

What the trout said



BROWN TROUT IN FEEDING SITE OR "LIE"



COMPETE FOR FEEDING SITES



MAXIMUM NON-STRESSFUL TEMPERATURE

- 68 F OR 20 C
- Do not grow above 20 C (Frost and Brown, 1967)
- At or above 20 C they reduce feeding, move to thermal refuges.
- Compete for space

- THE NUMBER OF ADULT TROUT IN A RIVER IS DEPENDENT ON THE NUMBER OF ACCEPTABLE FEEDING SITES AT OR BELOW 68 F
- (Bachman, 1984)

Discharges Oct 1, 2012-Sept. 30, 2013

- Cannonsville (USGS Stilesville) – 104,033 MG
- Pepacton (USGS Downsville) – 54,446 MG
- Neversink (USGS Neversink) – 37,506 MG
- Total for the year -- 195,985 MG

TOTAL UPPER DELAWARE SYSTEM: OCT 12 - SEP 13

- NYC DIVERSIONS~ 602 MGD X 365 =
- 219,730 MG
- RELEASES 195,985 MG
- TOTAL 415,715 MG

Thermal release

- Jul 17- 19, 2013 420 MG
- Upper Delaware System 12-13
- $420 / 415,715 \text{ MG} = 0.0010$ or 0.1%

HYPOTHESIS CONCLUSION?

- ***THE NUMBER OF ADULT TROUT BETWEEN HANCOCK AND LORDVILLE ARE LIMITED BY SIZE OF THERMAL REFUGES IN THIS 8 MILES OF RIVER***