



New Mexico Environment Department

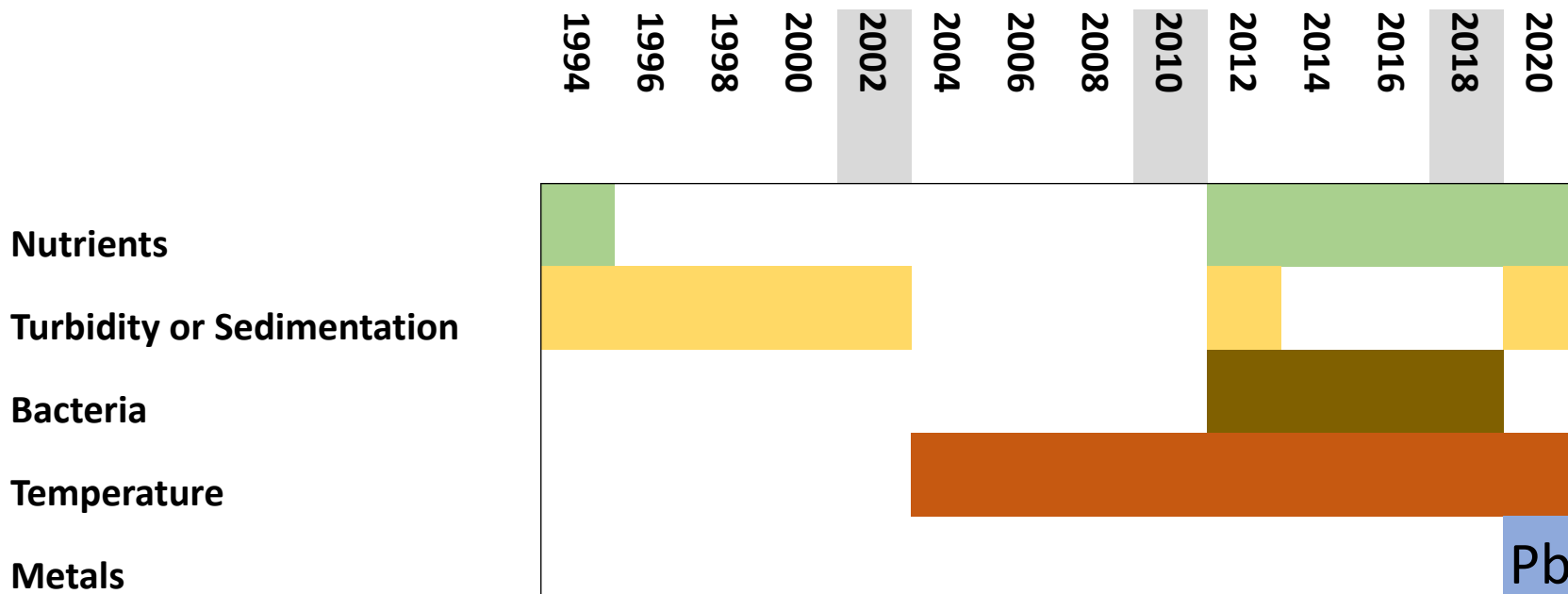
NPS Program History in NM's Part of the San Juan Basin
Abe Franklin, Program Manager, Watershed Protection Section
June 7, 2021



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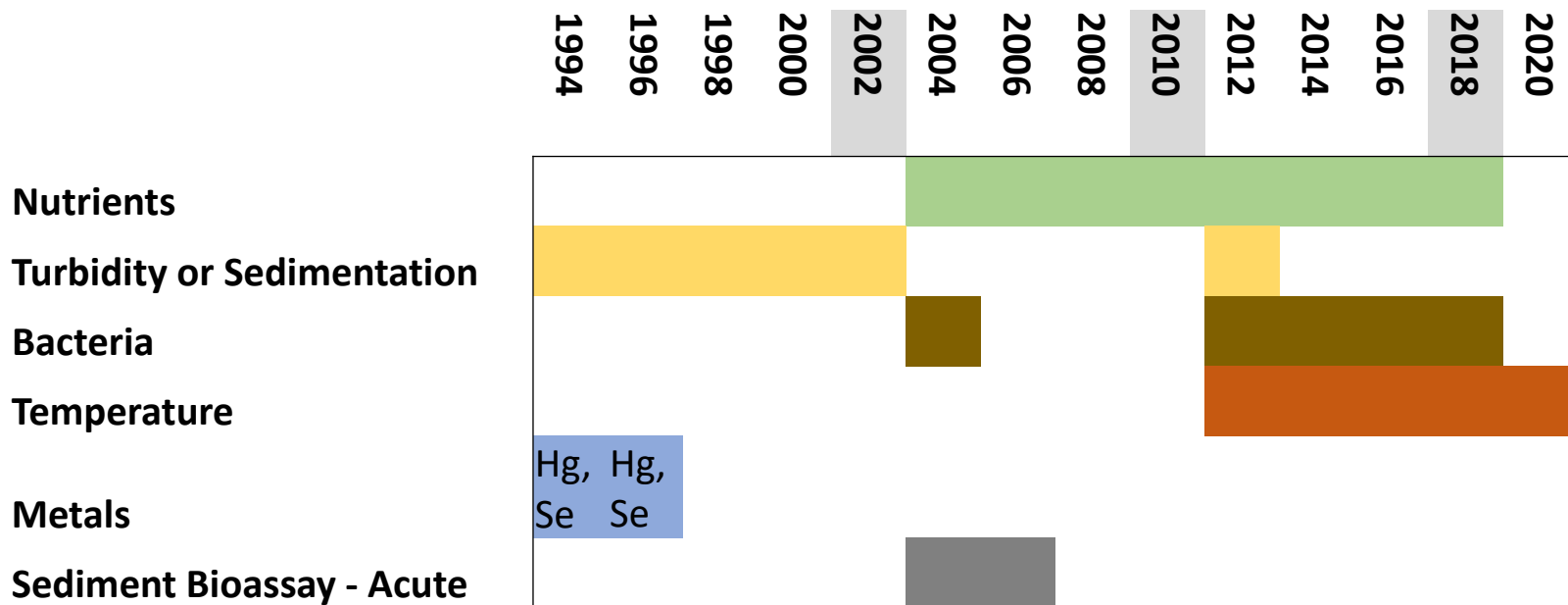
Animas River (Estes Arroyo to So. Ute Indian Tribe bnd)



The closer you look, the more problems you find.

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Animas River (San Juan River to Estes Arroyo)



Don't look so hard, you won't find as many problems.

2020 Lower Animas Assessment Criteria

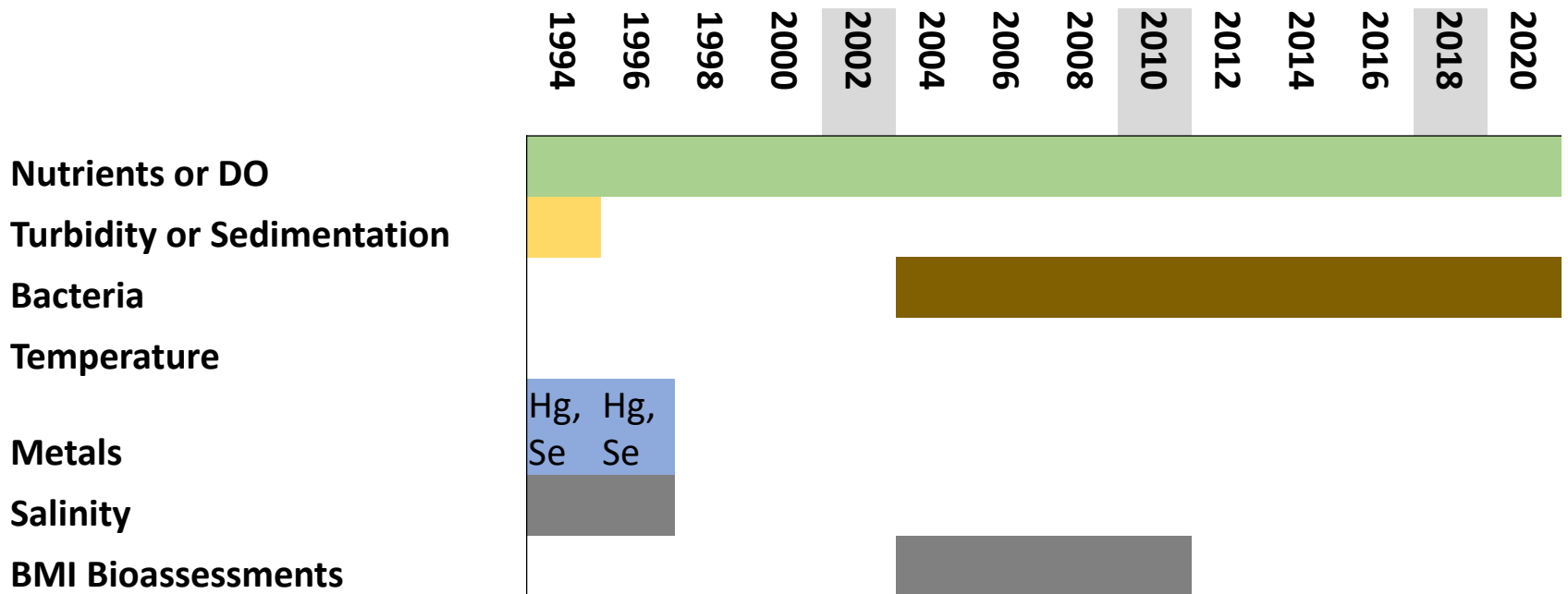
	TN Median	Median TP	TN Threshold	TP Threshold	Delta DO Class	Delta DO	Delta DO Threshold	Min DO	Min DO Threshold
66Animas001.7	0.31	0.028	0.42	0.03	Steep	4.33	1.79	5.44	6

2020 CALM: To delist, median TN and median TP need to be below their thresholds. If both of these are true, delta DO and min DO are not considered.

2021 CALM (proposed): To delist, median TN, median TP, AND delta DO would need to be below their thresholds. Min DO threshold would not be considered.

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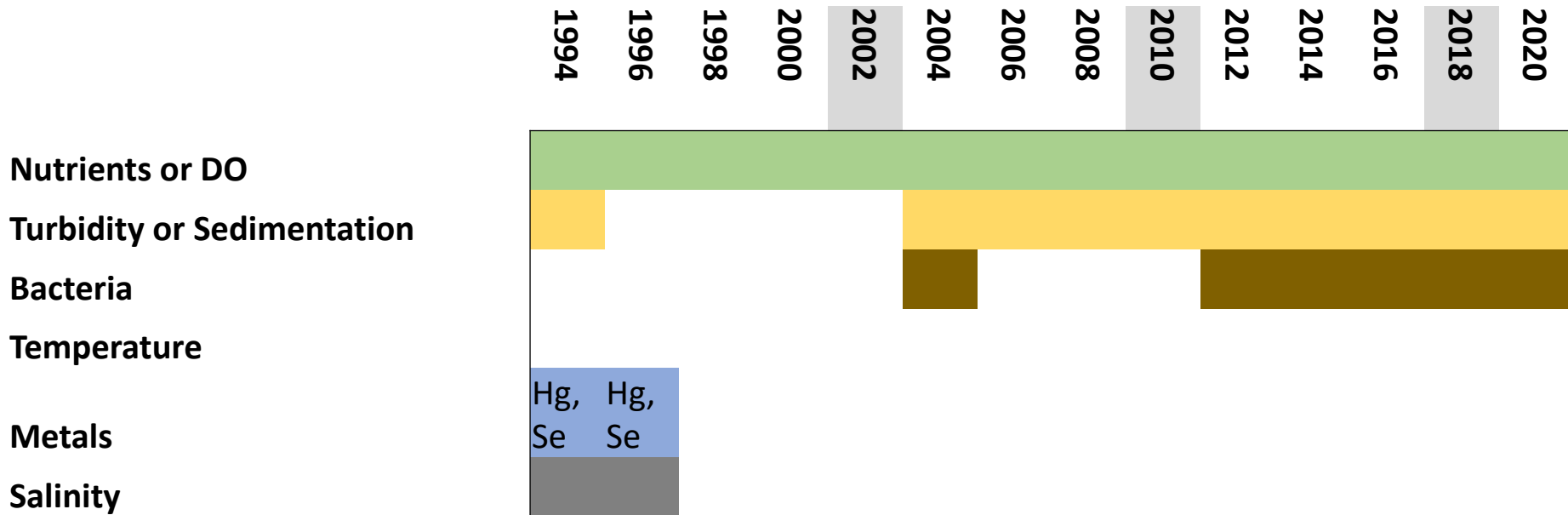
La Plata R (McDermott Arroyo to So. Ute Indian Tribe bnd)



Persistent low DO or other nutrient indicators, plus *E. coli*

6

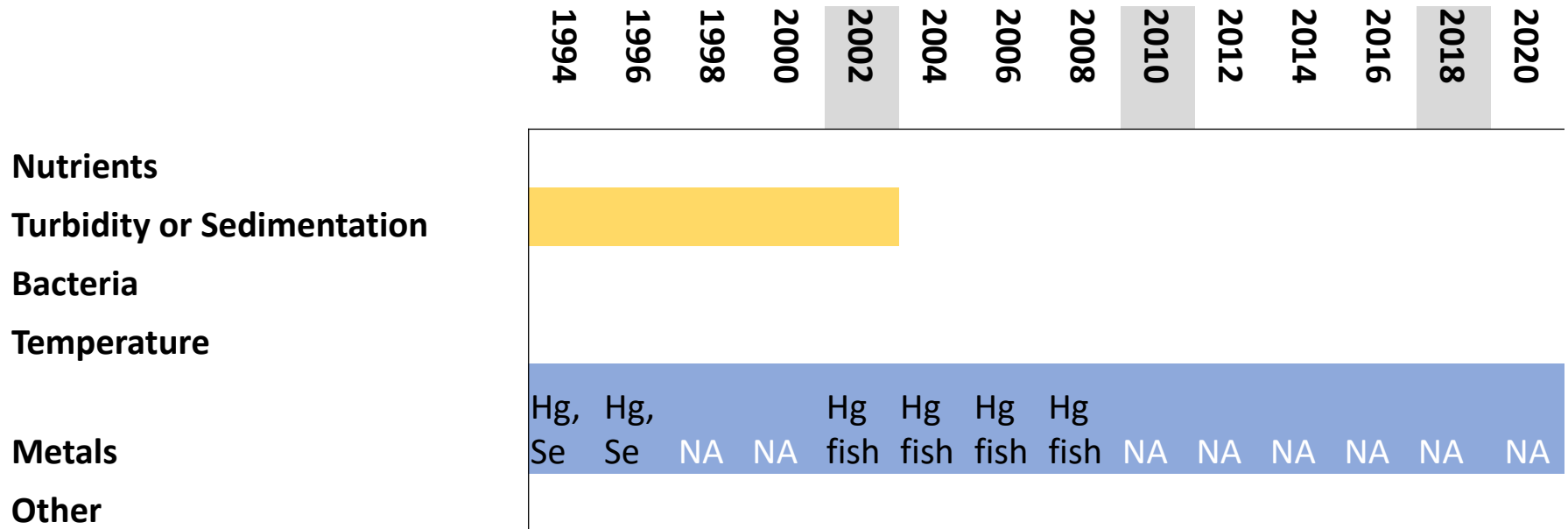
La Plata River (San Juan River to McDermott Arroyo)



Like the upper La Plata in NM, but with more sediment and less water.

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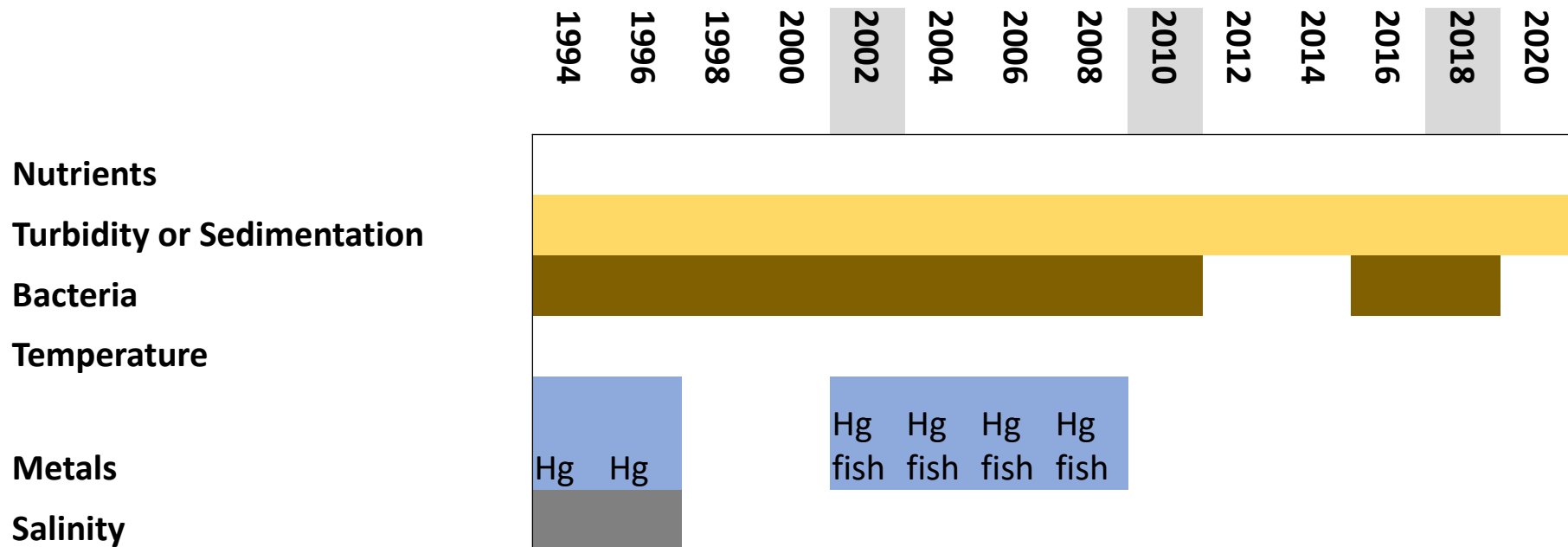
San Juan River (Cañon Largo to Navajo Reservoir)



Internationally famous high quality fly-fishing stream

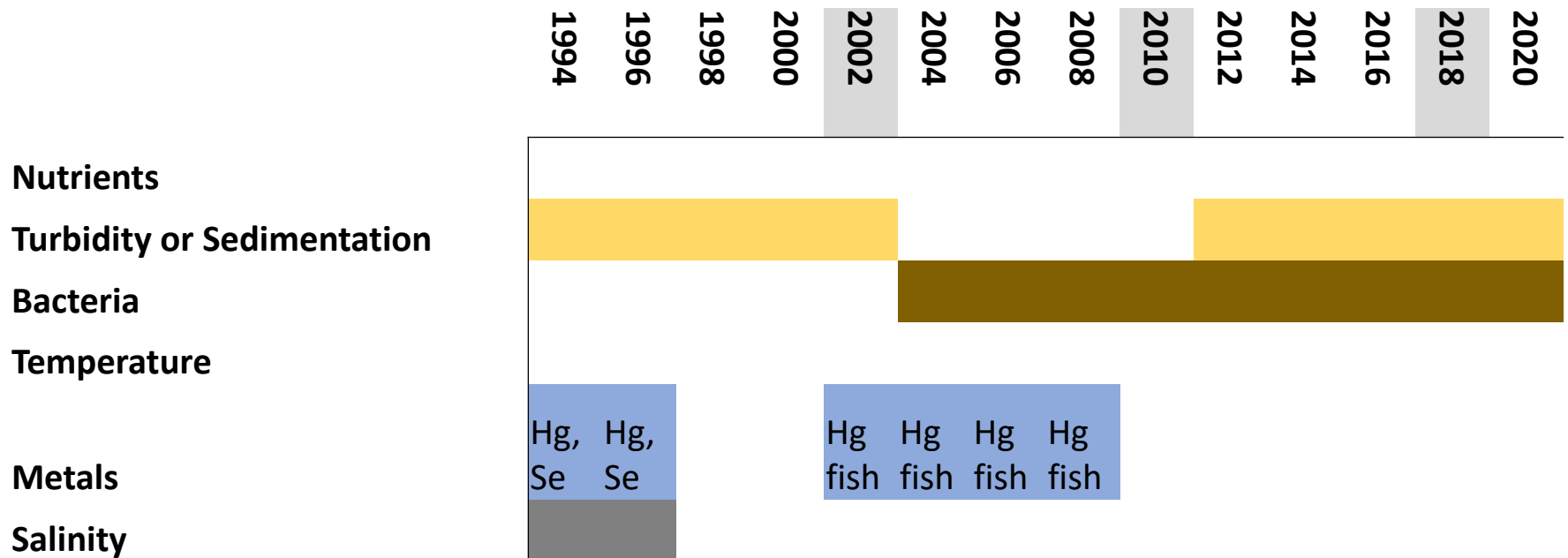
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San Juan River (Animas River to Cañon Largo)



Flow control and tributaries combined result in a lot of sediment.

San Juan River (Navajo bnd at Hogback to Animas River)



A stronger case for *E. coli* impairment with distance downstream



Nonpoint Source Projects (Summary)

Year / Period

Activities / Projects

2000 - 2005

- San Juan Watershed Group Formation and Early Planning

1998 - 2009

- Implementation Pilot Projects

2005 - 2016

- Nine-element watershed-based planning for the Animas River

2013 - 2014

- San Juan and Animas Rivers microbial source tracking study

2017 - present

- Animas River WBP implementation

San Juan Watershed Group Formation and Early Planning

Project Number	Project Title	Project End Date	Total 319h Funds
00-I	The Collaborative Watershed Project-Supporting TMDL Implementation in Northern New Mexico	07/01/2004	\$199,880
03-E	Collaborative Watershed Project: Supporting TMDL Implementation in Northcentral New Mexico	09/30/2006	\$184,000



National Sedimentation Lab study, 2004 (USDA ARS NSL Research Report 47)

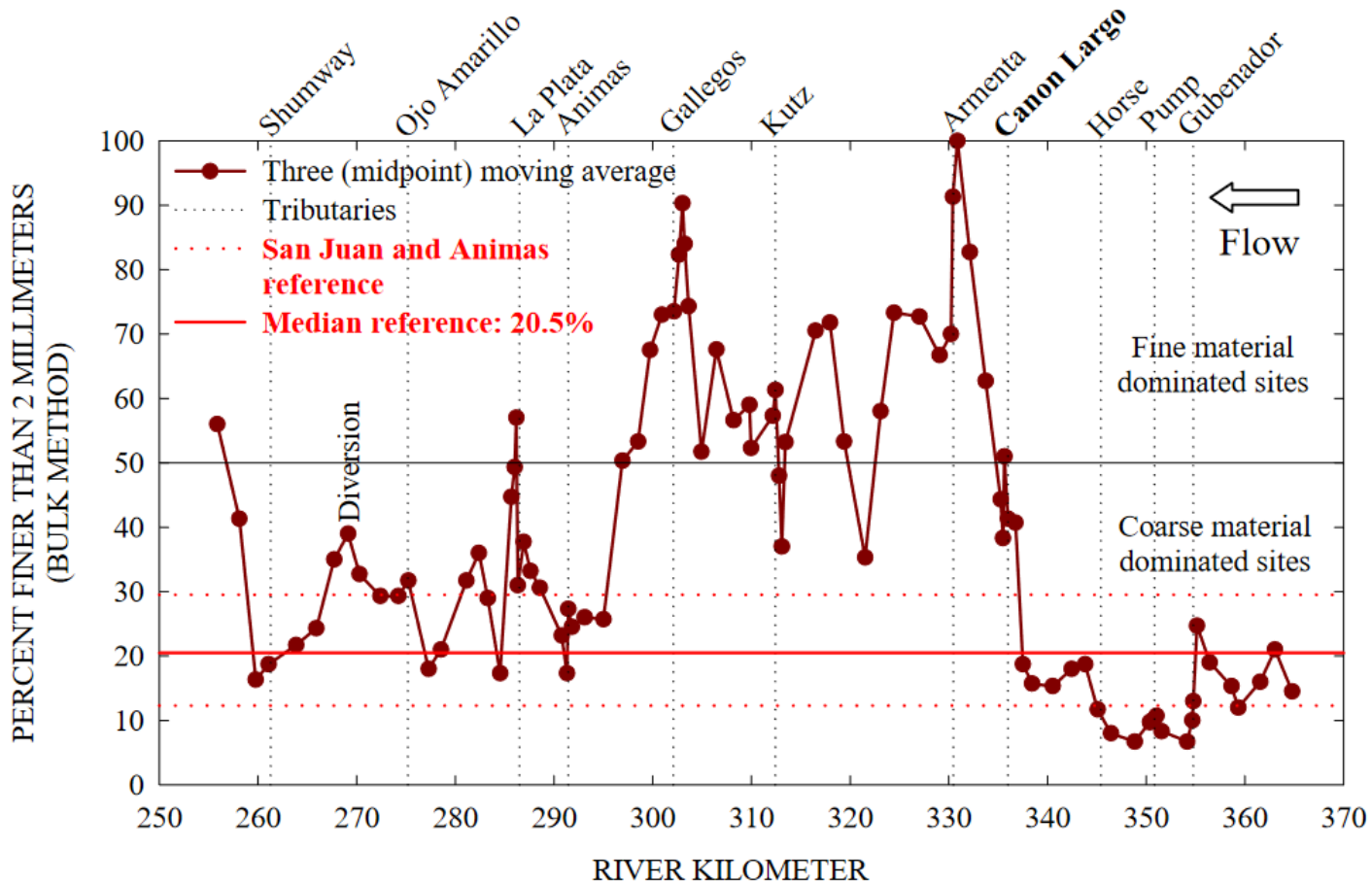


Figure 3.6 - Bed material percent fines on San Juan River by rkm, using PC/BS method



Collaborative Watershed Project: Supporting TMDL Implementation in Northcentral New Mexico

Table 13: Projected activities of SWQB, NMWQCC, and EPA related to surface water quality in the San Juan Basin, 2005-2010

Action	2005 (Quarter)				2006 (Quarter)				2007 (Quarter)				2008(Quarter)				2009 (Quarter)				2010 (Quarter)			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Draft TMDL's available for public comment	X																							
WQCC approves final TMDL's		X																						
New NPDES permits address waste load allocation portion of TMDL's			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
San Juan Basin applicants may apply for funding under Sec. 319(h) RFP			X				X																	
WQCC adopts new water quality standards			X																					
EPA approves new water quality standards						X																		
Draft 303(d) List available for public comment						X								X								X		
EPA approves 303(d) List								X							X									X
Review of water quality standards begins																		X						
SWQB conducts water quality survey																					X	X	X	X

Implementation Pilot Projects

Project Number	Project Title	Project End Date	Total 319h Funds
98-C	Naschitti NPS Range Project	02/23/2002	\$36,000
02-N	Animas River Channel Restoration Project	12/31/2005	\$136,161
05-C	Collaborative Water Quality Improvement Project for the San Juan River Watershed Phase I	12/31/2008	\$264,704
07-J	Westwater-Shumway Watershed Riparian & Wetland Enhancement	12/31/2009	\$28,853
08-3/ULO	Largo Canyon - Road Maintenance Education	12/16/2009	\$37,465
11-C	Collaborative Water Quality Improvement Project for the San Juan River Watershed, Phase III	12/30/2014	\$217,723
13-G	San Juan River Restoration Project (RSP)	06/30/2016	\$0



Animas River Channel Restoration Project





Largo Canyon - Road Maintenance Education





Collaborative Water Quality Improvement Project for the San Juan River Watershed, Phase III



Dewayne Blancett before (left) and after (right) installing the vegetated filter strip

Nine-element watershed-based planning for the Animas River

Project Number	Project Title	Project End Date	Total 319h Funds
06-M	A Watershed Planning Approach to Overcome Political Barriers on the Animas River	01/01/2008	\$137,867
07-D	Collaborative Water Quality Improvement Project for the San Juan River Watershed, Phase II	01/01/2008	\$287,187
08-9/ULO	NM Watershed Forum	12/31/2012	\$128,098
14-F	Lower Animas Watershed Based Plan (State Funded)	06/15/2016	\$0



A Watershed Planning Approach to Overcome Political Barriers on the Animas River





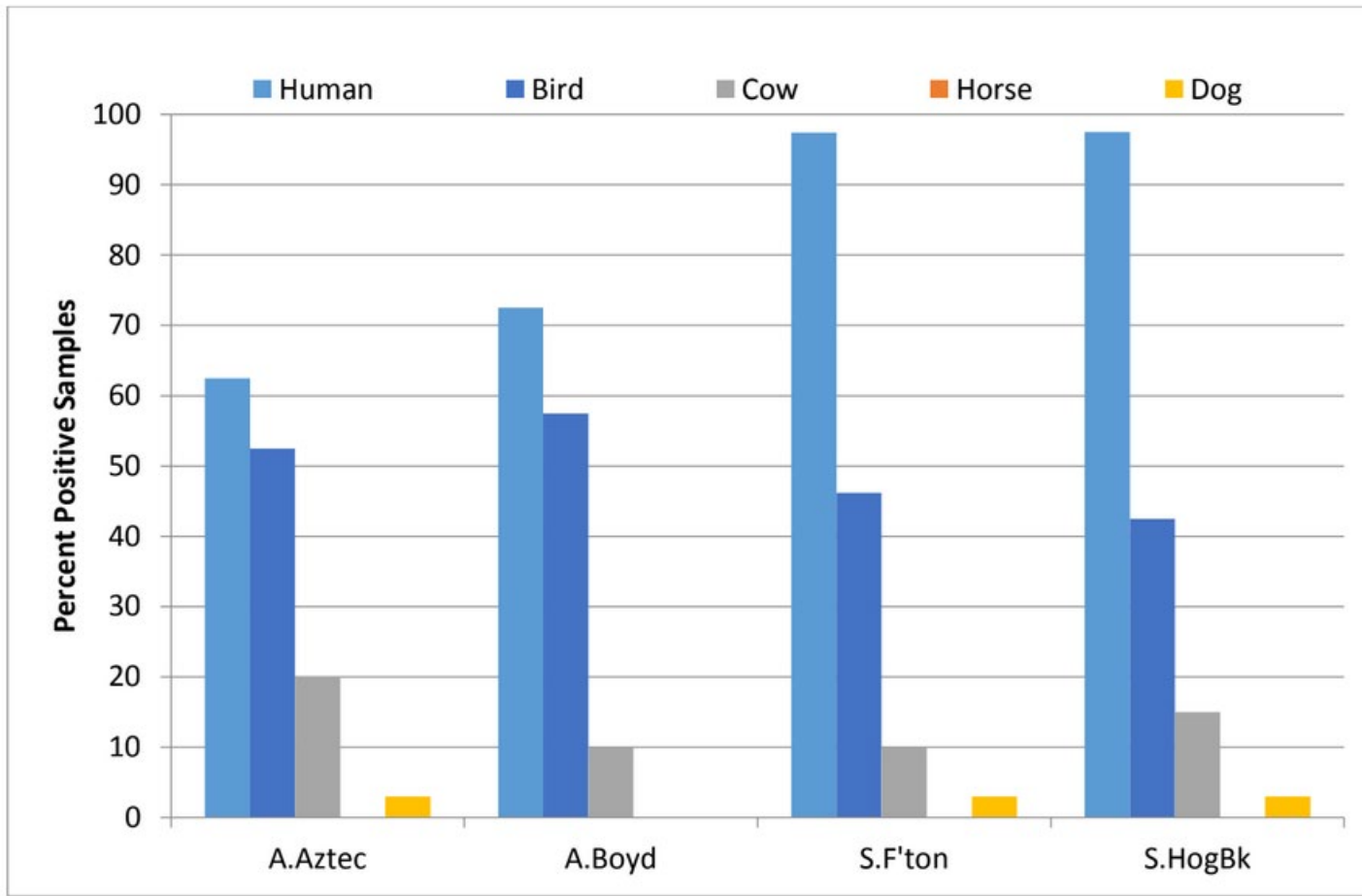
Lower Animas Watershed Based Plan (State Funded, \$287,540)

Costs to fix failing septic tank	
Pump - \$175	Repair - \$500-\$900 Replace - \$2,100-\$2,800
Estimated change in behavior	
5 septic tanks replaced per year	
Estimated pollutant load reduction to Animas	
Nitrogen	19 lb / year (5 tanks)
Phosphorus	7.5 lb / year (5 tanks)

<https://www.env.nm.gov/surface-water-quality/accepted-wbp/>



San Juan and Animas Rivers microbial source tracking study



<https://sanjuanswcd.com/watershed/>

Animas River WBP implementation

Project Number	Project Title	Project End Date	Total 319h Funds
17-D	Animas River Restoration Project (RSP)	06/30/2019	\$0
17-T	Lower Animas Watershed Based Plan Implementation Projects	12/31/2020	\$229,644
18-K	Lower Animas Watershed Based Plan Implementation Projects Phase 2	12/31/2021	\$148,450
20-I	Animas River Habitat Enhancement and Bank Stabilization Project (RSP)	06/30/2023	\$0



Animas River Restoration Project (RSP, \$221,303)



This photo was Taken March 15, 2018. River direction is flowing from photo left to right and towards the camera/viewer. The channel width has been reduced downstream of the rock cross-vane which also directs flow away from the eroding bank (circled in green) and towards the center of the channel protecting the bank from further erosion which reduces the amount of sediment in the water and improves water quality for aquatic life.



Lower Animas Watershed Based Plan Implementation Projects



Previous open manure piles. Note blue frost-free water troughs in background pen



One of the constructed waste storage facilities



Main walkway with new woodchips



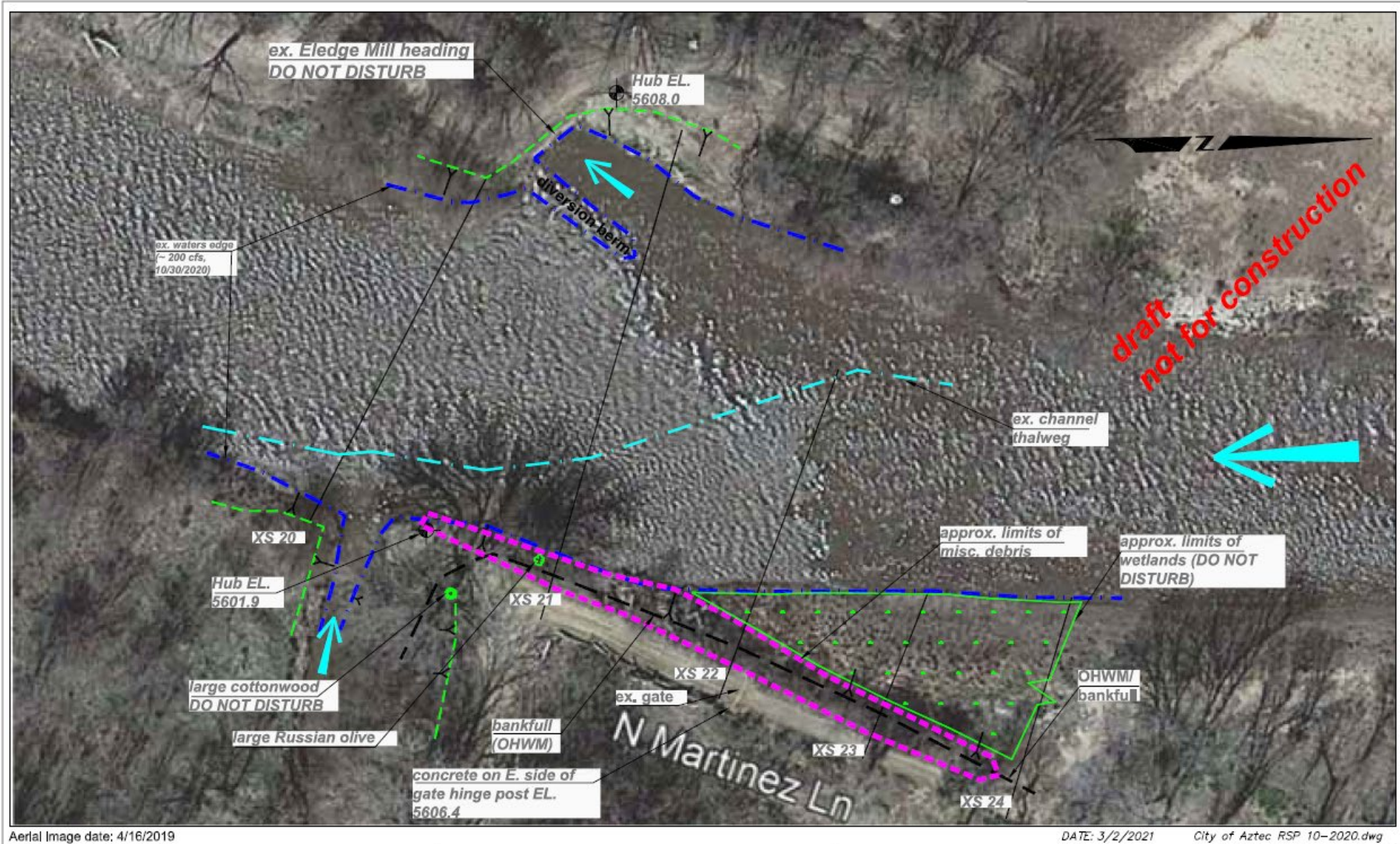
Lower Animas Watershed Based Plan Implementation Projects Phase 2



Draft RV Dump Station map to be included in educational brochure



Animas River Habitat Enhancement and Bank Stabilization Project (RSP, \$138,324)



Aerial Image date: 4/16/2019

DATE: 3/2/2021

City of Aztec RSP 10-2020.dwg



Future Projects and Initiatives in *State of* New Mexico part of the San Juan Basin

- Lower Animas WBP Implementation Projects Phase 3 project?
- San Juan River WBP for *E. coli*?
- Integration of EPA/State/Tribal “San Juan Alliance” and local watershed group (SJWG and AWP) efforts

