

Notes - Population Calculations.pdf



INVESTIGATION 1.2: 'A Sample Census - Wildlife on the Move'

- **population** - the total number of individuals of a single species that live in a designated region at a given time.
 - › ex: human population is ~ 6 billion
- **population density** - the number of individuals of a single species that live in each unit area (km², mi², hectare, acre) of habitat at a given time.
 - › ex: deer population is 6 deer per square mile
- **census** - a count of the population.
- **true census** - actual count of all of the individuals of a species in a given area.
- **sample census** - is an estimate of the population.

(used when actual count is not possible)

ESTIMATED POPULATION = Estimated Population Density x Area of Habitat

- The '**mark-return-recapture method**' is used to estimate population density.
ex: DFO at Millerton and Cassillis estimate salmon populations on Miramichi River.

$$P = \frac{T_F T_L}{M}$$

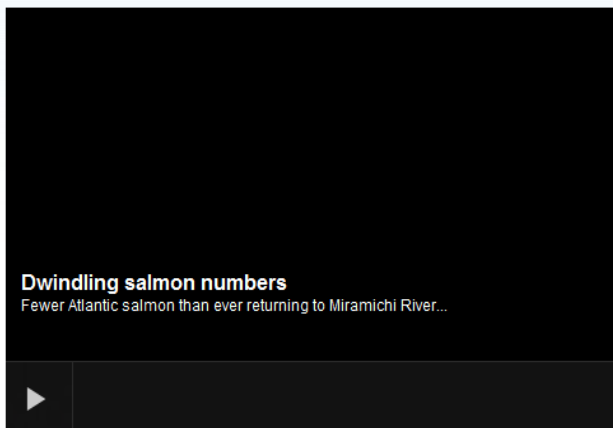
P - estimated population

T_F - total animals captured in first trapping


T_L - total animals captured in later trapping


M - recaptured animals that are marked


Miramichi Salmon Numbers Hit Record Low



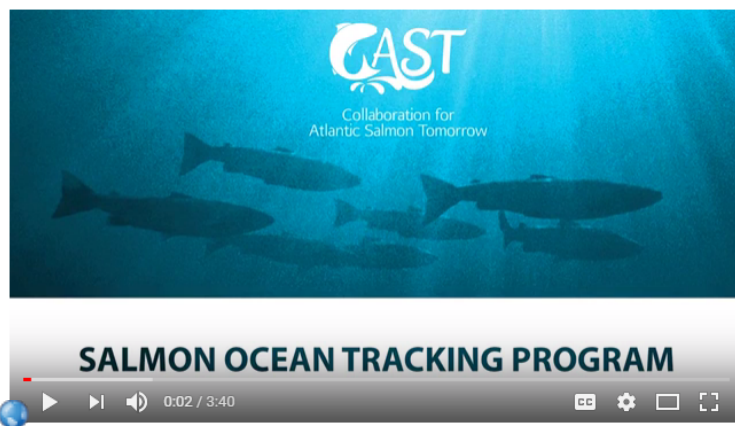
CBC NEWS

 **Miramichi River salmon numbers hit record low in 2014**

 <http://www.cbc.ca/news/canada/new-brunswick/salmon-stocks-dip-2017-1.4142749>

 <http://www.cbc.ca/news/canada/new-brunswick/salmon-stripped-bass-population-new-brunswick-1.4232693>

What is being done...population studies!



Attachments

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