

U.S. Department of Energy and TRIAD National Security

FILED
Water Quality
Control Commission

WQCC No. 20-51(R)
July 13, 2021

Summary of Technical Testimony of
Richard D. Meyerhoff



Managed by Triad National Security, LLC for the U.S. Department of Energy's NNSA

LA-UR-21-26471

Topic 2. Definitions

Proposed Addition of Baseflow & Effluent Dominated Definitions

- NMED provides the following reasons to add “baseflow” (NMED Ex. 1 at 13):
 - Clarify use of the word in the proposed definition of “effluent dominated” as it relates to flow condition
 - Provide clear guidance in the implementation of water quality standards
- NMED provides several reasons to add “effluent dominated” (NMED Ex. 1 at 13-14):
 - It is used in several procedural documents
 - Neither state statute nor regulation currently define this term; having a regulatory reference for this term will aid in the implementation of Clean Water Act goals
 - Will be applicable should the State adopt a designated aquatic life use for “effluent dominated” waters

Proposed Baseflow & Effluent Dominated Definitions Are Unnecessary

- LANL opposes the addition of these definitions for the following reasons:
 - Neither term is used in the 20.6.4 NMAC
 - NMED states that “effluent dominated” is used in procedural documents; define the term in those documents
 - The “effluent dominated” definition is inapplicable until the state adopts an aquatic life designated use for effluent dominated waters
 - “Effluent dominated” definition includes an unnecessary value statement regarding habitat
 - “Baseflow” is only used in the “effluent dominated” definition

Topic 5. Review and Amendment of the WQS (Existing Use and Use Attainability Analysis)

Process to Evaluate Existing Uses

- Process NMED used to evaluate existing uses is unclear
- USEPA states importance of having a high degree of confidence when making a finding that a use is existing “because a state or tribe may not remove an existing use when revising designated uses, regardless of whether the existing use remains attainable.” (LANL Ex. 32; NMED Ex. 62 – Attachment at 5 [Response to Question No. 3])
- USEPA recommends that the process to modify any beneficial use
 - Be transparent and clear
 - Evaluate all the available data
- My direct testimony recommends
 - Establishment of a clear, stepwise process for evaluating existing uses
 - Inclusion of the process in the Water Quality Management Plan/Continuing Planning Process document

Process to Evaluate Existing Uses – USEPA Guidance

- USEPA describes a two-part approach to evaluate an existing use: (LANL Ex. 32, Attachment at 3 [Response to Question No. 3]):

“EPA considers the phrase “existing uses are those uses actually attained” to mean the use and water quality necessary to support the use[s] (sic) that have been achieved in the waterbody on or after November 28, 1975. Waterbody uses relate to a distinct purpose (e.g., recreation, public water supply) or function (e.g., supporting an aquatic ecosystem). EPA’s regulations, relating to the protection of existing uses, require states and tribes to maintain and protect these uses, not specific water quality parameters which may have achieved levels more protective than necessary to support these uses.” (Emphases Added)

- Summary of USEPA’s two-part guidance:
 - Evaluate the actual use of the water, e.g., used by people for swimming or drinking water, or as habitat by aquatic organisms or wildlife
 - Assess water quality to determine whether it supports the use of the water

NMED's Process to Evaluate Existing Recreational Uses

- I reviewed NMED's direct testimony/exhibits regarding existing use findings:
 - Exhibit 73: NMED proposal to reclassify selected Section 128 waters
 - Exhibit 56: NMED proposal to establish primary contact recreation as an existing use in selected waters in Sections 20.4.101-20.6.4.899 NMAC
- NMED's approach to evaluating recreational contact uses is contrary to USEPA guidance
 - Focus is almost solely on water quality
 - Analysis of actual use of the waterbody is limited or missing

NMED's Recreational Use Findings Focus on Water Quality

- Section 128 Waters
 - NMED states that an existing recreational use determination could not be made at this time because no *Escherichia coli* (*E. coli*) data were available
 - NMED Exhibit 73 does not mention its 2007 UAA analysis that demonstrated that low flow conditions prevented Section 128 waters from being used for primary contact recreation (activities involving considerable risk of ingesting water in quantities sufficient to pose a significant health hazard, e.g., swimming)
- Other Waters (Sections 101-899)
 - Recreational use analysis focused almost solely on water quality (*E. coli* and pH)
 - Evaluation of actual recreational uses attained relies on “visitor brochures”, “recreational websites” and “guides to river rafting”
 - Analysis conflates definitions of primary and secondary contact uses by including wading (secondary contact) as an example of a full immersion activity

NMED's Existing Use Findings Relied on Very Limited Water Quality Data

- NMED's recreational existing use proposal is based on as few data as a single sample result (NMED Ex. 3 at 12): "If the waterbody segment contained at least one *E. coli* sample result equal to or less than 410 cfu/100 mL, then the existing use was determined to be at least primary contact."
- *E. coli* criteria at 20.6.4.900.D NMAC, which are based on USEPA recommendations, consider the magnitude (concentration) and the duration and frequency of exposure to *E. coli*
- Consideration of duration and frequency of exposure requires more than a single sample result

NMED's Approach to Use Attainment Based on Water Quality Is Inconsistent with Other State Guidance

- NMED's 303(d)/305(b) Integrated Report relies on a more robust dataset and methodology
 - NMED's Comprehensive Assessment and Listing Methodology (CALM) establishes criteria for "interpreting bacteriological data to assess Contact Use Support"
 - A minimum of four sample results are needed to assess Contact Use Support
 - Data threshold for an Existing Use Analysis should be no less stringent than CALM
- Based on the evidence I have reviewed, secondary contact remains the appropriate designated use for waters on LANL Property

LANL Recommended Existing Use Analysis Process

My direct and rebuttal testimony proposes the following stepwise process:

1. Establish Existing Use Analysis Work Plan
2. Compile existing data and collect new information to fill critical data gaps, including data to:
 - Evaluate the actual use of the water
 - Assess existing water quality
3. Conduct Existing Use Analysis using procedures consistent with the CALM use attainment assessment procedures
4. Petition the Commission to modify designated use(s) if warranted by the findings of the study
5. If approved by the Commission, submit revised uses to EPA for approval

SURREBUTTAL

Topic 5. Review and Amendment of the WQS (Existing Use and Use Attainability Analysis)

NMED Rebuttal is Contradictory Regarding the Process to Evaluate Whether a Use is Existing

- NMED states it has “a process for amending water quality standards, as outlined in the WQMP/CPP” (Fullam, NMED Ex. 109 at 72, line 18), then contradicts that statement in rebuttal:
 - NMED disputes that a “‘process’ specific to determining existing uses, like a UAA, is appropriate.” (Fullam, NMED Ex. 109 at 72, line 22)
 - NMED disagrees that a “prescriptive process” to determine existing uses to amend designated uses is needed (Fullam, NMED Ex. 109 at 73, line 4)
 - NMED states it has no obligation to develop a work plan for a proposed WQS amendment (Fullam, NMED Ex. 109 at 74, line 7)
- NMED contradicts what the process is to amend a designated use
 - NMED states a designated use “may be amended, and if there is an established Section in 20.6.4. NMAC that has the appropriate designated uses within the geographic location, the water may be listed in that classification section”. (Fullam, NMED Ex. 109 at 38, line 13)
 - NMED provides a different process by reference to the WQMPP/CPP and HP flowchart that declassifies classified waters based on flow regime (Fullam, NMED Ex. 109 at 72, line 18; HP flowchart, LANL Ex. 70 at II-8)

NMED's Declassification of Classified Waters Based Upon Flow Regime Only Is Inconsistent with EPA Guidance

- The WQMPP/CPP HP flowchart declassifies classified waters based on HP assessment alone (HP flowchart, LANL Ex. 70 at II-8)
- NMED's declassification of waters based upon an HP assessment is inconsistent with EPA guidance
 - EPA does not declassify water bodies, it seeks to refine the classification
- EPA's process to refine and reclassify a water body considers two factors:
 - The actual use of the water, e.g., used by people for swimming or drinking water, or as habitat by aquatic organisms or wildlife
 - The water quality to determine whether it supports the use of the water
- The HP assessment is a tool to support the evaluation of the actual use

Recreational Use Attainment Must Consider Risk of Ingestion

- NMED states that “although demonstrated previously that low-flow and lack of physical access prevented [primary contact] recreation in and on the water where full immersion would occur, the CWA protects for the attainment of the water quality to support the use, wherever possible. Although it may be a consideration for attainment, there is no criterion for volume to preclude attainment of primary contact.” (Fullam, NMED Ex. 109 at 65)
 - Risk of ingestion is highly related to the type of recreational activity and increases greatly with immersion; the ability to immerse is directly related to water depth and volume
 - Attainment cannot be based solely on water quality; physical limitations may prevent a given recreational use
 - EPA states this in their guidance in discussing evaluation of water quality in the context of existing uses
- NMED has no new information to support amending the designated recreational use for any LANL waters

Topic 7. LANL Waters (Section 126, 128 and 140)

History of Adoption of Classified Waters on LANL Property into Sections 126 and 128

- 2002 - U.S. Fish & Wildlife Study completed study on LANL property
- 2005 - Triennial Review completed
 - Classified specific perennial waters into new Section 121a (now Section 126) with coldwater aquatic life, secondary contact, wildlife habitat and livestock watering designated uses
 - Classified ephemeral and intermittent LANL waters in new Section 121c (now Section 128) with limited aquatic life, secondary contact, wildlife habitat and livestock water designated uses
- August 2007 - Per USEPA request, NMED completes UAA to support designations of secondary contact and limited aquatic life uses (LANL Ex. 18)
- August 31, 2007 - USEPA approves Section 126 and 128 classifications

Post-2005 Triennial Review History of Section 126 and 128 Classified Waters on LANL Property

- 2009 Triennial Review
 - 2011 - USEPA's record of decision reaffirmed use designations for Sections 126 and 128 based on the 2007 UAA
- 2013 Triennial Review
 - 2015 - Joint Stipulation agreement signed by Amigos Bravos, NMED, LANL and Department of Energy: Parties agree to work towards reaching consensus on appropriate protection of Section 128 waters
 - 2017 - USEPA's approval letter does not identify any concerns with use designations
- 2015-2020 - LANL has been working collaboratively with other parties under the Joint Stipulation to assess waterbodies on LANL property

NMED Proposals to Reclassify Section 126 and 128 Waters

- NMED proposes to move selected Section 128 waters to a new Section 140 with marginal warmwater aquatic life, secondary contact, livestock watering and wildlife habitat designated uses
- Basis for re-classification:
 - Findings from work completed under Joint Stipulation
 - NMED Existing Use Analysis (Original NMED Exhibit 73; Corrected Exhibit 124)

SURREBUTTAL
Topic 7. LANL Waters
(Sections 126, 128 and 140)

LANL Response to NMED Rebuttal Testimony

- Fullam, NMED Ex. 109 at 38, line 20: “the federal regulations do not contain provisions for ‘moving’ or ‘reclassifying’ waters”
 - LANL Ex. 76, EPA WQS Handbook, Chapter 2
- Fullam, NMED Ex. 109 at 44: NMED disputes that LANL has regularly evaluated the appropriateness of secondary contact
 - LANL conducts regular assessments and that data is reported to NMED
 - NMED Ex. 73 acknowledges that it has no new *E. coli* information
 - EPA, the WQCC, and NMED based secondary contact use on the 2007 UAA low flow determination consistent with 40 CFR 131.10(g)(2)
 - There is no contrary new information
- Fullam, NMED Ex. 109 at 65, line 1: EPA did not approve 2007 UAA
 - LANL Exs. 18 (2007 UAA), 19 (EPA 2007 approval), 25 (Michael Saladen rebuttal testimony), 26 (EPA 2009 Record of Decision excerpt)

All LANL Waters are Classified

- Lemon, NMED Ex. 106 at 4-5: waters proposed by LANL for increased protection under Section 126 are unclassified 20.6.4.99 NMAC and secondary contact would require a UAA
- Fullam, NMED Ex. 109 at 56, line 16: disputes that all LANL waters are classified
 - 2007 UAA and map (LANL Ex. 18)
 - EPA 2007 approval of UAA (LANL Ex. 19)
 - Excerpt Direct Testimony, Dr. Frederick Fisher, 2003 Triennial Review (LANL Ex. 23)
 - Michael Saladen rebuttal testimony (LANL Ex. 25)
 - Excerpt EPA 2009 Triennial Review Record of Decision (LANL Ex. 26)

