2016-2018 Public Comment Draft
State of New Mexico CWA 303(d)/305(b)
Integrated List of Assessed Surface Waters

Presented to:

Forest and Watershed Health Coordinating Group/Drought Task Force
Watershed Management Subcommittee

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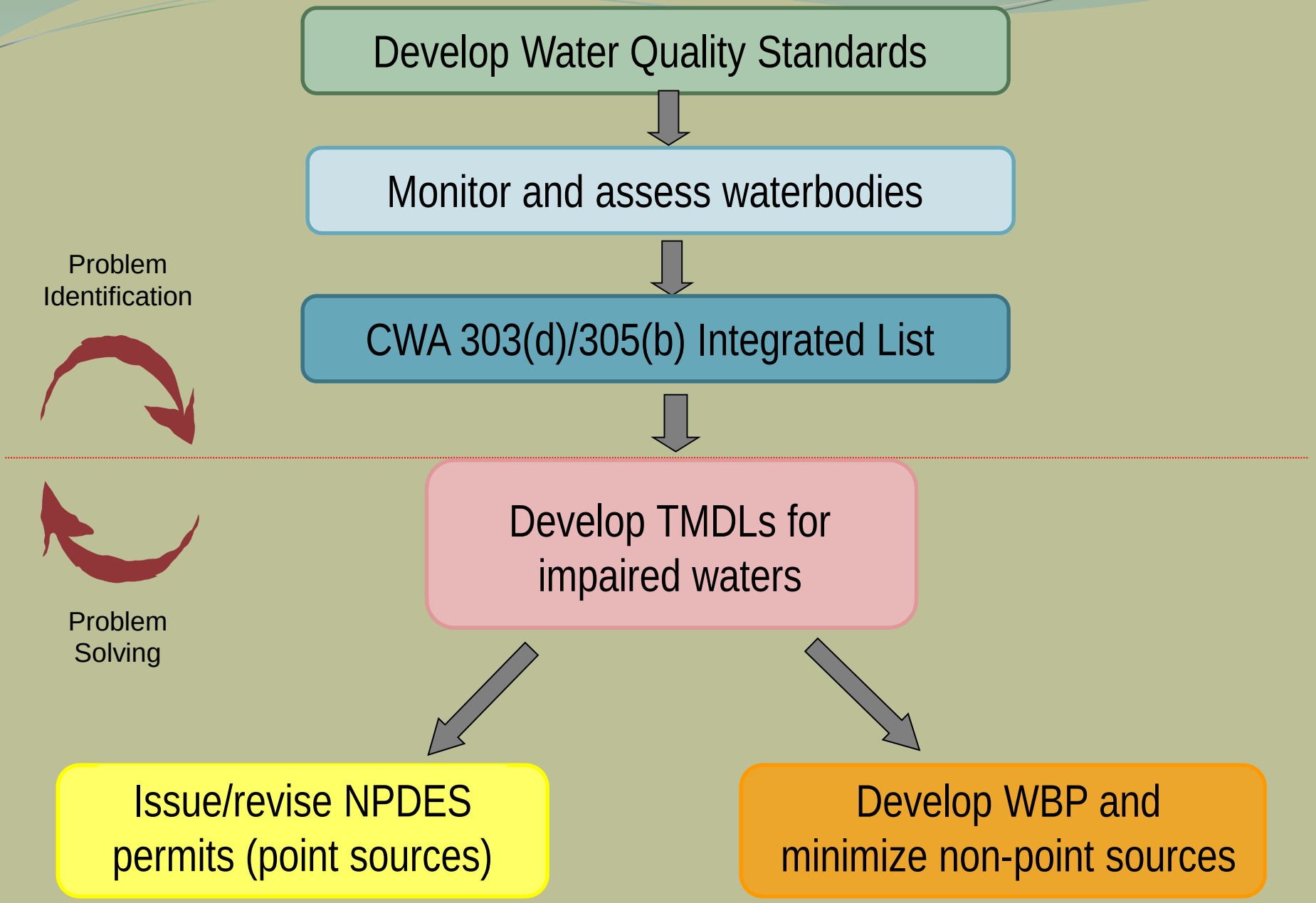
FRAMEWORK FOR RESTORING POLLUTED WATERS



2016 – 2018 INTEGRATED LIST

- The Integrated List is Appendix A of the State of New Mexico §303(d)/ §305(b) Integrated Report (IR)
- List includes designated use attainment status for all assessed surface waters in accordance with EPA's Integrated Report Guidance (IR Categories 1-5)
- **Category 5 waters** = list of impaired waters = "§303(d) list" for EPA Region 6 review and approval purposes
- Impairment status based on:
  - 20.6.4 NMAC water quality standards (June 5, 2013)
  - SWQB's Assessment Protocols (June 22, 2015)

Surface Water Quality Bureau
2014-2016 State of New Mexico
CWA §303(d)/§305(b)
Integrated List & Report
— FINAL —

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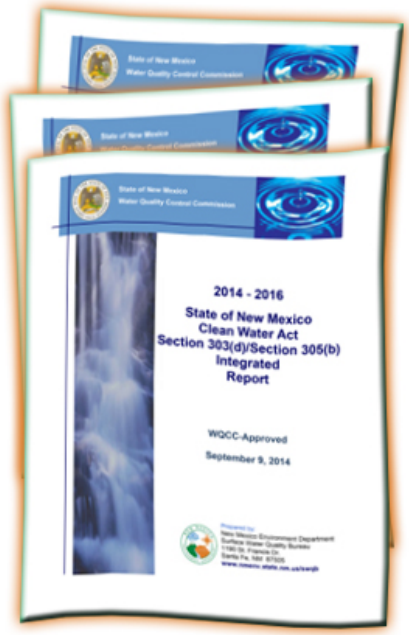
Read Me



PDF DOWNLOADS

Public Notice	12 kb
-Public Notice Extension	
Integrated Report	1.7 MB
Appendix A: Integrated List	1.1 MB

SPREADSHEETS

- Integrated List by IR Category
- Integrated List by IR Category
- All Impairments (Cat. 4 or 5)
- All Impairments (Cat. 4 or 5)
- 2014 New Impairments
- 2014 New Impairments
- 2014 De-Listed Impairments
- 2014 De-Listed Impairments

Appendix B: Sources & Causes Tables	357 kb
Appendix C: Response to Comments	932 kb
Record of Decision	1.4 MB
Public Notice for Data and AP Review	36 kb
External Data Quality Assurance Assessment	195 kb
WQCC Order of Approval	301 kb
NMED Submittal Letter	756 kb
US EPA Approval Letter	3.2MB

PREVIOUS ONLINE EDITIONS

2012-2014	2004-2006
2010-2012	2002-2004
2008-2010	2000-2002
2006-2008	1998-2000

The Integrated Report is designed to satisfy the statutory requirements of Section (§) 303(d) and the reporting requirements of §§ 305(b) and 314 of the federal Water Pollution Control Act (33 U.S.C. 1251) commonly known as the Clean Water Act (CWA). It is also designed to serve as a source of basic information on water quality and water pollution control programs in New Mexico. Accordingly, the intended audience includes but is

TOP CAUSES OF IMPAIRMENT

(based on total miles STREAM/RIVER)

CAUSE	DRAFT 2016 (miles)	2014 IR (miles)	2012 IR (miles)
Temperature	**1748**	1601	1406
E. coli	**1177**	1160	968
Nutrients	**1331**	1210	962
Turbidity	**633**	606	726
Aluminum	**428**	382	605
DO	**325**	441	446
Sedimentation	**419**	429	378

Watersheds of focus in the 2016-2018 IR:

- Lower Pecos River (2013)
- Jemez River (2013 - 2014)
- Middle Rio Grande and tributaries (2014)

TOP CAUSES OF IMPAIRMENT (STREAM/RIVER)

Temperature ↑ ↑

- More thermograph monitoring sites than in past
- Unattainable WQ standards for some streams -- tools/efforts to address WQS issues such as Hydrology Protocol, UAAs
- Current and predicted increase in 1) ambient air temp and 2) low flow condition (drought, diversion) will likely increase stream temperatures

E. coli ↔

- Field IDEXX kit rotation around entire state
- Impacts from drought (lower flows) and development
- Riparian grazing
- Pet wastes in urbanized areas
- Water fowl and other natural sources

TOP CAUSES OF IMPAIRMENT (STREAM/RIVER)

Dissolved Oxygen ↓

- DO impairment is the primary response to (i.e., observed effect of) nutrient enrichment, so if both determined impaired, listed for nutrients.

Nutrients ↑ ↑

- Performing full nutrient assessment at more sites than in past due to more DO loggers
- Increase in low flow conditions
- Current protocol based on causal (TN/TP) and response (DO, pH, chlorophyll a) variables
- Nutrient impairment thresholds will be revised for next listing cycle based on EPA N-STEPS/Tetra Tech/SWQB project

Sediment ↔

- Level 1 determines % sand and fines, then Level 2 uses geomorphic measurements to determine the systems ability to move sediment
- SWQB's Sediment Assessment Protocol is a good tool for measuring restoration success with respect to sedimentation

TOP CAUSES OF IMPAIRMENT (STREAM/RIVER)

Turbidity ↑

- Current protocol uses magnitude and duration of sonde data and the severity of ill effects (SEV) index for coldwater fisheries

Aluminum ↑

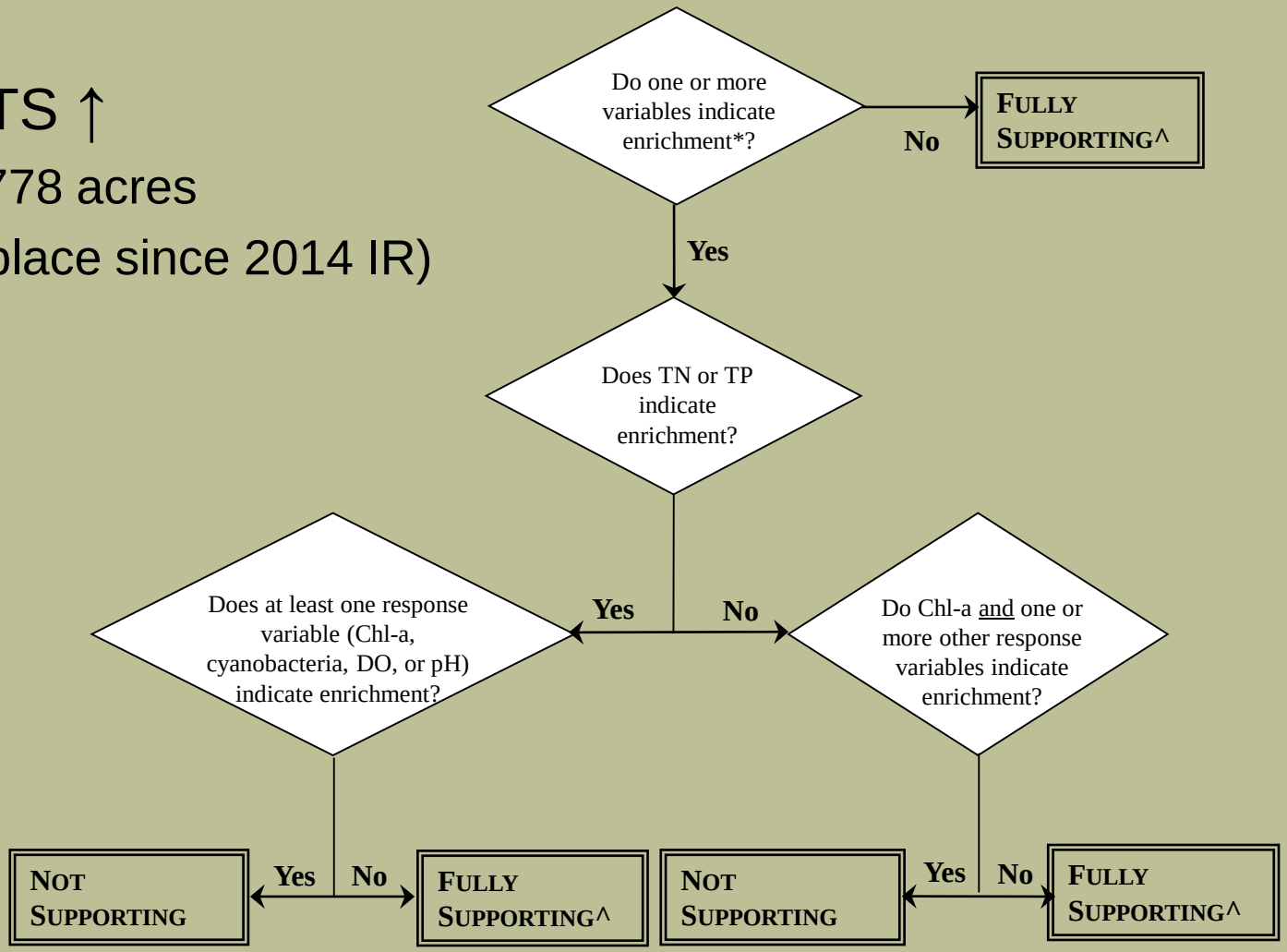
- EPA-approved change from dissolved to hardness-based total recoverable
- Assessment requires concurrent hardness data
- Naturally high aluminum in many parts of the state may require development of segment-specific WQ criteria
- ~65% of aluminum listings are based on the old dissolved WQ criterion (retained until total recoverable aluminum with concurrent hardness is available)

TOP CAUSES OF IMPAIRMENT (LAKES/RESERVOIRS)

NUTRIENTS ↑

8,652 to 13,778 acres

(Protocol in place since 2014 IR)



2016 - 2018 IR—incorporated data

SWQB data

- Lower Pecos River (2013)
- Jemez River (2013-2014)
- Middle Rio Grande and tributaries (2014) – Caballo Reservoir to San Ildefonso

Outside sources of data

- US Corp of Engineers with the University of New Mexico (sonde data)
- US Forest Service with New Mexico State University (thermograph data)
- Los Alamos National Laboratory (thermograph data)
- San Juan Soil and Water Conservation District (E. coli, nutrients)
- Valles Caldera National Preserve (sonde data)
- Village of Ruidoso (sonde data)
- National Water Quality Monitoring Council Water Quality Portal - USGS NWIS and WQX combined (http://www.waterqualitydata.us/)
- Middle Rio Grande DOE Oversite Bureau and LANL data available in Intellus (http://www.intellusnmdata.com/)

ASSESSMENT RESULTS

Lower Pecos River (2013, TMDLs 2016)

- New listings

AU_NAME	*CAUSE_NAME*
Pecos River (Salt Creek to Crockett Draw)	Temperature
Figure Eight Lake	Dissolved oxygen (Nutrients?)
Lake Van	Temperature
Pecos River (Eagle Creek to Rio Felix)	Temperature
Pecos River (Rio Felix to Rio Hondo)	Temperature
Agua Chiquita (perennial portions McEwan Cny to headwaters)	E. coli
Pecos River (Black River to Six Mile Dam Lake)	E. coli
Pecos River (TX border to Black River)	E. coli

- Concerns/Issues: Proposed triennial review WQS change to 20.6.4.206 – will result in two additional E. coli listings in the Pecos River

Jemez River (2013-2014, TMDLs 2016)

- List / De-list summary:

CAUSE	New listings	De lists
Temperature	6	3
E. coli	4	0
Nutrients	10 stream, 2 lake	0
Turbidity	3	1
Aluminum	5 (plus 6 dissolved --> total rec.)	5
Arsenic	1	2
Sedimentation	3	1

Middle Rio Grande (2014, TMDLs 2017)

- New river listings

AU_NAME	CAUSE_NAME
Rio Grande (Cochiti Reservoir to San Ildefonso bnd)	Aluminum, dissolved
Rio Grande (Cochiti Reservoir to San Ildefonso bnd)	Cyanide, total recoverable
Rio Grande (Cochiti Reservoir to San Ildefonso bnd)	Selenium, total recoverable
Rio Grande (Cochiti Reservoir to San Ildefonso bnd)	Thallium, dissolved
Rio Grande (non-pueblo Angostura Div to Cochiti Rsrv)	Gross alpha, adjusted
Rio Grande (non-pueblo Angostura Div to Cochiti Rsrv)	PCB in Water Column
Rio Grande (non-pueblo Angostura Div to Cochiti Rsrv)	Temperature
Rio Grande (Arroyo Canas to Rio Puerco)	Aluminum, total rec - chronic
Rio Grande (Arroyo Canas to Rio Puerco)	Aluminum, total rec -- acute
Rio Grande (Arroyo Canas to Rio Puerco)	COPPER, CHRONIC
Rio Grande (San Marcial at USGS gage to Arroyo Canas)	Aluminum, total rec - chronic
Rio Grande (San Marcial at USGS gage to Arroyo Canas)	Aluminum, total rec -- acute
Rio Grande (San Marcial at USGS gage to Arroyo Canas)	Temperature
Rio Grande (Elephant Butte Rsvr to San Marcial at USGS)	Aluminum, total rec - chronic
Rio Grande (Elephant Butte Rsvr to San Marcial at USGS)	Aluminum, total rec -- acute

- De-listing-E. coli

AU_NAME
Rio Grande (Cochiti Reservoir to San Ildefonso bnd)
Rio Grande (Tijeras Arroyo to Alameda Bridge)
Rio Grande (Rio Puerco to Isleta Pueblo bnd)
Rio Grande (San Marcial at USGS gage to Arroyo Canas)
Rio Grande (non-pueblo Alameda Bridge to HWY 550 Bridge)

Middle Rio Grande tributaries and reservoirs (2014)

- Santa Fe River (TMDLs 2016)
- MRG near Albuquerque (TMDLs 2017 with MRG)
- New listings

AU_NAME	*CAUSE_NAME*
Rito de los Frijoles (Rio Grande to Upper Crossing)	Aluminum, total rec - chronic
San Pedro Creek (San Felipe bnd to headwaters)	Nutrient/Eutrophication
Santa Fe River (Guadalupe St to Nichols Rsv)	Aluminum, total rec - chronic
Santa Fe River (Guadalupe St to Nichols Rsv)	E. coli
Santa Fe River (Nichols Reservoir to headwaters)	Aluminum, total rec - chronic
Santa Fe River (Paseo del Canon to Santa Fe WWTP)	E. coli
Santa Fe River (Santa Fe WWTP to Guadalupe St)	Aluminum, total rec - chronic
Santa Fe River (Santa Fe WWTP to Guadalupe St)	Aluminum, total rec -- acute

- Reservoir update
  - -Caballo Reservoir- new nutrient listing, Hg in fish tissue consumption advisory remains
  - -Elephant Butte Reservoir- PCB and Hg in fish tissue consumption advisories remain

2016 - 2018 IR SCHEDULE

- Opened for 45-day public comment period February 3 – March 18.
- Currently preparing Response to Comments and final revisions to all related documents. Final documents will be posted to SWQB web site by late April.
- Presenting final draft 2016-2018 Integrated Report and List to the New Mexico Water Quality Control Commission on May 10, 2016 in Santa Fe.