

III. Recommendations

In developing their recommendations, members of the SNWA Drought CAC recognized the need for more stringent measures by the community during drought conditions, but wanted to ensure an appropriate balance of efforts across all customer sectors. They agreed that all customers should share the “pain” of a Drought Emergency. Furthermore, they agreed in principle that each drought stage should be progressively more stringent in its measures; that is, more aggressive steps should be taken to conserve water during a Drought Emergency than is required under Drought Watch and Drought Alert. Accordingly, the committee developed the following recommendations for the SNWA Board of Directors and recommends the Board adopt and forward the recommendations to SNWA member agencies and other local public agencies for implementation.

Recommendation #1: DROUGHT EMERGENCY GUIDELINES (MATRIX)

The Drought CAC agreed it is essential to engage and involve the community in stringent water conservation efforts during a Drought Emergency. The members expressed concern over micromanaging individual conservation efforts and concluded that residents and businesses should be allowed some flexibility in managing their own water use. They expressed a preference for developing guidelines, instead of prescriptive measures, to help achieve water savings during Drought Emergency.

The committee therefore recommends that the following elements of the current matrix in the SNWA Drought Plan be modified as described for Drought Emergency:

Landscape Watering Guides

- Enforce mandatory seasonal watering schedules for sprinklers.
 - Three times per week (March through April and September through October)
 - One time per week during the winter (November through February)
- Publish the names of repeat water waste violators in local papers.

The Drought CAC believed if watering schedule and times were reduced even further in Drought Emergency, the community would respond by over-watering during designated periods and therefore not necessarily save water. Because of this, the committee agreed the watering schedule offered in Drought Alert should be sufficient for Drought Emergency.

Surface, Building and Equipment Washing

- Prohibit surface and building washing unless authorized by permit.

The committee agreed that equipment washing should not be prohibited because some types of equipment can degenerate if not washed. The members suggested prohibiting surface and building washing, but allowing exceptions based on necessity, not aesthetic reasons (for example, a painter may need to wash a building surface before applying a coating of paint).

Vehicle Washing

The committee could not reach agreement about whether to permit or prohibit personal and commercial vehicle washing during Drought Emergency. Some members believed this was a minor issue relative to larger drought concerns and should be prohibited completely during Drought Emergency. Other members believed that prohibiting this activity would impact a single business group unfairly (commercial car washing). Therefore, no recommendation was made, and at a minimum, the standard in Drought Alert would apply.

Landscape Development Codes

- Apply measures in Drought Alert.
- Reduce landscaped area or change types of landscape required.
- Place further restrictions on existing turf.
- Only allow the installation of water-efficient landscapes.

The committee agreed the measures listed in Drought Alert should apply in Drought Emergency. The committee further agreed that planning jurisdictions should re-examine existing codes and ordinances relating to buffers, open spaces, median islands and landscaping requirements to ensure water is used efficiently.

Mist Systems for Human Comfort

- Prohibit all non-essential outdoor uses related to human comfort.

The committee agreed that prohibition of all non-essential outdoor uses related to human comfort, as required under Drought Alert, was stringent enough and should be sufficient for Drought Emergency.

Water Budgeting for Golf Courses

- Continue to work with representatives from the golf course industry to determine feasible numbers for the Drought Alert and Drought Emergency stages.

Representatives of the golf course industry agreed in principle to the concept of water budgets for courses under Drought Watch, Alert and Emergency, but differed with the proposed amounts of the budgets identified in the SNWA Drought Plan. This made golf courses a frequent topic of discussion early in the committee process. Industry representatives maintained that golf courses are among the most efficient water users in the community and were being targeted unfairly for conservation under the SNWA Drought Plan. Some members argued that golf courses were being asked to conserve significantly during the Drought Watch and Drought Alert stages and therefore should not be subject to additional measures in Drought Emergency; instead, the focus should be placed on the residential sector, which accounts for the largest percentage of outdoor water use. Other members argued that golf courses needed to contribute more than residences and other businesses, given the industry's highly visible consumptive use. The committee concluded that residential homeowners had to contribute significantly to reductions in outdoor use, but that public perception required golf courses to do their part in order to ensure the rest of the community did its part.

The topic proved contentious and prevented the committee from moving forward on its larger task of determining steps for Drought Emergency. For this reason, it was suggested that staff work separately with representatives of the golf course industry to determine feasible target amounts for golf course water budgets under Drought Watch and Drought Alert. The committee agreed. While the committee developed its other recommendations, staff met frequently with golf industry representatives to explore possible options.

Staff and industry representatives agreed that the golf course water budget for Drought Watch would be 6.5 acre-feet per irrigated acre. This threshold amount was based on 2002 historical water use data and will target the top 10% of the golf course industry's water use. Water used in excess of the budget will be assessed a surcharge. Four of the five water purveyors of the SNWA agreed to implement the 6.5 acre-feet per irrigated acre target amount in their respective jurisdictions. At the time of this report, the Las Vegas Valley Water District and City of Henderson have adopted the water budget. The cities of Boulder City and North Las Vegas are expected to adopt and implement the budget in the near future. The Big Bend Water District implemented its own drought plan in May 2002, which includes a form of water budget for the one golf course in its jurisdiction.

The water budget will be placed on an annual cycle, which will give golf courses sufficient opportunity to convert large amounts of non-functional turf to water-smart landscaping courses as well as implement more water efficient systems to significantly reduce their consumptive water use, while minimizing impacts to their businesses. In addition, every golf course will be required to develop and submit a detailed water use reduction plan containing at least the following elements:

- A physical description of the course
- Itemized accounting of calendar year 2002 water use
- A review of spray irrigation efficiency
- Description of key water use reduction strategies and timelines for implementing those strategies

Public Parks, Schools and Governmental Facilities

- Establish a water budget for public parks, schools and governmental facilities.
- Apply drought provisions to parks, schools, and governmental facilities with less than 1 acre of turf (acreage limit currently "over 5 acres of turf").
- Allow non-functional turf at parks, schools and governmental facilities to brown out.

Committee members believed that government, parks and schools should manage their water usage to the same standards required of other customer sectors. They did not think the water efficiency plans currently required under Drought Watch and Drought Alert were enough for these entities in Drought Emergency and concluded instead that parks, schools and government facilities should be placed on a water budget – not only for Drought Emergency, but also for Drought Watch and Drought Alert. Recommendation #8 further discusses water budgets for parks, schools and government facilities.

The members did not agree on what consequences should apply if the water budget was exceeded, but some members suggested foregoing financial penalties (which would hit

ratepayers and taxpayers unfairly) and simply publicizing the level of compliance to create awareness among elected officials and voters. The committee agreed that these entities should be encouraged to analyze their useable/non-useable turf areas and retrofit where possible. Under extreme conditions, non-functional turf areas could also be allowed to brown out for a period of time, then revitalized if or when water conditions changed for the better.

Man-made Lakes

- Lakes that serve in whole or part as a functional reservoir for a golf course will be included in the calculation of a golf course water budget.
- All other man-made lakes shall pay drought surcharges on all fill water.

The water in man-made lakes is a consumptive use due to evaporative loss. For this reason, the committee recommended maintaining surcharges on all fill water. Overall, the members agreed the restrictions on man-made lakes offered in Drought Alert should be sufficient for Drought Emergency.

Fountains and Ornamental Water Features (less than one acre of surface area)

- Prohibit use of fountains and ornamental fountains. Exemptions provided as allowed by jurisdictional governmental bodies.
- Revise the SNWA Drought Plan to reduce the exemption of water features from 200 square feet surface area at single-family residences, while providing a minimum standard or exception for residential water features that support wildlife (for example, bird baths).

Overall, the members agreed the restrictions on fountains and ornamental water features offered in Drought Alert should be sufficient for Drought Emergency; however, the committee recommended that the exemption of water features less than 200 square feet surface area at residences be reduced to a size typical for wildlife-sustaining features only (5-15 square feet).

Water Rates and Surcharges

- Research and establish residential water budgets, where possible, with drought surcharges/penalties and rewards.
- Utilize additional surcharges if water budgeting is not feasible.

Committee members believed homeowners should be placed on a water budget during a Drought Emergency. However, given the difficulty of developing and tracking budgets for hundreds of thousands of individual residences, the committee concluded that surcharges might be the best tool to stimulate additional reductions in water use. It was suggested that local water purveyors explore the option of setting targeted water usage amounts – if residences (or other customer classes) exceeded the targeted amounts, a drought surcharge/penalty could be applied (or an incentive given if usage is below targeted amounts). If water budgeting or targets were not feasible, additional surcharges to rates should be used.

Water Waste Enforcement

- Increase education activities.
- Increase water waste penalties.
- Use proceeds from drought surcharges or penalties to fund enforcement, education, incentives and innovative water efficient technologies.

The committee believed that enforcement of drought measures would be difficult, but concluded that through education, residents can help “police” one another. Members underscored the need to educate the public on the difference between consumptive and non-consumptive uses – residents are not aware that they should be focused on lowering their outdoor water use instead of their indoor water use. Members also agreed there was a need to educate the community on efficient watering practices, focusing on those who live in older homes that may have less efficient irrigation systems or leaky plumbing fixtures. Lastly, members agreed that education on proper usage of irrigation clocks should be provided.

Strengthen Incentive Programs

- Maintain SNWA outdoor water conservation incentives at current levels.

The committee recognized the SNWA has already surpassed the recommended increase in incentive levels indicated in the Drought Watch and Drought Alert stages, but concluded that specific incentives should not be increased further because it might encourage the community to hold off participating in such programs until Drought Emergency. The goal should be to achieve water savings in the earlier drought stages to avoid or mitigate a Drought Emergency declaration. The committee therefore recommended that overall incentive levels remain unchanged. They also discussed developing new incentive programs (see Recommendation #7).

A revised matrix reflecting the preceding items is provided in Appendix C of this report.

Recommendation #2: ADDITIONAL DROUGHT GUIDELINES

In addition to their recommendations for the Drought Emergency column of the Drought Plan matrix, the committee identified the following measures for consideration by the SNWA, its member entities and other local planning agencies – but only if the Drought Emergency measures listed in the Drought Plan matrix proved ineffective in reducing water use; that is, the community was not reducing its consumptive use to levels at or below Southern Nevada’s available annual consumptive apportionment. These items were not subject to detailed analysis of their potential impacts:

- Prohibit watering turf in rights of way and non-functional turf.
- Provide incentives for converting cool season grass to warm season grass.
- Establish a golf course water budget for Drought Emergency.
- Additional rate increases.
- Separate consumptive and non-consumptive rates and meters in new development.
- Provide incentives for other water savings.
- Restrict water at restaurants to “by request.”

- Implement reduced laundering frequency program at hotels.
- Use private enterprise to save water.
- Allow car washing only at businesses that reclaim water.
- Prohibit turf planting during the months of May – September, except for conversion of cool to warm season grasses.
- Slow down new home construction.
- Prohibit water service connection for new construction.
- Prohibit new construction of fountains and ornamental water features.
- Require pool covers.

Recommendation #3: PUBLIC EDUCATION AND AWARENESS

For drought measures to succeed, the Drought CAC believed it was essential that residents and businesses acknowledge the fact that the drought situation in Southern Nevada is real and conditions are not likely to subside in the near future. For this reason, members agreed that one of the highest priorities is to educate the community on drought and water conservation, and to update the community regularly on the status of water conservation efforts.

To this end, the committee recommends that the SNWA assume the lead role in developing partnerships with local businesses to increase the public’s awareness of the drought situation in Southern Nevada, focusing on educational opportunities that target those with the greatest potential to save water – namely, high outdoor water users such as homeowners and schools. Efforts should focus on:

- Informing the community of drought conditions through a major public outreach effort. Specific suggestions include development of youth education programs in schools, use of public service announcements, working with local news and weather anchors, and advertising in local organization bulletins/newsletters.
- Communicating the community’s water conservation achievements (see Recommendation #4).
- Partnering with local landscape and golf course professionals to provide water conservation guidelines and tips.
- Providing more water efficiency classes to residents. These classes would be mandatory for flagrant violators of water waste rules.
- Providing residential site visits where staff help identify opportunities to increase water efficiency. This would be especially beneficial to those living in older homes.

Recommendation #4: WATER BUDGET TARGET FOR COMMUNITY

The Drought CAC recommends establishment of a weekly, monthly and annual water budget target for the community, to track the community's water conservation efforts during each stage of drought. The committee believes communicating the community's progress is essential to encouraging residents to follow additional drought measures. Therefore, members recommend that the SNWA and its member agencies work together to determine reasonable weekly, monthly and annual conservation targets that will be frequently communicated to the public during drought conditions.

Recommendation #5: RESIDENTIAL WATER BUDGETS

Recognizing that the greatest opportunity to conserve water lies with the residential sector, the Drought CAC believed the establishment of water budgets during the Drought Emergency stage will help curtail water use, while at the same time allowing homeowners to determine how best to manage their resources. The committee recognized it might be difficult to develop and track water budgets for individual residences, so members suggested utilizing rates and surcharges as a method to achieve additional water savings. In the event budgets are implemented, residents who exceed a specified target amount could be assessed a surcharge or penalty for excessive water use. At the same time, the committee felt a pricing incentive should be offered to encourage and reward residents that are already using water efficiently. These pricing signals would be intended to generate significant water savings from the residential sector, not generate revenue for local purveyors or the SNWA. To this end, the committee recommends:

- The SNWA and its member agencies work together to determine feasible target amounts for residences during the Drought Emergency stage.
- The member agencies of the SNWA assess drought surcharges/penalties if target amounts are exceeded.
- The member agencies of the SNWA offer price incentives or credits to residents who utilize water efficiently.

Recommendation #6: USE OF FUNDS FROM DROUGHT SURCHARGES AND PENALTIES

The Drought CAC recommends that SNWA use any monies collected from surcharges/penalties to support water enforcement and education initiatives, as well as to develop additional conservation incentive programs.

Recommendation #7: INCENTIVE PROGRAMS TO INCREASE WATER EFFICIENCY

The Drought CAC expressed its support of efforts to develop new incentive programs that will help increase water efficiency. Because the largest potential water savings can be achieved through efficient irrigation practices, the committee believed incentives on new irrigation technologies (such as evapotranspiration clocks and smarter controllers) should be offered in addition to existing water conservation programs. In addition to improvements in irrigation systems, the committee recognized that new innovative technologies are available or under development to help the community further reduce its consumptive water use.

The committee also expressed concern that funds for existing conservation programs, such as the Water Smart Landscapes rebate program, might run out and wanted to ensure sufficient funding is available for customers willing to convert their turf. As part of the matrix, it was recommended that in Drought Alert, total program funding increase by 35% and funding for specific incentive programs be maintained. The committee believed this percentage should remain unchanged in Drought Emergency because the SNWA has already surpassed the recommended increase in incentive levels indicated in the Drought Watch and Drought Alert stages. The committee also agreed that residential turf conversion should remain a priority, since outdoor lawn watering by homeowners remained one of the largest sources of water waste in the community. In addition to homeowners, the committee believed businesses should be further encouraged to convert their turf and suggested that incentive programs be limited to residences, businesses and non-profit organizations only (rather than government agencies).

The committee recommends that the SNWA and its member agencies continue to partner with irrigation and water industry professionals to encourage and expedite the delivery of smarter, more efficient irrigation systems to the market as well as other new technologies, test and promote their use as they become available, in order to develop additional incentive programs focusing on reduction of consumptive water use. The committee further recommends that incentive programs be offered to residential, business and non-profit customers only, as they are the main focus for water savings.

Recommendation #8: WATER BUDGETS FOR SCHOOLS, PARKS AND GOVERNMENTAL FACILITIES

The Drought CAC noted that schools, parks and governmental facilities use significant amounts of water and therefore needed to lead by example, contributing commensurately during each stage of drought. The committee believed that water budgets were one way to accomplish this, while still allowing the entities to determine how best to manage their resources. Members felt that by utilizing the expertise of local landscape and irrigation professionals, assessing useable/non-useable turf areas, and retrofitting wherever possible, these entities could operate within water budgets. The Drought CAC was unable to reach an agreement concerning the assessment of a drought surcharge or penalty if a budgeted amount is exceeded, given uncertainty surrounding the possible impacts of the penalties. Some members believed monetary penalties would have no effect on water consumption, because the fees would be recovered

through ratepayer/taxpayer contributions. Other members believed if penalties were imposed, the entities would be pressured to conserve water to avoid public backlash that could occur if targeted amounts were not met. The committee did agree that schools, parks, and governmental facilities should be required to report their progress in a public manner, to hold them accountable for water conservation. Members also discussed the need to maintain adequate levels of public open space, particularly when homeowners were being encouraged to reduce or eliminate turf at their residences.

The committee recommends:

- The SNWA and its member agencies work together to determine a feasible target amount for schools, parks and governmental facilities during each stage of drought.
- The SNWA and its member agencies work closely with schools to develop new standards that mandate newly constructed schools utilize a water-efficient landscape approach.
- Requiring schools, parks and government facilities to report their water conservation progress to the public by providing updates to the community at local government meetings and through published notices.

Recommendation #9: CODE CONSISTENCY

The committee discussed the need for consistent building codes as it relates to sewer outlets for swimming pool drainage and landscaping requirements. The members believed sewer outlets should be required and constructed in close proximity to the home so that pool water can be captured to the sanitary sewer. In addition, as part of the matrix, the members discussed the need for planning jurisdictions to re-examine existing codes and ordinances relating to buffers, open spaces, median islands and landscaping requirements to ensure equity among the local jurisdictions and to ensure water is being used efficiently. The committee recommends the SNWA work closely with its member agencies and other planning agencies to review local building and landscape development codes for consistency and make appropriate changes to save water.

Recommendation #10: GROWTH

The issue of community growth was raised and discussed on numerous occasions. While a wide range of opinions was voiced about the impacts of a high growth rate, including whether the committee had any charge to address this issue, essentially all members agreed that the issues of water supply and community growth are closely linked. There was also widespread agreement that if local officials do not acknowledge and address the relationship between growth and increasing demand for water, many members of the community will have difficulty believing water conservation is an issue to be taken seriously. With construction, the second largest industry in Clark County, dependent upon an ever increasing supply of fresh water, the future

availability of water and its relationship to community growth should be a major topic of public discussion.

The committee concluded that:

- Local government officials need to take a serious look at the demands on consumptive water use created by additional development and recommended that the SNWA distribute the results of the updated growth study to its member agencies and other local planning agencies for consideration.
- The development industry should be encouraged to continue its efforts to bring forth new and innovative ideas to save water, and to help reduce consumptive use in the community.