

**SOUTHERN NEVADA WATER AUTHORITY
BOARD OF DIRECTORS
REGULAR MEETING
DECEMBER 20, 2021
MINUTES**

CALL TO ORDER 12:00 p.m.

BOARD MEMBERS PRESENT Marilyn Kirkpatrick, Chair
Dan Stewart, Vice Chair
James Adams
Scottt Black
Jim Gibson
Justin Jones

BOARD MEMBERS ABSENT Cedric Crear

STAFF PRESENT John Entsminger, Colby Pellegrino, Dave Johnson, Doa Ross, and Tabitha Simmons

OTHERS PRESENT None

Unless otherwise indicated, all members present voted in the affirmative.

COMMENTS BY THE GENERAL PUBLIC

For full public comment, visit snwa.com/apps/snwa-agendas/index.cfm

Chair Kirkpatrick said that she would be taking public comment separately on item number 6; she then opened the public comment period for anyone wishing to speak on other items on the agenda. There were no speakers wishing to be heard on the other items.

ITEM NO.

1. ***For Possible Action: Approve agenda with the inclusion of tabled and/or reconsidered items, emergency items and/or deletion of items, and approve the minutes from the regular meeting of November 18, 2021.***

FINAL ACTION: Director Gibson made a motion to approve the agenda for this meeting, and to approve the minutes from the regular meeting of November 18, 2021. The motion was approved.

Items 2 and 4 were taken in one motion.

BUSINESS AGENDA

2. ***For Possible Action: Adopt the 2021 Water Resource Plan.***
4. ***For Possible Action: Consider and adopt a new conservation goal and direct staff to work with the Authority's member agencies to implement conservation initiatives to support goal achievement.***

John Entsminger, General Manager, gave a presentation on the Resource Plan and new conservation goal. A copy of his presentation is attached to these minutes.

Director Jones asked which conservation measures yielded the greatest water savings. Mr. Entsminger said that implementing the turf restrictions imposed by AB 356, which restricts turf at non-residential properties, saves the greatest amount of the community's water, but also restricting the installation of new turf in Southern Nevada, except in parks, cemeteries and schools, will also save a tremendous amount of water. He said that enforcing water waste regulations and reducing evaporative cooling will also save the community additional water.

Director Jones asked about converting golf courses to other uses. Colby Pellegrino, Deputy General Manager, Resources, said that golf course turf conversions were allowed under the Water Smart Landscapes program. However, it would be difficult to maintain conservation easements and protect the Authority's conservation investment at golf courses that want to convert into another type of development, such as single-family residences. If a golf course wanted to remove turf in favor of a different type of recreation area, such as mountain biking trails, the Authority would be willing to discuss potential incentives.

Chair Kirkpatrick asked if there were additional conservation measures that could be considered beyond what staff had proposed. Mr. Entsminger said that potential conservation measures were not limited to what was proposed by staff. He said that staff would be willing to entertain other ideas from the Board or other community members.

Chair Kirkpatrick suggested that the community work with the Clark County School District to develop future schools with playgrounds that could also be used as community parks.

Vice Chair Stewart asked how the proposed conservation goal of 86 gallons per capita per day (GPCD) compared to other large metropolitan communities' water usage. Mr. Entsminger said that the goal was comparable with some communities' usage in coastal California, while being significantly less usage than some communities in Utah, which use as much as 300 GPCD. He said that trying to compare GPCD across different jurisdictions was difficult since so many factors, such as precipitation, climate, and water accounting, went into calculating a community's GPCD. The best use of GPCD is to allow a community to measure its own conservation progress.

Director Gibson asked what additional water use reductions and development changes might the community be faced with in light of climate change and falling lake levels. He said that he could see that additional incentives could be needed, such as incentives for installing low water-use cooling technologies at new development. Mr. Entsminger said that the Authority would like community partners to submeter evaporative coolers at businesses throughout the Valley to collect better water usage data. Chair Kirkpatrick said that since evaporative coolers use water consumptively, the Board should discuss ways to increase the number of businesses installing submeters on their evaporative cooling systems.

FINAL ACTION: Vice Chair Stewart made a motion to approve staff's recommendations on item 2 and 4. The motion was approved.

3. ***For Possible Action: Adopt the 2021 Water Budget.***

FINAL ACTION: Director Jones made a motion to approve staff's recommendation. The motion was approved.

5. ***For Possible Action: Adopt a resolution (1) supporting a prohibition on the installation of new irrigated turfgrass and the installation and use of spray irrigation systems in new development in the service areas of SNWA's purveyor members, except in parks, schools and cemeteries; and (2) urging the immediate revision of applicable regulatory codes, ordinances and policies to implement the prohibition.***

FINAL ACTION: Director Gibson made a motion to approve staff's recommendation. The motion was approved.

6. ***For Possible Action: Adopt a resolution (1) supporting a moratorium on cooling and heating mechanisms that consumptively use water in all new developments and establishments within the service area of SNWA's purveyor members, except for single family residences; and (2) urging the immediate revision of applicable regulatory codes, ordinances and policies.***

Chair Kirkpatrick opened public comment on item 6.

Jon Leleu, NAIOP, said that NAIOP had been working with the Authority and was committed to continue working with the Authority to address needed water conservation in Southern Nevada. He encouraged the Board to take its time to study evaporative cooling before making a rushed decision.

Paul Moradkhan, Vegas Chamber, said that the Chamber supported the Authority's conservation measures to protect the community. He asked that as ordinances were drafted and considered for adoption in the coming months that the Authority and local jurisdictions conduct outreach to the business community and industry stakeholders. He suggested that the outreach include stakeholder meetings, business impact statements and solicitation for community feedback.

Virginia Valentine, Nevada Resort Association, said that Southern Nevada resorts employee 21 percent of the workforce in Nevada, but only use approximately 0.1 percent of the community's water. She thanked Mr. Entsminger for meeting with several of the Association's members to discuss proposals regarding evaporative cooling. The Nevada Resort Association wanted to be a part of the process moving forward and looking at every available opportunity to reduce water consumption and balance that with a possible increase in energy consumption.

There being no other speakers wishing to be heard, Chair Kirkpatrick closed the public comment period.

Chair Kirkpatrick asked for clarification on the resolution. Mr. Entsminger said that the resolution was to support a moratorium on cooling and heating mechanisms that consumptively use water in new development. He said that local jurisdictions would need to draft and adopt ordinances to implement the moratorium.

Director Gibson said that should the Board pass the Resolution, each member would need to be committed to taking it back to their respective jurisdictions to begin working on the necessary ordinances to implement in a coordinated effort.

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Director Adams said that the resolution represented a necessary and important first step in continuing to protect Southern Nevada's water resources.

Director Black thanked the business leaders and commentators for their tone and professionalism in addressing a sensitive topic. He looked forward to working with the community to address this important issue.

FINAL ACTION: Vice Chair Stewart made a motion to approve staff's recommendation. The motion was approved.

Public Comment

There were no speakers wishing to be heard.

Adjournment

There being no further business to come before the Board, the meeting adjourned at 1:14 p.m.

Copies of all original agenda items and minutes, including all attachments, are on file in the General Manager's office at the Las Vegas Valley Water District, 1001 South Valley View Boulevard, Las Vegas, Nevada.



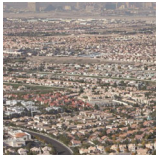
1

2021 WATER RESOURCE PLAN

The SNWA reviews its water resource plan annually.

Key Inputs:

- Population forecast from the University of Nevada, Las Vegas Center for Business and Economic Research (CBER)
- Hydrologic modeling from the U.S. Bureau of Reclamation
- Conservation progress (actual and projected)



2

2021 WATER RESOURCE PLAN

The SNWA's Water Resource Portfolio includes a diverse set of resource options that will be used in tandem with demand reduction tools to reliably meet the community's current and future water resource needs.


Permanent Resources	Temporary Resources	Future Resources
Colorado River (SNWA)	Southern Nevada Groundwater Bank	Transfers and Exchanges – Permanent Future Supply Desalination & Colorado River Partnerships
Nevada Unused Colorado River (Non-SNWA)	Interstate Bank (Arizona)	Transfers and Exchanges – Virgin River/Colorado River Augmentation
Tributary Conservation ICS	Interstate Bank (California)	Garnet & Hidden Valleys Groundwater
Las Vegas Valley Groundwater Rights	Intentionally Created Surplus (Lake Mead storage)	Tikaboo & Three Lakes Valley Groundwater

3

2021 WATER RESOURCE PLAN

2021 Plan Changes:

- Extended the planning horizon through 2072.
- Updated demand range based on the new population forecast.
- Applied new assumptions about conservation achievements.
- Incorporated the latest Colorado River supply outlook.
- Developed planning scenarios that reflect supply impacts under variable hydrology.
 - 14.7 MAFY
 - 12.9 MAFY
 - 11.0 MAFY

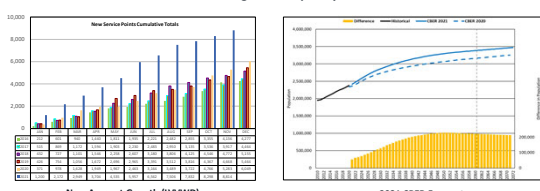


Supply and demand inputs have changed significantly.

4

2021 WATER RESOURCE PLAN

New account growth and longer-term forecasts are much higher than prior years.



New Account Growth (LVVWD)

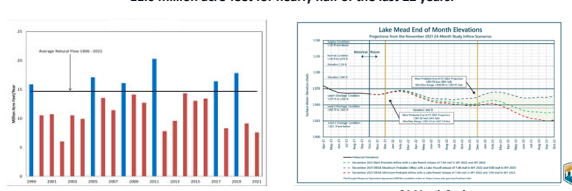
2021 CBFR Forecast

This affects the volume and timing of future resource needs.

5

2021 WATER RESOURCE PLAN

Annual Colorado River inflows have been at or below 11.0 million acre-feet for nearly half of the last 22 years.



Colorado River Inflows


24-Month Study

Further water-level declines are expected.

6

2021 WATER RESOURCE PLAN

There is a high probability for shortage over the long-term planning horizon.




Year	Population (Millions)	Per Capita (GPCD)	Total Demand (MGD)	Supply (MGD)	Shortage (MGD)	Shortage %
2020	3.1	111	344	344	0	0%
2025	3.4	109	370	370	0	0%
2030	3.7	107	396	396	0	0%
2035	4.0	105	420	420	0	0%
2040	4.3	103	443	443	0	0%
2045	4.6	101	465	465	0	0%
2050	4.9	99	487	487	0	0%
2055	5.2	97	509	509	0	0%
2060	5.5	95	530	530	0	0%
2065	5.8	93	551	551	0	0%
2070	6.1	91	572	572	0	0%
2075	6.4	89	593	593	0	0%
2080	6.7	87	614	614	0	0%
2085	7.0	85	635	635	0	0%
2090	7.3	83	656	656	0	0%
2095	7.6	81	677	677	0	0%
2100	7.9	79	698	698	0	0%
2105	8.2	77	719	719	0	0%
2110	8.5	75	740	740	0	0%
2115	8.8	73	761	761	0	0%
2120	9.1	71	782	782	0	0%
2125	9.4	69	803	803	0	0%
2130	9.7	67	824	824	0	0%
2135	10.0	65	845	845	0	0%
2140	10.3	63	866	866	0	0%
2145	10.6	61	887	887	0	0%
2150	10.9	59	908	908	0	0%
2155	11.2	57	929	929	0	0%
2160	11.5	55	950	950	0	0%
2165	11.8	53	971	971	0	0%
2170	12.1	51	992	992	0	0%
2175	12.4	49	1013	1013	0	0%
2180	12.7	47	1034	1034	0	0%
2185	13.0	45	1055	1055	0	0%
2190	13.3	43	1076	1076	0	0%
2195	13.6	41	1097	1097	0	0%
2200	13.9	39	1118	1118	0	0%
2205	14.2	37	1139	1139	0	0%
2210	14.5	35	1160	1160	0	0%
2215	14.8	33	1181	1181	0	0%
2220	15.1	31	1202	1202	0	0%
2225	15.4	29	1223	1223	0	0%
2230	15.7	27	1244	1244	0	0%
2235	16.0	25	1265	1265	0	0%
2240	16.3	23	1286	1286	0	0%
2245	16.6	21	1307	1307	0	0%
2250	16.9	19	1328	1328	0	0%
2255	17.2	17	1349	1349	0	0%
2260	17.5	15	1370	1370	0	0%
2265	17.8	13	1391	1391	0	0%
2270	18.1	11	1412	1412	0	0%
2275	18.4	9	1433	1433	0	0%
2280	18.7	7	1454	1454	0	0%
2285	19.0	5	1475	1475	0	0%
2290	19.3	3	1496	1496	0	0%
2295	19.6	1	1517	1517	0	0%
2300	19.9	0	1538	1538	0	0%
2305	20.2	0	1559	1559	0	0%
2310	20.5	0	1580	1580	0	0%
2315	20.8	0	1601	1601	0	0%
2320	21.1	0	1622	1622	0	0%
2325	21.4	0	1643	1643	0	0%
2330	21.7	0	1664	1664	0	0%
2335	22.0	0	1685	1685	0	0%
2340	22.3	0	1706	1706	0	0%
2345	22.6	0	1727	1727	0	0%
2350	22.9	0	1748	1748	0	0%
2355	23.2	0	1769	1769	0	0%
2360	23.5	0	1790	1790	0	0%
2365	23.8	0	1811	1811	0	0%
2370	24.1	0	1832	1832	0	0%
2375	24.4	0	1853	1853	0	0%
2380	24.7	0	1874	1874	0	0%
2385	25.0	0	1895	1895	0	0%
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2450	28.9	0	2168	2168	0	0%
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2475	30.4	0	2273	2273	0	0%
2480	30.7	0	2294	2294	0	0%
2485	31.0	0	2315	2315	0	0%
2490	31.3	0	2336	2336	0	0%
2495	31.6	0	2357	2357	0	0%
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2665	41.8	0	3071	3071	0	0%
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2725	45.4	0	3323	3323	0	0%
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2825	51.4	0	3743	3743	0	0%
2830	51.7	0	3764	3764	0	0%
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2845	52.6	0	3827	3827	0	0%
2850	52.9	0	3848	3848	0	0%
2855	53.2	0	3869	3869	0	0%
2860	53.5	0	3890	3890	0	0%
2865	53.8	0	3911	3911	0	0%
2870	54.1	0	3932	3932	0	0%
2875	54.4	0	3953	3953	0	0%
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2890	55.3	0	4016	4016	0	0%
2895	55.6	0	4037	4037	0	0%
2900	55.9	0	4058	4058	0	0%
2905	56.2	0	4079	4079	0	0%
2910	56.5	0	410			

2021 WATER RESOURCE PLAN

Additional actions are needed to address changing conditions.

Conservation Opportunities for Existing Users:

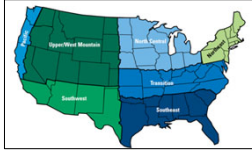
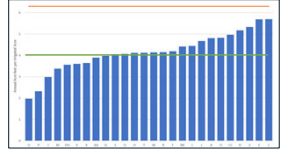
- Reduce golf course water budgets
- Require high-efficiency cooling retrofits
- Implement park efficiency improvements
- Make water rate changes to incentivize conservation
- Develop and implement a septic system conversion policy



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2021 WATER RESOURCE PLAN

Proposed Action
Reduce golf course water budgets for 4.0 acre-feet of water per irrigated acre.

The average Southwest course is using 4.0 acre-feet/acre.
The average local course is using 4.1 acre-feet/acre.

Legend: Current Budget (6.3 AF/Acre), Average 2016-2020 AF/Acre, Proposed Budget (4.0 AF/Acre)

14

2021 WATER RESOURCE PLAN

Additional actions are needed to address changing conditions.

Conservation Opportunities for New Development:


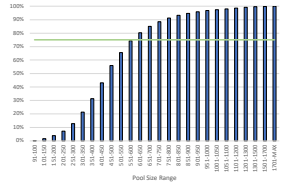
- Prohibit new golf course development
- Limit new pool construction size
- Update development standards for cooling technology
- Restrict turf in new development
- Implement large water user policy



15

2021 WATER RESOURCE PLAN

Proposed Action
Restrict the surface area of new pool development to 600 square feet.

Some area pools exceed 3,000 square feet and evaporate more than 145,000 gallons of water per year.

Pool Size Range

16

2021 WATER RESOURCE PLAN

Proposed Action
Require high-efficiency cooling.



17

2021 WATER RESOURCE PLAN

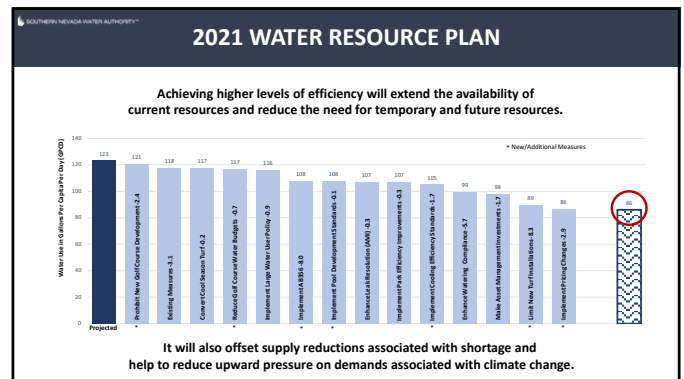
Proposed Action
Restrict the installation of turf in new development (except for parks and schools).



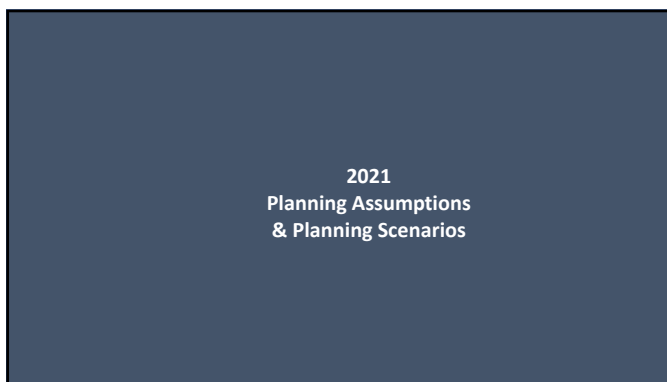
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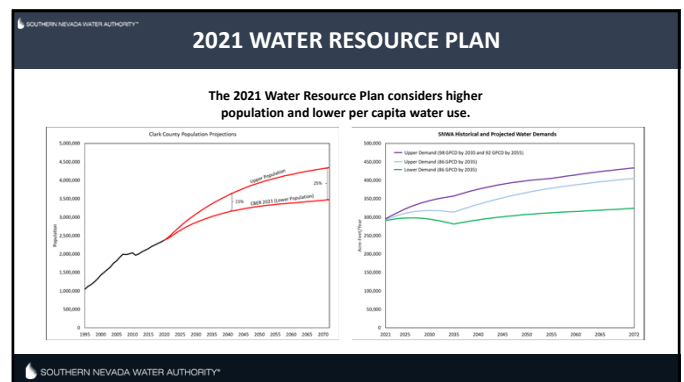
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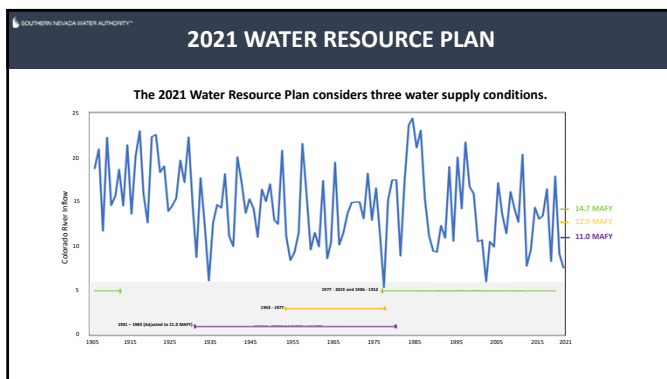
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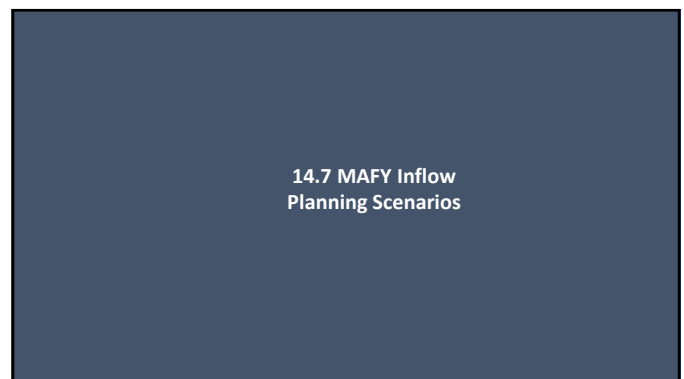
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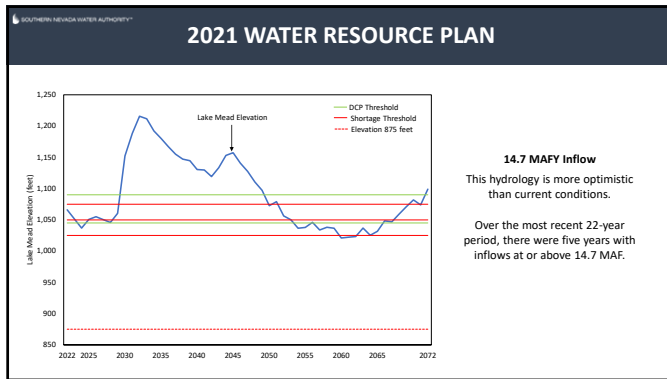
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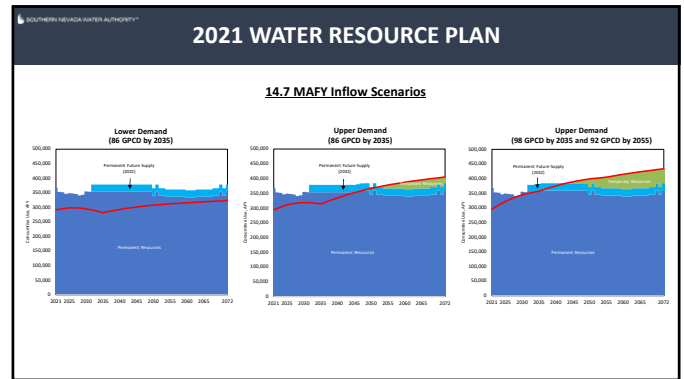
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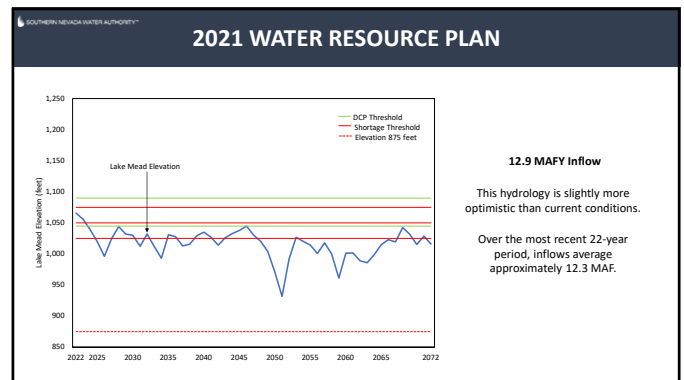
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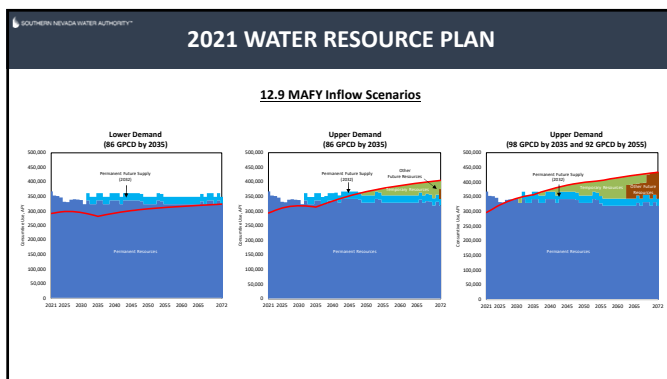
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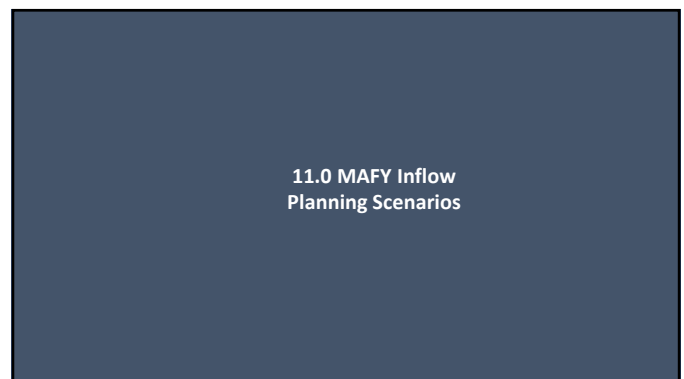
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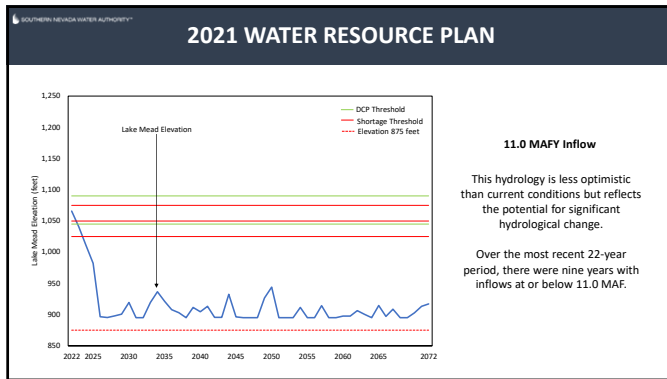
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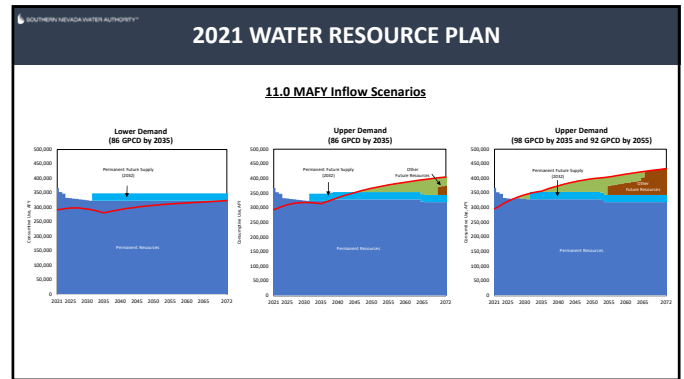
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