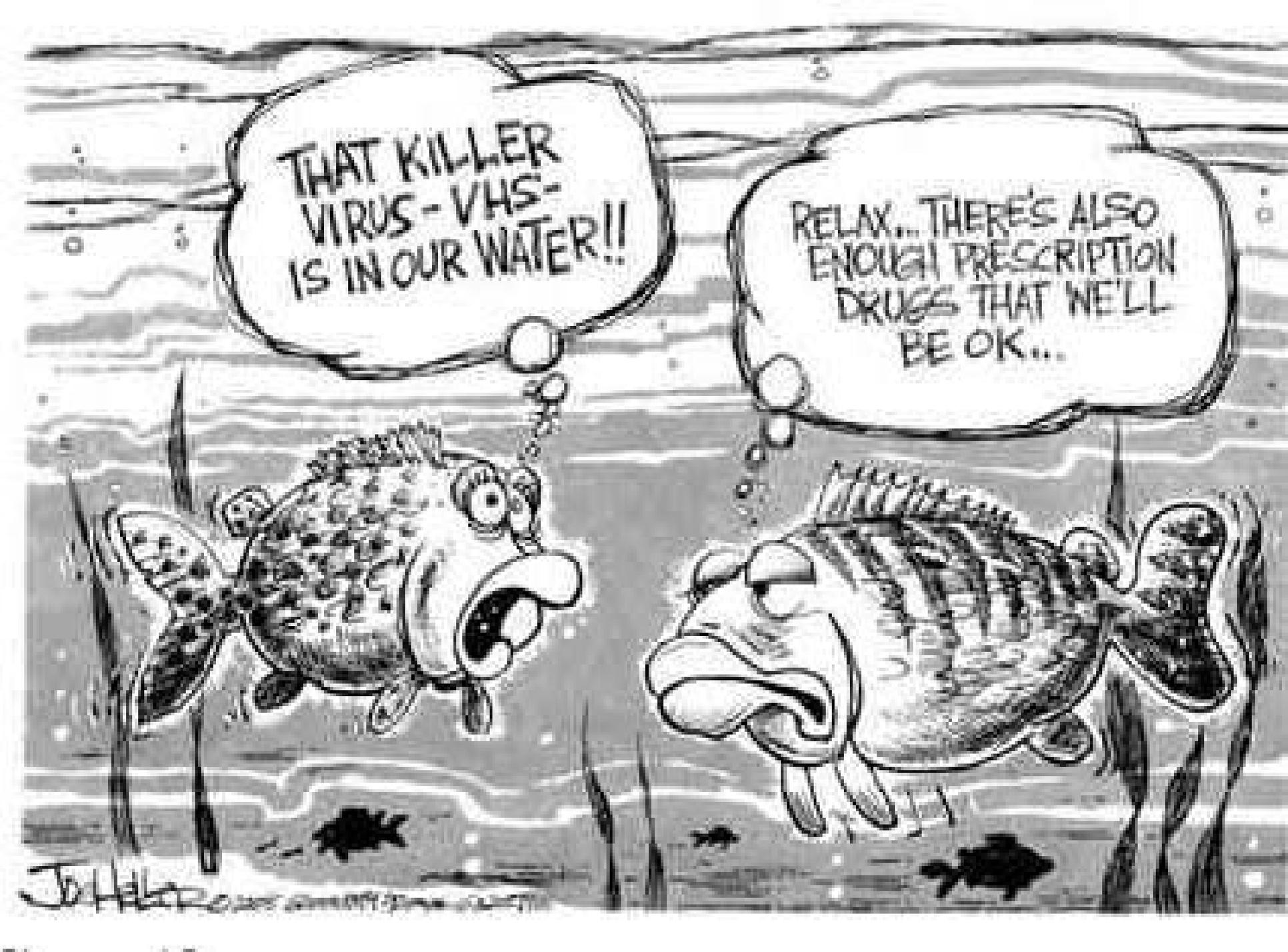


AQUATIC MONITORING FOR THE PUGET SOUND REGION

Recommendations from the
National Research Council's
Stormwater Committee



THAT KILLER
VIRUS - VHS -
IS IN OUR WATER!!

RELAX... THERE'S ALSO
ENOUGH PRESCRIPTION
DRUGS THAT WE'LL
BE OK...

General Themes in the Committee's Report

- Watershed instead of political-boundary basis
- Goal- and objective-based, emphasizing beneficial use attainment as the essential compliance endpoint
- Concern with water quantity along with water quality
- Efficient, advanced scientific and technical watershed analysis to set objectives and strategies
- Emphasize maximum isolation of receiving waters from impact sources; i.e., conservation design practices
- Municipal permittees, acting in watershed co-permittee groups, get more responsibility, along with more authority and funding

Committee's Critique of Current Monitoring

- Monitoring under all three stormwater permits is according to minimum requirements not founded in any particular objectives
- Produces scattershot data that cannot guide management programs
- Unrelated to effects produced in the receiving waters and unable to discern responsibility for them
- Inconsistent and often inadequate techniques and data analysis

Proposed Revised Monitoring System

Structure in several tiers to serve the watershed-based permitting and management framework:

- Progress Evaluation Tier
- Diagnostic Tier
- Compliance Reporting Tier
- Research Tier—outside the permit system; to develop broad mechanistic understanding of stormwater impacts and management practices to support the overall program

Progress Evaluation Tier

- Ultimate basis for judgment on whether or not objectives adopted for the watershed are being met
- Because objectives mainly expressed in terms related to support of beneficial uses, so too would monitoring in this tier principally emphasize direct measurements of ecological health
- Paired watershed approach

Progress Evaluation Tier (continued)

- Assigned to municipal permittees, guided by lead permittee, with substantial contribution by permitting authority of material support and guidance
- Best if designed and implemented by well qualified monitoring consortium
- Findings of objective shortfall would trigger development of active adaptive management strategies

Diagnostic Tier

- Designed to provide municipal permittees with necessary information to formulate active adaptive management strategies
- Assessment of information from Compliance Reporting Tier, plus specific field monitoring to determine reasons for failure if objectives not met
- Prioritized inspection and monitoring of potentially high-risk industrial and construction sites

Compliance Reporting Tier

- Submission of SWPPPs by construction and industrial permittees to municipal permittee for review and approval
- Industrial permittees relieved of sample collection, *if* they develop SWPPPs making maximum use of conservation design practices (although municipality could monitor under Diagnostic Tier)
- Otherwise, industrial permittees would be required to perform scientifically valid sampling and analysis
- Annual report covering observations, program operations, SWPPP modifications, and monitoring results (if any); to be sworn as to correctness and notarized

Summary

The NRC stormwater committee envisioned a unified system of permitting based on how water flows and what the life forms need that rely on it. The committee further envisioned a monitoring system that directly assesses provision of those needs, identifies reasons if they are not met, and determines actions needed to make every attempt to meet them.

Implications for the Puget Sound Region

- Obviously, implementation of the full range of recommendations would take years
- Relative to monitoring, the most productive first steps would be:
 - Develop a basis rooted in objectives tied to beneficial use maintenance and recovery
 - Form a highly professional monitoring consortium