



State of New Mexico
Water Quality Control Commission



**2014 – 2016
State of New Mexico
Clean Water Act
§303(d)/§305(b)
Integrated Report**

FINAL

- Appendix C -

Response to Comments

November 18, 2014



Prepared by:

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Surface Water Quality Bureau
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Santa Fe, NM 87505

www.nmenv.state.nm.us/swqb

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RESPONSE TO COMMENTS
ON THE
2014-2016 STATE OF NEW MEXICO
CLEAN WATER ACT
§303(d)/§305(b)
INTEGRATED LIST OF ASSESSED SURFACE WATERS

Table of Contents

COMMON ACRONYMS	2
MINOR CHANGES TO THE PUBLIC COMMENT DRAFT 2014-2016 INTEGRATED LIST BASED ON SWQB STAFF REVIEW	4
COMMENT SET 1 – San Juan Soil & Water Conservation District, Aztec, NM	6
COMMENT SET 2 – New Mexico Department of Agriculture, Agricultural Programs and Resources Division, Las Cruces, NM	7
COMMENT SET 3 - U.S. Forest Service - Gila National Forest, Silver City, NM	12
COMMENT SET 4 – Public Employees for Environmental Responsibility, Washington, D.C.	14
COMMENT SET 5 – Linda Butler, Tijeras, NM.....	20
COMMENT SET 6 – San Juan Water Commission, Farmington, NM	21
COMMENT SET 7 – Amigos Bravos, Taos, NM.....	25
COMMENT SET 8 – Communities for Clean Water, NM.....	35
COMMENT SET 9 – Los Alamos National Security (LANS), Los Alamos, NM	43
COMMENT SET 10 – City of Ruidoso / Village of Ruidoso Downs, NM	47
COMMENT SET 11 – Quay County, Tucumcari, NM.....	58

ATTACHMENT A: USEPA Region 6 memorandum dated June 16, 2014

ATTACHMENT B: Amigos Bravos (COMMENT SET 7) submitted comment attachments

PLEASE NOTE:

Original typed letters that were not received electronically were scanned and converted to MSWord. Letters received electronically were also converted to MSWord. All text was converted to Arial 11 font with standard page margins for ease of collation. Contact information such as phone number, street addresses, and e-mail addresses from private citizens were removed for privacy reasons. All original letters of comment are on file at the SWQB office in Santa Fe, NM.

COMMON ACRONYMS

ADB	assessment database
AOC	Areas of Concern
AP	Assessment Protocol
AU	Assessment Unit
BLM	U.S. Bureau of Land Management
BMP	best management practice
C	Celsius
CCW	Communities for Clean Water
CMI	Chevron Mining Inc.
CWA	Federal Water Pollution Control Act, 33 U.S.C. 1251 <i>et seq.</i> "Clean Water Act"
CWAL	coldwater aquatic life
DDT	dichlorodiphenyltrichloroethane
DO	dissolved oxygen
DEQ	Department of Environmental Quality
EPA	Environmental Protection Agency
FSA	Farm Service Agency
GI	Green Infrastructure
GIS	Geographical Information System
HUC	Hydrologic Unit Code
IP	Individual Permit
IPSP	Industrial Point Source Permit
IR	Integrated Report
LANL	Los Alamos National Labs
LANS	Los Alamos National Securities
LID	Low Impact Development
MCWAL	marginal coldwater aquatic life
mg	milligrams
MSGP	Multi Sector General Permit
NMAC	New Mexico Administrative Code
NMDA	New Mexico Department of Agriculture
NMED	New Mexico Environment Department
NPDES	National Pollutant Discharge Elimination System
NPS	Non Point Source
NRCS	Natural Resource Conservation Service
NTU	Nephelometric Turbidity Units
PCB	polychlorinated biphenyls
QAPP	Quality Assurance Project Plan
QA/QC	quality assurance/quality control
ROD	Record of Decision (for the 303(d) list)
SEV	severity of ill effects approach, based on Newcombe (2003)
SOP	standard operating procedure
SQUID	SWQB's Surface Water Quality Information Database
SSC	suspended sediment concentration
SWMU	Solid Waste Management Unit
SWQB	Surface Water Quality Bureau
TAL	Target Action Level
TMDL	Total Maximum Daily Load
TN	Total Nitrogen
TP	Total Phosphorous

UAA	Use Attainability Analysis
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFS	United States Forest Service
USGS	United States Geologic Survey
WQ	Water Quality
WQCC	Water Quality Control Commission
WQC	Water Quality Criterion
WQS	Water Quality Standards
WQX	Water Quality Exchange
WRAS	Watershed Restoration Action Strategy
WWAL	Warmwater Aquatic Life
WWTP	Wastewater Treatment Plant

MINOR CHANGES TO THE PUBLIC COMMENT DRAFT 2014-2016 INTEGRATED LIST BASED ON SWQB STAFF REVIEW

1. The **Alto Lake** nutrient assessment conclusions was changed to inconclusive (i.e., not assessed) in the Record of Decision (ROD) because one of the two total phosphorus exceedences leading to the nutrient impairment determination was later rejected due to detection of phosphorus in the sample blank. Regardless, the IR 5C categorization for Alto Lake remains because additional data are still needed.
2. NMSU-USFS Carson submitted 2010-2011 thermograph data from several Rio Grande cutthroat streams (listed below) in northern New Mexico. These data sets were assessed prior to opening the draft list for public comment and all indicated Full Support for temperature, but were inadvertently left off of the draft 2014 -2016 Integrated List. These assessment units (AUs) and temperature assessment conclusions will be added to the upcoming draft 2016-2018 Integrated List:

AU ID	AU Name	WQS Citation
NM-2120.A_441	Manzanita Creek (Rio Hondo to headwaters)	20.6.4.123
NM-2120.A_442	Jicarita Creek (Rio Santa Barbara to headwaters)	20.6.4.123
NM-2120.A_443	Policarpio Canyon (La Junta Ck to headwaters)	20.6.4.123
NM-2120.A_444	Placer Fork (Columbine to headwaters)	20.6.4.123
NM-2120.A_440	Italianos Creek (Rio Hondo to headwaters)	20.6.4.123

3. The ROD for **Rio Hondo (Perennial reaches Bonney Canyon to Rio Ruidoso)** was modified to the following:

2014 Action: This AU was sampled during the 2012 Sacramento Mountains survey.—Fecal coliform was removed as a cause of impairment because there is no longer a WQC for this contact use parameter (it was replaced by the *E. coli* WQC). The flow in the lower half of this AU is reduced due to diversion. This reach was impacted by 2012 fire and subsequent flooding. Additional nutrient, sonde, thermograph, sediment, and bacteria data will be collected 2014 and assessed for the 2016 Integrated List.

4. The description of the River Stewardship Initiative on page x and 21 of the Integrated Report was revised to appropriately describe the goals of the program:

On August 15, 2013 the intention for a new state-funded stream restoration program called the River Stewardship Program was announced. The River Stewardship Program ~~is designed to strengthen river-based education and recreation as it relates to the economic importance of fishing and boating and managing fires and flooding.~~ has the overall goal of addressing the root causes of poor water quality and stream habitat. Objectives of the River Stewardship Program include: restoring or maintaining hydrology of streams and rivers to better handle overbank flows and thus reduce flooding downstream; enhancing economic benefits of healthy river systems such as improved opportunities to hunt, fish, float or view wildlife; and providing state matching funds required for federal CWA grants. The New Mexico Legislature provided \$2.3 million in the state FY2015 budget to support for this initiative. Responsibility for the program will be assigned to NMED, and staff will develop and administer the program. These funds will also

serve to match federal funds New Mexico receives under the CWA.

5. Assessment Units **Brantley Reservoir, Pecos River (Avalon Reservoir to Brantley Reservoir), Pecos River (Brantley Rsvr headwaters to Rio Felix), Pecos River (Rio Felix to Salt Creek), and Rito de los Frijoles (Rio Grande to Upper Crossing)** were erroneously listed as impaired for “DDT” instead of “DDT in Fish Tissue” on the Integrated List due to an error in the transfer of data from the Assessment Database to SQUID. These were corrected to “DDT in Fish Tissue.”
6. The AU **Lake Farmington (Beeline Reservoir)** was erroneously listed “Mercury, total” instead of “Mercury in Fish Tissue” on the Integrated List due to an error in the transfer of data from the Assessment Database to SQUID. This was corrected to “Mercury in Fish Tissue.”
7. The AU **Bill Evans Lake** was inadvertently delisted for “Mercury in Fish Tissue” on the Integrated List. This de-listing action is withdrawn and the listing was added back because the fish consumption advisory is still in effect (advisories are available at <http://www.nmenv.state.nm.us/swqb/advisories/FishConsumptionAdvisories-2012.pdf>).
8. The IR Category was changed from 5A to 5C for the below AUs listed for aluminum, as additional data are needed prior to TMDL scheduling because these listings are from the old dissolved aluminum standard. Any estimated “TMDL DATE” associated with these waters was removed as additional data (i.e., total recoverable aluminum and concurrent hardness data) are needed to assess these waters against applicable total aluminum criteria. An AU Comment was also added if aluminum was the only impairment for a particular water. The following AUs were affected by this issue:
 - a. **Greenwood Canyon (Middle Ponil Creek to headwaters)**
 - b. **North Ponil Creek (Seally Canyon to headwaters)**
 - c. **Gold Creek (Comanche Creek to headwaters)**
 - d. **Santa Fe River (Santa Fe WWTP to Guadalupe St)**
 - e. **Jaramillo Creek (East Fork Jemez to headwaters)**
 - f. **East Fork Jemez (VCNP to headwaters)**
 - g. **La Jara Creek (East Fork Jemez to headwaters)**
 - h. **Redondo Creek (VCNP bnd to headwaters)**
 - i. **Rito de los Indios (San Antonio Creek to headwaters)**

COMMENT SET 1 – San Juan Soil & Water Conservation District, Aztec, NM

Received via email, June 03, 2014

Hi Lynette,

I have a question for you regarding the public comment period for the 303(d) list. My organization collected E.coli samples last year on the San Juan River in Farmington which indicate that the Upper San Juan segment NM-2401_00 (Animas River to Canon Largo) should be listed for an E.coli impairment. This segment was delisted in 2012 but our data indicate that the impairment is still present.

Between April 1 and October 28, 2013, 12 out of 25 samples exceeded the single sample criterion of 410 cfu/100mL, and four out of the six months exceeded the 126 cfu/100mL monthly geometric mean.

The samples were collected using standard methods and analyzed at an EPA approved lab; the collection was not part of an EPA approved QAPP at the time, but we are collecting the samples again this year using the same methods and now have an approved QAPP (see attached).

We would like to submit these data for consideration in the 303(d) list – is there a specific format we should submit them in?

Feel free to call me at the number below to discuss this further and let me know the best way to proceed.

Thank you!

Melissa May
Natural Resource Specialist
San Juan Soil & Water Conservation District
1427 W. Aztec Blvd Suite 1
Aztec, NM 87410

SWQB RESPONSE: *SWQB is definitely interested in incorporating outside data sources into attainment decisions, assuming they meet SWQB QA/QC requirements, however it is too late to incorporate these data into the 2014-2016 Integrated List. The draft list is already out for public comment and changing the attainment decision that was made and approved during the previous listing cycle (2012) during this draft 2014 comment period would not allow interested stakeholders an opportunity to review and comment on it during the current public comment period.*

Please submit your data for consideration for the draft 2016 Integrated List following the guidelines at: <http://www.nmenv.state.nm.us/swqb/DataSubmittals/>. It would be helpful for SWQB to receive any available data as soon as possible so our QA Officer can review them for QA/QC purposes in order to identify any potential concerns regarding use for assessment on future lists. There will also be an official public notice Call for Data in spring of 2015 for development of the draft 2016 list. Your email and contact information have been added to our SWQB email list to ensure you receive this notice.

COMMENT SET 2 – NM Department of Agriculture, Agricultural Programs and Resources Division, Las Cruces, NM

July 8, 2014

Dear Ms. Guevara:

New Mexico Department of Agriculture (NMDA) submits the following comments in response to the New Mexico Environment Department (NMED) Surface Water Quality Bureau (SWQB) Sections 303(d)/305(b) Integrated Report.

One of NMDA's roles is to review and comment on policy recommendations related to agriculture production. Our constituency has a vested interest in the planning process due to the inextricable relationship between natural resources and agriculture.

The following comments are intended to broaden the scope of the report, such that these stakeholders' interests may be more adequately represented.

Page 4

The last sentence of the first paragraph states, "The state's surface water supply is almost fully applied to beneficial uses under existing water rights and interstate compacts..."

The Office of the State Engineer does not officially maintain a list of beneficial uses for the state of New Mexico. Moreover, the process of the adjudication of water rights is still incomplete in much of the state. Thus the sentence may unintentionally mischaracterize the state of affairs with respect to the process of water rights adjudication.

The last sentence of the last paragraph states, "Ground water levels may decline in the vicinity of pumping even when withdrawals do not exceed basin recharge because pumping ground water draws down aquifer storage, which can only be replenished by recharge over time once pumping decreases or stops."

It remains unclear based on the lack of citation whether this conclusion is drawn from the Bartolino and Cunningham paper from 2003 or if the conclusion does not, in fact, come from a published source.

SWQB RESPONSE: *SWQB consulted with staff at the Office of the State Engineer (OSE) on these statements. OSE maintains records of water rights, which by law are based on beneficial use of water. The State Engineer may be able to determine whether a basin is fully appropriated or not without an adjudication. The 2003 New Mexico State Water Plan states (OSE/ISC 2003): "New Mexico's surface waters in many parts of the State have been fully appropriated since the early to middle 1900s." The last sentence in the first paragraph has been revised to read: "The state's surface water supply is considered almost fully appropriated to beneficial uses under existing water rights (or reserved for specified beneficial uses under water rights filings), or is needed to meet interstate compact obligations (NMOSE/ISC, 2003)." The last sentence of the last paragraph is based on Bartolino and Cunningham (2003), and has been revised as follows: "In some areas with significant ground water use, ground water levels have declined. Ground water withdrawals from an aquifer by pumping must be balanced by some combination of increased recharge, decreased discharge, and removal from storage (or*

depletion) (Bartolino and Cunningham, 2003).”

Additional references:

New Mexico Office of the State Engineer/ Interstate Stream Commission (OSE/ISC). 2003. New Mexico State Water Plan. Santa Fe, NM.

Page 7

The most current iteration of the Triennial Review is currently underway, and public comments were due on May 30, 2014. This section refers to the most current version as the one adopted by the Water Quality Control Commission in 2012 and omits any changes made in the more recent version.

SWQB RESPONSE: *The 2014 Integrated Report and List are based on the most recent, USEPA-approved version of 20.6.4 NMAC; it would not be appropriate to use standards changes proposed under the current Triennial Review as they have not been approved by the WQCC or USEPA. The Surface Water Quality Standards Program section of the Integrated Report clearly identifies that there have been changes since the 2012 approval by USEPA. Specifically, it states: “The SWQB completed its last triennial review for the WQCC in November 2010, and the USEPA approved the amendments adopted by the WQCC as of June 18, 2012. Since the last triennial review there have been amendments to the water quality standards (20.6.4 NMAC).” This section goes on to include a list of these changes.*

Page 9

The second paragraph contains the sentence, "Outside groups also recognize the importance of TMDL development in protecting New Mexico's surface water." Then the paragraph continues to discuss a lawsuit that initiated the development of TMDLs in New Mexico.

The phrase "outside groups" may unintentionally suggest there are private groups outside of the State of New Mexico that actively influence policy decisions by litigation and that NMED is not in control of these outcomes.

SWQB RESPONSE: *Agreed. While reviewing this comment, SWQB decided to strike the reference to the 1996 lawsuit in the draft 2014 Integrated Report since it is almost two decades old and no longer guides priority order for TMDL development in New Mexico.*

Page 11

In the second paragraph, NMED notes that there were 16 National Pollutant Discharge Elimination System (NPDES) enforcement actions in the state in FY 2012 and in 41 actions in FY 2013. This is an increase of more than 2.5 times year-over-year, but there is no explanation offered to account for this.

SWQB RESPONSE: *USEPA Region 6, as the permit-issuing agency in New Mexico, is responsible for issuing enforcement actions in New Mexico. SWQB is not aware of the reasons that may have contributed to this increase. Therefore it is not necessary or appropriate to speculate on this increase in New Mexico's Integrated Report.*

Page 19

The second sentence in the bottom paragraph states, "A table of delistings was compiled from a query of the SWQB Surface water QUality Information Database (SQUID)." The document references SQUID in several other places as well, including page 56, but does not offer a link for public access.

Additionally, this database does not appear to be accessible via NMED's website, but data such as these could be important for public knowledge.

SWQB RESPONSE: *Agreed. SWQB is working towards making SQUID accessible to the public with the assistance of NMED's Information Technology Bureau. Regardless, all validated SWQB data used for assessment are available on WQX, which is publically available at: <http://www.epa.gov/STORET/wqx/index.html>. Clarification was added to the Data Management Section on page 48.*

Page 36

Under the heading "Coordination with Other State, Tribal and Local Government Agencies," the "Department of Agriculture" is listed. However, it is unclear as to whether it refers to USDA or NMDA.

SWQB RESPONSE: *This was intended to refer to NMDA, as the specific branches of USDA we typically coordinate with were noted. This list has been revised to provide clarification.*

Page 41

NMDA shares NMED's concern that the draft scientific assessment *Connectivity of Streams and Wetlands to Downstream Waters* and proposed amendment to the Clean Water Act were not developed with sufficient consultation with states.

The second paragraph on the page begins to describe New Mexico's mixture of hydrologic conditions. However, no conclusion is drawn regarding how these conditions may affect regulatory agencies in the state when coupled with the proposed rule. Instead, the paragraph merely states the conditions exist, such as how "closed basins cover approximately 20% of the land area, and as much as 90% of the State's surface waters are non-perennial."

While these facts are important, there is not sufficient information for a member of the public to understand the implications they could have on the regulatory environment in the state of New Mexico.

SWQB RESPONSE: *While we appreciate and share your concerns, it would be premature and inappropriate to provide these comments in the Integrated Report, as NMED is currently in the process of developing their comments on the proposed rule and the Integrated Report is not the appropriate venue for detailed discussions regarding proposed changes to federal regulations under the Clean Water Act. Section B.4 of the Integrated Report merely provides an avenue for SWQB to relay to USEPA Region 6 and others specific current and upcoming challenges New Mexico faces with respect to meeting the objectives of the Clean Water Act and NM Water Quality Act. SWQB believes the level*

of detail in section B.4 is sufficient for the purposes of the Integrated Report. NMED is evaluating the proposed regulation to determine the implications for the regulatory environment in New Mexico, and plans to submit comments to USEPA by the October 20, 2014 deadline.

Page 56

The second paragraph states the list of probable sources of pollution is "not intended to single out any particular land owner or single land management activity, and has therefore been labeled "Probable" and generally includes several possible items."

However, later on the same page in the last paragraph, the tone departs from the previous attempt at neutrality. The sentence states, "the leading sources of impairment in New Mexico's rivers and streams is rangeland grazing, which is consistent with the widespread use occurrence of this activity in New Mexico."

SWQB RESPONSE: *Thank you for pointing out this unintentional omission. The phrase "...leading source of impairment..." was corrected to "...leading probable source of impairment..." Accordingly, Figure 12 was retitled "Probable Sources..."*

Page 57

Figure 12 presents the data as "stream miles impaired." This metric is imprecise as it does not mention the relative concentrations of any of the given probable sources. Therefore, activities that are spread out and not necessarily the worst polluters could be disproportionately represented. Readers may also draw conclusions, such as the one listed on Page 56, that conflict with the original intent of not singling out any one person or activity.

Also in figure 12, one of the causes attributed to "Stream Miles Impaired" is termed "Drought-related Impacts." As given, it is unclear as to what these impacts are and how they have affected surface water in terms of increasing TMDLs.

SWQB RESPONSE: *SWQB concurs that the metric is imprecise, but it is the best available given our current level of information. The Stream Miles Impaired column is generated from SQUID, and is the sum of all assessment units where a particular Probable Source is noted in USEPA-approved TMDLs. Clarification has been added to the Integrated Report, which now reads:*

"For development of the Integrated List, identified probable sources are incorporated into SQUID, which allows the stream miles for each particular probable source assigned to an impaired assessment unit to be totaled. SQUID generates summary reports that break down probable sources of impairment into major categories and subcategories. This metric is imprecise as it does not contain information on the relative concentrations of any of the given probable sources as this level of detail is not available given current source identification resources."

Drought-related Impacts is on USEPA's list of recommended probable sources and is defined as "Drought episodes, which in some cases may last several years, can deplete water supplies and accentuate pollution problems affecting human and ecological health. See background information in FEMA (1996)." Findings of the 1996 Multi-State Drought Task Force are available through <http://www.lrc.fema.gov/starweb/lrcweb/servlet.starweb?path=lrcweb/STARLibraries1.web&search=R=175523>. There are many more recent references available regarding the impacts of drought on water quality, including USEPA's web site specific to the southwest

<http://www.epa.gov/climatechange/impacts-adaptation/southwest.html>) and the Intergovernmental Panel on Climate Change web site (<http://www.ipcc.ch/>).

Page 68

The last paragraph states, "Ground water quality monitoring is typically required at permitted facilities and as part of remediation efforts." However, in Part D – Ground Water Monitoring and Assessment, there is no further mention of remediation efforts or of how ground water quality monitoring via wells could remedy contaminated groundwater.

Further information is needed to explain the connection between monitoring wells and remediation due to the potentially high cost of their installation.

SWQB RESPONSE: *Ground monitoring wells are needed to determine whether or not remediation efforts are leading to improved ground water quality. The sentence was revised to "Ground water quality monitoring is typically required at permitted facilities to determine baseline ground water quality, serve as a leak detection method, and as part of remediation efforts to determine whether or not remediation efforts are effective."*

Conclusion

NMDA would like to thank you for the opportunity to comment on the Integrated Report. If there are any questions regarding this response, please contact Mr. Ryan Ward at (575) 650-8196 or rward@nmda.nmsu.edu.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Julie Maitland', with a large, stylized flourish at the end.

Julie Maitland

Division Director JM/rw/ya

COMMENT SET 3 - U.S. Forest Service - Gila National Forest, Silver City, NM

Received via email, July 11, 2014

Please consider this comment from the Gila National Forest:

In reviewing the draft 303(d) report and list, we noticed that both Whitewater Creek and Middle Fork Gila River are no longer on the list, based on sampling that was conducted in 2011. This sampling occurred prior to the 2012 Whitewater Baldy Complex Fire which severely burned portions of the watersheds impacting these streams. With special circumstance like this, it may be premature to remove these streams from the list until additional sampling can occur. Perhaps the streams could still be classified as impaired, with special circumstances noted and additional data required before final delisting. This would aid in keeping these watersheds on everyone's priority list for watershed/water quality improvement projects, grant funding consideration, and partnership opportunities.

Thank you for the opportunity to comment.

Carolyn Koury
Watershed Program Manager
Gila National Forest
3005 E. Camino del Bosque
Silver City, NM 88061
(575) 388-8378

SWQB RESPONSE: *SWQB appreciates your comment and recognizes the potential impacts of wildfires on water quality (<http://www.nmenv.state.nm.us/swqb/Wildfire/>). In response to your comment, we have added AU Comments to the Whitewater Creek and Middle Fork Gila River AUs to acknowledge the 2012 Whitewater Baldy Complex Fire. While both Whitewater Creek assessment units were de-listed for their respective previous turbidity and dissolved aluminum impairments based on 2011 data, the two Middle Fork Gila River assessment units remain listed for temperature (IR Category 5/5B). These assessment conclusions are based on 2011 data and are appropriate with respect to CWA sections 303(d)/305(b) and our associated requirement to assess available data against our current water quality standards using our current assessment protocols. In addition, the TMDL for turbidity in "Whitewater Creek (San Francisco R to Whitewater Campground)" has not been removed and is still available as a water quality planning document.*

SWQB believes utilizing the NPS Management Plan and River Stewardship Program are the most appropriate and effective mechanisms to provide assistance following a wildfire given the unexpected, episodic nature of wildfires and their subsequent impact to water quality. To provide assistance to help address wildfire impacts on surface water quality, the NPS Management Plan was recently modified (<http://www.nmenv.state.nm.us/swqb/wps/Plan/2014NPSPPlan.pdf>) and approved by the WQCC, and pending USEPA review and approval, to provide funding opportunities for surface waters severely impacted by wildfire, specifically:

"EPA regions may approve the use of watershed project funding to implement alternative plans containing the above elements in the following circumstances: ...

- b. When responding to a NPS pollution emergency or urgent NPS public health risk.***
In scenarios when the proposed § 319 project(s) responds to an urgent, unplanned NPS pollution emergency or urgent NPS public health risk in an area for which a WBP does not exist (e.g., efforts to control erosion and re-establish vegetation in the immediate aftermath

of a forest fire, to reduce pollution affecting drinking water safety), an alternative plan may be developed to ensure the timely, targeted use of watershed project funds.”

Further, the recent Request for Proposals (http://www.nmenv.state.nm.us/swqb/RFP/RFP_40-667-14-23110.pdf) for New Mexico’s River Stewardship Program (<http://www.nmenv.state.nm.us/swqb/RiverStewards/>) included the following:

“NMED has identified statewide priority areas for the River Stewardship Program: 1) projects that address water quality and stream habitat impacts associated with fires in 2011, 2012, or 2013; ...”

COMMENT SET 4 – Public Employees for Environmental Responsibility, Washington, D.C.

Received via email, July 11, 2014

Dear Ms. Guevara,

Public Employees for Environmental Responsibility (“PEER”) is a national, nonprofit service organization dedicated to assisting federal, state, and local resource professionals who fight to uphold environmental laws and ethics within their organizations. Headquartered in Washington, D.C., PEER has a network of field offices, including one in New Mexico, as well as many members who are New Mexicans. In addition, PEER has deep experience in Clean Water Act issues.

We are writing with serious concerns about the assessment protocols (APs) used to generate the draft version of the 2014-2016 State of New Mexico Clean Water Act §303(d) / §305(b) Integrated Report (IR). Specifically, the proposed turbidity AP is so inappropriate that it effectively modifies state water quality standards.

The State of New Mexico Standards for Interstate and Intrastate Surface Waters (the Standards) were codified in State Law 20.6.4 NMAC following approval by the New Mexico Water Quality Control Commission (NMWQCC) and EPA Region 6 (EPA R6). The APs proposed, however, effectively alter the Standards without the approval of NMQCC and EPA Region 6 approval. Accordingly, we request that data for the 2014-2016 IR be re-assessed after making changes to the proposed turbidity AP to address the following issues:

SWQB RESPONSE: *We acknowledge that New Mexico’s narrative turbidity standard (20.6.4.13(J) NMAC) applies to all waters of New Mexico, however SWQB disagrees with the statement that the Turbidity AP modifies state water quality standards. We ensure our assessment protocols are consistent with adopted standards by only providing additional guidance on magnitude, frequency and duration for listing actions in the protocols, when these items are not specified in the standards. The challenge is to develop assessment protocols that implement narrative criterion appropriately in all waters of the state.*

The Turbidity Assessment Protocol for Coldwater Perennial Streams and Rivers (<http://www.nmenv.state.nm.us/swqb/protocols/2014/>, Appendix G, aka “Turbidity AP”) documents SWQB’s current turbidity assessment approach. Our approach is currently limited to coldwater aquatic life use in perennial rivers and streams as these are the only waters where we have sufficient technical understanding to develop assessment protocols regarding the magnitude, frequency and duration of turbidity to assess impairment of the aquatic life use. To apply this methodology to other waters with different aquatic life uses is not appropriate. As such, while the narrative turbidity criterion applies to all waters, we are not able to assess for waters other than coldwater perennial rivers and streams at this time. We continue to review the literature and look for approaches to assess other water types to further develop our assessment approach.

All of SWQB’s assessment protocols, including the Turbidity AP, are released for 30-day public comment every two years. They were last released for comment March 20, 2013, through April 18, 2013, and will be released for public comment again in the spring of 2015, prior to the 2016-2018 listing cycle. These comment periods are the appropriate avenue to submit comments related to the Assessment Protocols. USEPA requests that comments received during the public comment period for SWQB’s draft Assessment Protocols be provided to them for their consideration. The SWQB considers all staff, public or USEPA comments before finalizing the Assessment Protocols.

1. The proposed turbidity AP excludes assessment units with a designated use of coolwater aquatic life, leaving these assessment units without protection from excessive turbidity.

Section NMAC 20.6.4.13 (J) of the Standards sets forth the criteria for turbidity, which, in part reads:
“Turbidity attributable to other than natural causes shall not reduce light transmission to the point that the normal growth, function[,] or reproduction of aquatic life is impaired or that will cause substantial visible contrast with the natural appearance of the water.”

Section 1.1 of the proposed turbidity AP describes salmonids as the most appropriate species for use in determining the appropriate turbidity thresholds for stream segments with a designated use of coldwater aquatic life. Brown trout are specifically mentioned and a reference is cited that indicates growth in brown trout could be impaired at long-duration turbidity levels of less than 10 NTUs.

The SEV index approach to addressing turbidity first appeared in the turbidity AP used to generate the 2012 IR. In that AP, an SEV index of 3.5 was applied to assessment units with high quality coldwater, coldwater, marginal coldwater, and coolwater aquatic life designated uses. In contrast, the proposed turbidity AP excludes assessment units with a designated use of coolwater aquatic life, and these assessment units now have no protection from excessive turbidity.

Brown trout are known to occupy stream segments, lakes, and reservoirs in New Mexico that have a designated aquatic life use of coolwater aquatic life. Evidence of the presence of salmonids in these waters can be obtained from local fishing reports, fisherman’s blogs, websites maintained by the New Mexico Department of Game and Fish, and the New Mexico Environment Department, Surface Water Quality Bureau website. For example:

- NMAC 20.6.4.505 (A) specifically address Bill Evans Lake, giving it a coolwater aquatic life designated use. A description of the fishing at Bill Evans Lake states, “Trout, although present throughout the year, are more active from October through May,” indicating that there are reproducing populations of trout that overwinter in this coolwater lake.
- NMAC 20.6.4.224 assigns Monastery Lake a coolwater aquatic life use. Brown trout are found in Monastery Lake according the New Mexico Department of Game and Fish. Reports of brown trout in excess of two feet in length caught in Monastery Lake, taken together with the fact that brown trout are not stocked by the New Mexico Department of Game and Fish, strongly indicates the existence of a reproducing, even thriving, population of brown trout in water body with a designated coolwater aquatic life use.
- The upper assessment unit of the Animas River, from Estes Arroyo, near Aztec, NM, to the boundary of the southern Ute tribal lands, was recently recommended for downgrading from a marginal coldwater to a coolwater aquatic life designated use by a New Mexico Environment Department Use Attainment Analysis. Native residents of Aztec, New Mexico, report that the Animas holds wild populations of trout in this reach. The New Mexico Department of Game and Fish recognizes this reach of the Animas as fishery for both rainbow and brown trout.

Although referred to as a coldwater species in the proposed turbidity AP, brown trout clearly occupy waters that the Standards list as coolwater, and they must be considered a coolwater, as well as a coldwater, species. The rationale employed by the proposed turbidity AP in using the SEV index approach to assess turbidity in waters with a coldwater aquatic life use, which section 1.1 indicates is based on the turbidity tolerance of brown trout, is equally valid for coolwater segments. It is arbitrary and capricious to apply the SEV index approach to assessing turbidity only to waters with a designated

uses of marginal coldwater, coldwater, and high quality coldwater aquatic life while omitting coolwater segments.

SWQB RESPONSE: *SWQB disagrees with this statement. In addition, the 2014 Turbidity AP is finalized, not proposed; it was released for 30-day comment March 20, 2013, through April 18, 2013, and finalized on June 24, 2013.*

The challenge in the assessment of narrative water quality standards for parameters such as turbidity and nutrients is that these parameters, at appropriate levels, are natural components of a healthy aquatic ecosystem. The appropriate level, however, can vary based on the primary aquatic life use. As such, USEPA encourages the use of narrative WQS to allow states to develop assessment protocols for specific aquatic life uses based on applicable studies and available data. States can then expand these assessment protocols to other aquatic life uses as the state of knowledge evolves and additional studies and data become available and ultimately adopt appropriate numeric criteria. This exact approach was taken with the current Turbidity AP, and is why SWQB had already planned to review and potentially revise this AP for the 2016 listing cycle with additional studies and information developed in recent years. The severity of ill effects (SEV) approach, based on Newcombe (2003), was developed solely with data from studies on the effects of turbidity on “clear water fishes” (i.e., salmonids), primarily rainbow, brook, and lake trout. As such, it is inappropriate to apply a protocol based on Newcombe (2003) to coolwater or other aquatic life use stream segments. In addition, several coolwater fish species are not visual feeders, and actually may need some level of turbidity for protection from predatory visual feeders such as brown trout.

The coolwater aquatic life use was added to 20.6.4 NMAC during the 2009 triennial review (<http://www.nmenv.state.nm.us/OOTS/HearingOfficer/TR2009/>) “...to address waters that are dominated by aquatic life populations with physiological requirements different from those of either warm or coldwater aquatic life populations at various times throughout the year.” NMED provided testimony and exhibits regarding the proposed use, including examples of coolwater species found in New Mexico (see NMED Exhibit No. 4). These examples were based on thermal tolerances. Coolwater has been assigned to various water bodies in New Mexico based primarily on research into what is the attainable surface water temperature under natural conditions.

As noted, NMED considers brown trout to be a coldwater species. Brown trout were one of four salmonid species used to develop coldwater temperature criteria modifications during the 2009 triennial review (see NMED Exhibit No. 5). Brown trout are non-native, visual feeders. The presence of brown trout has been documented to decrease the survival and propagation of native species, for example, in the Valles Caldera in New Mexico. Fish exhibit behavioral thermoregulation, wherein individuals may seasonally migrate between cooler and warmer stream reaches (Wehrly 2007). As such, brown trout can migrate back and forth between adjacent waters assigned coolwater and coldwater. This reality is acknowledged in the coolwater definition in 20.6.4.7(C) NMAC, which states “...conditions may also be suitable to support a combination of warm, coldwater aquatic life in areas of transition from one aquatic life use to another.” The presence of non-native brown trout in some waters designated coolwater is not adequate justification to apply the Turbidity AP to coolwater stream reaches.

2. The proposed turbidity AP's SEV index value fails to protect normal feeding.

Section 2.0 of the proposed turbidity AP, states:

“An SEV index value of 3.5 was selected to develop thresholds for turbidity assessment in New Mexico. This value corresponds to the boundary between conditions that produce changes in feeding and those that reduce growth rate and habitat size.”

Feeding is a normal function and NMAC 20.6.4.13(J) specifies that turbidity shall not impair the normal growth, function, or reproduction of aquatic life. The ability to feed will influence the normal growth of aquatic organisms. The proposed turbidity AP, by its own admission, selects an SEV index value that is not protective of feeding and hence does not protect normal growth. The failure of the proposed AP to consider feeding a normal function, while making an artificial distinction between conditions that produce changes in feeding and those that reduce growth rate, is fatally flawed.

SWQB RESPONSE: *SWQB disagrees with this statement. Newcombe (2003) includes the following SEV scale:*

1-3: Slightly Impaired. Feeding and other behaviors begin to change.

4-8: Significantly Impaired. Marked increase in water cloudiness could (emphasis added) reduce fish growth rate, habitat size, or both.

SWQB's selection an SEV index value of 3.5 balances the potential for both type I and II error with respect to impairment listings, is conservative given the scale provided in Newcombe (2003), and addresses the goal of 20.6.4.13(J) NMAC. Aquatic organisms are adapted to episodic disruptions in feeding, especially in southwest streams that experience intense localized precipitation events.

3. The proposed turbidity AP leaves waters with multiple use designations unprotected.

Section 2.0 of the proposed turbidity AP also states, "...this assessment approach derived from the SEV index will not be applied to stream segments that list both a coldwater and a warmwater designated aquatic life use."

40 CFR 131.11(a)(1) addresses criteria for waters with multiple use designations:

"States must adopt those water quality criteria that protect the designated use. Such criteria must be based on sound scientific rationale and must contain sufficient parameters or constituents to protect the designated use. For waters with multiple use designations, the criteria shall support the most sensitive use."

Thus, the proposed turbidity AP leaves waters with multiple use designations unprotected in violation of the requirements found in 40 CFR 131.11(a)(1).

SWQB RESPONSE: *SWQB disagrees with this statement. As noted above, there is only one turbidity criterion and it applies to all waters in New Mexico. The turbidity criterion is not associated with any specific designated use(s) but is part of a set of general criteria adopted "to sustain and protect existing or attainable uses of surface waters of the state."*

The purpose of 40 CFR 131.11(a)(1) and complimentary 20.6.4.11 (F) NMAC is to address instances where there are different water quality criteria for two or more uses applicable to a particular water body. For example, surface waters in New Mexico with both wildlife habitat and livestock watering uses are assessed against the lower numeric water quality criterion of 0.77 µg/L total mercury vs. only the 10 µg/L livestock watering criterion. Specifically, 20.6.4.11 (F) NMAC states:

***"Multiple Uses:** When a surface water of the state has more than a single designated use, the applicable numeric [emphasis added] criteria shall be the most stringent of those established for such water."*

This requirement is reiterated in the footnote to Table 3.4 in the Main Assessment Protocol. SWQB has developed and utilized several narrative criteria assessment protocols that only apply to certain aquatic

life uses and/or hydrologic conditions because the data and information used to develop these protocols were only available and/or relevant for these conditions. USEPA has been supportive of and encourages this approach.

In contrast there is only one narrative criterion for turbidity for all waters, however, we are unable to assess for certain waters given our current technical understanding. This includes waters with dual warmwater and coldwater aquatic life uses, as applying a protocol based solely on protecting the coldwater use to these dual use waters is not appropriate. New Mexico has historically applied both warmwater and coldwater designated uses to protect transitional water bodies. This strategy does not address the unique characteristics of this group of waters, and is the primary reason the coolwater aquatic life use was proposed and adopted during the 2009 triennial review based on an interagency workgroup recommendation (see <http://www.nmenv.state.nm.us/OOTS/HearingOfficer/TR2009/>). The workgroup also recommendation that SWQB review all current marginal coldwater, marginal warmwater, and dual aquatic life use WQS segments to determine the most appropriate aquatic life use. SWQB's intends to complete this review and propose appropriate revisions to 20.6.4 NMAC.

In sum, the criteria for turbidity in the Standards are grouped with General Criteria (NMAC) which “are established to sustain and protect existing or attainable uses of surface waters of the state. These general criteria apply to all surface waters of the state at all times, unless a specified criteria is provided elsewhere in this part. Surface waters of the state shall be free of any water contaminant in such quantity and of such duration as may with reasonable probability injure human health, animal or plant life or property, or unreasonably interfere with public welfare or the use of property.”

The Standards clearly intend for turbidity protection to apply to all surface waters of the state, at all times, but the proposed turbidity AP deprives segments with a coolwater designated use from this protection, even though the previous version of the turbidity AP protected such segments. In addition, the 2013 turbidity AP effectively modifies the Standards to violate 40 CFR 131.11(a)(1), because it does not extend turbidity protection to the most sensitive use, coldwater aquatic life, in segments with both a warmwater and coldwater designated aquatic life use. The 2013 turbidity AP also modifies the provision for general criteria in the Standards since the AP does not extend turbidity protection to all surface waters of the state at all times.

To address the inconsistencies and concerns with the proposed turbidity AP and the draft 2014-2016 IR described above, we request the following:

1. Reduce the SEV index value in the proposed turbidity AP to a level that protects the normal functions (i.e. feeding) of aquatic life and re-assess the turbidity data for all assessment units with a designated aquatic life use of high quality coldwater, coldwater, marginal coldwater, and coolwater, using the reduced SEV index value for inclusion in the final 2014-2016 IR.
2. Adapt the proposed turbidity AP to include stream segments, lakes, and reservoirs with a designated use of coolwater aquatic life, and re-assess turbidity data from these waters with the revised SEV index values arrived at after complying with request 1 (above). If no long-term turbidity data is available for these stream segments, lakes, and reservoirs, we request they be designated as category 3B or 5C on the final version of the 2014-2016 IR.
3. Re-assess all water quality segments with both a warmwater and coldwater designated aquatic life for turbidity, following downward revision of the SEV index value to address protection of normal aquatic life function, as coldwater aquatic life segment in order to be compliant with 40 CFR 131.11(a)(1) and NMAC 20.6.4.13.

SWQB RESPONSE: *For the reasons noted above, the requested changes will not be made. As stated previously, SWQB will review any additional studies and revise/expand the turbidity AP as appropriate.*

Sincerely,

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COMMENT SET 5 – Linda Butler, Tijeras, NM

Received via email, July 15, 2014

Please accept my question / comment as follows:

Can you please improve the location description information for the stream segments and watersheds? Will you please add GPS coordinates and/or other specific locational description information, such as address, streets, name of town. Or simply just add a map or SAT photo ? Anything will be an improvement and be helpful and appreciated. Until this happens, it will continue to be a very difficult to sometimes impossible task of locating stream segments and sub watershed boundaries for specific geographic locations.

Thank you. Linda Butler, Biologist, Tijeras, NM

SWQB RESPONSE: *SWQB appreciates your comment and strives to find new and additional ways to relay spatial data. The Integrated List (Appendix A of the Integrated Report) is organized by USGS 8 Digit watersheds (HUCs), and includes a map of these watersheds in the beginning of the document. Individual assessment units are listed alphabetically within these watersheds in both the Integrated List and associated Record of Decision (ROD). In addition, SWQB's main web page also includes a link to "SWQB Mapper" (<http://gis.nmenv.state.nm.us/SWQB/>) on the left hand list of Topics. This publically-available GIS tool maintained by the NMED Information Technology Department contains several layers, including an Assessed Streams layer indicating the associated listing cycle, which can be toggled off and on to display a variety of spatial information related to surface water quality. If you need assistance navigating the GIS interface, we can provide specific assistance over the phone or via email.*

COMMENT SET 6 – San Juan Water Commission, Farmington, NM

July 29, 2014

Re: Comments of San Juan Water Commission on the Surface Water Quality Bureau's Draft 2014-2016 State of New Mexico Clean Water Act Sections 303(d)/305(b) Integrated Report and Integrated List of Assessed Surface Waters

Dear Ms. Guevara:

Thank you for publishing, and accepting public comment on, the Surface Water Quality Bureau's ("SWQB") Draft 2014-2016 State of New Mexico Clean Water Act Sections 303(d)/305(b) Integrated Report and Integrated List of Assessed Surface Waters (the "Draft 2014 List"). The San Juan Water Commission ("SJWC") appreciates the opportunity provided by the SWQB to remark on the Draft 2014 List, as follows.

Spreadsheet of New Impairment Listings

The Draft 2014 List contains a spreadsheet of new listings for water quality impairment. That spreadsheet lists the following assessed unit ("AU") for the San Juan Basin as "not supporting" the Marginal Cold Water Aquatic Life ("MCWAL") designated use:

HUC Name	AU Name	Impairment	IR Category	Status	Cycle First Listed
Middle San Juan	La Plata River (San Juan River to McDermott Arroyo)	Low Flow Alterations	5/5C	303(d) List (no TMDL in place)	2014

SJWC objects to this new impairment listing on the basis of the information provided by the SWQB in its "AU Comment" on page 290 of Appendix A, which states:

There were conflicting results between the 2002 dissolved oxygen sonde data (using percentage) and grab data. 2010 sonde equipment failure. Redeployment attempted fall of 2012, but channel was completely dry. Coolwater aquatic life use may be a more appropriate ALU based on available fisheries data. Application of the SWQB Hydrology Protocol (survey date 6/17/09) indicate this assessment unit should be perennial (Hydrology Protocol score of 28.3 but 14.2% no flow days at USGS gage 09367500).

Given the SWQB's statements that: (i) there is conflicting data, (ii) the Coolwater Aquatic Life use may be more appropriate, (iii) the channel was "completely dry" in the fall of 2012, and (iv) in 2009 there were 14.2% no flow days, this segment of the La Plata River should not be considered a perennial stream. The designated aquatic life uses of Marginal Cold Water Aquatic Life or Coolwater Aquatic Life are inappropriate for this segment. The Hydrology Protocol analysis is dated, and no stream segment with 14.2% no flow days should be considered a perennial stream. This segment of the La Plata River should be designated as an intermediate stream, in which case the appropriate designated aquatic life use would be Marginal Warm Water Aquatic Life. That use would be fully supported. SJWC therefore urges the SWQB to obtain additional data and revisit the perennial/intermediate stream designation

rather than list this segment of the La Plata River as impaired.

SWQB RESPONSE: *Thanks for your comment. As a result, Low Flow Alteration has been removed as a cause of impairment; this listing was made in error. While making this revision, it was noted that the Probable Sources in the 2005 sedimentation and 2010 E. coli TMDLs for the lower La Plata River were inadvertently missing from the draft 2014 Integrated List. They included the following and have been added back to the draft 2014 Integrated List: Animal Feeding Operations (NPS), Drought-related Impacts, Flow Alterations from Water Diversions, Loss of Riparian Habitat, On-site Treatment Systems (Septic), Rangeland Grazing, and Streambank Modifications/Destabilization. In addition, your request regarding the perennial/intermittent stream designation has been provided to SWQB's Monitoring, Assessment and Standards Section for consideration. However, this does not establish a commitment or priority to reclassify this AU in accordance with 20.6.4.15 NMAC.*

New WWAL Impairment Listing for Gallegos Canyon

A comparison of Appendix A to the 2014 Draft List with Appendix A to the 2012-2014 final Integrated List shows that the SWQB has newly listed Gallegos Canyon (San Juan River to Navajo boundary) as “not supporting” the Warm Water Aquatic Life (“WWAL”) designated use because the stream segment does not meet the water quality criteria for selenium. It is unclear why the SWQB failed to identify this new impairment on its spreadsheet of new impairment listings, and SJWC requests that the SWQB continue to list Gallegos Canyon as “fully supporting” WWAL.

The SWQB added WWAL as a designated use for Gallegos Canyon in 2008 because, pursuant to EPA Region 6 instruction in 2008, WWAL was added as a presumed use to all waters falling under 20.6.4.99 NMAC. The SWQB then identified—and EPA approved—Gallegos Canyon as “fully supporting” WWAL on the 2008, 2010 and 2012 Integrated Lists. According to the draft Record of Decision for the 2014 Draft List at page 207, the SWQB now has decided to list Gallegos Canyon as “not supporting” WWAL based on “[a]ssessment of available Navajo Nation EPA 2008-2011 total selenium data [which] confirms the impairment (5/5 exceedences).” SJWC objects to the use of the old Navajo Nation EPA data that was available to the SWQB during the previous three listing cycles. Any new impairment listing for WWAL should be based on newly acquired and up-to-date water quality data. The SJWC recognizes that this is a segment of concern with respect to selenium loading, and the SJWC would not object to an impairment listing, so long as it is based on current data.

SWQB RESPONSE: *Selenium has been listed for wildlife habitat in Gallegos Canyon since the 2004 listing cycle. When WWAL was added as a designated use on the 2008 listing cycle, SWQB should have listed WWAL as impaired for selenium as well because the total recoverable selenium water quality criteria for wildlife habitat and chronic WWAL uses is the same (5.0 ug/L). As stated in the Preface (page iv) to the Integrated List, “The 2014 listing cycle generally includes data from May 1, 2008 – May 1, 2013.” Since SWQB did not collect any selenium data from Gallegos Canyon during this period, we utilized available Navajo EPA water quality data collected during this period to develop the 2014 Integrated List that met SWQB QA/QC criteria. Thus, the selenium listing for Gallegos Canyon is accurate and appropriate based on available data. The ROD entry was clarified to state:*

“Assessment of available Navajo Nation EPA 2008-2011 selenium data documents 5/5 exceedences of both the warm water chronic aquatic life and the wildlife habitat criteria of 5.0 ug/L. Therefore, selenium remains listed as a cause of impairment.”

Spreadsheet of De-Listed Impairments

The Draft 2014 List also contains a spreadsheet of de-listed impairments, which de-lists the following AU's in the San Juan Basin:

HUC Name	AU Name	De-Listed Impairment	Cycle First Listed	De-Listing Reason
Upper San Juan	San Juan River (Animas River to Cañon Largo)	Turbidity	2012	Applicable WQS attained; original basis for listing was incorrect
Animas	Animas River (Estes Arroyo to So. Ute Indian Tribe boundary)	Sedimentation/Siltation	2012	Applicable WQS attained; original basis for listing was incorrect
Animas	Animas River (San Juan River to Estes Arroyo)	Turbidity	2012	Applicable WQS attained; original basis for listing was incorrect
Animas	Lake Farmington (Beeline Reservoir)	Temperature	2012	Applicable WQS attained; original basis for listing was incorrect
Middle San Juan	La Plata River (San Juan River to McDermott Arroyo)	Turbidity	2012	Applicable WQS attained; original basis for listing was incorrect

The SJWC agrees with the de-listings referenced above for the reasons stated by the SWQB in the Draft 2014 List.

Response to Anticipated Comments by Others

The San Juan Watershed Group (“SJWG”) is considering requesting the SWQB to list the San Juan River from Farmington to Cañon Largo for E. coli based on limited E. coli data. The primary reason for the SJWG’s anticipated request is the fact that the New Mexico Environment Department does not grant Section 319 funds for stream segments that are not on the current §303(d) list, and the SJWG wants to have a greater opportunity to pursue a planning grant for the San Juan River in the future.

The SJWC objects to the listing of the San Juan River from Farmington to Cañon Largo for E. coli based on any such request from the SJWG because the request would be premature, and any listing should not be based on limited water quality sampling data. Further, it would be misguided to list a stream segment based on a desire to pursue Section 319 grant funds. Section 319 grant funds previously were awarded for projects in the San Juan Basin between 2009 and 2013. Moreover, between August 26, 2005 and September 30, 2013, nine EPA-approved Total Maximum Daily Load (“TMDL”) documents were written for stream segments in the San Juan Basin. Several of those TMDLs include E. coli, and there is a fecal coliform TMDL with E. coli loads already in place for the San Juan River (Animas River to Cañon Largo). Because there are TMDLs already in place, there is no

reason why on-going restoration efforts related to bacteria cannot proceed for the segment of interest to the SJWG.

In addition, language in the 2014 Draft List, on page 13, states the following regarding the Non-Point Source Management Program:

The NPS Management Program emphasizes watershed-based planning, as described in USEPA's *Nonpoint Source Program and Grants Guidelines for States and Territories* (USEPA, 2013). Such planning is a tool that NMED encourages to be used by any watershed restoration program whose intent is to benefit water quality. NMED underscored its encouragement by making watershed-based planning a requirement for significant restoration activities to be funded with CWA Section 319(h) funds. *The focus of planning and implementation is on impaired waters with approved TMDLs, and on a limited group of impaired waters for which TMDL development is not required because the impairment is thought to be caused by insufficient flow (i.e., Category 4C streams).*

(Emphasis added.) Therefore, the plethora of EPA-approved TMDLs for the San Juan Basin should provide sound rationale for the SJWG to receive consideration for Section 319 grant funding. There is no need for an E. coli listing.

SWQB RESPONSE: *Please be aware that there is no E. coli impairment listing proposed for this assessment unit in the draft 2014 Integrated List. See COMMENT SET 1 for additional information.*

Thank you for your consideration of these comments. If you have any questions about the SJWC's position, or if you would like to discuss these issues in more detail, please do not hesitate to call me. We look forward to receiving your response to these comments.

Sincerely,

L. Randy Kirkpatrick
Executive Director
San Juan Water Commission

COMMENT SET 7 – Amigos Bravos, Taos, NM

P.O. Box 238, Taos, NM 87571
Telephone: 575.758.3474
Fax: 575.758.7345

July 29, 2014

RE: Draft 2010-2012 303(d)/305(b) Integrated List

Dear Ms. Guevara,

Amigos Bravos is a statewide water conservation organization guided by social justice principles. Our mission is to protect and restore the rivers of New Mexico. Amigos Bravos works locally, statewide, and nationally to ensure that the waters of New Mexico are protected by the best policy and regulations possible. In this capacity Amigos Bravos works to make sure that New Mexico's water quality standards are protective enough to support the diverse human and non-human uses of our state's water resources. The 303(d)/305(b) list is a critical component of our work to protect clean water and the communities that depend upon clean water here in New Mexico. We would like to communicate the following comments regarding the draft 2014-2016 integrated list.

1. IR Designation for Sandia Canyon

Amigos Bravos opposes the proposal to change the IR designation for copper impairment in Sandia Canyon on LANL property (segment that flows from NPDES outfall 001 to Sigma Canyon, AU NM-9000.A_047) from IR category 5 to IR category 4b. This change in designation will remove the requirement to develop a TMDL for this assessment unit. In addition, this change assumes that existing pollution control requirements and regulatory mechanisms planned or in place, are monitored, and are reasonably expected to result in attainment of the applicable water quality criterion in the near future. This is not the case. The March 5, 2014 "Justification for an Integrated Reporting Category 4b Demonstration – Upper Sandia Canyon Assessment Unit – AU NM-9-.A_47 – Dissolved Copper Pollutant Pair" (hereinafter "Justification"), prepared by LANL, does not adequately show that there is sufficient monitoring or controls in place to ever achieve the applicable water quality criterion, let alone achieve the applicable water quality criterion in the near future.

SWQB RESPONSE: *The proposed Category 4b demonstration for dissolved copper in upper Sandia Canyon and associated "DOE/LANS Response (Enclosure 1)" to USEPA Region 6 and SWQB comments on the preliminary draft can be accessed at: <http://www.nmenv.state.nm.us/swqb/303d-305b/2014-2016/LANL/index.html>.*

SWQB and USEPA Region 6, via preliminary review, find that the proposed IR Category 4b Demonstration and associated DOE/LANS Response meet the necessary requirements to justify listing under IR category 4b (see USEPA Region 6 memorandum dated June 16, 2014, provided as ATTACHMENT A), including the required components detailed in Appendix H of the SWQB Assessment Protocols. This protocol is based on USEPA guidance as referenced in the document. The existence of an IR Category 4b demonstration, or an USEPA-approved TMDL for that matter, does not guarantee the stated water quality goals will be met. Implementation of the non-point source portion of both IR Category 4b demonstrations as well as TMDLs continues to rely on voluntary practices.

1.1 Lack of Adequate Monitoring

Contrary to the impression that the Justification makes, there is likely to be little to no copper monitoring requirements in any of the three National Pollution Discharge Elimination System (NPDES) permits in the Assessment Area (AU) drainage area. Copper is no longer monitored under the Multi Sector General Permit (MSGP) (Justification at 5). The current and the proposed draft renewal of the EPA Industrial Point Source Permit (IPSP) does not require copper monitoring, (Justification at 2). While the Section 401 certification for the IPSP prepared by the state does require some copper monitoring, the final permit has not been issued and it is unclear if these requirements will be part of the final permit. The Justification states that copper is monitored at all 13 Stormwater Individual Permit NM0030759 (IP) sites that are in the AU drainage area (Justification at 5). Yet in LANL's recent IP renewal application, they are requesting to remove copper monitoring from all but one (S.SMA-.25) of those 13 sites.¹ In summary, there is very little copper monitoring required under the three NPDES permits in the AU drainage area.

SWQB RESPONSE: *The DOE/LANS Response document provides additional detail on the monitoring locations and how they are determined / required with respect to the permits mentioned. As noted, the IPSP and IP permit renewals are currently in draft form, and will be thoroughly reviewed and discussed USEPA, LANL, stakeholders, and SWQB. Speculation of the contents or requirements in these final permits is not appropriate in this Response to Comments document. As stated on page 25 of the draft IR Category 4b demonstration and page 14 of the DOE/LANS Response, effectiveness of the 4b demonstration will be primarily tracked through continued monitoring at watershed-based stations E121, E123 and SCS-2. Additional monitoring that will provide insight into the success of current and planned point-source and non-point source controls are detailed on page 26. All these data will be available on, and can be publically accessed through, Intellus New Mexico.*

1.2 Lack of Adequate Controls

The Justification does not demonstrate that there are adequate controls in place to meet water quality criterion in the near future. In fact, the Justification makes a very good case for why there are *not* adequate controls in place to control the sources of copper causing the impairment in Sandia Canyon. LANL identifies only two controls that they claim will result in the attainment of the copper water quality criterion: 1. Continued application of NPDES permits and regulatory controls already in place; and 2. Completion of the Sandia grade-control structure (Wetland Stabilization Project) (Justification at 17).

SWQB RESPONSE: *A successful IR Category 4b demonstration must document that there are adequate controls in place to meet water quality goals. SWQB and USEPA through their respective preliminary reviews believe that completion and maintenance of the Wetland Stabilization Project, continued application of the existing and renewed NPDES permits and controls, and the existing and future storm water management and controls from both developed laboratory and urban townsite areas in the upper watershed are expected to lead to attainment of the dissolved copper water quality criterion in Sandia Canyon in the near future. As stated in section 2.3.2 "Non – Point Source Controls" in the IR Category 4b demonstration, the highest concentrations of copper in the AU are in the depositional wetlands reach. Stabilizing and expanding this wetland area reduces sediment and associated contaminant transport into the lower canyon. Page 22 of the IR Category 4b demonstration, as well as pages 14 and 16 of the DOE/LANS Response, note that a Storm Water Management Plan is under development. Continued monitoring will be able to determine the success of these efforts. Any and all IR Category 4b demonstrations are reviewed every listing cycle. If there is not an indication of improved water quality for the constituent of concern, the IR listing may be reverted to IR Category 5.*

¹ See LANL IP renewal application <http://permalink.lanl.gov/object/tr?what=info:lanl-repo/eprr/ERID-254864>, page 227, (appendix B of redline).

In addition, SWQB requested additional information from LANL regarding the referenced upcoming Storm Water Management Plan in response to your comment. The below information was provided:

“In FY-14 LANL initiated the review of Laboratory environmental policies, DOE orders, Engineering standards and environmental permits and evaluated the need for a Storm Water Management Plan for Technical Area 3 (TA-03). TA-03 is highly developed area at LANL and located in the headwaters to the AU. For FY-15 LANL will request funding for the development of a pilot TA-03 Storm Water Management Plan. If funded, the plan will be fashioned to provide an integrated approach to storm water management and include the following objectives:

- Maintain compliance with current and future storm water regulations.*
- Create a storm water planning process involving multiple organizations and integrate into comprehensive planning process.*
- Identify and implement storm water management practices that facilitate compliance and address nonpoint source contaminant transport and increases in storm water discharge, channel erosion and sediment transport.*
- Identify storm water runoff locations.*
- Identify potential pollutant sources affecting water quality.*
- Identification of appropriate Best Management Practices and control measures for both current and future sites and activities.*
- Increased controls to manage storm water runoff from urban and developed areas on Laboratory property.”*

1.2.1 Current NPDES Permits Are Not an Adequate Control of Copper Exceedances

The Justification very clearly outlines how the current NPDES regulatory structure in the AU drainage area is doing little to control copper discharges.

IPSP - EPA found no reasonable potential to exceed copper criteria under the analysis done when preparing the IPSP (Justification at 2) which indicates that that the outfalls under the IPSP have not been discharging copper at levels of concern, and therefore it is unlikely that discharges under the IPSP are a source of the impairment. While it is encouraging to see NMED imposing effluent and monitoring requirements for copper in their 401 certification of the IPSP (Justification at 3), the result of these controls will be to ensure that if something changes at the facilities covered under the permit, increased levels of copper won't be discharged at the outfalls. Therefore, the ISPS and associated 401 cert conditions do little to address the current levels of copper that are reaching Sandia Canyon, since there is no reasonable potential that current discharges under the IPSP are contributing to the water quality criterion exceedances.

MSGP - Monitoring conducted under the MSGP has shown that discharges from MSGP covered facilities have been below MSGP sector specific copper benchmarks or LANL specific background values and therefore monitoring for copper under the MSGP has been stopped (Justification at 5). Therefore, according to LANL data, facilities under the MSGP are not contributing to the ongoing impairment in Sandia Canyon.

IP - LANL is claiming that copper is not coming from the 13 Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) in the technical areas in the AU drainage area which is why they are

proposing to remove copper monitoring requirements from all but one of the 13 sites under the new IP.²

In conclusion, it is clear that according to LANL, the point sources covered under these three NPDES permits are not sources of copper and are not discharging copper; therefore controls under these permits will do little to help to attain the copper water quality criterion and are not an appropriate control to be identified under the 4b demonstration.

SWQB RESPONSE: See above responses. The IR Category 4b demonstration contains sections on both point source and non-point source permits and controls in effect and planned. The monitoring and investigations that have been completed under the existing NPDES permits have contributed to the recognition that there are significant non-point sources of dissolved copper from the Los Alamos County townsite as well as developed landscapes within LANL. The IR Category 4b demonstration and associated DOE/LANS Response clearly acknowledge that "...development and execution of an urban storm water management plan for the Laboratory is a key to addressing non-point source contamination and eventual attainment of water quality standards in the long-term."

1.2.2 – The Sandia Grade Control Structure Is Not An Appropriate Control

While Amigos Bravos applauds LANL's efforts, which were mandated under the 2005 NMED Consent Order for LANL, to stabilize the foot of the Sandia Wetlands, this action is not in itself an appropriate control under the Clean Water Act (CWA) to address the existing copper impairment. The goals and mandates of the Clean Water Act are to control pollution at their source prior to discharging to waters of the US. The Sandia Wetlands and the perennial stream that flows through the wetlands, both of which are waters of the US, have for too long been used as the control mechanism for upstream discharges, and as a result they are now contaminated with multiple contaminants, including copper. Instead of using a water of the US as a treatment system, pollution must be stopped *before* it reaches the stream and adjacent wetlands.

SWQB RESPONSE: SWQB agrees and acknowledges that the ultimate goal is to control pollution at its source, and that an integrated, adaptive storm water management plan is the key to achieving this goal in the Sandia watershed. In the interim, the Wetlands Stabilization Project is an important part of the strategy to reduce transport of contaminated sediments down canyon. Dissolved copper in storm water runoff is primarily bound with organic matter. The organic matter in the wetland provides a reducing environment that promotes the formation of more stable forms of copper-organic complexes. The stabilization project is expected to expand the wetland area as well as slow and manage the downstream physical migration of both dissolved and total copper.

1.2.3 - There Are Not Adequate Controls in Place for Urban Stormwater Discharges

Unfortunately controls to address this urban stormwater discharges are not included in the two controls outlined by LANL (Justification at 17), which is ironic since this is the only source that LANL presents as conclusively contributing copper to the receiving waterbody (Justification at 9 and 17). In addition, LANL has identified urban sources as contributing to Target Action Level (TAL) exceedances in all of their alternative compliance requests under the IP.³ It is clear that LANL does not believe urban stormwater discharges are covered under the current regulatory system. For example, LANL has repeatedly said in their alternative compliance requests to the Environmental Protection Agency (EPA) under the IP, that

² See LANL IP renewal application <http://permalink.lanl.gov/object/tr?what=info:lanl-repo/eprr/ERID-254864>, page 215, (appendix A of redline).

³ *Id.* and Justification at 10.

the IP covers discharges from SWMUS and AOCS, but not from urban sources.⁴

It is true that LANL is installing a couple of small LID projects in TA-3 (Justification at 23). These are primarily focused on addressing discharges from SWMUs, which happen to have the added benefit of addressing a very small amount of impervious surface discharge located near the SWMU. As mentioned above, LANL has argued the SWMUs and AOCS in Technical Area 3 (TA-3) are not a source of copper and, therefore, controls put in place to control discharges from these SWMUs are not going to be effective at reducing copper exceedances in the receiving waterbody. While there may also be some redevelopment/development projects being planned (details about these projects are lacking in the 4b justification), as far as CCW is aware, these projects are not tied to specific efforts or targets to reduce urban runoff. The riprap and detention ponds (Justification at 23) have been in place for some time and yet the impairment still exists. These token projects are not nearly enough to address the substantial pollution being generated by urban runoff. Further, these projects certainly do not qualify as “existing pollution control requirements and regulatory mechanisms planned or in place that are reasonably expected to result in attainment of the applicable water quality criterion in the near future”.

Nowhere does LANL quantify the type or quantity of the Low Impact Design/Green Infrastructure (LID/GI) stormwater projects being implemented or planned. Amigos Bravos asks: What is the percentage of impervious surface in the AU drainage area that will be treated with these projects? Is there monitoring in place to determine if these practices are effective? Is LANL using the data from their background reports to identify urban runoff hot spots and plan treatments accordingly? We request NMED require LANL to answer these questions.

SWQB RESPONSE: *These questions/concerns should be addressed in the forthcoming Storm Water Management plan that LANL ensures is currently under development and that the plan will include effectiveness monitoring. SWQB and USEPA anticipate that this plan will contain information on the questions you pose. Data from their background/urban development report has been used to determine urban / LANL developed area runoff hot spots, and will be used to plan treatments accordingly.*

There is a very real and substantial urban storm water problem in Los Alamos County. This proposal to downgrade the IR category appears to be dismissing this problem with claims that the limited ongoing actions being taken by LANL and Los Alamos County are addressing the urban storm water problem. This is simply not the case. If this situation is being addressed through ongoing programs and actions, we question why LANL is still claiming as recent as April 2014 that urban storm water discharges are a major problem and are the source of TAL exceedances.⁵

On June 30th, 2014 Amigos Bravos, submitted a petition to EPA documenting the substantial urban storm water problem and requesting that storm water discharges from urban areas in Los Alamos be covered under a NPDES permit. A more appropriate mechanism for controlling urban stormwater pollution at LANL, which is a much wider problem than just one copper impairment in one AU, would be for EPA to issue a NPDES stormwater permit to control urban/impervious surface discharges. This petition and supporting documentation has been attached to these comments (*SWQB has included these under ATTACHMENT B*).

⁴ LANL alternative compliance requests for S-SMA-25, S-SMA-2, and M-SMA-7.9 under the Individual Stormwater Permit: <http://www.lanl.gov/community-environment/environmental-stewardship/protection/compliance/individual-permit-stormwater/alternative-compliance.php>

⁵ LANL Alternative Compliance Request to EPA for M-SMA-7.9, April 2014. <http://www.lanl.gov/community-environment/environmental-stewardship/protection/compliance/individual-permit-stormwater/alternative-compliance.php>

SWQB RESPONSE: *The draft IR Category 4b demonstration for dissolved copper in upper Sandia Canyon does not dismiss or ignore the problem of runoff from both urban and developed LANL impervious surfaces. In fact, we believe that the development of this IR Category 4b demonstration served to bring together various programs and staff to create a comprehensive summary of current, planned, and needed control mechanisms, as well as clear acknowledgement of non-point source contributions to the dissolved copper impairment in a way that is equally, if not more effective, than developing a TMDL for this impairment. As stated, documentation of continued progress towards attainment of the dissolved copper water quality criterion through monitoring is a required element of a successful IR Category 4b demonstration, and required in order to continue listing an impairment under IR Category 4b vs. Category 5.*

2. Delisting of Drainages on the Pajarito Plateau

Amigos Bravos has several concerns with the proposal to delist copper impairments from DP Canyon (LA Canyon to LANL Boundary); LA Canyon (NM4 to DP Canyon); Pueblo Canyon (Los Alamos Canyon to Los Alamos WWTP); Pajarito Canyon (upper LANL boundary to headwaters); Pajarito Canyon (within LANL boundary below Arroyo de la Delfe); Canon de Valle (LANL Gauge E256 to Burning Ground Spring); Sandia Canyon (Within LANL below Sigma Canyon); Ten Site Canyon (Mortandad Canyon to headwaters); and Three Mile Canyon (Pajarito Canyon to headwaters). We are also concerned with the proposal to delist Gross Alpha Radiation impairments from Guaje Canyon (San Ildefonso bnd to headwaters) Pajarito Canon (Arroyo de la Delfe to Starmers Spring) and Pajarito Canyon (within LANL below Arroyo de la Delfe). In addition we are concerned with the proposal to delist zinc impairments from Acid Canyon (Pueblo Canyon to headwaters); Pueblo Canyon (Los Alamos Canyon to Los Alamos WWTP); Los Alamos Canyon (NM-4 to DP Canyon); and Ten Site Canyon (Mortandad Canyon to headwaters). As well as the proposal to remove Mercury impairments from Acid Canyon (Pueblo Canyon to headwaters); LA Canyon (NM4 to DP Canyon); and Arroyo de la Delfe (Pajarito Canyon to headwaters). And the proposal to remove the Arsenic and Silver impairments from Ten Site Canyon (Mortandad Canyon to the headwaters).

Amigos Bravos has many questions about the assessment process that led to the delisting of so many parameters from the waters of the Pajarito Plateau. How many samples were used to make these determinations? Did the assessment determinations that were made based on the 2006-2007 study utilize concurrent hardness data. If not, did the 2006-2007 data get discarded in the current assessment because of this lack of hardness data? How variable was the hardness data in the data sets analyzed? Would it be possible to utilize an average hardness number? Can Amigos Bravos' experts review the data that was used to make these delisting determinations?

SWQB RESPONSE: *All data used to determine the draft 2014 Pajarito Plateau listings were available during the 60-day public comment period and will remain available via a specifically-created website (<http://www.nmenv.state.nm.us/swqb/303d-305b/2014-2016/Pajarito/index.html>), which was indicated on the main Public Comment Draft 2014-2016 Integrated Report and List web site (<http://www.nmenv.state.nm.us/swqb/303d-305b/2014-2016/index.html>). In addition, the "Assessment Notes" posted to this Pajarito Plateau Assessment webpage explain how the assessment data sets were collated, reviewed for QA/QC, and finalized. As stated in this document, "[t]o assess hardness-dependent metals, concurrent hardness data calculated from dissolved calcium and magnesium were used. When these concurrent data were not available, the associated metals data were not assessed." SWQB believes this approach is appropriate for the draft 2014 assessments as hardness values varied with stream flow, depending the sample location along the annual or storm hydrograph, intensity of storm event, watershed, etc. For example, the dissolved copper data set had a hardness range of 6.6 to 400, median 41.5, mean 60.6, and standard deviation 60.3 as mg CaCO3/L.*

Since the data that was used to make these assessment determinations came from LANL's database, LANL should be added to list of entities that provided data on page i.

SWQB RESPONSE: *The Preface to the Integrated List (page i) contains a list of outside data that were submitted. SWQB pulled publically-available data from Intellus; these data were not submitted. Section III of the Preface entitled "Pajarito Plateau Assessment Notes" is a duplicate to the above-mentioned "Assessment Notes" and clearly indicates that data from Intellus New Mexico were downloaded and assessed. An acknowledgement of Intellus New Mexico as a publically-available source of both LANL and NMED DOE Oversight Bureau data has been added to section C.2 of the Integrated Report.*

Red River – Aluminum

Amigos Bravos is concerned about the lack of Aluminum impairment on the Red River. As mentioned previously during the last listing cycle and in our comments on the triennial review, Amigos Bravos does not believe that the Aluminum criteria is protective of existing uses, and that with a protective Aluminum standard, the Red River, among other waterbodies in New Mexico, would be listed as impaired for not meeting the high quality cold water use.

The history of the change in the Aluminum standard during the last triennial review is very problematic. As EPA points out in their 4/12/11 Record of Decision (ROD) on the 2010 triennial review of New Mexico's surface water quality standards, the new standard that was adopted by the Commission was based on a technical report developed by a consulting firm (GEI) at the request of Chevron Mining Inc. (CMI). This is the very company that stands most to gain from a delisting of the stream. EPA pointed out inaccuracies in the GEI report and a concern that pH was not factored into the standard calculation at an appropriate level. Thus EPA concludes in the ROD that:

"Based on our review of the revised GEI technical report, EPA has a number of concerns. EPA believes that pH is important in determining the mechanism of toxicity of aluminum. While increased toxicity at low pH is common for all metals, pH appears to be particularly important with aluminum due to the drastic change in solubility at low pH, increasing the bioavailable fraction of the metal. Although the GEI report acknowledges this, noting that the mechanism responsible for toxicity will probably be dependent on pH and calcium concentration of a given solution, the affect of pH was given limited consideration... Given that the parameters for aluminum were based on toxicity tests conducted within a neutral pH range, EPA has concerns with the appropriateness of the resulting criteria and believes that additional review of the GEI document is warranted."⁶

While the hardness based Aluminum standard has now been approved by EPA, with a pH range limitation, Amigos Bravos still has numerous concerns with the standard. Here is an excerpt from our comments on NMED's public discussion draft for the 2013 Triennial Review Process which is now underway:

The current hardness-based criteria for aluminum pH 6.5 to 9.0, previously approved by NM WQCC and EPA, Region 6, is not protective of aquatic life and should be replaced with the USEPA recommended dissolved Aluminum criteria of 87 ug/l and 750ug/l that New Mexico had in place prior to 2010, until such time that there is sufficient scientific data to develop a hardness based criteria that is appropriate in western waters.

⁶ EPA's Record of Decision on New Mexico's Standards For Interstate and Intrastate Surface Waters 20.6.4 NMAC, April 12, 2011 (page 118).

- USEPA has not recommended a hardness-based standard for aluminum, at present. One should be developed when adequate studies exist to do so. There is a particular need to investigate the relationships of hardness-based effects of aluminum regarding chronic (long term) conditions and that of pH variance effects under those conditions.
- Montana, Wyoming, and Utah use the current national standard.
- The only states that have adopted hardness-based standards for aluminum (Colorado and New Mexico) did so at the request of mining companies who benefit from the standards, and these standards were based only on a study prepared for those same companies who stood to benefit.
- New Mexico approved the hardness-based standard for aluminum, without modification, as requested by Chevron Mining Inc. EPA, Region 6, while expressing serious reservations about the proposal, approved it with the exception relative to pH <6.5. There are several problems with the NM hardness based standard including:
 - There is no consideration of Al speciation with respect to pH.
 - The chronic standards derivation was simply the result of applying an acute-to-chronic ratio (ACR), as there was not sufficient data to develop a chronic standards derivation independently.
 - The U.S. Fish and Wildlife Service is required to review the proposal, but Amigos Bravos is not aware that such an analysis has been done.
- Colorado approved a similar proposal (No consideration of pH dependent speciation, and a total recovery analysis for Al concentration.) that was requested by the Colorado Mining Association. However, that standard included the following crucial differences: Unlike the NM proposal, Colorado recognized that the standard formulation relative to chronic effects should be different than that for acute effects. The result is that all chronic concentration values allowed for Al at different hardness values is 1/3 that allowed in NM. Also, the pH region begins at 7.0 not 6.5.
- Oregon, at present, only has a narrative standard for aluminum. Oregon's previous standards for aluminum were disallowed by EPA, Region 10. The result has been that Oregon DEQ has declined to propose a new set of standards and EPA now has the task of developing new Al standards.
- The current hardness-based standard does not address important pH effects where the pH is >7.5, a condition prevalent in many New Mexico streams.
- Hardness protects against, but does not eliminate, lethality at low concentration dissolved Al. over long periods. According to one study a mortality of 50% would be projected at a little more than 3 mo.(109d): at 100 mg/l CaCO₃, 0.16mg/l dissolved Al, pH=8.6.7

SWQB RESPONSE: *Comments related to the aluminum water quality criteria are and will continue to be addressed through SWQB's Standards and Reporting Team. These comments are most appropriately addressed through on-going water quality standards revision processes.*

DDT, PCBs and Mercury in Fish Tissue

Amigos Bravos continues to be concerned that no TMDL schedule has been identified for the 30 plus waters impaired with at least one fish tissue contaminant (PCBs, DDT, or Mercury). Many of these waters are impaired for more than one fish tissue impairment. While Amigos Bravos understands that Department has limited resources, even more so now than in the past, we question if perhaps these waters should be prioritized for TMDL development since these impairments are directly related human

⁷ Gunderson, et.al.1994. pH, Hardness, and Humic Acid Influence Aluminum Toxicity to Rainbow Trout (*Oncorhynchus mykiss*) in Weakly Alkaline Waters. Can. J. Fish. Aquat. Sci. 51: 1345-1355

health impacts. The Department develop TMDL schedules for these waters so that these impairments can begin to be addressed.

Amigos Bravos thinks it would be helpful and informative to the public if a separate section of the list could be prepared that lists all of the waters that are listed for fish consumption advisories. Amigos Bravos often gets questions from the public about what waters are safe for fishing and what waters have suggested limits for consumption. It is confusing and time consuming for the public to have to go and look up every potential water in which they may go fishing. Having this information all in one place would be very beneficial for public health and safety.

SWQB RESPONSE: *SWQB maintains a Fish Consumption website (<http://www.nmenv.state.nm.us/swqb/advisories/>) that contains the most recent fish consumption advisories. Fish Consumption advisories and updates are the result of coordinated efforts between NM Game and Fish, NM Department of Health, and SWQB. Development of fish tissue TMDLs typically requires significant data on the concentrations of the parameter of concern in associated sediments as well as concurrent fish tissue and water column concentrations. Due to limited resources that do not allow SWQB to design and implement these types of studies, we have instead focused current TMDL development efforts on water column impairments.*

IR Category 3 Waters Adjacent to LANL

Amigos Bravos also has concerns about the number of waters that are given an IR category of 3 (no monitoring has been conducted to date). We are especially concerned about the eight waters⁸ that are potentially impacted by Los Alamos National Laboratory (LANL) activities. The AU comment box for these waters says that the Department does not plan on assessing these water again for the next 10 years. These waters could have substantial water quality problems and they should be sampled as soon as possible. Amigos Bravos understands that other waters already sampled in the Pajarito Study are not going to be sampled again in the next 10 years because extensive monitoring was already done on them. These eight waters, for which no data was collected, should not suffer because nearby waters were part of a past study.

SWQB RESPONSE: *SWQB appreciates your concern regarding Category 3 waters. Monitoring these waters would require development and implementation of a stormwater monitoring network within our state-wide Monitoring and Assessment program. Establishment of a stormwater monitoring program is noted as one of seven future monitoring objectives in Section 2.8 of SWQB's 10-Year Monitoring Strategy (available at: <http://www.nmenv.state.nm.us/swqb/MAS/monitoring/10-YearMonitoringPlan.pdf>). Several of the eight mentioned waters have upstream surface water quality management mechanisms and strategies planned or in place that should improve water quality in downstream assessment units as well, and which would be reflected in future Integrated Lists.*

8

NM-97.A_007	Bayo Canyon (San Ildefonso bnd to headwaters)
NM-9000.A_053	Cañada del Buey (San Ildefonso Pueblo to LANL bnd)
NM-128.A_02	Cañon de Valle (within LANL above Burning Ground Spr)
NM-128.A_04	Fence Canyon (above Potrillo Canyon)
NM-128.A_05	Indio Canyon (above Water Canyon)
NM-9000.A_000	Los Alamos Canyon (San Ildefonso bnd to NM-4)
NM-9000.A_044	Water Canyon (Rio Grande to lower LANL bnd)
NM-128.A_12	Water Canyon (within LANL above NM 501)

Format

Thank you again for taking the time to provide the excel spreadsheets with the delisting and new impairments. This was extremely helpful in our review of the draft list.

Thank you for the opportunity to provide comment on the draft list. We look forward to further discussion about the concerns that we have raised in our comments. Please do not hesitate to contact me at 575-758-3874 or rconn@amigosbravos.org if further clarification or discussion on the above comments is merited or needed.

Sincerely,

Rachel Conn
Projects Director
Amigos Bravos

COMMENT SET 8 – Communities for Clean Water, NM



Communities For Clean Water

July 29, 2014

RE: Draft 2010-2012 303(d)/305(b) Integrated List

Dear Ms. Guevara:

Thank you for the opportunity to submit comments on the draft 2014-2016 303d/305b Report. Communities for Clean Water is a network of organizations whose mission is to ensure that community waters impacted by Los Alamos National Laboratory (LANL) are kept safe for drinking, agriculture, sacred ceremonies, and a sustainable future. Our growing network includes Concerned Citizens for Nuclear Safety (CCNS), Amigos Bravos, Honor Our Pueblo Existence (HOPE), the New Mexico Acequia Association, Partnership for Earth Spirituality, and Tewa Women United. CCW brings together the vast expertise and commitment of widely respected and well-tested advocacy groups from culturally diverse backgrounds. Collectively CCW represents the only community-based coalition in Northern New Mexico that has been monitoring and advocating for better public water policy to address the toxic threats from LANL. Our comments have been provided below, broken out into several issue areas.

1. Acknowledging our government's occupation and pollution of sacred places.

CCW calls on all regulatory agencies when making regulatory decisions that impact water, land or air on the Pajarito Plateau, where LANL is located, to acknowledge that these resources are part of the sacred ancestral homeland of the Pueblo Peoples. NMED, when making impairment recommendations and setting monitoring priorities, must take into consideration the importance of these sacred places. We cite the following Declarations of Indigenous Women that acknowledge the U.S. occupation and pollution of sacred places on the Pajarito Plateau. The Declarations state the threats and harms from dangerous industries, such as is the LANL nuclear, chemical and biological weapons complex. Recommendations are made to achieve "safe, healthy, and joyful lives for our families and communities" and to restore justice, health and well-being to Indigenous communities.

A. Las Mujeres Hablan: The Women Speak - Women's Declaration for New Mexico 2010

"9. Be it further resolved that we will support the work of Las Mujeres Hablan. (New Mexico Acequia Association (NMAA); Honor Our Pueblo Existence (HOPE), Tewa Women United (TWU); Concerned Citizens for Nuclear Safety (CCNS); Embudo Valley Environmental Monitoring Group (EVEMG); New Mexico Conference of Churches (NMCC); Community Service Organization (CSO) Del Norte

"Mission: To address past, present and future issues arising from the nuclear industry's releases of toxic chemicals and radioactive materials that cause contamination to our land, air, and water; demand clean-up of these sites; question the continued manufacturing of nuclear weapons; and restore justice to the Peoples who have been impacted by this industry. And, address other activities that violate and cause harm to our environment and well-being within the Sacred Mountains of New Mexico and other places in the world,"

B. *Indigenous Women and Environmental Violence*, A Rights-based approach addressing impacts of Environmental Contamination on Indigenous Women, Girls and Future Generations. Submitted to the United Nations Permanent Forum on Indigenous Issues Expert Group Meeting *Combating Violence Against Indigenous Women and Girls*, January 18 – 20, 2012, United Nations Headquarters, New York, by Andrea Carmen, International Indian Treaty Council and Indigenous Women's Environmental and Reproductive Health Initiative, and Viola Waghiyi, Native Village of Savoonga, St. Lawrence Island, Alaska and Alaska Community Action on Toxics – Theme 2: *Contextualizing Violence*.

"From a traditional perspective, the health of our Peoples cannot be separated from the health of our environment, the practice of our spirituality and the expression of our inherent right to self-determination, upon which the mental, physical and social health of our communities is based."

--- IITC Oral Intervention presented by Faith Gemmill, Gwich'in Nation Alaska United Nations Working Group on Indigenous Populations, Geneva July 31, 1996

C. *Report of the International Indigenous Women's Environmental and Reproductive Health Symposium*, April 27 – 29, 2012, Chickaloon Native Village, Alaska. Co-hosted by the International Indian Treaty Council (IITC) and Indigenous Women's Initiative for Environmental and Reproductive Health, Alaska Community Action on Toxics (ACAT), Chickaloon Native Village and International Indigenous Women's Forum (FIMI). Submitted to the Eleventh Session of the United Nations Permanent Forum on Indigenous Issues as a Conference Room Paper by the International Indian Treaty Council, Indigenous Non-governmental Organization in General Consultative Status to the United Nations Economic and Social Council. May 5, 2012. Kathy WanPovi Sanchez, of Tewa Women United, and Marian Naranjo, of Honor Our Pueblo Existence, participated in the Symposium and signed the Report.

"Based on these shared understandings, we adopt by consensus this 2nd DECLARATION for the Health, Survival and Defense of OUR LANDS, OUR RIGHTS and our FUTURE GENERATIONS and make the following recommendations:

"That Indigenous Peoples, Nations and Communities:

"1) Identify and document the disproportionate impacts of environmental toxins on Indigenous women and children as "environmental violence" for which States and corporations can be held accountable.

"2) Provide community capacity-building and training linking reproductive and environmental health and human rights.

"3) Maintain, support, strengthen and assert traditional systems of law, community organization, decision-making, leadership and representation."

D. *Sovereignty: Long Live Mother Earth – Women's Declaration 2012: Year of Indigenous Women*, by Las Mujeres Hablan: The Women Speak, which include Honor Our Pueblo Existence, Tewa Women United, and Concerned Citizens for Nuclear Safety.

"29. Be it further resolved that we will work in solidarity with each other in our struggles to defend the air, land, and water from contamination, exploitation, and militarization,

"30. Be it further resolved that we honor, respect, and recognize the dignity of women and their families throughout the world and here at home who are subjected to exposure to toxins through their work, their food, or their proximity to pollution and that we resolve to speak and act in solidarity with them in

efforts to defend the health of their families and communities,

“31. Be it further resolved that we will continue to play an important role in reshaping our communities to achieve a vision of safe, healthy, and joyful lives for our families and communities with good, healthy and locally grown food, good livelihoods that honor the dignity of every human person, and a meaningful and spiritual relationship with Mother Earth.”

E. *References to Indigenous Women in the ALTA Outcome Document*, Compiled and submitted to the World Conference of Indigenous Women, October 28 -30, 2013, Lima, Peru, by Andrea Carmen (North America Region) and Mililani Trask (Pacific Region).

“*Recommend* that States uphold and respect the right of self-determination and the free, prior and informed consent of Indigenous Peoples who do not want mining and other forms of resource extraction, “development” and technologies deemed as degrading to their human, cultural, reproductive and ecosystem health. Where mining and other forms of resource extraction are already occurring, States shall develop mechanisms with the full and effective participation of Indigenous Peoples to develop a comprehensive strategy for ecologically sustainable and equitable development to end and prevent uncontrolled and unsustainable industrial contamination and degradation with plans for clean-up, remediation and restoration. Such as strategy shall incorporate strengthening the capacity of Indigenous youth in relation to sustainable development practices based on Indigenous knowledge and the relationship with the land as well as the protection and promotion of the important role of traditional knowledge holders including Indigenous Elders and women; (*Theme 1: Indigenous Peoples’ lands, territories, resources, oceans and waters, Paragraph 6*).

SWQB RESPONSE: *NMED has and will continue to coordinate and cooperate with all pueblos in New Mexico on our collective efforts to protect and improve the environment in a government to government relationship. SWQB has coordinated monitoring efforts and other surface water-related activities with several different pueblos over the years. SWQB does not include surface waters solely under pueblo jurisdiction on the Integrated List of impaired waters because section 518(e) of the Clean Water Act afford Indian tribes “treatment as states” to carry out section 303 of the CWA.*

2. To ensure that copper pollution in Sandia Canyon is addressed, a Total Maximum Daily Load (TMDL) must be developed. CCW, therefore, opposes the proposed change in Integrated Reporting (IR) Designation for Sandia Canyon.

SWQB RESPONSE: *Thank you for your comments. Given the below comments are identical to those received from Amigos Bravos, please refer to the corresponding “SWQB RESPONSE:...” in COMMENT SET 7 above.*

CCW opposes the proposal to change the IR designation for copper impairment in Sandia Canyon on LANL property (segment that flows from NPDES outfall OO1 to Sigma Canyon- AU NM-9000.A_047) from IR category 5 to IR category 4b. This change in designation will remove the requirement to develop a TMDL for this assessment unit. In addition, this change assumes that existing pollution control requirements and regulatory mechanisms that are either planned or in place, are monitored, and are reasonably expected to result in attainment of the applicable water quality criterion in the near future. This is not the case. The March 5, 2014 “Justification for an Integrated Reporting Category 4b Demonstration – Upper Sandia Canyon Assessment Unit – AU NM-9-.A_47 – Dissolved Copper Pollutant Pair” (hereinafter “Justification”), prepared by LANL, does not adequately show that there is sufficient monitoring or controls in place to ever achieve the applicable water quality criterion, let alone achieve the applicable water quality criterion in the near future.

2.1 Lack of Adequate Monitoring

Contrary to the impression that the Justification makes, there is likely to be little to no copper monitoring requirements in any of the three National Pollution Discharge Elimination System (NPDES) permits in the Assessment Area (AU) drainage area. Copper is no longer monitored under the Multi Sector General Permit (MSGP) (Justification at 5). The current and the proposed draft renewal of the EPA Industrial Point Source Permit (IPSP) does not require copper monitoring, (Justification at 2). While the Section 401 certification for the IPSP prepared by the state does require some copper monitoring, the final permit has not been issued and it is unclear if these requirements will be part of the final permit. The Justification states that copper is monitored at all 13 Stormwater Individual Permit NM0030759 (IP) sites that are in the AU drainage area (Justification at 5). Yet in LANL's recent IP renewal application, they are requesting to remove copper monitoring from all but one (S.SMA-.25) of those 13 sites.⁹ In summary, there is very little copper monitoring required under the three NPDES permits in the AU drainage area.

2.2 Lack of Adequate Controls

The Justification does not demonstrate that there are adequate controls in place to meet water quality criterion in the near future. In fact, the Justification makes a very good case for why there are *not* adequate controls in place to control the sources of copper causing the impairment in Sandia Canyon. LANL identifies only two controls that they claim will result in the attainment of the copper water quality criterion: 1. Continued application of NPDES permits and regulatory controls already in place; and 2. Completion of the Sandia grade-control structure (Wetland Stabilization Project) (Justification at 17).

2.2.1 Current NPDES Permits Are Not an Adequate Control of Copper Exceedances

The Justification very clearly outlines how the current NPDES regulatory structure in the AU drainage area is doing little to control copper discharges.

IPSP - EPA found no reasonable potential to exceed copper criteria under the analysis done when preparing the IPSP (Justification at 2) which indicates that the outfalls under the IPSP have not been discharging copper at levels of concern, and therefore it is unlikely that discharges under the IPSP are a source of the impairment. While it is encouraging to see NMED imposing effluent and monitoring requirements for copper in their 401 certification of the IPSP (Justification at 3), the result of these controls will be to ensure that if something changes at the facilities covered under the permit, increased levels of copper won't be discharged at the outfalls. Therefore, the IPSPs and associated 401 cert conditions do little to address the current levels of copper that are reaching Sandia Canyon, since there is no reasonable potential that current discharges under the IPSP are contributing to the water quality criterion exceedances.

MSGP - Monitoring conducted under the MSGP has shown that discharges from MSGP covered facilities have been below MSGP sector specific copper benchmarks or LANL specific background values and therefore monitoring for copper under the MSGP has been stopped (Justification at 5). Therefore, according to LANL data, facilities under the MSGP are not contributing to the ongoing impairment in Sandia Canyon.

IP - LANL is claiming that copper is not coming from the 13 Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) in the technical areas in the AU drainage area which is why they are proposing to remove copper monitoring requirements from all but one of the 13 sites under the new

⁹ See LANL IP renewal application <http://permalink.lanl.gov/object/tr?what=info:lanl-repo/eprr/ERID-254864>, page 227, (appendix B of redline).

IP.10

In conclusion, it is clear that according to LANL, the point sources covered under these three NPDES permits are not sources of copper and are not discharging copper, therefore controls under these permits will do little to help to attain the copper water quality criterion and are not an appropriate control to be identified under the 4b demonstration.

2.2.2 – The Sandia Grade Control Structure Is Not An Appropriate Control

While CCW applauds LANL's efforts, which were mandated under the 2005 NMED Consent Order for LANL, to stabilize the foot of the Sandia Wetlands, this action is not in itself an appropriate control under the Clean Water Act (CWA) to address the existing copper impairment. The goals and mandates of the Clean Water Act are to control pollution at their source prior to discharging to waters of the US. The Sandia Wetlands and the perennial stream that flows through the wetlands, both of which are waters of the US, have for too long been used as the control mechanism for upstream discharges, and as a result they are now contaminated with multiple contaminants, including copper. Instead of using a water of the US as a treatment system, pollution must be stopped *before* it reaches the stream and adjacent wetlands.

2.2.3 - There Are Not Adequate Controls in Place for Urban Stormwater Discharges

Unfortunately controls to address this urban stormwater discharges are not included in the two controls outlined by LANL (Justification at 17), which is ironic since this is the only source that LANL presents as conclusively contributing copper to the receiving waterbody (Justification at 9 and 17). In addition, LANL has identified urban sources as contributing to Target Action Level (TAL) exceedances in all of their alternative compliance requests under the IP.11 It is clear that LANL does not believe urban stormwater discharges are covered under the current regulatory system. For example, LANL has repeatedly said in their alternative compliance requests to the Environmental Protection Agency (EPA) under the IP, that the IP covers discharges from SWMUS and AOCs, but not from urban sources.¹²

Nowhere does LANL quantify the type or quantity of the Low Impact Design/Green Infrastructure (LID/GI) stormwater projects being implemented or planned. CCW asks: What is the percentage of impervious surface in the AU drainage area that will be treated with these projects? Is there monitoring in place to determine if these practices are effective? Is LANL using the data from their background reports to identify hot spots and plan treatments accordingly? We request NMED require LANL to answer these questions.

It is true that LANL is installing a couple of small LID projects in TA-3 (Justification at 23). These are primarily focused on addressing discharges from SWMUS, which happen to have the added benefit of addressing a very small amount of impervious surface discharge located near the SWMU. As mentioned above, LANL has argued the SWMUS and AOCs in Technical Area 3 (TA-3) are not a source of copper and, therefore, controls put in place to control discharges from these SWMUs are not going to be effective at reducing copper exceedances in the receiving waterbody. While there may also be some redevelopment/development projects being planned (details about these projects are lacking in the 4b justification), as far as CCW is aware, these projects are not tied to specific efforts or targets to reduce urban runoff. The riprap and detention ponds (Justification at 23) have been in place for some

¹⁰ See LANL IP renewal application <http://permalink.lanl.gov/object/tr?what=info:lanl-repo/epr/ERID-254864>, page 215, (appendix A of redline).

¹¹ *Id.* and Justification at 10.

¹² LANL alternative compliance requests for S-SMA-.25, S-SMA-2, and M-SMA-7.9 under the Individual Stormwater Permit: <http://www.lanl.gov/community-environment/environmental-stewardship/protection/compliance/individual-permit-stormwater/alternative-compliance.php>

time and yet the impairment still exists. These token projects are not nearly enough to address the substantial pollution being generated by urban runoff. Further, these projects certainly do not qualify as “existing pollution control requirements and regulatory mechanisms planned or in place that are reasonably expected to result in attainment of the applicable water quality criterion in the near future”.

There is a very real and substantial urban storm water problem in Los Alamos County. This proposal to downgrade the IR category appears to be dismissing this problem with claims that the limited ongoing actions being taken by LANL and Los Alamos County are addressing the urban storm water problem. This is simply not the case. If this situation is being addressed through ongoing programs and actions, we question why LANL is still claiming as recent as April 2014 that urban storm water discharges are a major problem and are the source of TAL exceedances.¹³

On June 30th, 2014 Amigos Bravos, supported by CCW, submitted a petition to EPA documenting the substantial urban storm water problem and requesting that storm water discharges from urban areas in Los Alamos be covered under a NPDES permit. A more appropriate mechanism for controlling urban stormwater pollution at LANL, which is a much wider problem than just one copper impairment in one AU, would be for EPA to issue a NPDES stormwater permit to control urban/impervious surface discharges.

3. CCW has substantial concerns about the proposal to delist many of the drainages on the Pajarito Plateau for multiple parameters.

CCW has several concerns with the proposal to delist many LANL influenced waters on the Pajarito Plateau. CCW is concerned about the following proposed actions:

- Delisting copper impairments from DP Canyon (LA Canyon to LANL Boundary); LA Canyon (NM4 to DP Canyon); Pueblo Canyon (Los Alamos Canyon to Los Alamos WWTP); Pajarito Canyon (upper LANL boundary to headwaters); Pajarito Canyon (within LANL boundary below Arroyo de la Delfe); Canon de Valle (LANL Gauge E256 to Burning Ground Spring); Sandia Canyon (Within LANL below Sigma Canyon); Ten Site Canyon (Mortandad Canyon to headwaters); and Three Mile Canyon (Pajarito Canyon to headwaters).
- Delisting gross alpha radiation impairments from Guaje Canyon (San Ildefonso bnd to headwaters) Pajarito Canon (Arroyo de la Delfe to Starmers Spring) and Pajarito Canyon (within LANL below Arroyo de la Delfe).
- Delisting zinc impairments from Acid Canyon (Pueblo Canyon to headwaters); Pueblo Canyon (Los Alamos Canyon to Los Alamos WWTP); Los Alamos Canyon (NM-4 to DP Canyon); and Ten Site Canyon (Mortandad Canyon to headwaters).
- Delisting mercury impairments from Acid Canyon (Pueblo Canyon to headwaters); LA Canyon (NM4 to DP Canyon); and Arroyo de la Delfe (Pajarito Canyon to headwaters).
- Delisting the Arsenic and Silver impairments from Ten Site Canyon (Mortandad Canyon to the headwaters).

CCW has many questions about the assessment process that led to the delisting of so many parameters from the waters of the Pajarito Plateau. They are:

- How many samples were used to make these determinations?
- Did the assessment determinations that were made based on the 2006-2007 study utilize

¹³ LANL Alternative Compliance Request to EPA for M-SMA-7.9, April 2014. <http://www.lanl.gov/community-environment/environmental-stewardship/protection/compliance/individual-permit-stormwater/alternative-compliance.php>

concurrent hardness data.

- If not, did the 2006-2007 data get discarded in the current assessment because of this lack of hardness data?
- How variable was the hardness data in the data sets analyzed?
- Would it be possible to utilize an average hardness number?

CCW request the opportunity to review the data that was used to make these delisting determinations.

Since the data that was used to make these assessment determinations came from LANL's database, LANL should be added to list of entities that provided data on page i.

4. IR Category 3 waters adjacent to LANL should be monitored during the 2017 assessment cycle.

CCW also has concerns about the number of waters that are given an IR category of 3 (no sampling has been conducted). We are especially concerned about the eight waters¹⁴ that are potentially impacted by LANL activities. The AU comment box for these waters says that the Department does not plan on assessing these waters again for the next 10 years. These waters could have substantial water quality problems and they should be sampled as soon as possible. CCW understands that other waters already sampled in the Pajarito Study are not going to be sampled again in the next 10 years because extensive monitoring was already done on them. These eight waters, for which no data was collected, should not suffer because nearby waters were part of a past study.

CCW thanks the Department for the opportunity to provide comments. We welcome further dialogue on these issues.

Sincerely,

Marian Naranjo
Honor Our Pueblo Existence
mariann2@windstream.net

Joan Brown and Marlene Perrotte
Partnership for Earth Spirituality
JoanKansas@swcp.com and marlenep@swcp.com

Kathy Sanchez and Beata Tsosie-Pena

14

NM-97.A_007	Bayo Canyon (San Ildefonso bnd to headwaters)
NM-9000.A_053	Cañada del Buey (San Ildefonso Pueblo to LANL bnd)
NM-128.A_02	Cañon de Valle (within LANL above Burning Ground Spr)
NM-128.A_04	Fence Canyon (above Potrillo Canyon)
NM-128.A_05	Indio Canyon (above Water Canyon)
NM-9000.A_000	Los Alamos Canyon (San Ildefonso bnd to NM-4)
NM-9000.A_044	Water Canyon (Rio Grande to lower LANL bnd)
NM-128.A_12	Water Canyon (within LANL above NM 501)

Tewa Women United

Kathy@tewawomenunited.org and Beata@tewawomenunited.org

Brian Shields and Rachel Conn

Amigos Bravos

rconn@amigosbravos.org and bshields@amigosbravos.org

Joni Arends

Concerned Citizens for Nuclear Safety

jarends@nuclearactive.org

COMMENT SET 9 – Los Alamos National Security (LANS), Los Alamos, NM

Environmental Protection Division
Environmental Compliance Programs (ENV-CP)
PO Box 1663, K490
Los Alamos, New Mexico 87545
(505) 667-0666

Date: July 29, 2014
Symbol: ENV-DO-14-0162
LAUR: 14-25026
Locates Action No.: N/A

Dear Ms. Guevara:

Subject: LANS Comments to Draft 2014 - 2016 State of New Mexico Clean Water Act (CWA) Sections 303(d)/305(b) Integrated List of Assessed Surface Waters (Integrated Report List)

Included below for your consideration, are the Los Alamos National Security (LANS) comments to NMED's 2014-2016 CWA Sections 303(d)/305(b) Integrated List of Assessed Surface Waters. LANS acknowledges that NMED's Integrated Report List (IR) addresses a number of previously made comments and concerns of issue to the Laboratory. Specifically, NMED:

- Updated the attainment status for a number of Assessment Unit (AUs) after a review of Pajarito Plateau water quality data and criteria.
- Designated a number of reaches to 5C IR category pending availability of data to verify cause of impairment.
- Assisted LANS with the process of developing the Sandia Canyon Category 4b Demonstration.

Comments for your consideration:

1. Category 5B for Unclassified Waters – Nine (9) AUs within Laboratory are denoted as 20.6.4.98 (Section 98), meaning that they are unclassified sections and presumed to be intermittent streams subject to Section 98 marginal warm water aquatic life (MWWAL) uses until formally classified by a Use Attainability Analysis (UAA). These include:
 - a. Acid Canyon (Pueblo Canyon to headwaters) - NM-97.A_002
 - b. Graduation Canyon (Pueblo Canyon to headwaters) - NM-97.A_005
 - c. Kwage Canyon (Pueblo Canyon to headwaters) – NM-97.A_003
 - d. Los Alamos Canyon (upper LANL boundary to Los Alamos Reservoir) – NM-9000.A_049
 - e. Pueblo Canyon (Acid Canyon to headwaters) – NM-9000.A_043
 - f. Pueblo Canyon (Los Alamos Canyon to Los Alamos WWTP) – NM-99.A_001
 - g. Pueblo Canyon (Los Alamos WWTP to Acid Canyon) – NM-97.A_006
 - h. South Fork Acid Canyon (Acid Canyon to headwaters) – NM-97.A_029
 - i. Walnut Canyon (Pueblo Canyon to headwaters) – NM-97.A_004

The designated use of MWWAL is consistent with the 2005 Triennial Review and subsequent direction from the United States Environmental Protection Agency (USEPA). As NMED indicates in the Pajarito Plateau Study notes, this presumption leads to the application of chronic aquatic life criteria to protect the aquatic life use. In the 2012 IR, each of these

unclassified AUs includes the following comment: This unclassified AU may be ephemeral or intermittent; however, per USEPA Region 6, instruction, it is being noted under 20.6.4.98 at this time and MWWAL and primary contact are presumed uses for all waters noted as 20.6.4.98.

However, many Pajarito Plateau waters that have been presumed as intermittent under Section 98 would be expected to be similar to Section 128 waters in the vicinity. According to 20.6.4.128 NMAC, Section 128 waters have a limited aquatic life use designation and hence require acute, but not chronic aquatic life criteria. The NMED's 2007 UAA for Section 128 waters presented the evidence necessary to show limited aquatic life use was an appropriate use designation given the absence of fish populations and highly intermittent and ephemeral flows. That UAA was approved by the USEPA and incorporated in the 2007 standards.

Given this information it would be appropriate for NMED to change all listings related to non-support of chronic WQC in Section 98 waters from Category 5A/5C to 5B. Until the standards are updated via a UAA, to determine that aquatic life uses are present that justify chronic criteria protection, a TMDL for chronic criteria exceedances would be premature.

SWQB RESPONSE: *It is important to keep in mind that only one IR Category is assigned per assessment unit in our current database setup. Therefore, an assessment unit with, for example, three impairments falling under three different subcategories (e.g., IR Cat 5A, 5B, and 5C) will only be assigned one overall subcategory for the AU. SWQB strives to provide additional detail in the ROD when these situations arise. SWQB may and does go forward scheduling IR Category 5A impairments regardless of IR Category 5B or 5C needs for other impairments in the same assessment unit. The following revisions/clarifications to the 2014 Integrated List have been made in response to your comment:*

- a. *Acid Canyon (Pueblo Canyon to headwaters) - NM-97.A_002 – The IR Category for this assessment unit was changed to 5B due to the chronic copper listing. The ROD was updated.*
- b. *Graduation Canyon (Pueblo Canyon to headwaters) - NM-97.A_005 -- There are no chronic aquatic life impairment listings. The IR Category remains 5A.*
- c. *Kwage Canyon (Pueblo Canyon to headwaters) – NM-97.A_003 – This AU remains noted as IR Category 3B, as there was only one data point.*
- d. *Los Alamos Canyon (upper LANL boundary to Los Alamos Reservoir) – NM 9000.A_049 -- This AU remains noted as IR Category 3A, as there were no data available to assess.*
- e. *Pueblo Canyon (Acid Canyon to headwaters) – NM-9000.A_043 – The only chronic aquatic life impairment listings is for dissolved aluminum which will be resolved when adequate total aluminum, turbidity, and hardness data are available. The IR Category remains 5C.*
- f. *Pueblo Canyon (Los Alamos Canyon to Los Alamos WWTP) – NM-99.A – The only chronic aquatic life impairment listing is for dissolved aluminum which needs to be re-assessed against the revised aluminum water quality standard when adequate total aluminum and hardness data are available. The IR Category remains 5C.*
- g. *Pueblo Canyon (Los Alamos WWTP to Acid Canyon) – NM-97.A_006 – There are no chronic aquatic life impairment listings. The IR Category remains 5C for the reasons stated in the ROD.*
- h. *South Fork Acid Canyon (Acid Canyon to headwaters) – NM-97.A_029 – There are no chronic aquatic life impairment listings. The IR Category remains 5A.*
- i. *Walnut Canyon (Pueblo Canyon to headwaters) – NM-97.A_004 – There are no chronic aquatic life impairment listings. The IR Category remains 5C for the reasons stated in the ROD.*

2. Acid Canyon – NM-97.A_002 (Pueblo to headwaters) – This AU is an ephemeral tributary to Pueblo Canyon and only flows in response to precipitation events. Please consider removing copper, chronic, as a cause of non-support. Water quality data collected during unstable conditions should not be used for assessment of chronic criteria. Note: Two samples collected on August 28, 2008 and July 9, 2009, are coded for surface flow and exceeded chronic criteria; however, it is unclear that stable conditions existed for both sampling events and, therefore, may not be valid for assessing chronic aquatic life criteria.

SWQB RESPONSE: *SWQB used the SAMPLE TYPE column in Intellus to determine the hydrologic conditions at the time of sampling. As noted, LANL samples collected on August 28, 2008 and July 9, 2009 are coded as “surface flow” vs. “storm,” therefore these data were assessed against chronic criteria. The ROD entry has been revised to note the chronic copper listing as 5C due to the possible mischaracterization of the flow conditions in Intellus. Please let SWQB know if and when the SAMPLE TYPE for these two sampling events is revised in Intellus. SWQB would then re-assess accordingly. It is important to note that, regardless, there remains an acute copper listing.*

3. Pueblo Canyon - NM-97.A_006 (WWTP to Acid Canyon) - Application of NMED’s Hydrology Protocol on 7/21/08 indicates the AU is ephemeral. LANS respectfully requests NMED complete the process detailed in 20.6.4.15 NMAC Subsection C in order to include this AU of Pueblo Canyon under 20.6.4.97 NMAC.

SWQB RESPONSE: *The previous observations from application of the hydrology protocol in Pueblo Canyon on July 21, 2008 may require further evaluation. Your comment has been provided to SWQB’s Monitoring, Assessment and Standards Section for consideration. However, this does not establish a commitment or priority to reclassify this AU as ephemeral (i.e., under 20.6.4.97 NMAC) in accordance with 20.6.4.15 NMAC.*

4. Pajarito Canyon – NM-9000.A_048 (LANL boundary to headwaters) The Water Quality Section (WQS) Reference is listed as 20.6.4.99. In all other previous listings, the WQS reference is 20.6.4.98. Was the hydrology protocol applied and a UAA completed to reach this conclusion? Or is it possible that the WQS Reference is incorrect?

SWQB RESPONSE: *It is not necessary to complete a UAA to change the WQS citation from 20.6.4.98 to 20.6.4.99. All data assessed had SAMPLE TYPE “surface flow”; no data were noted as “storm.” Based on this information SWQB presumed that the reach is perennial and classified under 20.6.4.99. A note was also added to the ROD. A change from 20.6.4.99 to 20.6.4.98 would not have any impact on the impairment listings.*

5. Canada del Buey – NM-128.A_00 (within LANL) – Aluminum is listed as a cause of non-support for the use of limited aquatic life. Because of the recent changes to the water quality criteria for aluminum, insufficient total recoverable aluminum and corresponding hardness-related data is available to demonstrate attainment with the designated use. Consequently, LANS requests NMED change this reach’s IR category from 5A to 5C.

SWQB RESPONSE: *The dissolved aluminum 5C listing was noted in the ROD, but the IR Category was inadvertently set to 5A. It has been changed to 5C.*

6. Mortandad Canyon – NM-9000.A_042 (within LANL) – The designated use for this reach includes limited aquatic life. Consequently, chronic criteria for copper do not apply. Additionally, there appears to be insufficient information to list a cause of non-support to copper,

chronic. Two data points since 2005, where flows may have occurred, indicate samples are below the chronic water quality criteria for copper. Water quality data collected during unstable conditions should not to be used for assessment of chronic criteria.

SWQB RESPONSE: *Chronic aquatic life uses to not apply to 20.6.4.128. The erroneous chronic copper AL impairment was removed. The acute copper listing remains.*

7. South Fork Acid Canyon - NM-97.A_29 (Acid Canyon to headwaters) - It is unclear what rationale or information was used to justify designating South Acid Canyon as a separate AU. Please include, in the Record of Decision, an explanation of the factors NMED considered for listing South Fork Acid Canyon as a separate AU.

SWQB RESPONSE: *A separate assessment unit was created for South Fork Acid Canyon because available data led to different assessment conclusions. For example, South Fork Acid Canyon data indicates zinc impairment, whereas Acid Canyon data do not. This additional information has been added to the ROD.*

8. Walnut Canyon – NM-97.A_004 (Pueblo Canyon to headwaters) – There appears to be insufficient data to support listing copper, acute, as the cause of non-support for the designated use of MWWAL. It appears the 5C listing is based on samples collected in 2007. An additional sample collected in August 2010, for the LANS Background study, shows copper levels below the acute water quality criteria.

SWQB RESPONSE: *The August 2010 data point was not in the final assessment dataset (<http://www.nmenv.state.nm.us/swqb/303d-305b/2014-2016/Pajarito/index.html>). There were no 2010 data for Walnut Canyon in Intellus, and data from the LANS Background study were not submitted for assessment consideration. Even if the August 2010 data point had been assessed, the impairment would remain IR Category 5C with 2/3 exceedences. A note was added to the ROD to clarify that the listing was based on 2007 data.*

Thank you for providing the opportunity to comment. Please contact Robert Gallegos (505) 665-0450 of the Laboratory's Environmental Compliance Programs (ENV-CP) if you have questions.

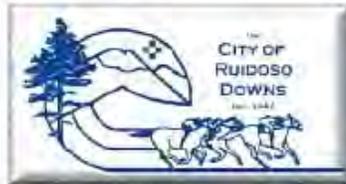
Sincerely,

Anthony R. Grieggs, Group Leader
Environmental Compliance Programs (ENV-CP)
Los Alamos National Security, LLC

ARG:RMG/lm

Cy: James Hogan NMED/SWQB, (E-File)
Gene E. Turner, NA-00-LA, (E-File)
Eric L. Trujillo, NA-OO-LA, (E-File)
Carl A. Beard, PADOPS, (E-File)
Michael T. Brandt, ADESH, (E-File)
Alison M. Dorries, ENV-DO, (E-File)
Michael T. Saladen, ENV-CP, (E-File)
Terrill W. Lemke, ENV-CP, (E-File)
Steven J. Veenis, PMFS-DO, (E-File)
Robert M. Gallegos, ENV-CP, (E-File)

COMMENT SET 10 – City of Ruidoso / Village of Ruidoso Downs, NM



July 29, 2014

Lynette Guevara, Assessment Coordinator
Surface Water Quality Bureau
New Mexico Environment Department
Post Office Box 5469
Santa Fe, NM 87502

**Re: Draft 2014–2016 State of New Mexico Clean Water Act Sections
303(d)/305(b) Integrated Report**

Dear Ms. Guevara:

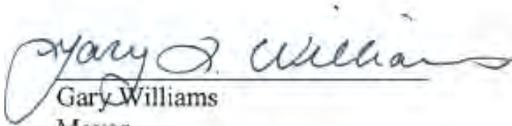
On behalf of the Village of Ruidoso and the City of Ruidoso Downs (collectively “Ruidoso”), we are transmitting to you the attached Technical Memorandum prepared by Parametrix that contains Ruidoso’s comments on the referenced report (“Integrated Report”). Our two municipalities are the members of the Regional Wastewater Treatment Plant Joint Use Board (“JUB”) that is responsible for operating Ruidoso’s wastewater treatment plant (“Plant”). Several of Ruidoso’s comments on the Integrated Report are summarized as follows:

- Having completed effective and costly Plant upgrades, we believe Ruidoso should be eligible for Total Maximum Daily Loads implementation options available to other communities in New Mexico before any further Plant upgrades are considered.
- After the new Plant became fully operational in the summer of 2011, Segment 208 (NMAC 20.6.4.208) of the Rio Ruidoso (into which the Plant discharges treated effluent) is close to fully supporting New Mexico’s narrative nutrient standard.
- We are encouraged that the Surface Water Quality Bureau (“SWQB”) has recognized the extent to which sources upstream from the Plant are causing nutrient impairment of the stream that must be reduced in order for the stream to consistently support New Mexico’s narrative nutrient standard.

- The current standard for Segment 208 recognizes a high-temperature limit. If the designated use of the segment were changed from “coldwater aquatic life” to “warmwater” or “coolwater” aquatic life, each of which is more consistent with the high-temperature limit than the coldwater use, the segment would then meet the lower dissolved-oxygen criterion associated with those uses and support New Mexico’s narrative nutrient standard.
- When the water temperature and altitude of Segment 208 are considered, it is possible to conclude that the segment is meeting the currently applicable dissolved-oxygen criterion and is therefore supporting New Mexico’s narrative nutrient standard.
- Rather than rejecting all nutrient data collected by Parametrix, the SWQB should consider accepting data where the commonly recognized method of sample freezing was employed to retard biological activity in samples.

Ruidoso appreciates your consideration of our comments on the Integrated Report contained in the attached Technical Memorandum and looks forward to further discussion of these issues.

Sincerely,



Gary Williams
Mayor
City of Ruidoso Downs



Tom Battin
Mayor
Village of Ruidoso

Attachment: a/s

TECHNICAL MEMORANDUM

DATE: July 28, 2014

TO: Regional Wastewater Treatment Plant Joint Use Board

FROM: Jim Good

SUBJECT: CWA 303(d)/305(b) Integrated List and Report

CC: Ned Kendrick

PROJECT NUMBER: 573-6327-001

PROJECT NAME: Ruidoso Monitoring

The New Mexico Environment Department Surface Water Quality Bureau (SWQB) has posted a Public Comment Draft of the subject document, and comments are due by Tuesday, July 29: <http://www.nmenv.state.nm.us/swqb/303d-305b/2014-2016/>. The purpose of this memorandum is to provide input that could be incorporated in comments on the SWQB report submitted by the Village of Ruidoso/City of Ruidoso Downs RWWTP Joint Use Board (JUB). Technical input presented below includes comments on the Integrated Report, the Integrated List, and the External Data Quality Assurance Assessment.

Integrated Report Page 42 summarizes New Mexico's Nutrient Reduction Strategy (SWQB 2014) as a significant surface water issue. This report section states that "...New Mexico seeks to adopt nutrient TMDLs that recognize the threshold concentrations necessary to be protective of designated uses while developing approaches for implementation of the waste load allocations that are technologically achievable and are neither over- nor under-protective. The State is currently evaluating alternative approaches to the implementation of TMDL waste load allocations for point-source discharges that are scientifically based, environmentally sound, and consider the existing facility design, facility age and local economic factors." The JUB supports the goal of TMDLs that recognize threshold concentrations protective of existing and attainable uses, and approaches to implementing waste load allocations that are technologically achievable and neither over- nor under-protective. However, it is not clear in Table 10 of the Nutrient Reduction Strategy document why the Rio Ruidoso is identified as ineligible for phased implementation or TMDL implementation options. Having completed facility upgrades at great expense and having demonstrated dramatic reductions in effluent nutrient concentrations, Ruidoso should be eligible for any options and alternative approaches (e.g. phased implementation, longer compliance schedules, seasonal effluent limits, etc.) available to other communities in New Mexico, before considering any further facility upgrades in the future.

SWQB RESPONSE: *The Nutrient Reduction Strategy documents the current nutrient TMDLs adopted. The Rio Ruidoso TMDL has recently been revised and posted for public comments; included within the proposed revision to the TMDL is alternative compliance approaches.*

The Record of Decision for the Integrated Report (see page 199) contained only a single sentence regarding what was the most extensive nutrient assessment data collected in the state of New Mexico: “Causal indicators (SWQB TN/TP data) as well as response indicators (SWQB and Village sonde data, Village chlorophyll data) were present.” This single sentence uses the same descriptor for variables that were below thresholds as variables that were above thresholds: “present”. It fails to convey the fact that, since the new wastewater treatment plant became fully operational in the summer of 2011, the only response variable that had not improved to meet thresholds was dissolved oxygen (DO, Parametrix 2013). Although DO diel fluctuations had dramatically decreased to less than the 3.0 mg/L threshold and DO concentrations also improved substantially, there were still some monitoring days in 2012 when DO was both less than 6.0 mg/L and 90% saturation. Periphyton chlorophyll a concentrations dropped to below 5.8 µg/cm², and pH was consistently between 6.6 and 8.8. All indicators considered, the weight of evidence from these data showed that the river segment had nearly improved to the point of fully supporting New Mexico’s narrative nutrient standard (i.e. non-impairment).

SWQB RESPONSE: *The Record of Decision (ROD) for the Integrated List is a non-required text document intended to provide USEPA and stakeholders with additional information regarding impairment listings. The nutrient impairment portion of the ROD entry was revised to “Causal indicators (specifically SWQB-collected TN data) as well as response indicators (specifically Village DO sonde data) were present at levels that did not meet applicable threshold values. Additionally, the 0.1 mg/L segment-specific total phosphorus WQS was exceeded 7/23 times.”*

Integrated List The draft list identifies four reaches (i.e. assessment units) of the Rio Ruidoso, two upstream and two downstream from the US Highway 70 Bridge, and the previous list had only two reaches. Why has the river been divided into four assessment units? This change in assessment units was not documented in the Record of Decision.

SWQB RESPONSE: *The previous upstream and downstream Rio Ruidoso assessment units were split at Carrizo Creek and Eagle Creek, respectively, to acknowledge predominant land use and assessment conclusion differences at stations above and below Carrizo Creek, and hydrologic character and assessment conclusion differences at stations above and below Eagle Creek. Information regarding the reasons for these assessment unit splits was inadvertently not included in the associated draft ROD entries; it has been added.*

The JUB is encouraged to see that the SWQB has recognized that sources upriver from the treatment plant discharge location are causing nutrient/eutrophication and total phosphorus impairment, as indicated by the new listings for the river reach from the US Highway 70 Bridge to Carrizo Creek and from Carrizo Creek to the Mescalero Apache boundary, respectively. The Rio Ruidoso Monitoring Program concluded that since the new treatment plant became operational, treated effluent has diluted total phosphorus (TP) concentrations in the river during the few occurrences when TP exceeded the 0.1 mg/L target concentration downstream (Parametrix 2013). In other words, sources other than the treatment plant effluent were responsible for TP in the river exceeding 0.1 mg/L. The study further concluded that effluent TN concentrations have met the TMDL target concentrations in the river downstream most of the time; however, nitrogen concentrations from upstream sources will make it difficult to consistently achieve 1.0 mg/L TN in the Rio Ruidoso. The Level II nutrient assessment in this study also showed that response variables were improving and nearly met the thresholds that would show the river is fully supporting the narrative nutrient standard, and thus would no longer appear on the CWA §303(d) list as impaired. The new Ruidoso treatment plant is among the top plants in the U.S.

in nutrient removal performance, but the most recent studies show that reductions in upstream sources of nutrients will be necessary to consistently meet TMDL target concentrations in the river.

The US Highway 70 Bridge to Carrizo Creek assessment unit is listed as category 5/5C, indicating that additional data will be collected before a TMDL is scheduled. However, a Public Comment Draft TMDL has been published. What additional data will be collected this year? Does the data collection effort include repeating the chlorophyll a sampling and analysis that was rejected from the 2011 and 2012 SWQB assessment? Presuming the data are collected this year, will the TMDLs for this assessment unit proceed on the same schedule with the other Rio Ruidoso segments? Given the major investment already required of utility rate payers to upgrade the treatment plant, it is important that the emphasis on reducing other nutrient sources proceed as soon as possible.

SWQB RESPONSE: *SWQB plans to collect TN and TP, chlorophyll a, and sonde data in this assessment unit during the 2014 field season. SWQB drafted a nutrient TMDL based on the 2014 assessment for this assessment unit because of a planned revision to the nutrient TMDL in the downstream assessment unit. Coordinating similar TMDLs is more efficient and helps ensure the entire watershed is addressed. The IR Category has been changed to 5/5A.*

It is noted that the Eagle Creek to US Highway 70 Bridge assessment unit has been listed for turbidity for the first time. Controlling turbidity from the listed probable sources (e.g. gravel/dirt roads, watershed runoff following forest fire) will also reduce nutrient loading from nonpoint sources. The 2012-2014 303(d) list indicated impairment and the 2006 TMDL for the Rio Hondo had a turbidity TMDL for the Rio Ruidoso from US Highway 70 to the Mescalero Apache Boundary, but the current draft TMDL does not include turbidity among the parameters of concern for the US Highway 70 to Carrizo Creek segment. No turbidity data were collected during the Rio Ruidoso Monitoring Program (Parametrix 2013); however, very high turbidity from upstream sources was observed during many of the 44 monitoring events conducted by Parametrix between 2009 and 2012. Many of the probable sources identified in the draft TMDL for total phosphorus and plant nutrients are associated with the erosion and sediment transport processes that also causes high turbidity, including watershed runoff following forest fire. It is not clear why the US Highway 70 Bridge to Carrizo Creek segment is no longer listed as impaired by turbidity. Did the SWQB collect turbidity data in this segment sufficient to show that it was no longer impaired?

SWQB RESPONSE: *The US Highway 70 Bridge to Carrizo Creek assessment unit is no longer listed as impaired for turbidity because turbidity sonde data collected by SWQB from September 5, 2012 to September 16, 2012 did not exceed associated SEV thresholds. SEV thresholds and the turbidity assessment process are detailed in the Turbidity Assessment Protocol, available at: <http://www.nmenv.state.nm.us/swqb/protocols/2014/AssessmentProtocol-w-Appendices-2014.pdf>. As mentioned, turbidity is identified as an impairment in the assessment unit Eagle Creek to US Highway 70 Bridge, and an associated TMDL has been drafted. Although TMDLs are written on an assessment unit basis, and are based on assessment unit impairment determinations, it is recognized that all land use activities in the watershed area above the impaired reach can contribute to the impairment. Therefore, since there is a TMDL for the lower assessment unit (Eagle Creek to US Highway 70 Bridge), efforts to address non-point sources anywhere in the watershed area above Eagle Creek are encouraged and promoted to help address the impairment(s).*

It is further noted that the Eagle Creek to US Highway 70 Bridge segment is listed for *E. coli* impairment for the first time. Herds of cattle and horses are common in floodplain pastures throughout the Eagle Creek to US Highway 70 Bridge segment, and livestock grazing allotments are likely also extensive in the rangelands and forestlands that contribute runoff to this assessment unit. Livestock were often seen standing in or wading through the river during the monthly Parametrix monitoring events from 2009

through 2012 - they contribute nutrients both directly to the stream and indirectly through runoff. Controlling *E. coli* loading from grazing animals is expected to substantively reduce nutrient loading from nonpoint sources.

SWQB RESPONSE: *Controlling E. coli loading from grazing animals does have the potential to reduce both E. coli and nutrient loading from nonpoint sources, however these are nonpoint sources of pollution and all efforts would be strictly voluntary on the part of local property owners. “Livestock grazing” is currently listed as a probable source in the Rio Ruidoso (US Highway 70 to Carrizo Creek) draft TMDL, and will be added to the Rio Ruidoso (Eagle Creek to US Highway 70 Bridge) draft TMDL as well. After the WQCC and USEPA approve these two TMDLs, the probable sources listed for these two assessment units will be updated on the subsequent Integrated List.*

The draft list identifies coldwater aquatic life as a designated use for the Eagle Creek to US Highway 70 Bridge assessment unit; however, the current water quality standards recognize that temperature criteria for coldwater aquatic life are not attainable in this reach of the Rio Ruidoso as NMAC 20.5.4.208.B has a segment-specific temperature criterion of 30°C (86°F) or less. Was the site-specific criterion for temperature adopted because (1) actual species in the segment are less sensitive to high temperatures, or (2) natural background conditions cause temperature to exceed the coldwater criteria? The ability for water to contain DO is dependent on cool temperatures, so would the same justification for adopting a higher maximum temperature criterion not also justify adopting a lower minimum DO criterion? NMAC 20.6.4.900.H specifies the general criteria that are applicable to aquatic life use designations where segment-specific criteria are not established. The general criteria for coldwater aquatic life include dissolved oxygen 6.0 mg/L or more, 6T3 temperature 25°C (77°F), and maximum temperature 24 °C (75°F). The segment-specific temperature criterion for this reach of the Rio Ruidoso (30°C) lies between the general criteria of maximum temperature 29°C (84°F) for marginal coldwater and coolwater, and the maximum temperature 32.2°C (90°F) for warmwater. In other words, streams in New Mexico with temperature criteria greater than 29°C (84°F) are nearly always designated for warmwater aquatic life, with this segment of the Rio Ruidoso being a rare exception. If the segment was designated for warmwater or coolwater aquatic life rather than coldwater aquatic life, the general DO criterion would be 5.0 mg/L or more, rather than 6.0 mg/L or more. If the DO criterion was 5.0 mg/L or more, the most recent Level II nutrient assessment would have concluded that this segment of the Rio Ruidoso was fully supporting the narrative nutrient criteria in 2012, and would therefore no longer carry the impairment status that requires a TMDL for nutrients.

SWQB RESPONSE: *The above points merit consideration, and your request regarding review of the currently designated aquatic life use has been provided to SWQB’s Monitoring, Assessment and Standards Section for consideration. This does not establish a commitment or priority to reclassify this AU in accordance with 20.6.4.15 NMAC. At the present time, however, the assessment process for the Integrated List requires comparison of water quality data to those standards adopted by the WQCC and approved by USEPA. The appropriate avenue to address concerns regarding applicable water quality standards in 20.6.4 NMAC is through a use attainability analyses, which involves evaluating a waterbody to determine the highest existing or attainable use.*

SWQB’s Dissolved Oxygen Dataset Assessment Protocol (SWQB 2013) provides the following discussion of dissolved oxygen criteria and assessment:

“Currently, New Mexico’s criteria for DO are expressed only as mass per volume (mg/L). However, in certain circumstances such as high altitudes where atmospheric pressure is comparatively low or high air temperatures that reduce oxygen solubility (and particularly when these two conditions are both present), DO may be reduced so much that the concentration-based criterion is physically impossible to attain. For this reason, this assessment protocol takes into account the percent saturation, as this integrates several factors that influence the amount of oxygen that water can contain. Specifically,

water quality criteria for DO concentration are considered to be met if the measured DO percent saturation is equal to or greater than 90 percent.”

The Eagle Creek to US Highway 70 Bridge segment of the Rio Ruidoso commonly experiences the combined conditions of high air temperatures and low atmospheric pressure. The relationship between temperature and DO can be observed using dissolved oxygen solubility tables, such as the web-based calculator provided by the U.S. Geological Survey: <http://water.usgs.gov/software/DOTABLES/> (USGS 2014). Using the single-value computation function you can provide inputs and calculate percent DO saturation. At the temperature criterion of 30.0 °C, and assuming a barometric pressure of 610 mm Hg (24.0 inches Hg, a common barometric pressure at the approximately 6,000 foot elevation below the US Highway 70 Bridge) and a specific conductance of 1,500 µS/cm (a roughly average specific conductance measured by Parametrix from 2009 through 2012), a DO concentration of 5.37 mg/L would result in 90% DO saturation and the DO saturation would increase if the barometric pressure dropped lower and other conditions remained the same. Continuous hourly monitoring in the year after the new treatment plant became fully operational measured no occasions when the DO was both less than 90% saturation and less than 5.4 mg/L. Research on the historical range of local barometric pressures might be necessary to establish a consistently attainable DO concentration threshold; however, if the DO threshold was 5.4 mg/L, the most recent Level II nutrient assessment would have concluded that this segment of the Rio Ruidoso was fully supporting the narrative nutrient criteria in 2012, and would therefore no longer carry the impairment status that requires a TMDL for nutrients.

It is not logical that a river segment with allowable temperatures up to 30°C (86°F) would be designated for coldwater aquatic life and also have a DO criterion of 6.0 mg/L or more. The SWQB should take the necessary steps to re-classify the Eagle Creek to US Highway 70 Bridge assessment unit to the appropriate aquatic life use designation for the protection and propagation of aquatic species that actually exist in this reach, and with temperature and DO criteria that are feasibly attainable and consistent with these species' requirements.

SWQB RESPONSE: *Your aquatic life use and DO concentration threshold concerns have been forwarded to SWQB's Standards and Reporting Team. Please note, however, that the 2014-2016 Integrated List must be based on the approved water quality standards at the time of assessment, thus your request cannot be accommodated this listing cycle.*

Finally, please note that language in the Water Quality Management Plan allows for the removal of a TMDL when an assessment unit is delisted, USEPA also has a list of requirements that needs to be satisfied before they will approve TMDL removal (http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/upload/Draft-TMDL_32212.pdf). In many cases, a revision, rather than a removal, of a TMDL is more appropriate.

External Data Quality Assurance Assessment The review of data provided by Ruidoso states that the nutrient data collected by Parametrix and analyzed by the University of Idaho Analytical Sciences Laboratory were determined to not meet the requirements for use in assessments. This rejection of the nutrient data was based primarily on changes in the sample preservation methods employed by the study from those specified in the Quality Assurance Project Plan (QAPP) prepared for the Rio Ruidoso Monitoring Program. These changes were determined by the Principal Investigator (Jim Good) early in the monitoring program, after consultation with the University of Idaho Analytical Sciences Laboratory Director (Steve McGeehan, Ph.D.), an expert in low-level nutrient analyses suitable for eutrophication studies. Dr. McGeehan's recommendation for freezing samples rather than acidifying them in the field was based on his experience with many nutrient monitoring programs, and supported by *Standard Methods for the Examination of Water and Wastewater* (APHA 1998), a reference for sampling and analysis methods cited in NMAC 20.6.4.14.

Standard Methods states that no single method of preservation is entirely satisfactory, so you should choose the method with due regard to the determinations to be made (APHA 1998). In the case of nutrient analyses, the intent of preservation is to retard biological action (e.g. stop the photosynthetic activity that consumes nutrients in the water). In most cases this intent was met in the Rio Ruidoso Monitoring Program by immediately placing the sample containers in an opaque black plastic bag, freezing the samples for overnight shipping, and adding H₂SO₄ to the samples when thawing them at the laboratory. Standard Method 4500-P for phosphorus states in its introduction that “If dissolved phosphorus forms are to be differentiated, filter sample immediately after collection. Preserve by freezing at or below -10°C. If total phosphorus alone is to be determined, add H₂SO₄ or HCl to pH<2 and cool to 4°C, or freeze without any additions.” It also warns “Do not store samples containing low concentrations of phosphorus in plastic bottles unless kept in a frozen state because phosphates may be adsorbed onto the walls of plastic containers.” These statements clearly indicate that freezing is the preferred preservation method for phosphorus analyses. While the introduction section for Standard Method 4500-N for nitrogen does not have a subsection for sampling and storage, the preservation practices used to retard biological action (placing samples in the dark, freezing for overnight shipment, and acidifying when thawing) are expected to be effective in preserving nitrogen concentrations as well as phosphorus sample concentrations.

Methods for Chemical Analysis of Water and Wastes (USEPA 1983) states that “...complete and unequivocal preservation of samples, either domestic sewage, industrial wastes, or natural waters, is a practical impossibility. Regardless of the nature of the sample, complete stability for every constituent can never be achieved. At best, preservation techniques can only retard the chemical and biological changes that inevitably continue after the sample is removed from the parent source.” These statements suggest that acidification in the field would not have achieved complete and unequivocal preservation of the nutrient samples.

It is correct to state that the preservation of samples did not follow the project QAPP because samples were not acidified at the time of collection. However, because for most samples the methods employed by the Rio Ruidoso Monitoring Program met the intent of sample preservation by retarding biological action, and these preservation methods are recommended by *Standard Methods for the Examination of Water and Wastewater*, the nutrient sample data from samples that were frozen should not be rejected from use in nutrient assessment and evaluating water quality standards attainment.

The following information provides more specifics on how samples were preserved over the course of the Rio Ruidoso Monitoring Program, and summarizes documentation of sample conditions. This information was compiled by reviewing the case narratives and chains of custody (COC) provided in analytical data packages, and the Data Quality Review Technical Memoranda that were included in Appendix A of the project completion report (Parametrix 2013). In all cases, the University of Idaho Analytical Sciences Laboratory performed a final preservation of samples using sulfuric acid, either upon receipt or upon thawing of samples received. The differences in how samples were handled prior to arrival at the laboratory, and conditions of samples received by the laboratory are summarized below.

- The nine sets of monthly samples collected between May 2009 and January 2010 were shipped on ice but not frozen. No problems with the condition of samples received were noted in the case narrative or on the COC form, with one exception of July 2009.
- For the samples received on July 20, 2009, the case narrative noted that the samples were inadvertently shipped via ground service, and sample temperature upon receipt was 22.8 °C.

The Quality Assurance Technical Memorandum dated October 13, 2009, further documented the warm samples from July 2009 and qualified the sample results.

- The 35 sets of monthly samples collected from February 2010 through December 2012 were frozen on the day of collection for overnight shipping to the laboratory. In most cases, the laboratory noted in the case narrative that samples were “frozen upon receipt” or “frozen upon arrival”, documenting that the samples remained frozen through the shipping process.
- For the samples received on the following dates, the case narrative and COC documented that the samples were “partially frozen upon receipt at the lab” or “partially frozen upon arrival”: 5/20/2010, 6/17/2010, 8/5/2011, 9/23/2011, and 12/1/2011. Although these samples did not remain completely frozen in transit, the freezing and storage in the dark would have retarded biological activity in the sample containers and effectively preserved nutrient concentrations until they were acidified at the laboratory.
- For the samples received on the following dates, the case narrative and COC documented that the samples were “thawed upon arrival”, “arrived unfrozen”, or “arrived not frozen”: 5/12/2011, 6/20/2011, and 1/26/12. Although beginning in February 2010 it was the consistent practice to freeze the samples, the laboratory records do not definitively show that the samples received on these three dates had been frozen, thus the record of preservation for these samples is incomplete for the time between collection and acidification at the laboratory.

Rather than rejecting all of the nutrient data from the Rio Ruidoso Monitoring Program, this additional detail on the preservation of individual sample sets is intended to help support the acceptance of all sample data where the records show that a preservation method recommended in Standard Methods (sample freezing) was employed to retard biological activity and prevent changes in nutrient concentrations.

SWQB RESPONSE: *As documented in the 303(d)/305(b) data submission guidelines (<http://www.nmenv.state.nm.us/swqb/DataSubmittals/>), SWQB employs a two part test of documentation associated with outside data sources, which includes: (1) verification that there is there documentation of QA/QC procedures that, at a minimum, meet the QA/QC requirements described in the SWQB's most recent QAPP; and (2) verification that there is reasonable evidence or assurance that these procedures were followed.*

As acknowledged in the technical memo provided by Parametrix, the freezing of nutrient samples does not conform to the approved nutrient preservation procedures identified in the Rio Ruidoso Quality Assurance Project Plan (QAPP). Freezing and acidification (on ice) are preservation methods identified in Standard Methods for both phosphorous and ammonia. However, Standard Methods clearly states that when freezing phosphorous and ammonia samples, they must be kept at or below -10°C and -20°C respectively. Documentation that demonstrates that these temperature requirements were maintained throughout shipment and laboratory receipt has not been provided; the documentation provided does demonstrate that a significant number of samples did not maintain a 0°C temperature lending doubt that -10°C and -20°C were achieved in an even larger number. Other analytes (nitrate, nitrite and Kjeldahl nitrogen) lack method specific guidance in Standard Methods; preservation of these analytes should follow the standard preservation techniques identified, which are designed to minimize the potential for volatilization or biodegradation between sample collection and analysis by keeping samples cool (4°C) without freezing and adding a chemical preservative if immediate analysis is not possible.

The nutrient samples collected and frozen by Parametrix for Ruidoso were analyzed following USEPA Methods (300 Series), which calls for samples to be preserved with sulfuric acid and stored at 4°C at time of collection. Additionally, sample preservation requirements identified in 40 CFR Part 136

Table II for all nutrient analytes are acid preservation and sample temperature maintained at or below 6°C without freezing unless data demonstrating that sample freezing does not adversely impact sample integrity is maintained on file and accepted as valid by the regulatory authority. The nutrient preservation requirements identified in 40 CFR Part 136 Table II are followed by SWQB, and compliance with these requirements is factor in determining whether externally submitted data is of equal or comparable quality to data collected and used by SWQB in nutrient assessments.

In summary the Ruidoso samples for which freezing has been documented as the preservation technique does not conform to 1) the approved Ruidoso QAPP, 2) the USEPA analysis methods used by the laboratory, 3) SWQB standard operating nutrient sample preservation procedures, which ensure data comparability, and 4) the requirements in 40 CFR Part 136 Table II, to which the SWQB and USEPA are required to conform. The Standard Method reference provided by Ruidoso and the consideration of a documented subset of frozen samples does not change the quality assurance assessment determination of these data. These data remain ineligible for use in regulatory decisions for failure to meet SWQB's external data submission criteria.

While this dataset fails to meet the QA requirements of SWQB for use in assessment, we acknowledge the use of freezing likely results in the necessary preservation of nutrients within the samples. As such we believe these results can be used for informational purposes and to guide further data collection efforts. To that end we have compared the nutrient data collected by Parametrix with data collected by SWQB and find assessment of the datasets to result in the same impairment conclusions. For example, there were 15/15 TN exceedences and 7/23 TP exceedences in the SWQB data set for the AU from Eagle Creek to HWY 70. The decision to not include the Parametrix TN and TP data does not alter the assessment conclusion for either segment of the Rio Ruidoso.

Additional references:

Code of Federal Regulations. 2014. Title 40: Protection of Environment, Part 136 – Guidelines Establishing Test Procedures for the Analysis of Pollutants, Table II – Required Containers, Preservation Techniques, and Hold Times. Available at: <http://www.ecfr.gov/cgi-bin/text-idx?SID=e58fcd49bcbdc8bdb679467cb4b8d694&node=40:23.0.1.1.1&rgn=div5>.

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USGS. 2014. Dtables Dissolved oxygen solubility tables. U.S. Geological Survey Office of Water Quality. Reston, Virginia. Available at: <http://water.usgs.gov/software/DOTABLES/>.

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COMMENT SET 11 – Quay County, Tucumcari, NM



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DRAFT 2014 - 2016 STATE OF NEW MEXICO CLEAN WATER ACT SECTIONS 303(d) / 305(b) INTEGRATED REPORT and LIST

The Quay County Commission submits our brief comments on behalf of our County Government, residents, landowners and businesses:

Regarding 2014 – 2016 NM Clean Water Act Sections 303 (d)/ 305 (b):

In New Mexico, stated nonpoint sources of pollution include, but are not limited to: agriculture, construction activities, grazing, malfunctioning septic systems, recreational activities resource extraction riparian habitat modification, roads, silviculture/forest management, stream flow modification, and storm water run-off from developed areas. Although we do not agree that all of these actually create pollution we are commenting based on the NMED Integrated Report and List.

As shown in Figure 12, the alleged leading source of impairment in New Mexico's rivers and streams is from rangeland grazing, which constitutes 24% of documented sources in TMDLs. Thirty-seven percent of CWA Sec 319(h) funds have been used in the grazing/wildlife management NPS pollution category. We assume the majority of these funds have been expended on public lands in New Mexico however, we are concerned about how future funding for BMPs will be expended on private lands rangeland grazing. The reason for our concern comes from the current EPA CWA "Waters of the US" proposed rule and interpretive rule for agricultural exemptions. Under the interpretive rule the exemptions are narrowly defined and a landowner who grazes livestock on private lands is basically going to be limited to following NRCS specifications on almost all normal and necessary operations and land management practices or be forced into taking part in a Natural Resources Conservation Service (NRCS) conservation contracts or program to qualify for the exemptions or be faced with the prospect of applying for expensive permits under CWA rules. The NRCS conservation programs have been voluntary in the past. However, we feel that under proposed federal regulations landowners' freedom to participate or not in conservation programs of their choice will be severely limited in the future as potential results of federal and state CWA policies. We believe that farming and ranching practices in Quay County are not the most serious threats to impairment and even further improvements can be made by voluntary cooperation with NRCS, FSA, Soil and Water Conservation Districts and private owner initiatives.

SWQB RESPONSE: *SWQB agrees that improvements can be made by voluntary cooperation with NRCS, FSA, Soil and Water Conservation Districts and private owner initiatives and works to achieve this goal. Nonpoint source pollution management is an entirely voluntary effort under the federal CWA and the State Water Quality Act. As noted in the Integrated Report "NMED's Nonpoint Source Management Program is designed as a cooperative effort among watershed stakeholders and NMED*

to educate and implement best management practices (BMPs) to reduce nonpoint pollutants entering surface and ground waters.”

Quay County Commission believes the entire authority to manage water sources and resources in New Mexico are totally under the authority of State Law and not federal regulations. We also agree with the State of New Mexico official concern that this rule making was developed without sufficient consultation with states and that the rule making could usurp state authority in water management. We are pleased with New Mexico's' stance that all waters of the state will continue to be protected under New Mexico laws.

The NPS Management Program emphasizes watershed-based planning and NMED underscored its encouragement by making watershed-based planning a requirement for significant restoration activities to be funded with CWA Section 319(h) funds. Inventorying and monitoring of impairments, in particular, non-point source pollution, is critical to identifying where the funding will be expended. The USEPA request that states incorporate probabilistic sampling designs into their monitoring programs, a process in which the laws of probability determine which elements are to be included in a sample, gives us concern that a subjective shotgun approach to inventory and monitoring of non-point source pollution on private rangelands in Quay County will result in statistically unsound scientific data in which BMPs will attempt to be implemented. Quay County Commission is concerned that the loss of USGS sampling will effect state water quality monitoring and we applaud New Mexico's' decision to continue to rely on targeted sampling, however, we fear that USEPA pressure to use probabilistic sampling techniques will create unreliable data and even misinformation in the future. We also want to emphatically state that we believe there is no adequate information as to what the historical baseline of water quality in the Canadian was. There certainly is no detailed analysis and sampling of water quality even as few as 60 years ago. We also believe natural erosion and naturally occurring elements in all of the uplands do not constitute pollution and should be omitted from impairment designations.

SWQB RESPONSE: *SWQB share your concerns regarding probabilistic monitoring, and have and will continue to express them to USEPA. To date, SWQB has not incorporated probabilistic monitoring into our monitoring strategy. Section C.5 of the draft Integrated Report was prepared at USEPA's request, and highlights the challenges of comparing impairment conclusions from probabilistic vs. targeted sampling within the State of New Mexico. Further the implementation of voluntary BMPs to address nonpoint pollution should be based on local watershed based plans not just water quality monitoring data. This is a requirement for projects funded with CWA 319(h), except in response to emergency situation such as after a wildfire.*

Watershed based planning and restoration of the NPS Management Program will unfairly impact those private landowners within a watershed who practice sound productive BMPs outside of federal conservation programs. The lack of adequate sampling and monitoring of water quality within a watershed may lead to subjective inclusion of those practicing good management in a restoration program not of their choice.

SWQB RESPONSE: *As noted previously all activities funded and implemented under the NPS Management Program are entirely voluntary. For watershed based planning projects to be successful they require the input and support of many local stakeholders and landowners; these projects often involve the collection of significant additional water quality data by these local parties. Further while the development of the a watershed based plan allows for the implementation of BMPs proposed within to be funded under the 319(h) program participation by the property owner is, again, entirely voluntary.*

We think that monitoring once every eight years is inadequate and not statistically sound. After all, the

purpose of SWQB's Monitoring and Assessment Program is to ensure relevant water quality data for all of New Mexico's surface waters are collected and assessed with the most robust scientific methods in a way that is transparent to water quality agencies and the public.

SWQB RESPONSE: *As stated in the Integrated Report, the above is the stated purpose of the Monitoring and Assessment Program and what we strive to accomplish. SWQB is in the process of revising our 10-Year Monitoring Strategy to address concerns such as these to the best of our ability given available and projected resources.*

The "probable source of impairment" approach is a subjective method of determining source of impairment made by field personnel and verified by public meetings and comments. Where are the hard scientific facts that a particular landowners' management activities is contributing to the chemical, biological, and physical impairment of a watershed? We agree that robust scientific methods need to be utilized to ensure relevant water quality data. We also believe that the Executive and Legislative Branches of State Government need to request and appropriate adequate funding to improve monitoring and sampling in the entire state and that those funds should be made available to the County Government and Soil and Water Conservation Districts by contracts or grants to accomplish better sampling, monitoring and analysis then work on improving the data and working on more localized voluntary BMPs.

SWQB RESPONSE: *SWQB agrees that additional monitoring and inventory by stakeholders and other entities would be beneficial. To this end, SWQB created a "Data Submittal" web page (available at <http://www.nmenv.state.nm.us/swqb/DataSubmittals/>) and has worked with various soil and water conservation districts, consultants, and other stakeholders to ensure the data they are collecting can be collated into the state's assessment process provided they meet or are equivalent to SWQB's quality assurance procedures.*

Another area of concern relating to the degradation of wetland areas is New Mexico's playas. The majority of the playas in Quay County are on private land and the term "degradation" is all inclusive, categorical, and misleading without adequate monitoring data to justify calling them degraded and impaired. We agree with the report that attainment status for playas or lakes where adequate resources have not been available to re-monitor in more recent years were changed to "Not Assessed" and playas or lakes where data from only one sampling event were previously used to make Full Support determinations were changed to "Not Assessed" because this is considered to be insufficient data to make attainment determinations under current assessment protocols. Again, we reiterate our previous statement that valid objective monitoring is critical to identifying impaired or degraded playas.

SWQB RESPONSE: *SWQB agrees that the use of the term "degradation" in this sentence in the New Mexico Wetlands section of the Integrated Report is not appropriate given the lack of recent monitoring data. The sentence was changed to "Another area of concern relating to the condition of wetland areas is New Mexico's playas."*

Another concern we have is the statement that a majority of nonpoint source concerns are associated with runoff from Extensive road networks in rural areas. Although the EPA proposed "waters of the US" rule excludes irrigation ditches from the rule except when they directly or indirectly contribute water to a traditional water of the US, we are of the opinion that waters from county road ditches will come under EPA jurisdiction. Quay County is a rural county with an extensive road system (1,114 miles) that provides access for law enforcement, emergency medical services, firefighting and legal access to landowner's farms, ranches, and residences. Any restoration of surface runoff from the road system will be impossibly expensive for the county and may result in a number of roads being closed which will

impair public safety, emergency services and places a hardship on county residents as well as law enforcement. Again, we believe that a determination of the historic baseline water quality be determined and then a scientifically sound monitoring and analysis of water quality from the Quay County road system needs to be state funded and locally implemented before any suggestion of changes in management and maintenance or restoration activities are required.

SWQB RESPONSE: *SWQB agrees that roads through rural areas are important for access and safety; however these roads can be constructed and maintained in such a way as to reduce their potential to contribute to nonpoint source pollution in adjacent surface waters. As noted previously, all BMPs implemented to address nonpoint source pollution are voluntary.*

Thank you for the opportunity to comment and we urge you to work cooperatively with Quay County and others to develop more accurate monitoring and sampling along with establishing that naturally occurring elements and erosion are not pollution and should not be included in determining impairments.

Sincerely,

Richard D. Primrose
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ATTACHMENT A: USEPA Region 6 memorandum dated June 16, 2014



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
WATER QUALITY DIVISION
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

June 16, 2014

MEMORANDUM

SUBJECT: Review of LANS's Response to Comments on the *Justification for an Integrated Reporting Category 4b Demonstration – Upper Sandia Canyon Assessment Unit – AU NM-9000.A_047-Dissolved Copper Pollutant Pair*

TO: Daniel Reid, Monitoring and Assessment
Water Quality Protection Division

Through: Richard Wooster, Chief
TMDL Section

From: Katrina Higgins-Coltrain, State Coordinator
TMDL Section

A handwritten signature in black ink, appearing to read "Higgins", is located to the right of the "From:" field.

On March 5, 2014, the New Mexico Environment Department Surface Water Quality Board (SWQB) received the *Justification for an Integrated Reporting Category 4b Demonstration – Upper Sandia Canyon Assessment Unit – AU NM-9000.A_047-Dissolved Copper Pollutant Pair*, submitted by Los Alamos National Security, LLC (LANS) and the Department of Energy. The document was then sent to the U.S. Environmental Protection Agency (USEPA) for review. On April 4, 2014, the SWQB, and LANS participated in a conference call to discuss the report and comments received. By letter dated May 14, 2014, the SWQB received the *DOE/LANS Response to the Environmental Protection Agency's April 8, 2014, Review of the Category 4b Demonstration* (DOE/LANS Response) while EPA received a May 15, 2014, email notification that the DOE/LANS Response was available for download and review. The purpose of this memorandum is to provide a summary of the DOE/LANS Response for your consideration.

In the April 8, 2014, EPA memorandum, three elements of the Category 4b Structure were identified as the primary areas of concern and were essential to the evaluation of the Category 4b Demonstration and its acceptance as an alternative to a total maximum daily load (TMDL). The three elements identified were (1) Identification of assessment unit and statement of problem causing the impairment; (2) Description of pollution controls and how they will achieve water quality standards; and (3) Monitoring plan to track effectiveness of pollution controls. In addition, section-specific comments were included

to assist with responses and revisions under each of the three elements. Based on the review of the DOE/LANS responses, all three elements and specific-section comments have been adequately addressed and the provided information clarifies work completed, describes work underway, and summarizes future work to be implemented.

The purpose of the Category 4b Demonstration is to demonstrate and document that current and future regulatory controls are stringent enough, in place, and monitored such that development of a TMDL is unnecessary because both mechanisms would essentially achieve the same surface water quality goal. LANS has provided information related to the following regulatory controls and associated compliance monitoring.

Resource Conservation and Recovery Act Consent Order

- Site investigations and corrective actions have been and continue to be implemented to address site contamination in order to protect human health and the environment.

NPDES Permit NM0028355

- The Industrial Point Source NPDES permit regulates 3 outfalls associated with the Upper Sandia Canyon assessment unit.

NPDES Permit NM0030759

- The Storm Water Individual NPDES permit regulates 13 solid waste management units and areas of concern associated with the Upper Sandia Canyon assessment unit.

NPDES Permit NMR05GB21

- The Storm Water Multi-Sector General Permit NPDES permit regulates 7 operational industrial facilities associated with the Upper Sandia Canyon assessment unit.

Army Corp of Engineers Nation-wide Permit #38 under CWA, Section 404

- The permit allowed for construction of a grade-control structure at the head of the Sandia Wetland.

In addition to the regulatory controls listed above, LANS is planning to complete complementary actions to support attainment of water quality standards.

- LANS plans to update and revise the *Background metals concentrations and Radioactivity in Storm Water on the Pajarito Plateau, Northern New Mexico*¹, with additional data. The purpose is to determine background concentrations in the undeveloped reference watershed and western locations and determine the baseline/non-point source concentrations of metals in urban/developed areas runoff. The DOE/LANS response indicates that this report was not formally reviewed and accepted by the Agencies; however, copies were provided. LANS intends to collect more data and is working with NMED and the communities to finalize the sampling for 2014. LANS further explains that the undeveloped background and urban/developed background values are used as a tool to explain exceedances of the storm water individual permit (IP) and the storm water multi sector general permit (MSGP) benchmark values. It is also stated that there is no

¹ Background Metals Concentrations and Radioactivity in Storm Water on the Pajarito Plateau, Northern New Mexico, Los Alamos National Laboratory, LA-UR-13-22814 (ERID-239557), April 2013.

formal agreement that the undeveloped background and urban/developed background baseline values are acceptable and representative.

This report will be critical to understanding the nature of urban storm water runoff associated with the Upper Sandia Canyon assessment unit's drainage area.

- LANS plans to develop an Urban Storm Water Management Plan to address storm water runoff from urban developed areas on Laboratory property. *“This plan will aid in further identifying storm water runoff locations, quantifying runoff volumes, identifying potential pollutant sources affecting water quality, and assisting in the identification of appropriate Best Management Practices and control measures for both current and future sites and activities.”*²
- LANS plans to implement an Effectiveness Monitoring Strategy for the 4B Demonstration that will be developed in conjunction with the regulatory agencies. This plan will include
 - a description of and schedule for monitoring milestones to track the effectiveness of the pollution controls (e.g., sampling of gages E-121, E-123, and S-SCA-2 quarterly and after storm events).
 - water quality monitoring that will be performed to determine the combined effectiveness of the pollution controls on ambient water quality (e.g., sampling for TSS, total and dissolved copper, ph, and wetland performance criteria).
 - water quality monitoring upgradient and downgradient of the segment quarterly and after storm events.
 - application of the estimated 4b Demonstration loadings as targets for point and non-point discharges.

Based on the regulatory control in place, the additional controls LANS is planning to implement, and the effectiveness monitoring strategy that will be developed, this 4b Demonstration may lead to attainment of the dissolved copper (acute) water quality criterion and designated use. The Urban Stormwater Management Plan, Effectiveness Sampling Strategy, and the Background sampling and analysis report are essential documents that must be developed for a successful project, and should be reviewed by and acceptable to the Agencies that will be evaluating effectiveness.

USEPA regulations recognize that alternative pollution control requirements that are stringent enough, in place, and monitored may make the development of a TMDL unnecessary because both mechanisms would essentially achieve the same surface water quality goal. Specifically, TMDLs are not required if technology-based effluent limitations, more stringent effluent limitations, or other pollution control requirements (e.g., best management practices) required by local, State, or Federal authority are stringent enough to implement an applicable water quality standard (WQS) [see 40 CFR 130.7(b)(1)] within a reasonable period of time. Alternatively, an assessment unit can be moved from Category 4b to Category 5 if the original Category 4b Determination can no

² Justification for an Integrated Reporting Category 4b Demonstration – Upper Sandia Canyon Assessment Unit – AU NM-9000.A_047-Dissolved Copper Pollutant Pair, Los Alamos National Laboratory, LA-UR-13-28670, March 5, 2013.

longer be supported.³

When LANS revises the document, the following revisions are requested.

1. Figure 4: All of the 2008 results are not plotted.
2. Section 2.1.3:
 - a. Identify the equations used to calculate each column of the data used to develop the flow duration curve. This can be provided as a footnote.
 - b. Identify the process and equation used to calculate the TMDLs 0.248 lbs/day, 0.0499 lbs/day, and 0.0375 lbs/day shown in Figure 2.
3. Table 7: it is noted that the loadings are based on total copper concentrations rather than dissolved copper concentrations. Please include a discussion and clarification in the text.

³ Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act. Memorandum from the Office of Wetlands, Oceans, and Watersheds. July 29, 2005. Washington, D.C.

ATTACHMENT B: Amigos Bravos (COMMENT SET 7) submitted comment attachments

**A Petition by Amigos Bravos
for a Determination that Storm Water Discharges
in Los Alamos County
Contribute to Water Quality Standards Violations
and Require a Clean Water Act Permit**

June 30, 2014

Ron Curry, Regional Administrator
EPA Region 6
1445 Ross Avenue, Suite 1200, Dallas, Texas 75202
gray.david@epa.gov

Dear Administrator Curry,

As the Regional Administrator of EPA Region 6, Amigos Bravos hereby petitions you for a determination, pursuant to 40 C.F.R. 122.26(a)(9)(i)(D), that non-de minimis, currently non-NPDES permitted storm water discharges in Los Alamos County are contributing to violations of water quality standards in certain impaired waters throughout the area, and therefore require a National Pollutant Discharge Elimination System (NPDES) permit pursuant to Section 402(p) of the Clean Water Act and/or designation as a municipal separate storm sewer system. *See* 33 U.S.C. §§ 1342(p)(2)(E), (p)(6); 40 C.F.R. §§ 122.26(a)(1)(v), (a)(9)(i)(D), (f)(2), (f)(4).

I. Regulatory Framework

In order to achieve the Clean Water Act's (CWA or the Act) fundamental goal of "restor[ing] and maintain[ing] the chemical, physical, and biological integrity of the Nation's waters,"³³ U.S.C. § 1251(a), EPA and states delegated authority to administer the Act must establish minimum water quality standards. 33 U.S.C. § 1313; 40 C.F.R. § 131.2. These standards define "the water quality goals of a water body, or portion thereof, by designating the use or uses to be made of the water and by setting criteria necessary to protect the uses." 40 C.F.R. § 131.2. New Mexico has established, and EPA has approved, water quality standards pursuant to this requirement.

In order to ensure that such water quality standards will be achieved, no person may discharge any pollutant into waters of the United States from a point source without a National Pollutant Discharge Elimination System (NPDES) permit. 33 U.S.C. §§ 1311(a), 1362(12)(A). NPDES permits must impose water quality-based effluent limitations, in addition to any applicable technology-based effluent limitations, when necessary to meet water quality standards. 33 U.S.C. § 1311(b).

The Act defines "point source" as "any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit . . . from which pollutants are or may

be discharged.” 33 U.S.C. § 1362(14). EPA’s Clean Water Act regulations further specify that “discharge of a pollutant” includes “additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man.” 40 C.F.R. § 122.2. Consequently, although storm water discharges are often characterized as “non-point” in nature, it is legally well settled that “[s]torm sewers are established point sources subject to NPDES permitting requirements.” *Environmental Defense Center v. EPA*, 344 F.3d 832, 841 (9th Cir. 2003) (*citing Natural Resources Defense Council v. Costle*, 568 F.2d 1369, 1379 (D.C. Cir. 1977)). As EPA has stated, “[f]or the purpose of [water quality] assessments, urban runoff was considered to be a diffuse source or nonpoint source pollution. From a legal standpoint, however, most urban runoff is discharged through conveyances such as separate storm sewers or other conveyances which are point sources under the CWA.” National Pollutant Discharge Elimination System Permit Application Regulations for Storm Water Discharges, 55 Fed. Reg. 47,990, 47,991 (Nov. 16, 1990).

Despite the fact that storm water runoff channeled through a conveyance is a point source subject to the Act’s permitting requirements, EPA did not actually regulate storm water through the NPDES program until Congress amended the statute in 1987 to explicitly require it, *see* 33 U.S.C. § 1342(p), and EPA promulgated its Phase I and II regulations in 1990 and 1999, respectively.¹ As a result, the Clean Water Act now requires NPDES permits for discharges of industrial and municipal storm water. 33 U.S.C. § 1342(p)(2). While these are the only categories of storm water discharges called out for regulation in the text of the statute, Congress also created a catch-all provision directing EPA to require NPDES permits for any storm water discharge that the Administrator or the State director determines “contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States.” 33 U.S.C. § 1342(p)(2)(E); 40 C.F.R. § 122.26(a)(1)(v).

This catch-all authority – known as EPA’s “residual designation authority” (RDA) – is a critical tool to ensure that problematic discharges of storm water do not go unregulated. In the preamble to its Phase II Storm water regulations, EPA described the need for this authority: “EPA believes . . . that individual instances of storm water discharge might warrant special regulatory attention, but do not fall neatly into a discrete, predetermined category. Today’s rule preserves the regulatory authority to subsequently address a source (or category of sources) of storm water discharges of concern on a localized or regional basis.”²

Citizens may petition EPA for designation of storm water sources for regulation under this authority. 40 C.F.R. § 122.26(f)(2) and (f)(4). In recent years, often acting in response to such petitions, EPA and delegated states have exercised this residual designation authority on multiple

¹ National Pollutant Discharge Elimination System Permit Application Regulations for Storm Water Discharges, 55 Fed. Reg. 47,990 (Nov. 16, 1990); National Pollutant Discharge Elimination System—Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges, 64 Fed. Reg. 68,722 (Dec. 8, 1999).

² National Pollutant Discharge Elimination System—Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges, 64 Fed. Reg. at 68,781.

³ U.S. EPA Region IX, Request for Designation of MS4 Discharges on the Island of Guam for NPDES Permit Application Regulations for Storm Water Discharges, 64 Fed. Reg. at 68,781.

occasions.³

Once EPA has made a finding or determination that a category of discharges meets the statutory criterion of “contribut[ing] to a violation of a water quality standard,” it must designate that category for regulation, and those “operators shall be required to obtain a NPDES permit.” 40 C.F.R. § 122.26(a)(9)(i)(D). In other words, “the Agency’s residual designation authority is not optional.” *In re Storm water NPDES Petition*, 910 A.2d 824, 835-36 (Vt. 2006). As EPA has explained, “designation is appropriate as soon as the adverse impacts from storm water are recognized.” Letter from G. Tracy Mehan III, EPA Assistant Administrator, to Elizabeth McLain, Secretary, Vermont Agency of Natural Resources 2 (Sept. 16, 2003).⁴

EPA has not defined a threshold level of contribution to water quality standards violations that would suffice to make such a determination. However, the agency has advised delegated states that “it would be reasonable to require permits for discharges that contribute more than *de minimis* amounts of pollutants identified as the cause of impairment to a water body.” *Id.*

In New Mexico, EPA Region VI is the permitting agency. Thus, the Region would make a determination under 40 C.F.R. § 122.26(a)(9) whether a storm water discharge is contributing to a water quality standards violation or is a significant contributor of pollutants. Once you receive an RDA petition requesting that EPA exercise this authority, the Agency must make a final decision on the petition within 90 days. 40 C.F.R. § 122.26(f)(5).

In responding to similar petitions filed last year, EPA Regions I, III and IX have indicated that they considered five factors. We do not concede that these five factors are consistent with the relevant provisions of the Clean Water Act or EPA’s implementing regulations; however, they provide a useful framework for this analysis. The factors are:

1. Likelihood of exposure of pollutants to precipitation at sites in the categories identified in the petition;
2. Sufficiency of available data to evaluate the contribution of stormwater discharges to water quality impairment from the targeted categories of sites;
 - a. Data with respect to determining causes of impairment in receiving water quality;
 - b. Data available from establishment of Total Maximum Daily Loads;

³ U.S. EPA Region IX, Request for Designation of MS4 Discharges on the Island of Guam for NPDES Permit Coverage (Feb. 2011), available at <http://www.epa.gov/region9/water/npdes/pdf/guam/Guam-ms4-residual-designation-memo.pdf>; Vermont Agency of Natural Resources, Department of Environmental Conservation, Final Designation Pursuant to the Clean Water Act for Designated Discharges to Bartlett, Centennial, Englesby, Morehouse and Potash Brooks (Nov. 2009), available at http://www.vtwaterquality.org/stormwater/docs/swimpairedwatersheds/sw_rda_permit_FINAL.pdf; U.S. EPA Region I, Final Determination Under Section 402(p) of the Clean Water Act—Long Creek (Oct. 2009), available at <http://www.epa.gov/region1/npdes/stormwater/assets/pdfs/LongCreekFinalResidualDesignation.pdf>; U.S. EPA Region I, Residual Designation Pursuant to Clean Water Act—Charles River (Nov. 2008), available at <http://www.epa.gov/region1/charles/pdfs/RODfinalNov12.pdf>.

⁴ All documents cited in this Petition and the attached Statement of Facts are provided in the Appendix, which is submitted as part of the Petition.

3. Whether other federal, state, or local programs adequately address the known stormwater discharge contribution to a violation of a water quality standard.⁵

Additional factors can be found in Addendum D to a Region VI document titled “FACT SHEET, August 29, 2003, Proposed Issuance of National Pollutant Discharge Elimination System (NPDES) Storm Water General Permit for Small Municipal Separate Storm Sewer Systems (MS4s)” [hereinafter “Region VI Fact Sheet”]. The Region VI Fact Sheet details the results of an effort by EPA to determine the need for MS4 coverage within the region. The factors listed in Addendum D were used to decide which MS4s would be included in the general permit. The factors are:

- 1) Does the MS4 discharge storm water to sensitive waters?

“Sensitive waters” generally include public drinking water intakes and their designated protection areas; swimming beaches and waters in which swimming occurs; shellfish beds; state-designated Outstanding Resource Waters; National Marine Sanctuaries; waters within Federal, State and local parks; and waters containing threatened or endangered species and their habitat. Discharges of storm water to sole-source aquifers will be considered by EPA Region 6 on a case-by-case basis.

- 2) Is the MS4 a significant contributor of pollutants to waters of the United States?

A municipal storm water discharge that has been identified as a “contributing source of pollutants” to a Clean Water Act section 303(d)-listed waterway will be considered a significant contributor of pollutants for purposes of designation decisions. A storm water discharger that is required to reduce loading through an EPA-approved Total Maximum Daily Load (TMDL) analysis shall also be considered a significant contributor of pollutants to waters of the United States.

- 3) Is the MS4 densely populated?

Population density is related to the level of human activity, and has been shown to be directly linked to total impervious land surfaces; impervious surfaces are directly related to pollutant loadings from storm water runoff. EPA is also taking into consideration whether or not the MS4 serves a larger seasonal or commuter population.

- 4) Has the MS4 experienced high population growth over the last 10 years?

⁵ Enclosure to Letter from H. Curtis Spalding, Regional Administrator, EPA Region I, to Jeffrey Odefey, Christopher Kilian, and Jon Devine 4 (March 11, 2014); Enclosure to Letter from Shawn M. Garvin, Regional Administrator, EPA Region III, to Jeffrey Odefey, Director of Storm water Programs, American Rivers 6 (March 12, 2014); Enclosure to Letter from Jared Blumenfeld, Regional Administrator, EPA Region IX, to Jeffrey Odefey, Director of Storm water Programs, American Rivers 5 (March 12, 2014) [hereinafter “March 2014 Letters”].

High population growth or growth potential means the local residential population has grown by 10% or more, based upon the latest Census Bureau information. A discussion on selection of 10% as a high growth rate outside urbanized areas was included in the proposed Phase II regulations published January 9, 1998 (63 FR 1561).

5) Is the MS4 contiguously located to an Urbanized Area?

Jurisdictions that are directly adjacent to a U.S. Census Bureau-defined Urbanized Area will be considered to have potential impacts on a neighboring regulated municipality.

6) Is the MS4 physically interconnected to another MS4?

As required by 40 CFR 123.35 (b)(4), an MS4 located outside a UA that contributes substantially to the pollutant loadings of a physically interconnected MS4 already regulated under Phase II must be included in the program. To be “physically interconnected,” the MS4, including roads with drainage systems and municipal streets, is physically connected directly to a municipal separate storm sewer of another entity.

7) Is the storm water runoff from this MS4 effectively addressed by other water quality programs?

EPA will consider, on a case-by-case basis, whether the storm water runoff from a potentially designated MS4 is effectively addressed under other regulations or programs, such as the Coastal Zone Act Reauthorization Amendments, the National Estuary Program under Clean Water Act section 320, and/or other non-point source programs. Information in support of this criterion should be provided directly to EPA Region 6 by the candidate MS4.

Region VI Fact Sheet at 51-3 (Addendum D). In the Fact Sheet EPA describes the analytical process it used: “water quality considerations and overall impacts of storm water discharges will be given more ‘weight’ than population characteristics in this decision-making process.” *Id.* at 53.

II. Factual Background

A statement that summarizes the undisputed facts and some relevant documents is attached as Exhibit A, and is incorporated herein by reference. A summary of this statement is set forth below:

A. LAY OF THE LAND

Los Alamos County is located in north-central New Mexico, approximately 60 miles north northeast of Albuquerque and 25 miles northwest of Santa Fe. Statement of Facts in Support of Amigos Bravos’ Petition at 1 (Paragraph 1) (Attached as “Exhibit A”) [hereinafter “Statement of

Facts”]. The main population center is called the Los Alamos Townsite. *Id.* (Paragraph 2). The other densely inhabited place in the County is the community of White Rock Canyon. *Id.* Los Alamos County is also home to the 36 square mile Los Alamos National Laboratory (LANL or the Laboratory). *Id.* (Paragraph 4).

The Los Alamos Townsite and the urbanized areas of LANL sit on the Pajarito Plateau. *Id.* (Paragraph 5). The Pajarito Plateau consists of a series of finger-like mesas separated by deep east-to-west-oriented canyons cut by streams. *Id.* (Paragraph 6). Most Laboratory and community developments are confined to the mesa tops. *Id.* Urban landscapes at the Townsite and at LANL include parking lots, roads, and structures. *Id.* (Paragraph 7).

LANL property contains all or parts of seven primary watersheds that drain directly into the Rio Grande. *Id.* at 2 (Paragraph 11). Listed from north to south, these watersheds are: Los Alamos, Sandia, Mortandad, Pajarito, Water, Ancho, and Chaquehui Canyons. The Los Alamos Townsite and the urbanized areas of LANL drain into five canyons: Los Alamos, Pueblo, Sandia, Bayo and Mortandad Canyons. *Id.*

B. WATER IMPAIRMENT

The Statement of Facts provides a detailed discussion of urban-related surface water pollution downgradient from LANL and the Los Alamos Townsite.

1. **Several Canyons are Impacted by Runoff Pollution**

Los Alamos Canyon within LANL property is impaired for gross alpha (a measurement of overall radioactivity), PCBs, aluminum, copper, mercury, and zinc. *Id.* (Paragraph 16). New Mexico Environment Department (NMED) data show levels of PCBs in Los Alamos Canyon downgradient from most of the urbanized areas at LANL to be over 11,000 times greater than the New Mexico Human Health water quality criteria and 51 times greater than the New Mexico Wildlife Habitat water quality criteria. *Id.* at 3 (Paragraph 18).

Sandia Canyon is impaired for PCBs, aluminum, copper, gross alpha, and mercury. *Id.* (Paragraph 19). Post-development erosion and sedimentation are listed as sources of impairment in the 2012-2014 State of New Mexico Clean Water Act 303b/305b 2014 Integrated Report [hereinafter “303b/305b Report”]. Statement of Facts at 3 (Paragraph 19). NMED data show levels of PCBs in Sandia Canyon below much of the urbanized areas at LANL to be over 14,000 times greater than the New Mexico Human Health water quality criteria and 66 times greater than the New Mexico Wildlife Habitat water quality criteria. *Id.* (Paragraph 20). In a 2013 request to EPA for alternative compliance with its Clean Water Act discharge permit, LANL explains that copper, zinc, and PCB storm water pollution above New Mexico water quality standards was from urban storm water sources. *Id.* at 7 (Paragraph 56).

Mortandad Canyon is impaired for aluminum, copper and gross alpha. *Id.* at 2 (Paragraph 15). Impervious surface/parking lot runoff, post-development erosion and sedimentation, and watershed runoff following forest fire are listed as sources of impairment in the 303b/305b Report. *Id.*

Pajarito Canyon is impaired for gross alpha, aluminum, PCBs, and copper. *Id.* at 3 (Paragraph 21). Post-development erosion and watershed runoff following forest fire are listed as sources of impairment in the 303b/305b Report. *Id.*

Pueblo Canyon is impaired for gross alpha, PCBs, aluminum, copper, and zinc. *Id.* at 2 (Paragraph 13). Industrial/commercial site storm water discharge, post-development erosion and sedimentation are listed as sources of impairment by the NMED in the 303b/305b Report. *Id.* NMED data show levels of PCBs in Pueblo Canyon right in the middle of the Los Alamos urbanized areas to be over 3,500 times greater than the New Mexico Human Health water quality criteria and 16 times greater than the New Mexico Wildlife Habitat water quality criteria. *Id.* (Paragraph 14).

2. Urban Runoff is the Cause

The data and studies summarized in the Statement of Facts firmly link the water quality impairment downgradient from the Pajarito Plateau to storm water runoff from urban areas.

LANL conducted two detailed studies of storm water runoff from the Pajarito Plateau. One study focused on PCB contamination and the second focused on metals contamination. In these studies LANL collected samples from non-urban, non-laboratory influenced reference sites as well as from sites representing runoff from the urbanized areas of the Los Alamos Townsite. Neither the reference nor the urban sites were influenced by point source discharges from LANL's individual storm water permit. These studies show a significant contribution of both PCBs and metals from urban runoff on the Pajarito Plateau.

The LANL PCB study found 40 of the 41 Los Alamos urban storm water samples were above the New Mexico human health water quality criteria for PCBs and 19 of the 41 Los Alamos urban storm water samples were above the New Mexico wildlife habitat water quality criteria for PCBs. *Id.* at 4 (Paragraphs 33-34). The LANL report concluded that suspended PCBs carried by urban runoff from the Los Alamos Townsite were 10 to 200 times more enriched with PCBs than at non-urban influenced Pajarito Plateau sites. *Id.* at 5 (Paragraph 36).

In 2007 the NMED collected storm water samples from urban sites containing PCBs as high as 255 times the state's PCB human health water quality criteria. *Id.* at 8 (Paragraph 64). NMED sampling data in 2006 and 2007 show levels of PCBs in storm water draining off of urban areas in Los Alamos Townsite to be more than 34,000 times greater than the NM Human Health water quality criteria. *Id.* (Paragraph 65).

A Laboratory study of metals contamination in storm water runoff from urban areas at LANL and the Los Alamos Townsite found exceedances of New Mexico water quality criteria for cadmium, copper, and zinc. *Id.* at 6 (Paragraphs 43-50). In addition, the LANL metals report demonstrated that values for copper, zinc and nickel in urban storm water runoff in Los Alamos County substantially exceeded non-urban influenced Pajarito Plateau storm water concentrations. *Id.* at 6-7 (Paragraphs 49-51).

As noted above, in its 303b/305b Report the State of New Mexico found that water quality in Sandia, Mortandad, Pajarito, and Pueblo Canyons is impaired because of urban-related causes such as impervious surfaces, parking lots, construction and development. *Id.* at 2-3 (Paragraphs 13, 15, 19, 21). NMED data also shows substantial water quality impairment in Los Alamos Canyon downgradient from most of the urbanized areas at LANL. *Id.* at 8 (Paragraph 64).

The LANL studies of PCB and metal contaminated runoff tie these contaminants to the urban areas of the Pajarito Plateau. In LANL's 2013 request to EPA for alternative compliance with its Clean Water Act discharge permit, the Laboratory argues that the cause of its exceedances of New Mexico water quality criteria for zinc and copper is urban runoff from sources such as motor oil accumulation on parking lots, brake pad and tire material released on pavement, galvanized fencing, culverts and other building materials. *Id.* at 5 (Paragraphs 38-41).

III. Analysis

Los Alamos County and LANL have a storm water pollution problem. The NMED's 2006 and 2007 data shows dramatic exceedances of the state's PCB human health water quality criteria. The state's 303b/305b Report documents many more exceedances of standards – for a variety of pollutants and locations – and identifies storm water runoff as a major cause. LANL's own documents confirm these findings and identify urban runoff as the culprit.

A. EVALUATION FACTORS FROM MARCH 2014 LETTERS

The evaluation factors from the March 2104 Letters confirm that this Petition should be granted.

Factor one is the “[l]ikelihood of exposure of pollutants to precipitation at sites in the categories identified in the petition.” The 303b/305b Report and the LANL reports show that exceedances of state water quality criteria are associated with storm water; in other words, precipitation comes in contact with sites within Los Alamos County containing pollutants that end up in the storm water flow.

The Petition also meets the second factor, “sufficiency of available data to evaluate the contribution of stormwater discharges to water quality impairment from the targeted categories of sites.” The first sub-factor is the sufficiency of “[d]ata with respect to determining causes of impairment in receiving water quality.” The 2006/2007 NMED data, the 303b/305b Report, the LANL PCB and metals reports and the LANL requests for alternative compliance all provide data and/or analysis that support the Petition. The second sub-factor, the sufficiency of “[d]ata available from establishment of Total Maximum Daily Loads,” is not relevant here as there are no TMDLs for the water-bodies at issue.

Finally, the third factor, “[w]hether other federal, state, or local programs adequately address the known stormwater discharge contribution to a violation of a water quality standard,” is also met. As noted above, there is no TMDL that addresses this storm water-borne pollution. Further, the individual permits for LANL and Los Alamos County do not cover storm water discharges from the urbanized features that generate the pollution. The LANL requests for

alternative compliance repeatedly state that there is no mechanism under the Laboratory's individual storm water permit to control the water quality exceedances found in their sampling because the pollution is caused by runoff from urban features.

EPA's Multi Sector General Permit (MSGP) provides no protection from the sources of pollution involved here. The MSGP applies to operators of storm water discharges associated with thirty different industrial activities, such as scrap recycling facilities, auto salvage yards, and steam electric generating facilities. However, the MSGP does not cover general urban storm water discharges such as the discharges from parking lots and roads that are causing the toxic runoff in Los Alamos County.

B. FACTORS FROM REGION VI FACT SHEET

Application of the factors in the Region VI Fact Sheet also supports this petition.

Factor one is, “[d]oes the MS4 discharge storm water to sensitive waters?” Sub-factors identified by EPA include public drinking water intakes, swimming areas, federal and state parks and threatened or endangered species. Factor one is met for a variety of reasons.

Regarding intake for public drinking water systems, both Santa Fe's and Albuquerque's public water intakes are potentially affected. The runoff from Los Alamos is enough of a public health concern to the downstream City of Santa Fe that it shuts down its surface water diversion on the Rio Grande (the receiving water for runoff from Los Alamos County) used to supply drinking water when storm water flows from Los Alamos are predicted. Statement of Facts at 8-9 (Paragraph 66). Farther downstream, the City of Albuquerque draws fifty percent or more of its drinking water from a surface diversion on the Rio Grande. *Id.* at 9 (Paragraph 67). Consistent with this, the designated uses to be supported by New Mexico Water Quality Standards for the Rio Grande from the Cochiti Pueblo boundary to north of where runoff from Los Alamos' canyons enters the river include “primary contact” (that is, ingestion) and “public water supply.” *Id.* (Paragraph 68).

Regarding the sub-factor for swimming areas, the Rio Grande feeds Cochiti Lake, which is a very popular swimming location in the summer for residents of Albuquerque and others. *Id.* (Paragraph 69).

Regarding the sub-factor for federal and state parks, the Rio Grande is adjacent to Bandelier National Monument and makes up more than four miles of its eastern boundary. *Id.* (Paragraph 70).

Finally, although they are not threatened or endangered, the Rio Grande provides habitat for re-introduced river otters, which have been observed below the point where the Los Alamos canyons intersect the river. *Id.* (Paragraph 71).

Factor two is, “[i]s the MS4 a significant contributor of pollutants to waters of the United States?” The Region VI Fact Sheet, in explaining this factor notes, “[a] municipal storm water discharge that has been identified as a ‘contributing source of pollutants’ to a Clean Water Act

section 303(d)-listed waterway will be considered a significant contributor of pollutants for purposes of designation decisions.” Region VI Fact Sheet at 52. The 303b/305b Report identifies storm water discharges from Los Alamos County as causes for the impairment to several water courses discharging into the Rio Grande. Further, the LANL PCB and metals reports as well as its request for alternative compliance confirm that exceedances of water quality standards are caused by storm water discharges from Los Alamos County.

Factor three, “**[i]s the MS4 densely populated?**” is met because Los Alamos has been designated as an “urban cluster,” based on the results of the 2010 census. 77 Fed. Reg. 18,651, 18,662 (Mar. 27, 2012). In addition Los Alamos Townsite meets the small MS4 definition as detailed in 40 CFR 122.32 in that it has a population greater than 10,000 and a population density of greater than 1,000 per square mile. Statement of Facts at 1 (Paragraph 2). Adding to the density in Los Alamos County is its growing commuter population. As of the year 2000 the commuter population in the county was 8,673 and had grown steadily from 1980 through 2000. *Id.* (Paragraph 3). By 2010 the commuter population had grown to 9,072. *Id.*

Factor three, “**[h]as the MS4 experienced high population growth over the last 10?**” is not met based on permanent population but the commuter population has grown steadily, as noted above.

Factors five and six – whether contiguous to an urbanized area, and whether physically interconnected to another MS4 -- are not met. However, as the Region VI Fact Sheet explains at page 53: “water quality considerations and overall impacts of storm water discharges will be given more ‘weight’ than population characteristics in this decision-making process.”

Factor seven, “**Is the storm water runoff from this MS4 effectively addressed by other water quality programs?**” is the same as the third factor from the March 2014 Letters. This factor is met as noted above.

C. THE PETITION SHOULD BE GRANTED

Petitioner Amigos Bravos, and others, have repeatedly requested LANL and Los Alamos County to address this pollution and also requested that EPA Region VI mandate such efforts. MS4 coverage is required to address this pollution.

Based on the well-documented water quality impairment caused by urban runoff from Los Alamos County sites, Amigos Bravos requests that EPA require an individual NPDES permit (or permits)⁶ for these discharges into municipal separate storm sewer systems. In the alternative, Amigos Bravos requests that EPA designate the systems through which these discharges travel

⁶ Because of its existing monitoring infrastructure and baseline studies as well as the unique concerns associated with storm water flows mobilizing historic contamination from the Lab, Amigos Bravos believes LANL should have an individual MS4 permit with appropriate treatment and monitoring requirements. See Letter from Rachel Conn to William Honker (June 30, 2014) (copy provided in the Appendix). However, whatever form the permit takes -- whether general or individual – EPA has a responsibility to protect water quality by subjecting urban stormwater from the Los Alamos to Clean Water Act regulation.

as a municipal separate storm sewer system under the Act and add it to the general permit.

For all the foregoing reasons, the Petition has merit and should be granted.

Sincerely,

/s/ Rachel Conn

Rachel Conn
Projects Director
Amigos Bravos

Cc: William K. Honker
Claudia V. Hosch
Brent Larsen
Nancy K. Stoner
Michael H. Shapiro
Sarah Holcomb, NMED

Statement of Facts in Support of Amigos Bravos' Petition¹

1. Los Alamos County is located in north-central New Mexico, approximately 60 miles north northeast of Albuquerque and 25 miles northwest of Santa Fe.²
2. According to the 2010 Census, the county has a population of 17,950. The main population center is called the Los Alamos Townsite. The Townsite is a Census Designated Place (CDP) and according to the 2010 Census the population of the CDP was 12,019. According to the 2010 Census, the density of the Los Alamos Townsite CDP is 1,078.7 persons per square mile. The other densely inhabited place in the County is the community of White Rock Canyon, which is also a CDP. According to the 2010 Census the population of White Rock Canyon is 5,725 and the density is 811.8 persons per square mile. 2010 Census, <http://quickfacts.census.gov/qfd/states/35/3542320.html>
3. The number of commuters who work in Los Alamos County but live elsewhere has increased from 1980 to 2000.³ In 1980 the number of commuters was 4,263, which increased to 6,485 in 1990. The year 2000 figure is 8,673. In 2010 the number of commuters had increased to 9,072.⁴
4. Los Alamos County is home to the 36 square mile Los Alamos National Laboratory (LANL), which was founded to undertake the Manhattan Project.⁵
5. The Los Alamos Townsite and the urbanized areas of LANL sit on the Pajarito Plateau.
6. The Pajarito Plateau consists of a series of finger-like mesas separated by deep east-to-west-oriented canyons cut by streams. The mesa tops range in elevation from approximately 7,800 feet on the flanks of the Jemez Mountains to about 6,200 feet at the edge of White Rock Canyon. Most Laboratory and community developments are confined to the mesa tops. 2012 Environmental Report at 1-2.
7. Urban landscapes at the Townsite and at LANL include parking lots, roads, and structures ranging in age from the 1940s to 2012. These features release a variety of soluble and insoluble constituents to storm water, including metals and organic

¹ All the documents reference herein are included in the Appendix, which accompanies the Petition.

² Los Alamos National Laboratory, *Polychlorinated Biphenyls in Precipitation and Stormwater within the Upper Rio Grande Watershed 2* (May 2012) (LA-UR-12-1081) (PCB Report).

³ Los Alamos County Community Development Department, *Los Alamos County Affordable Housing Plan 38* (Jan. 14, 2010) (Table 14), www.losalamosnm.us/cdd/Documents/Affordable%20Housing/LAAffordableHousingPlan2010.pdf

⁴ U.S. Census Bureau, *Table 2. Residence County to Workplace County Flows for the United States and Puerto Rico Sorted by Workplace Geography: 2006-2010* <http://www.census.gov/population/metro/data/other.html> (sum of column E values for rows 73589-621; omitting row 73604).

⁵ Los Alamos National Laboratory, *Los Alamos National Laboratory Environmental Report 2012*, 1-1 and 1-2 (2012) (LA-UR-13-27065) (2012 Environmental Report).

compounds.⁶

8. LANL lies in the upper Rio Grande watershed denoted by U.S. Geological Survey (USGS) hydrologic unit codes 13020101 and 1301000. <http://water.usgs.gov/wsc/reg/13.html>.
9. LANL has approximately 2,800 structures with approximately 8.6 million square feet of roof space. 2012 Environmental Report at 1-7.
10. The Laboratory has a footprint of developed area that is consistent with urban development. Metals Report at 5.
11. LANL property contains all or parts of seven primary watersheds that drain directly into the Rio Grande. Listed from north to south, these watersheds are Los Alamos (includes Pueblo, DP and Bayo Canyons), Sandia, Mortandad, Pajarito, Water, Ancho, and Chaquehui Canyons. 2012 Environmental Report at 6-2. A map of these watersheds can be found at in the 2012 Environmental Report at page 6-3.
12. The Los Alamos Townsite and the urbanized areas of LANL drain into 7 canyons – Los Alamos Canyon, DP Canyon, Pueblo Canyon, Sandia Canyon, Pajarito Canyon, Bayo Canyon and Mortandad Canyon. 2012 Environmental Report at 6-3.
13. Pueblo Canyon is impaired for Gross Alpha, PCBs, Aluminum, Copper, and Zinc. Industrial/commercial site storm water discharge, post-development erosion and sedimentation are listed as sources of impairment.⁷
14. New Mexico Environment Department (NMED) data presented in NMED's Pajarito Plateau Assessment show levels of PCBs in Pueblo Canyon right in the middle of the urbanized areas at LANL and at Los Alamos Townsite (sampling station EO55) to be over 3,500 times greater than the New Mexico Human Health WQC and 16 times greater than the New Mexico Wildlife Habitat WQC.⁸
15. Mortandad Canyon is impaired for Aluminum, Copper and Gross Alpha. Impervious surface/parking lot runoff, post-development erosion and sedimentation, and watershed runoff following forest fire are listed as sources of impairment. 303b/305b 2014 Report, Appendix A at 238.
16. Los Alamos Canyon within LANL property is impaired for Gross Alpha, PCBs, Aluminum, Copper, Mercury, and Zinc. *Id.* at 125 and 127.

⁶ Los Alamos National Laboratory, *Background Metals Concentrations and Radioactivity in Storm Water on the Pajarito Plateau Northern New Mexico 2* (April 2013) (LA-UR-13-22841) (Metals Report).

⁷ State of New Mexico Water Quality Control Commission, *2012-2014 State of New Mexico Clean Water Act 303b/305b 2014 Integrated Report* Appendix A, 137 to 139 (303b/305b Report).

⁸ NMED, *Pajarito Plateau Assessment for the 2010-2012 Integrated Report* data set with PCBs and map of sampling stations <http://www.nmenv.state.nm.us/swqb/303d-305b/2010-2012/Pajarito/index.html> (Pajarito Plateau Study).

17. Los Alamos Canyon from the Los Alamos Reservoir to headwaters, located above urbanized areas fully supports all assessed designated uses. *Id.* at 126.
18. NMED data presented in NMED's Pajarito Plateau Assessment show levels of PCBs in Los Alamos Canyon, which is located below most of the urbanized areas at LANL (sampling station E030), to be over 11,000 times greater than the New Mexico Human Health WQC and 51 times greater than the New Mexico Wildlife Habitat WQC. See Pajarito Plateau Study (data set with PCBs and map of sampling stations).
19. Sandia Canyon is impaired for PCBs, Aluminum, Copper, Gross Alpha, and Mercury. Post-development erosion and sedimentation are listed as sources of impairment. 303b/305b 2014 Report, Appendix A at 250-51.
20. NMED data presented in NMED's Pajarito Plateau Assessment show levels of PCBs in Sandia Canyon, which is located below most of the urbanized areas at LANL (sampling station E123), to be over 14,000 times greater than the New Mexico Human Health WQC and 66 times greater than the New Mexico Wildlife Habitat WQC. See Pajarito Plateau Study (data set with PCBs and map of sampling stations).
21. Pajarito Canyon is impaired for Gross Alpha, Aluminum, PCBs, and Copper. Post-development erosion and watershed runoff following forest fire are listed as sources of impairment. 303b/305b 2014 Report, Appendix A at 240-43.
22. LANL has coverage under an individual storm water permit NM0030759 (LANL IP), issued by the Environmental Protection Agency. This permit covers 405 contaminated sites, which are called either Solid Waste Management Units (SWMUs) or Areas of Concern (AOCs). These sites are monitored at 250 Site Monitoring Areas (SMAs). NM0030759 only regulates these sites. NM0030759 does not regulate general urbanized runoff at LANL or from the Los Alamos Townsite. See NPDES permit # NM0030759 (LANL IP).
23. The target action levels (TALs) developed in the LANL IP are based on and equivalent to New Mexico State water quality criteria. LANL IP at 3 (Part I).
24. In 2012, copper concentrations in filtered storm water were detected above the New Mexico chronic aquatic life water quality criteria (WQC) for copper in Sandia Canyon (4 of 5 samples). In 2012, copper concentrations in filtered storm water were detected above the NMWQCC acute aquatic life WQC for copper in Acid Canyon, DP Canyon, and at the upper Los Alamos sediment detention basins (5 of 39 samples). All of these locations receive a large percentage of runoff from developed areas. 2012 Environmental Report at 6-25.
25. In 2012 sampling of storm water occurred in watersheds along the western boundary of LANL and in urban, developed landscapes in the Los Alamos townsite and on LANL property. The results were included in a report evaluating background and

baseline concentrations of particular metals, weak acid, dissociable cyanide, gross-alpha radioactivity, and radium isotopes. Metals Report at 1.

26. LANL acknowledges that elevated zinc concentrations in storm water are associated with developed areas. 2012 Environmental Report at 6-26.
27. Only 1 of the 34 precipitation and snowpack samples (that is, background samples) collected by LANL for their PCB report were above the New Mexico human health WQC of 0.64 ng/L, and none were above the wildlife habitat WQC of 14 ng/L. PCB Report at 18.
28. Otowi Bridge on the Rio Grande is located above the runoff from the majority of urban influenced canyon systems from Los Alamos County and LANL (Los Alamos Canyon, Pueblo Canyon, Sandia Canyon, Mortandad Canyon, Bayo Canyon and Mortandad Canyon). See maps found at 2012 Environmental Report at 6-3 and PCB Report at 10.
29. The Buckman Well Field on the Rio Grande is located below the runoff from the majority of Los Alamos County and LANL urban influenced canyon systems. See maps found at 2012 Environmental Report at 6-3 and PCB Report at 10.
30. When collecting data for the PCB report, storm water samplers were placed in ephemeral channels around the edge of urban development in Los Alamos County and LANL. No urban samplers were located below any known areas of concentrated contamination (point sources). PCB Report at 59.
31. No known natural sources of PCBs exist. Because of their non-flammability, chemical stability, high boiling point, and electrical insulating properties, PCBs were historically used in hundreds of industrial and commercial applications. These applications included electrical, heat-transfer, and hydraulic equipment; plasticizers in paints, plastics, caulking, and rubber products; pigments, dyes, and carbonless copy paper; and many other uses. More than 1.5 billion pounds of PCBs were manufactured in the U.S. until domestic manufacture of commercial mixtures, known as Aroclors, ceased in 1977. Approximately 450 million pounds of PCBs have been released to the environment (ATSDR 2000, 213440). *Id.*
32. 41 Los Alamos urban influenced storm water samples were collected and analyzed for PCBs. *Id.* at 62.
33. 40 of the 41 (98%) Los Alamos urban storm water samples were above the New Mexico human health WQC for PCBs. *Id.*
34. 19 of the 41 (46%) Los Alamos urban storm water samples were above the New Mexico wildlife habitat WQC for PCBs. *Id.*
35. In the LANL PCB Report upper tolerance limits (UTLs) were calculated in ProUCL for the best fit distribution to calculate the upper limit concentrations for PCBs under

baseline conditions. (ProUCL is EPA-developed statistical software; http://www.epa.gov/osp/hstl/tsc/ProUCL_v5.0_fact.pdf.) The upper tolerance limit (UTL) for PCBs at Los Alamos urban influenced storm water sites (98 ng/L) was substantially higher than the PCB UTL at Los Alamos area non-urban influenced storm water sites (13 ng/L). PCB Report at 49, 64.

36. Suspended PCBs carried by urban runoff from the Los Alamos townsite were 10 to 200 times more enriched with PCBs than at non-urban influenced Pajarito Plateau sites. *Id.* at 62.
37. The LANL PCB Report shows that urban development in Los Alamos County is contributing large amounts of PCBs to receiving waters. The PCB Report calculated the baseline value for total PCBs in storm water runoff from the Los Alamos Townsite to be 98 ng/L, which is substantially greater than the baseline value of 11.7 ng/L that was measured for reference non-urban influenced runoff in Los Alamos County. *Id.* at 49, 64.
38. The higher concentrations associated with the Los Alamos urban runoff as opposed to the Pajarito Plateau reference sites “likely results from the contribution of additional diffuse local [Los Alamos] sources in the urban environment.” This is consistent with information from the Agency for Toxic Substances and Disease Registry as well numerous studies that report PCB concentrations in storm water in urban areas are higher than in rural locations. Los Alamos National Laboratory, *Alternative Compliance Request for S-SMA-2 23* (April 2013) (Alternative Compliance Request 2).
39. Studies have shown that motor oil accumulation on parking lots that then is discharged during storm events is a large contributor of zinc in storm water. *Id.* at 15.
40. Tire material consists of 1% zinc by weight, which is released with tire wear as particulate dust or as deposits onto pavement. This release of zinc from tire wear has been found to be a source in storm water runoff (Golding 2006). *Id.*
41. Vehicle brake emissions are one of the most important sources of copper in the urban environment (Sondhi 2010). Copper and other metal additives have been used in brake pads since the 1960s. Between 1998 and 2002, the use of copper in domestic brake pads increased by 90% to meet new federal safety regulations. The content of copper in brake pads varies from 15%–25% at present and accounted for an estimated 47% of copper in a Maryland urban residential neighborhood. Brake emissions in California were estimated to contribute 80% of the copper found in urban storm water runoff. *Alternative Compliance Request 2* at 15.
42. LANL repeatedly says in their Alternative Compliance Requests that there is no mechanism under the Individual Stormwater Permit to control the water quality

exceedances found in their sampling because the pollutants come from urban sources, not the Lab.⁹

43. In 2009 LANL prepared a report to measure background levels of metals and radioactivity in storm waters of the Pajarito Plateau unaffected by Laboratory point source activities and baseline levels of metals and radioactivity in urban (runoff from buildings, roads, parking lots, and associated infrastructure) storm water in the Los Alamos area. Metals Report at 1.
44. Sample locations in the Metals Report were chosen to represent urban environments on the Pajarito Plateau (Los Alamos Townsite and LANL). *Id.* at 5.
45. Nineteen samples for the Metals Report were collected from reference areas (not influenced by urban runoff) and analyzed for 26 constituents (metals and radionuclides). These samples were used to determine baseline values for these constituents. *Id.* at 19, 28.
46. Storm water samples from urban areas at LANL and Los Alamos Townsite were collected from 2008-2012 and used to develop the Metals Report. *Id.* at 33.
47. The maximum value for dissolved cadmium in urban runoff samples from LANL and Los Alamos Townsite was 0.894 ug/L. *Id.* at 33. The TAL and NM WQC for dissolved cadmium is 0.6 ug/L. LANL IP at 4 (Part I).
48. LANL sampling found concentrations of dissolved copper in Los Alamos urban storm water discharges at values well above the NM WQC. The maximum value for dissolved copper in urban runoff samples from LANL and Los Alamos Townsite was 31.8ug/L and the mean value was 10.17 ug/L. Metals Report at 34. The TAL and NM WQC for dissolved copper is 4.3 ug/L. LANL IP at 4 (Part I).
49. The Metals Report shows that urban development in Los Alamos County is contributing large amounts of copper to receiving waters. The Metals Report calculated the baseline value for dissolved copper in storm water runoff in Los Alamos County to be 32.3 ug/L, which is substantially greater than the baseline value of 3.43 ug/L that was measured for reference non-urban influenced runoff in Los Alamos County. Metals Report at 17, 37.
50. The Metals Report shows that urban development in Los Alamos County is contributing large amounts of zinc to receiving waters. The Metals Report calculated the baseline value for dissolved zinc in storm water runoff in Los Alamos County to be 1,120 ug/L, which is substantially greater than the baseline value of 109 ug/L that was measured for reference non-urban influenced runoff in Los Alamos County. *Id.*

⁹ Alternative Compliance Request 2 at 31-2; Los Alamos National Laboratory, *Alternative Compliance Request for S-SMA-.25 28* (April 2013) (Alternative Compliance Request .25).

51. The Metals Report shows that urban development in Los Alamos County is contributing large amounts of nickel to receiving waters. The Metals Report calculated the baseline value for dissolved nickel in storm water runoff in Los Alamos County to be 7.57 ug/L, which is substantially greater than the baseline value of 3.53 ug/L that was measured for reference non-urban influenced runoff in Los Alamos County. *Id.*
52. LANL sampling found concentrations of dissolved zinc in Los Alamos urban storm water discharges at values well above the NM WQC. The maximum value for dissolved zinc in urban runoff samples from LANL and Los Alamos Townsite was 882 ug/L and the mean value was 181 ug/L. *Id.* at 34. The TAL and NM WQC for dissolved copper is 42 ug/L. LANL IP 4 (Part I).
53. LANL, in their 2013 Alternative Compliance request to EPA, reports that there is copper storm water pollution above NM WQC from urban development in Sandia Canyon. Alternative Compliance Request .25 at 15.
54. LANL, in their 2013 Alternative Compliance request to EPA, reports that data strongly indicate that zinc pollution in storm water in Sandia Canyon is associated with urban runoff. *Id.* at 16.
55. LANL reports in their 2013 Alternative Compliance request to EPA that the primary source of PCB exceedances of permit TALs (and therefore NM WQC) at site monitoring area S-SMA-.25 is from urban runoff. *Id.* at 22.
56. In their 2013 Alternative Compliance Request to EPA, LANL claims that installing controls at the storm water point sources in S-SMA-.25, a drainage area in the Sandia Canyon Watershed, would not lead to attainment of TALs (the same as NM WQC) because the primary source of exceedances are from storm water runoff from urban and natural background sources. *Id.* at 26, 28. LANL goes on to identify urban storm water runoff as the main source of TAL and NM WQC exceedances for zinc, copper and PCBs. *Id.* at 28.
57. LANL identifies urban runoff from sources such as brake pad wear on parking lots, galvanized fencing, culverts and other building materials as the sources of zinc and copper exceedances of TALs (same as NM WQC). *Id.* at 31.
58. Site-specific storm water run-on samples collected by LANL in Sandia Canyon demonstrate urban storm water runoff contributes to TAL (same as NM WQC) exceedances of PCBs. *Id.*
59. In another drainage area in Sandia Canyon (S-SMA-2.0), LANL identifies anthropogenic urban sources as one of the sources of TAL (and NM WQC) exceedances for PCBs. Alternative Compliance Request 2 at 14.
60. LANL identifies runoff from urban development as the likely source of TAL (and NM WQC) exceedances for copper. At one specific site in Sandia Canyon, which is

the focus of one of their alternative compliance request, copper exceedances from urban runoff ranged from 4.78 ug/L to 21.3 ug/L. The TAL (same as NM WQC) for copper is 4.3 ug/L. *Id.* at 16.

61. LANL identifies runoff from urban development as the likely source of TAL (and NM WQC) exceedances for zinc. At one specific site in Sandia Canyon (S-SMA-2.0), which is the focus of one of their alternative compliance requests, zinc exceedances from urban runoff ranged from 30.9 ug/L to 61.2 ug/L. The TAL (same as NM WQC) for zinc is 42 ug/L. *Id.* at 21.
62. LANL states in their Alternative Compliance Request 2.0 that controls in place under the LANL IP and controls proposed to be installed under the LANL IP would not affect the urban source of PCBs in storm water found at S-SMA-2.0, a drainage area in Sandia Canyon. *Id.* at 27.
63. In 2009 the New Mexico Environment Department (NMED) issued a Notice of Violation (NOV) and proposed penalty of \$13,200 to Los Alamos County for violating state surface water quality standards by discharging contaminated storm water.¹⁰
64. NMED collected storm water samples on 8/3/07 that showed a geometric mean of 0.16316 ug/ of PCBs. They collected another set of samples on 9/5/07 that revealed a geometric mean of 0.00360 ug/L of PCBs. These samples were approximately 255 times and six times the state's PCB human health WQC. The 8/3/07 sample was 12 times the PCB wildlife habitat WQC. Press Release LA County Violations.
65. NMED sampling data in 2007 and 2006 show levels of PCBs in storm water draining off of urban areas in Los Alamos Townsite to be more than 34,000 times greater than the NM Human Health WQC. The concentration of PCBs at Los Alamos County Yard (site 1; 28CtyYdSite1) on 8/2/06 was 22.2 ug/L, which is over 34,000 times greater than the Human Health WQC. A sample taken on 7/26/07 from Timber Ridge (Timber Ridge drainage; 28TimbRg000.2) showed a PCB concentration of 0.133 ug/L, which is 207 times greater than the Human Health WQC. Timber Ridge is a development of apartment buildings in Los Alamos Townsite that drains into Los Alamos Canyon.¹¹
66. The City of Santa Fe diverts water from the Rio Grande at its surface water diversion, the Buckman Direct Diversion Project. This surface water is critical to Santa Fe's effort to meet its current and future water needs. City of Santa Fe, *How the BDD Works*, <http://bddproject.org/about-the-bdd/how-the-bdd-works/>. Santa Fe shuts down its diversion whenever the City's monitors in Los Alamos and Pueblo Canyons

¹⁰ New Mexico Environment Department, *Press Release: Environment Department Issues Notice of Violation and Penalty to Los Alamos County for Allowing Discharge of PCBs into Canyon from County's Annex* (December 15, 2009) (Press Release LA County Violations).

¹¹ This NMED sampling data was obtained via an Inspection of Public Records Act request. The data is included in the Appendix.

detect storm water flows. City of Santa Fe, *Buckman Direct Diversion Project Water Quality FAQs*, <http://bddproject.org/water-quality/water-quality-faqs/>.

67. The City of Albuquerque also diverts surface water from the Rio Grande and uses it for drinking water. Albuquerque Bernalillo County Water Utility Authority, *San Juan Chama Project*, http://www.abcwua.org/San_Juan_Chama_Project.aspx. The City relies upon this diversion project, referred to as the San Juan-Chama Drinking Water Project, for the majority of the City's drinking water and projects a substantial need for this surface water far into the future.¹²
68. The designated uses to be supported by New Mexico Water Quality Standards for the Rio Grande from the Cochiti Pueblo boundary to north of where runoff from Los Alamos' canyons enters the river include "primary contact" (that is, ingestion) and "public water supply." 20.6.4.114.A NMAC.
69. Below where the Los Alamos canyons feed into it, the Rio Grande flows into Cochiti Lake, "[o]ne of the Albuquerque metro-area's most popular swimming spots," with "more than 600 people on the beach every day of a holiday weekend," according to the Army Corps of Engineers. <http://krqe.com/2014/05/22/cochiti-lake-swim-beach-closed-for-memorial-day/>
70. The Rio Grande is adjacent to Bandelier National Monument and makes up more than four miles of its eastern boundary.
https://www.lib.utexas.edu/maps/national_parks/bandelier_park97.pdf
71. The Rio Grande supports a population of re-introduced river otters. Beginning in 2008, 33 river otters have been released to the Rio Grande; since then otters have been spotted in the Rio Grande and its tributaries below where the Los Alamos canyons feed into the Rio Grande.¹³

¹² Albuquerque Bernalillo County Water Utility Authority, *Water Resources Management Strategy Implementation 2024 Water Conservation Plan Goal and Program Update 2* (July 2013), http://www.abcwua.org/uploads/files/2024_Water_Conservation_Plan_Update.pdf (Figure 1).

¹³ James N. Stuart, *River Otter Reintroduction Update* (Feb, 23, 2012) (presentation by NMG&F to N.M. Game Commission).



Friends of the Wild Rivers

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Via USPS and email (Honker.William@epa.gov)

June 30, 2014

William K. Honker, Division Director
Water Quality Protection Division
U.S. EPA, Region VI
Fountain Place, 12th Floor, Suite 1200
1445 Ross Avenue
Dallas, TX 75202-2733

Dear Mr. Honker,

Under separate cover, Amigos Bravos is petitioning the Regional Administrator for a determination that storm water discharges in Los Alamos County are contributing to violations of water quality standards and, therefore, require NPDES permits pursuant to Section 402(p) of the Clean Water Act and/or designation as a municipal separate storm sewer system. Our petition is supported by extensive data and analysis from the New Mexico Environment Department and the Los Alamos National Laboratory. We firmly believe this petition has merit and should be granted.

If the petition is granted, your division will have the task of implementing the decision. In this letter I would like to share with you our vision of how MS4 coverage for Los Alamos could be accomplished. Urban storm water pollution from Los Alamos should be covered by an individual permit.

Both the nature of the pollution and the current monitoring infrastructure that is unique to this area support the case for coverage under an individual permit. The urban storm water runoff from developed areas at LANL and the Los Alamos Townsite are additionally harmful because of LANL's history of releases. Many of the canyons on the Pajarito Plateau have old dump sites called solid waste management units (SWMUS), which continue to release pollution. Annual reports for LANL's individual industrial storm water permit (IP) detail the scope of continuing storm water exceedances from these SWMUS. Specifically, of the 246 sites for which samples were collected, 233 of them had releases that exceeded water quality standards.¹ Some of these

¹ Los Alamos National Laboratory, *Storm Water Individual Permit Annual Report, Reporting Period: January 1–December 31, 2013, NPDES Permit No 0030759 154* (March

exceedances continue to be over 32,000 times greater than water quality standards.² The urban storm water that is discharged into these canyons exacerbates and mobilizes this historic toxic pollution. The unique contamination issues associated with Los Alamos merit the individual treatment and monitoring opportunities available under an individual permit.

Another reason why an individual permit is appropriate in this case is LANL, as demonstrated by its detailed background study reports on PCBs and Metals, as well as by its extensive monitoring under the IP, has the needed monitoring infrastructure already in place as well as an extensive baseline to compare monitoring results collected under an individual MS4 permit.

An individual permit could provide for needed monitoring and specific treatment options that are not available under the general small MS4 permit. Appropriate treatment options for Los Alamos could be similar to those proposed for the individual MS4 permit for Charles County, Maryland under which treatment of twenty percent of the County's impervious surface would be required by the end of the 5-year permit term.³

We look forward to having a constructive dialogue with you and your staff on this topic.

Sincerely,

Rachel Conn
Projects Director
Amigos Bravos

Cc: Claudia Hosch
Brent Larsen

2014) (table 8.2), <http://permalink.lanl.gov/object/tr?what=info:lanl-repo/epr/ERID-254067>.

² Los Alamos National Laboratory, *Renewal Application for NPDES Permit Number NM0030759, Individual Permit for Storm Water Discharges from Solid Waste Management Units and Areas of Concern, Volume 1 of 2* 133 (March 2014) (Table 10), <http://permalink.lanl.gov/object/tr?what=info:lanl-repo/epr/ERID-254864>.

³ *Maryland Department of the Environment Draft National Pollutant Discharge Elimination System Municipal Separate Storm Sewer System Permit 8* (June 18, 2014) (Draft permit for Charles County, Maryland. Permit No MD0068365, <http://www.mde.state.md.us/programs/Water/StormwaterManagementProgram/Documents/Charles%20Permit%20tentative%20determination.pdf>).