



NEVADA DIVISION OF
**ENVIRONMENTAL
PROTECTION**



Nevada Department of
**CONSERVATION &
NATURAL RESOURCES**

Nevada's Water Quality Integrated Report

Carson River Watershed Forum

April 18, 2023

Presented by

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Bureau of Water Quality Planning

WATER QUALITY STANDARDS

Introduction

- Driven by CWA, we as a State enact the CWA
- Nevada's Water Quality Standards are provided in Nevada Administrative Code (NAC) 445A.11704 - 445A.2234
- Set, review, update water quality criteria for parameters, based on the latest science, in order to protect beneficial uses of Nevada's surface waters.
- WQS consist of 3 components:
 - Beneficial uses (aquatic life, irrigation, etc.)
 - Criteria
 - Antidegradation



WATER QUALITY STANDARDS

Nevada's Water Quality Standards are provided in tables NAC 445A.11704 - 445A.2234

Designated Waters

Ammonia: NAC 445A.118

Toxics: NAC 445A.1236

Narratives: NAC 445A.121

Footnotes are important

NAC 445A.1844 Carson Region: Ash Canyon. (NRS 445A.425, 445A.520) The limits of this table apply to the body of water known as Ash Canyon from its origin to the first point of diversion of the Carson City Water Department, near the west line of section 12, T. 15 N., R. 19 E., M.D.B. & M. Ash Canyon is located in Carson City.

STANDARDS OF WATER QUALITY
Ash Canyon

PARAMETER	REQUIREMENTS TO MAINTAIN EXISTING HIGHER QUALITY	WATER QUALITY CRITERIA TO PROTECT BENEFICIAL USES	Beneficial Uses ^a												
			Livestock	Irrigation	Aquatic	Contact	Noncontact	Municipal	Industrial	Wildlife	Aesthetic	Enhance	Marsh		
Beneficial Uses			X	X	X	X	X	X		X					
Aquatic Life Species of Concern															
Temperature - °C		S.V. ≤ 20			*										
ΔT ^b - °C		ΔT = 0			*										
pH - SU		S.V. 6.5 - 9.0			*										
Dissolved Oxygen - mg/L		S.V. ≥ 6.0			*	*									
Total Phosphorus (as P) - mg/L		S.V. ≤ 0.10			*	*									
Total Ammonia (as N) - mg/L		^c			*										
Total Dissolved Solids - mg/L		S.V. ≤ 500						*							
E. coli - cfu/100 mL ^d		G.M. ≤ 126 S.V. ≤ 410				*									
Fecal Coliform - No./100 mL		S.V. ≤ 1,000			*										
Toxic Materials		^e													

* = The most restrictive beneficial use.

X = Beneficial use.

^a Refer to [NAC 445A.122](#) and [445A.1792](#) for beneficial use terminology.

^b Maximum allowable increase in temperature above water temperature at the boundary of an approved mixing zone, but the increase must not cause a violation of the single value standard.

^c The water quality criteria for ammonia are specified in [NAC 445A.118](#).

^d The geometric mean must not be exceeded in any 30-day period. The single value must not be exceeded in more than 10 percent of the samples collected within any 30-day period.

^e The water quality criteria for toxic materials are specified in [NAC 445A.1236](#).

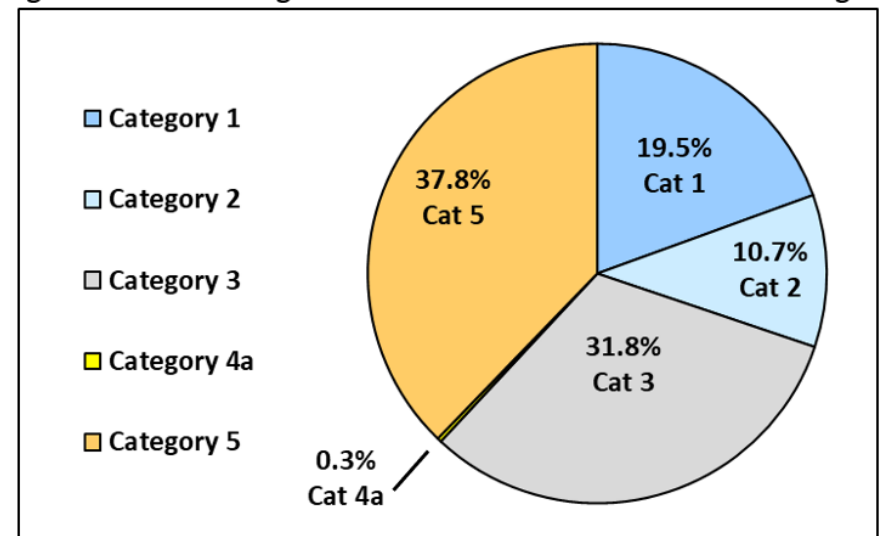
WATER QUALITY INTEGRATED REPORT

CURRENTLY WORKING ON THE 2024 REPORT

Table ES-1. Parameters Causing Impairments Overall and as a Percentage of Total Impairments

Parameter	Impairments by Parameter	% of Total Impairments	No. Impairments by Beneficial Use								
			AQL	FC	IRR	MDS	OO	RNC	RWC	WLS	W&O
Phosphorus, Total	153	19.3%	81						72		
Temperature	81	10.2%	81								
Beryllium	73	9.2%				73					
Iron	64	8.1%	61		3						
E. coli	40	5.1%						1	39		
Hg in fish	40	5.1%		40							
Total dissolved solids (TDS)	35	4.4%				32				3	
Cadmium, dissolved	33	4.2%	33								
Turbidity	31	3.9%	31								
Selenium, total	22	2.8%	19		3						
Total suspended solids (TSS)	22	2.8%	22								
pH	19	2.4%	19								
Dissolved oxygen (DO)	17	2.1%	17								
Silver, dissolved	17	2.1%	17								

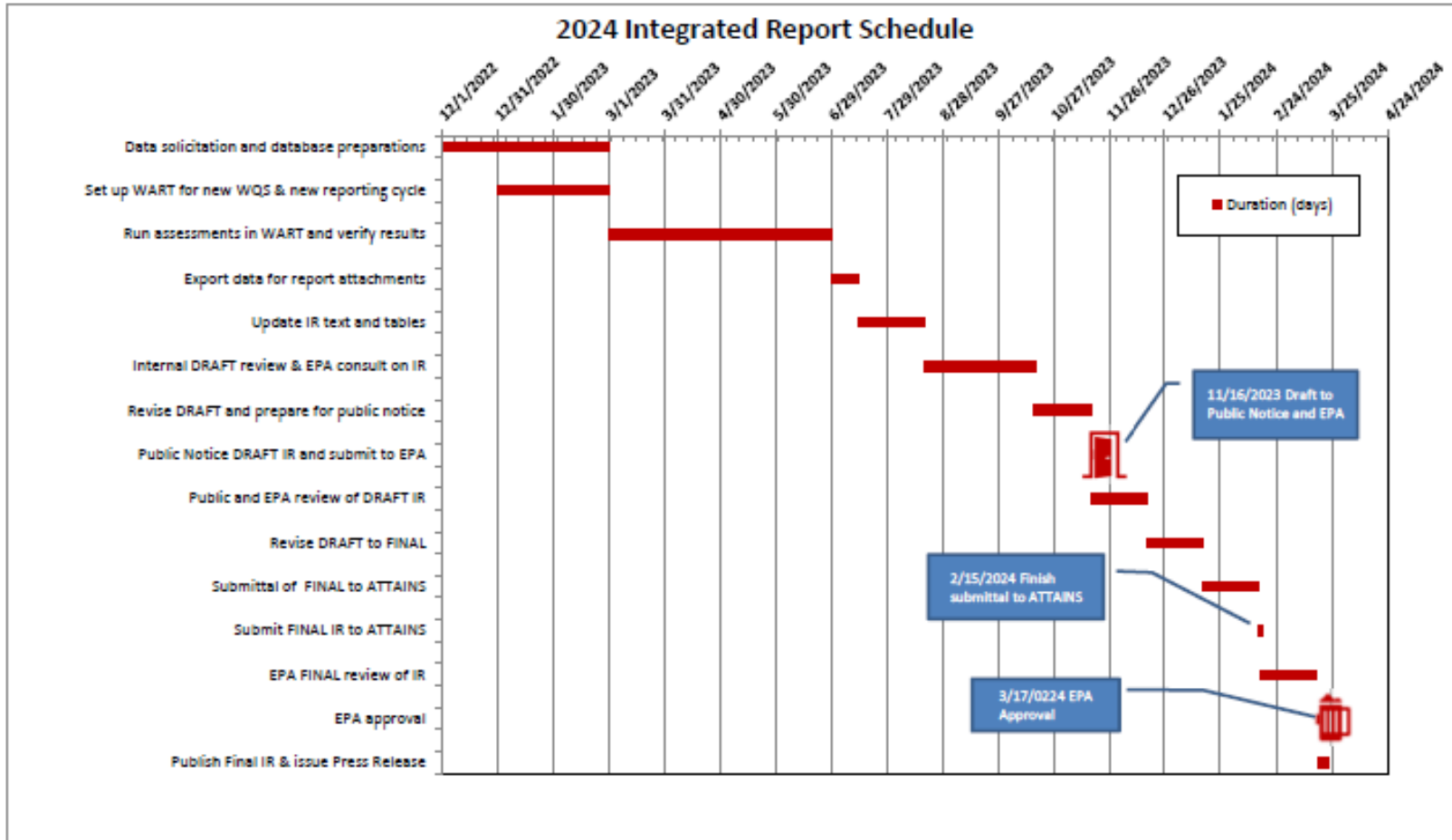
Figure ES-1. Percentage of Waterbodies in Each Assessment Category



303(d)/305(b) Integration

- 303(d) – Impairments
- 305(b) – All waters Assessment

2024 INTEGRATED REPORT SCHEDULE

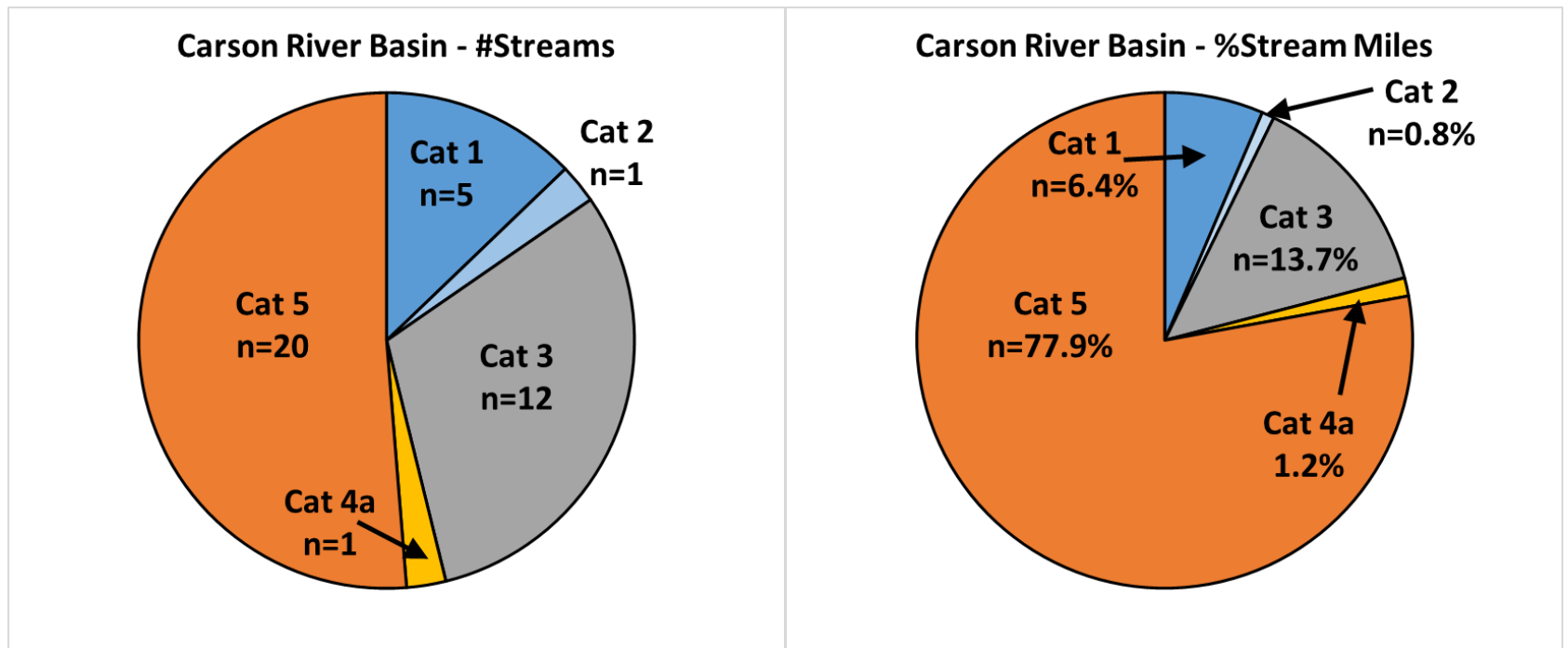


HOW IS THE CARSON RIVER WATERSHED

2020-2022 IR ASSESSMENT

Know what you are looking at!

- Data presentation can be misleading





HOW IS THE CARSON RIVER WATERSHED 2020-2022 IR ASSESSMENT

Impairments - 303d Listings

- Mercury, Temperature, and Phosphorus

303(d) - Delistings

- Based on Parameter & Beneficial Use

Parameter	%			
			As	2.4%
Hg fish	16.5%		Cd	2.4%
Hg sed	12.9%		pH	2.4%
Temp	11.8%		SO4	2.4%
TP	11.8%		TDS	2.4%
Fe	8.2%		TSS	2.4%
E. coli	4.7%		Alkalinity	1.2%
Be	3.5%		B	1.2%
DO	3.5%		Hg water	1.2%
Mn	3.5%		Ni	1.2%
Turbid	3.5%		Ag	1.2%

Waterbody Code	NAC	Size	Water Name	Beneficial Use	Parameter
NV08-CR-02_00	1798	3.67 M	Bryant Creek near the state line	MDS	Sulfate mg/L
NV08-CR-02_00	1798	3.67 M	Bryant Creek near the state line	MDS	Total Dissolved Solids
NV08-CR-02_00	1798	3.67 M	Bryant Creek near the state line	AQL	Temperature
NV08-CR-09_00	1816	6.96 M	Carson River near New Empire	AQL	Dissolved Oxygen
NV08-CR-09_00	1816	6.96 M	Carson River near New Empire	AQL	Temperature
NV08-CR-23-C_00	1852	655.15 A	Indian Lakes	PWL	pH
NV08-CR-23-C_00	1852	655.15 A	Indian Lakes	RWC	pH
NV08-CR-24-C_00	1854	13.41 M	Diagonal Drain	RWC	Phosphorus, Total mg/L
NV08-CR-29_00	1812	16.15 M	Brockliss Slough, including East and West Branches	RWC	Escherichia Coli
NV08-CR-53_01	1822	1.54 M	Bonanza Creek	PWL	pH
NV08-CR-53_01	1822	1.54 M	Bonanza Creek	RWC	pH

Questions?



Contact

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