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June 15, 2021

The Honorable Catherine Cortez Masto
Chairwoman
Public Lands, Forests and Mining Subcommittee
Senate Energy and Natural Resources Committee

RE: Hearing on S.567

Chairwoman Cortez Masto and Members of the Committee:

We submit this letter in opposition to the Southern Nevada Economic Development and Conservation Act, S.567, because there is not an identified, sustainable source of water to meet the demand that will be spurred by this legislation.

The land sales proposed in this legislation imply that there will be water available in the coming decades. The basins in which the land sales will occur have no available groundwater. Therefore, economic development in the targeted disposal areas will require inter-basin transfers of water from Lake Mead.

That reliance seems like a precarious endeavor as we embark upon an unprecedented breakpoint at many reservoirs throughout the western U.S. — especially at Lake Mead.

Modeling the 50-year outlook of the Colorado River is not an exact science, which is why I am imploring the committee to proceed with caution on the sections of the bill regarding the expansion of disposal boundaries. Those disposals of public land will require water. However, there is no language in this bill dealing with long-term supply issues on the Colorado River. But the need for that water is inherent in this bill — it is just not explicitly written.

The Southern Nevada Water Authority's 2020 Water Resource Plan lists a number of scenarios relating to the region's water supply over the next 50 years. The climate change, high demand scenario — which is the modeled scenario closest to what we're actually seeing on the river in real time — says the region will need a new water supply in 35 years¹ (Listed below as "Other Future Resources"). Those are not explicitly identified resources and, therefore, not

¹ <https://www.snwa.com/assets/pdf/water-resource-plan-2020.pdf> (Pg 58 in PDF)

sustainable. While the SNWA’s resource plan lists potential supplies of water in the future, none are guaranteed, identified supplies at this juncture.

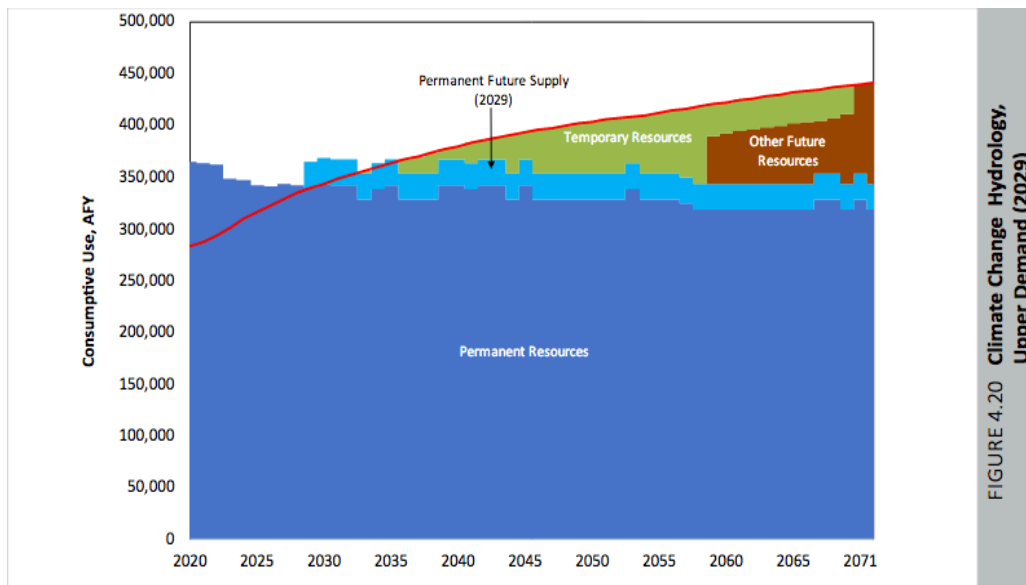


FIGURE 4.20 Climate Change Hydrology, Upper Demand (2029)

As you will see below, the SNWA uses “natural flow” data from Lee’s Ferry to model the impacts to the region’s water supply. SNWA’s climate change model uses Colorado River flow data taken at Lee’s Ferry between 1953-1977, a well-known dry period on the river that averaged 12.9 million acre feet per year². Between 2020 and 2018, flows at Lee’s Ferry averaged 12.4 million acre feet per year. Therefore, what the graph indicates is that we are going to be getting more water at Lake Mead in the coming years.

CLIMATE CHANGE	To simulate the effects of drier and hotter conditions represented in climate change projections, the Colorado River inflows over a 25-year period from 1953 to 1977 are repeated to form an average annual inflow of 12.9 million AFY. Projections of inflows under the Colorado River Basin study for climate change ranged from roughly 10 to 17 million AFY. While this does not represent the driest scenario, it is drier than approximately 70 percent of the climate scenarios (see Appendix 4).
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FIGURE 4.4 Water Supply Conditions Summary

Conversely, new Bureau of Reclamation data demonstrate that no new water is coming to Lake Mead anytime soon.

² <https://www.snwa.com/assets/pdf/water-resource-plan-2020.pdf> (Pg 50 in PDF)



May 2021 24-Month Study
Most Probable Inflow*
Hoover Dam - Lake Mead



Date	Glen Release (1000 Ac-Ft)	Side Inflow Glen to Hoover (1000 Ac-Ft)	Evap Losses (1000 Ac-Ft)	Total Release (1000 Ac-Ft)	Total Release (1000 CFS)	SNWP Use (1000 Ac-Ft)	Downstream Requirements (1000 Ac-Ft)	Bank Storage (1000 Ac-Ft)	Reservoir Elev End of Month (ft)	EOM Storage (1000 Ac-Ft)
May 2020	629	33	46	1057	17.2	31	1059	713	1091.32	10971
H Jun 2020	650	19	55	973	16.4	31	978	699	1087.07	10605
I Jul 2020	750	35	68	902	14.7	36	906	676	1084.63	10398
S Aug 2020	833	69	72	847	13.6	36	850	673	1084.04	10349
T Sep 2020	692	56	59	646	10.9	28	651	666	1083.21	10279
WY 2020	6230	863	553	8263		255	8267			
O Oct 2020	640	35	43	730	11.9	21	734	661	1081.88	10167
R Nov 2020	640	56	42	714	12.0	11	718	656	1081.07	10100
I Dec 2020	719	59	37	497	8.1	8	500	671	1083.72	10322
C Jan 2021	763	72	30	593	9.6	11	616	683	1086.95	10510
A Feb 2021	675	55	28	574	10.3	8	581	690	1087.26	10622
L Mar 2021	700	33	31	945	15.4	15	935	675	1084.39	10378
* Apr 2021	628	37	38	1057	17.8	23	1056	647	1079.30	9953
May 2021	628	50	43	1074	17.5	19	1074	619	1074.04	9523
Jun 2021	651	29	51	961	16.2	28	961	597	1069.81	9185
Jul 2021	765	64	63	854	13.9	33	854	590	1068.37	9071
Aug 2021	800	81	67	814	13.2	35	814	588	1067.97	9039
Sep 2021	622	71	55	712	12.0	30	712	581	1066.72	8941
WY 2021	8230	643	530	9625		243	9555			
Oct 2021	480	58	40	578	9.4	25	578	575	1065.46	8843
Nov 2021	500	71	40	608	10.2	13	608	569	1064.39	8760
Dec 2021	600	67	34	508	8.3	7	508	577	1065.82	8871
Jan 2022	723	95	28	537	8.7	11	537	591	1068.72	9088
Feb 2022	639	97	26	611	11.0	9	611	597	1069.78	9182
Mar 2022	675	111	29	923	15.0	15	923	586	1067.63	9012
Apr 2022	601	81	36	978	16.4	17	978	564	1063.42	8684
May 2022	599	50	40	962	15.7	21	962	542	1058.81	8333
Jun 2022	628	29	48	921	15.5	29	921	521	1054.53	8014
Jul 2022	709	64	59	811	13.2	33	811	513	1052.88	7892
Aug 2022	758	81	62	779	12.7	34	779	511	1052.42	7858
Sep 2022	568	71	51	684	11.7	31	684	502	1050.66	7730
WY 2022	7480	876	493	8909		244	8909			
Oct 2022	480	58	37	539	8.8	26	539	499	1049.83	7671
Nov 2022	500	71	37	657	11.0	15	657	490	1048.04	7542
Dec 2022	600	67	32	565	9.2	10	565	494	1048.83	7599
Jan 2023	723	95	26	535	8.7	11	535	509	1052.02	7829
Feb 2023	639	97	24	573	10.3	9	573	517	1053.68	7951
Mar 2023	675	111	27	916	14.9	16	916	506	1051.46	7789
Apr 2023	601	81	33	962	16.2	17	962	486	1047.15	7478

* Based on the Colorado River Basin Forecast Center's Most Probable Water Supply Forecast

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By April 2023, the Bureau of Reclamation predicts Lake Mead will drop more than 25 feet³ from the reservoir's current elevation. Those precipitous declines are a warning to us all and signal hundreds of billions of gallons of water will continue to flee the grip of communities in the Upper and Lower Basins.

Regardless of what's happening in Nevada, we are walking a delicate tightrope. Upper Basin states are working on multiple projects to purportedly shore up their own supplies of water. Utah is dangerously pressing forward on the Lake Powell Pipeline, for example. Entities in Colorado, New Mexico, and Wyoming are all working on a number of proposals to dam or divert water from the Colorado River and its tributaries. The culminating effect of these efforts, at the least, could likely be reduced flows on the river and lower levels at Lake Mead.

As the state with the smallest share of the river, Nevada must be conscious of the reality across the Colorado River Basin and in our backyard. This bill is not cognizant of those factors.

Southern Nevada's water use increased by about 10 percent in the past two years. Unexpected increases in use, paired with drought, make long-term planning more difficult. As demonstrated above, modeling scenarios are only as good as their inputs. What we see as outlooks on paper aren't necessarily what will be in a water system in the future.

³ https://www.usbr.gov/uc/water/crsp/studies/24Month_05.pdf

The Southern Nevada Water Authority works at the behest of local officials. The agency is in a difficult position – but relative to other water purveyors in the Upper and Lower basin it is unmatched in its conservation efforts and respect of climate change/water change. This legislation could ultimately make life difficult for the SNWA down the road. And that gives us pause and the right to ask the question: Where will the water come from in the future?

We understand the difficulties of balancing economic growth and water conservation. We are not ignorant of the demands you face as lawmakers and public officials. We believe that caution will serve Nevadans best in the long run. No matter what happens, we are committed to working with Southern Nevada officials to ensure a sustainable supply of water that doesn't come at the expense of other communities or ecosystems.

Suggestions for the bill:

- First, remove the expanded disposal boundaries. If not, then add language that prohibits residential development in the new disposal areas.
- Second, consider funding more efforts to study and implement desalination, akin to what's in Section 105 of HR 3404, and initiatives for wastewater treatment across the west, which is outlined in Section 203(J)(2) of HR 3404.
- Provide more funding to the Bureau of Reclamation and U.S. Geological Survey to conduct studies on Colorado River flows, snowpack, water quality, soils, and wildlife with realistic flow scenarios.
- Next, ensure increases of all WaterSmart grants to the SNWA.
- Lastly, enact a moratorium throughout the Upper and Lower Basin on any new dams or water diversions for non-Tribal entities.

Thank you,

Kyle Roerink
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