



Piscicide Use & Proposed Legislation

Piscicide Use & Legislation: SB 1294 and HB 2114

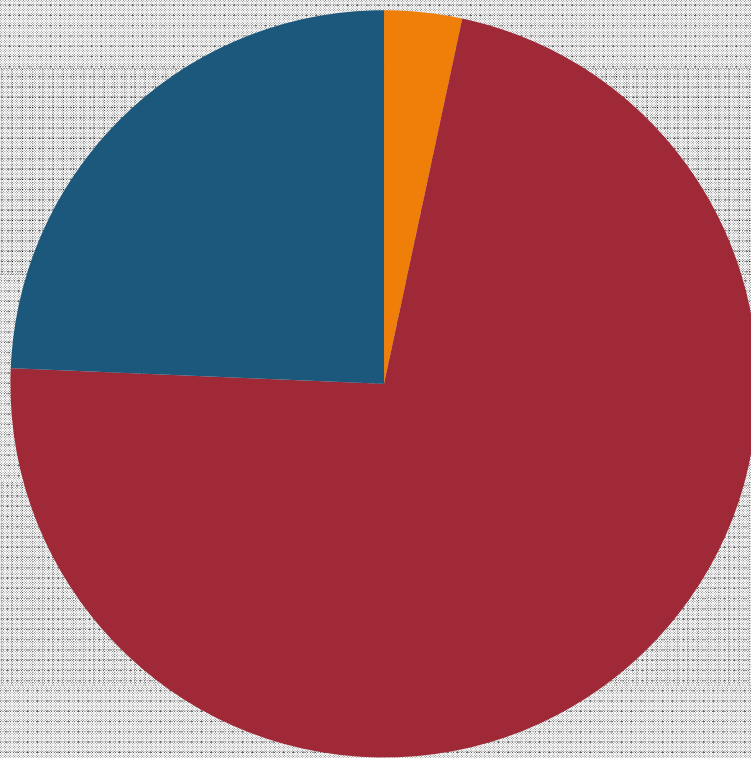
- Bill language: “A person shall not apply rotenone or antimycin A to any spring, seep, stream, river, stock pond, irrigation water delivery system, lake or any other body of standing or running water in this state, until submitting to the Director (of Environmental Quality) a **full impact analysis of any risks** posed to the **environment** and downstream **potable water** supply or **livestock water** supply and receiving approval from the Director for the application.”
- “A moratorium is imposed on the application of rotenone and antimycin A until the Department (of Environmental Quality) **has adequate funding to review the impact analysis** and risks associated with the use of the chemicals and to approve or disapprove the use.”

Claims

- Renovations are unsuccessful
- 210 scientific studies state rotenone triggers onset of Parkinson's Disease (PD) – Animal Models
- Rotenone is directly linked to PD by the National Institute of Health – Associative Studies
- Rotenone Pollutes Water Supplies – e.g. the Lake Davis 1997 rotenone renovation polluted Portola's water supply

The Facts – Used Successfully

- Renovations are highly successful (217 of 291)



Percent of successful and unsuccessful rotenone and antimycin treatments in western states since 1938

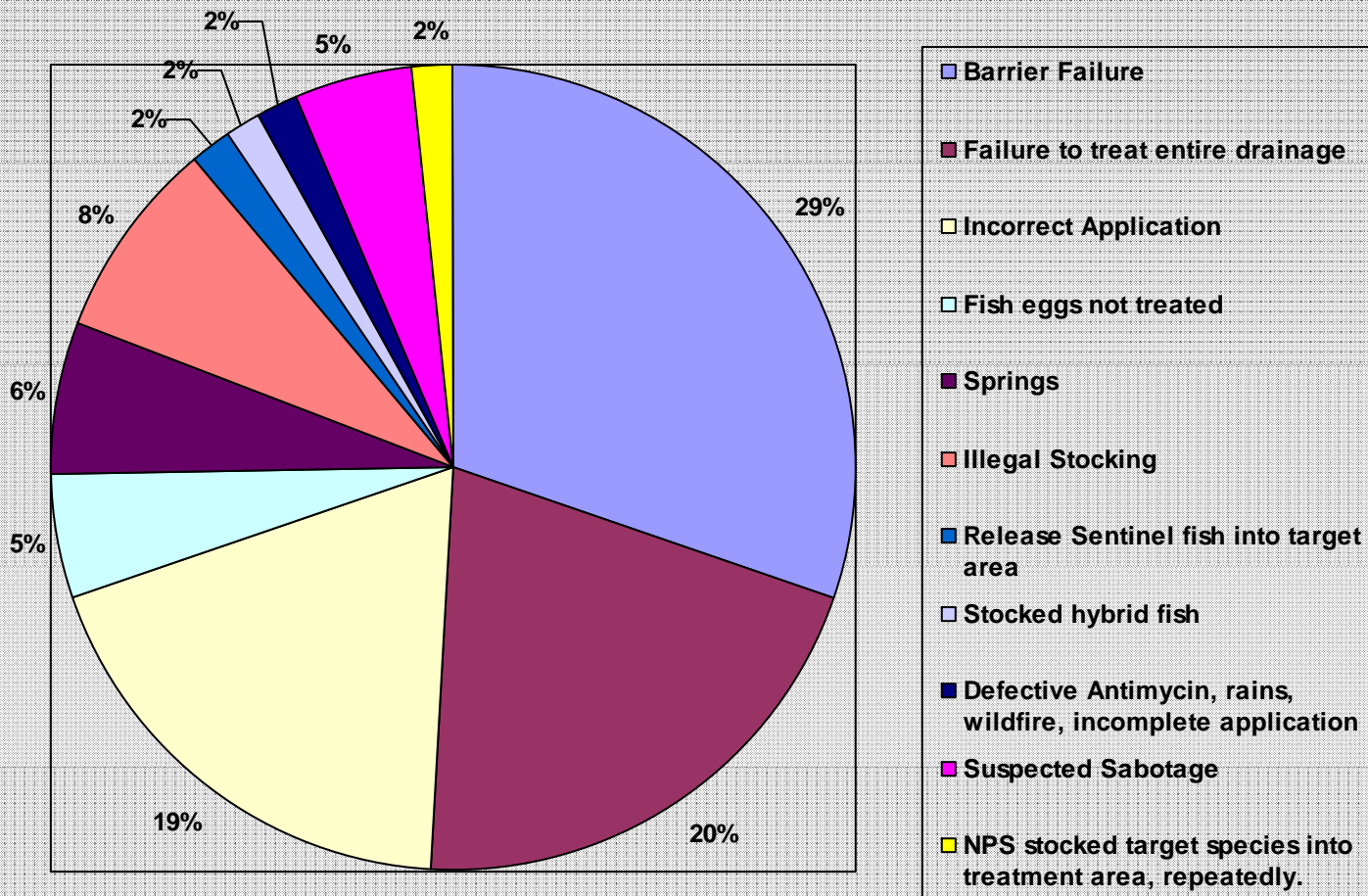
■ Undetermined

■ Successful

■ Unsuccessful

The Facts - Unsuccessful

Reasons for Unsuccessful Rotenone and Antimycin Treatments in Western States 1938-2011.



The Facts – Human Health

- Animal Models
- Scientific studies use rotenone to mimic some PD-like symptoms in rodents (“animal models”)
 - Chronic IV injection into jugular vein, sub-cutaneous or mid brain commonly used to reproduce symptoms
 - PD symptoms reproduced in rats following daily injections of rotenone for 4-6 weeks using high doses of rotenone
 - Dosage equivalence in a 150 lb person is 4,000 times the concentration used in streams
 - PD understanding, treatment and cure directed

The Facts – Human Health

- Association Studies

- Recent Associative Studies (NIH et al.)

Interview-based statistical association studies do not show causation factors of PD but identify potential associative factors:

- 0.8 – 2.6 odds ratios associated with long term Rotenone application in agriculture
- Lawyers, religious workers, blows to the head also associated with PD

The Facts – Water Supply

- ❑ Rotenone or rotenone by-products were never found in 27 wells sampled during and post-rotenone treatments in CA
- ❑ Plumas Co. monitored 80 wells for 10 years after the 1997 treatment of Lake Davis – no Rotenone
- ❑ Sentinel wells were monitored at Lake Davis during treatment in 2007 – no Rotenone
- ❑ Bill Powers – 1997 Lake Davis protester to County Supervisor supporting 2007 treatment

The Facts – EPA & Safety

- ❑ Rotenone is a naturally occurring substance derived from roots of tropical plants in the bean and pea family found in Australia, southern Asia, and South America and has been utilized for centuries for fish capture and since the 1930s for fish management in the U.S.
- ❑ Use of rotenone as a piscicide is regulated by the EPA under FIFRA authority – Reregistered in 2007
- ❑ Treatments are designed and implemented following strict label requirements to insure public safety as regulated by EPA

The Facts - Impacts

- ❑ Decreased conservation (native fish, amphibs, SF)
- ❑ Increased Federal listings & uplistings
- ❑ Revisit Federal opinions and Conservation Plans – MSCP, CAP, HCPs
- ❑ Threats to sport fish stocking & recreation – re-consult
- ❑ Increased pressure on public land multiple uses e.g. grazing, timber, recreation
- ❑ Duplication of EPA – A California Model...

Status

- ❑ Bill cleared Senate Committee
- ❑ Headed to Senate floor
- ❑ Likely amendment on Senate floor to develop study committee
- ❑ Bill must go to House for read and then to house floor
- ❑ AGFD Commission has unanimously opposed legislation 3 times