

# Human Health Criteria — Fish Consumption Rates

Policy Discussion #8 — Water Quality Standards  
Implementation Tools

# On the Agenda...

- Welcome and Introductions
- Update on Idaho Fish Consumption Survey
- Update on Tribal Survey
- Summary of Comments on Policy Discussion #7 — Risk Management & Protection of Human Health
- Policy Discussion #8 — Implementation Tools
- Discussion

# Idaho Fish Consumption Survey Update

Don A. Essig, DEQ



# Survey Summary

Through End of February, 2015

- 4127 completed surveys as of 2/28/15; 91.7% of goal
- Geographic distribution is coming in well
- We are now at 35/65 split of anglers/non-anglers, very close to the 33/66 we expect
- We currently have 47/53 male/female split in our survey
- We currently have 7.3% Hispanics vs.11.4% expected
- We continue to see a high percentage of fish consumers in Idaho
- We have 1370 completed re-contacts

# Arranging for NCI Analysis

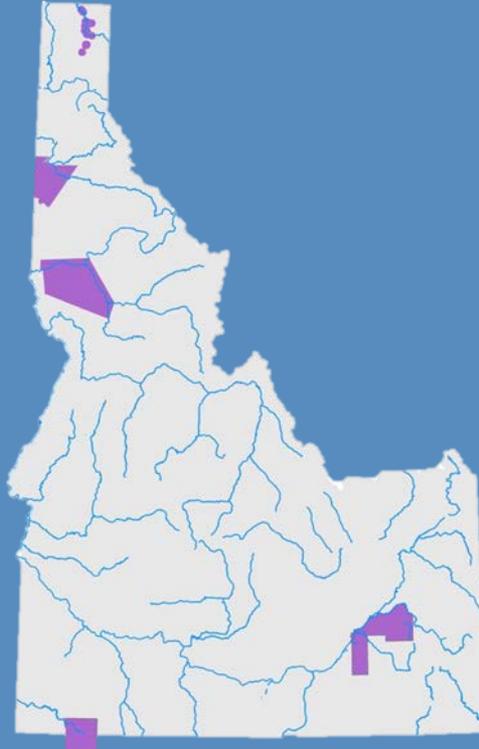
- DEQ sent out a request for bid on February 13<sup>th</sup>
- We received 1 proposal, from **Information Management Services, Inc.**
- They expressed some concern about being able to perform the NCI analysis on more than 24 hr data
- Had a call last Thursday between NWRG and NCI, in which it was resolved that NCI method could be used on our data up to 7-day recall
- Proceeding with contracting with IMS

# Twice Consumers

- For overall fish consumption, looking at just past 24 hours, we have 31 twice consumers
- But if we go back just 2 days our number of twice consumers increases to 92
- To get  $\geq 50$  twice consumers for anglers only we have to go back 3 days
- Things get very tenuous if we focus on consumption of Idaho fish, with just 2 twice consumers in 24hr

# Tribal Survey Update

Mary Lou Soscia, EPA



# Summary of Comments

Don A. Essig, DEQ



# Policy Discussion #7 Comments – Risk Management and Protection of Human Health

Written comments received from:

- Idaho Conservation League (ICL)
- Coeur d'Alene Tribe (CDT)
- Columbia River Inter-Tribal Fish Commission (CRITFC)
- Confederated Tribes of the Umatilla Indian Reservation (CTUIR)
- Upper Snake River Tribes Foundation (URST)
- Clearwater Paper (CP)
- Catherine O'Neill, Seattle University (CO)
- Idaho Association of Commerce & Industry (IACI)
- USEPA Region 10 (EPA)

# The Question:

What is an acceptable level of risk? Or...

How much risk can we accept and still protect human health?

# What we heard on risk

- ICL –  $10^{-6}$ , applied to the 99<sup>th</sup> percentile of the general population as well 99<sup>th</sup> percentile of for each Tribe in Idaho.
- CDT –  $10^{-6}$ , needed to provide downstream protection of CDT waters
- CRITFC – No more than  $10^{-6}$ , do not weaken current rate, consider reducing risk to  $10^{-7}$  in recognition of greater fish consumption by tribes
- CUITR –  $10^{-6}$ , this is the current rate used by Idaho, no justification for discarding it
- USRT –  $10^{-6}$ , anything less protective “will be injurious to the health of tribal members”

# ... more on risk

- CP –  $10^{-5}$ , applied to the “average person”, allowing up to  $10^{-4}$  for more “highly exposed subpopulations”
- CO – no opinion offered
- IACI – Evaluate allowable range of risk,  $10^{-6}$  to  $10^{-4}$ , spoken to in EPA guidance, applied to different percentiles as appropriate, e.g. higher percentiles will have higher risk
- EPA – no opinion offered

# Some other points

- DEQ must provide equal protection to all
- Criteria disproportionately affect those that have high consumption of fish
- $10^{-6}$  is not de minimus, only zero risk is protective
- Raising the cancer risk level dooms people to more cancer
- Choosing an acceptable cancer risk level implies deterministic criteria calculation

# DEQ Response

- Equal protection / equal risk is impossible
- While risks are inherently unequal, criteria do not cause that inequity
- Zero risk is completely unachievable
- Actual cancer risk going forward depends on criteria adopted
- A decision on acceptable cancer risk level is needed regardless of whether PRA or deterministic calculation is used

# Implementation Tools

Policy Discussion #8

Don A. Essig, DEQ

# Why Implementation Tools?

**Idaho's revised Fish Consumption Rate (FCR) is likely to be higher than 17.5 g/day**

**A higher consumption rate:**

- WILL result in more protective/stringent water quality criteria for non-carcinogens
- Is LIKELY to result in more protective/stringent water quality criteria for carcinogens
- More stringent criteria are LIKELY to be difficult for all dischargers to meet immediately

# Challenges to meeting revised HHC and FCR

- **Treatment Technology**
  - Unavailable
  - Cost prohibitive
- **Natural Conditions**
  - Arsenic
- **Legacy Pollutants**
  - Persistent Pesticides
    - DDT, PCBs
  - Historic mining
- **Atmospheric Deposition**
  - Coal burning
    - Mercury
  - Manufacturing
    - PCBs
- **Measurement Capability**
  - < than detect = compliance

# Overcoming challenges

- “Implementation Tools” may provide the needed “bridge” to attaining revised HHC and FCR
- Under the Clean Water Act (CWA) implementation tools must ensure reasonable progress towards attaining Water Quality Standards (WQS)

# Implementation Tools

- **Many different tools have been proposed**
  - 8 we found, although there are likely others
    - Compliance schedules
    - Variances
    - Intake credits
    - Multiple discharger variance
    - Water quality trading
    - Site-specific background pollutant criterion provision
    - Restoration water quality standards
    - Delayed implementation of rulemaking components

# Compliance Schedules

- Already used in Idaho
- Used when new effluent limits are in a permit for the first time
  - Meet more stringent of technology based effluent limits (TBELs) or water quality based effluent limits (WQBELs)
- Treatment method is known, but time is needed for financing and development
- Compliance as soon as possible
- Current durations range from 6 months to 20 years

# Variations

- Already used in Idaho
- “a temporary relaxation of water quality standards”
- Generally on a individual discharger / pollutant basis
  - Exceptions exist
- Typically 5 years, but renewable
- Must demonstrate that at least one criterion can not be attained...

# Variations

Similar to process for a removal of a use, must demonstrate inability to meet criterion (or use) using one of the following 6 reasons:

- 1) Naturally occurring pollutant
- 2) Low flow or water levels
- 3) Human caused condition/source cannot be remedied
- 4) Hydrologic modification
- 5) Natural physical condition
- 6) Substantial and widespread economic/social impact

# Intake Credits

- Discharger not responsible for pollutant already present in water used
- Originally to address TBELs
  - Now seeing application expanding to WQBELs
- Generally intake and discharge in same water body
- NO NET ADDITION
- Especially beneficial where natural and legacy pollutants occur

# Other Implementation Tools

- **Many different tools have been proposed**
  - 8 we found, although there are likely others
    - Compliance schedules
    - Intake credits
    - Variances
    - Multiple discharger variance
    - Water quality trading
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# Multiple Discharger Variance

- Same basic conditions of an individual variance
- Typically for particular class of dischargers for a particular pollutant
- A 5 year duration
- Mercury may be prime candidate

# Water Quality Trading

- Requires one discharger to pollute less so that another can pollute a little more
- Framework present in Idaho WQS
- Typically used for nutrients and temperature
- Some precedence for use with toxics in Eastern states, but not current intention in Idaho

# Site-specific Background Pollutant Criterion Revision

- Bears similarity to intake credits – Discharger not responsible for pollutant mass in intake water
- Unique to Oregon
  - Only for carcinogens
- Allows for small increase in concentration (3%), so long as cancer risk rate does not exceed  $10^{-4}$

# Restoration Water Quality Standards

- Proposed in Florida, not yet acted on by EPA
- Intended for impaired water not likely to meet WQS for a long period of time
- Allow for restoration activities to be implemented for incremental improvement
- Compliance Schedules may be more appropriate

# Delayed Implementation of Rulemaking Components

- Proposed during Oregon's HHC rulemaking process
- Entail delaying effective date
- Allow time for additional research
- Confusing for stakeholders and regulators/administrators
- Was dropped as not likely to gain EPA approval

# Monitoring Progress

- What are measures of improvement?
  - Quantifying incremental reductions of toxics
  - Quantifying improvement in beneficial use support
  - Tracking areas where pollution reductions implemented

# Thank You!

- Remember the comment deadline on today's discussion is **April 2, 2015**
- Next Meeting is on **April 21, 2015** (9am-noon MST)
  - DEQ's Proposed Policy Decisions