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#768

4-17-62 Mtg - Merrimack Station - USFWS - Concord.

Paul Geoghegan - Normandeau.

Northeast Utilitist - attorney.

- Drew - John Warner (speaking)

thermal limits - spring period.

May 1 - June 15. Smoltification

20°C

literature? citations? - river specific

↳ accumulation of degree days -

Secondary

adult clupeids - moving & should moving u/stream.

23°C near future?

no significant numbers of clupeids currently moving
u/s.

also protective of resident. -

=

mid summer - plume extends

- juvenile clupeids - MOSS 1970 ET. YANKEE.

↳ data ~ hundreds of smolts. '92 Saunders

150 smolts study - plume didn't slow down

Sept 27 - look at plume data.

mid-water to surface = smolt/

Rick Simpson

↳ no juvenile clupeids moving down stream in early

Sept.

4.17.

thermal shock potential

Standard - $1.4 \pm .3^{\circ}\text{C}$ cools per hour.

- never been a fish kill temperature according to related. Normandeau.
- what is 30°C based

nearest smolt pop. Winnipeg:

- Suncook -

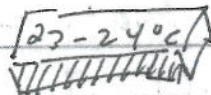
← acid rain →

Normandeau -

Spring - smolt ~~can~~ radio tagged. May 1 - June 15

~ 15 indices //

Joe McKeon -



[when were studied
collect]

thinks it should be
shortened. it's already

J. Warner

- most work on smolt movement is done on CT &
nothing on Merrimack -

~ Simmons - this limit would only protect
5% of stock. → (24-25°C) on shortening
period May 1-31

? do they need any protection at all?

↔

~ Allow really need a mixing zone ~

- Bill. ~ zone of passage ~ established by
questionable shad study.

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4.17

John Warner - [vt. Yankee]

springs 20.5°C 69°F AMBIENT

modules are
reg'd on lit.

Paul G. (fall) both temp & duration too restrictive

largest # shad in early August. (26)

Simmons - 80% of run can be move on a single
rain event.

26° not a barrier ~ too low.

26°C acclimated ~ 32.0°C ~

[30°C is common in citations]

rec. ~~at~~ 1 Oct. ~ does not turn off

urge to migrate



summer 30°C warmwater fishery - state

Sounders & Harza - good study ~
according to →

Allen - '92 ~

shad larvae → problem
parrish larvae ~ report.