Productive Capacity** as:
“The natural capability of habitats to produce healthy fish, safe for human consumption, or to support or produce aquatic organisms upon which fish depend”
- Generally impacts from TSS should be mitigated so **HADD** avoided



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Dose/Response Relationship

- Dose/response relationship characterized by three variables
 - > [x] = duration of exposure
 - > [y] = concentration of sediment
 - > [SE] = severity of ill effects

$$SE = a + b(\text{Ln}x) + c(\text{Ln}y) \quad (\text{Anderson } et \text{ al.}, 1995^*)$$

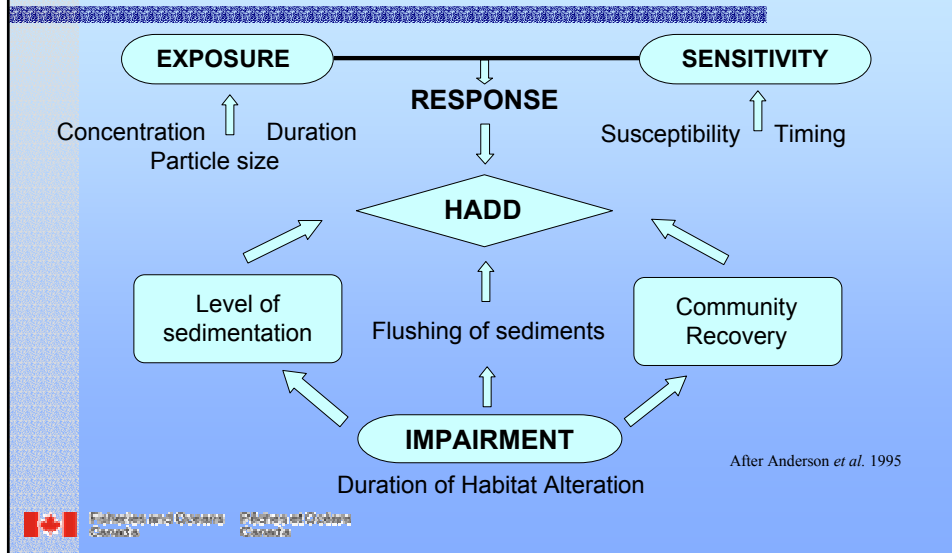
*Anderson, P.G., B.R. Taylor and G. Balch. 1995. Quantifying the effects of sediment release on fish and their habitats. Prepared for the Department of Fisheries and Oceans, Habitat Management, Eastern B.C. Unit and Alberta Area by Golder Associates Ltd. Rpt. No. 952-2207.



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Factors in Risk of HADD



Summary

- Consider Habitat and Pollution Protection Provisions of *Fisheries Act* in Sediment Control
- Dose/ response approach provides method for evaluating sediment control methods