



**NONFUNCTIONAL TURF REMOVAL ADVISORY COMMITTEE  
MEETING SUMMARY**

*September 22, 2021, 3:00 p.m.*

*Colorado River Conference Rooms, Southern Nevada Water Authority  
100 City Parkway, 7th Floor, Las Vegas, Nevada*

NTRAC members present:	David Strickland	Tena Cameron
	Larry Fossan	Scott Black
	Brian Walsh	Mauricia Baca
	Dale Hahn	

NTRAC members absent:	Stephanie Bressler	Tom Burns
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Staff present:	Colby Pellegrino	Zane Marshall
	Tabitha Simmons	Katie Horn
	Mitch Bishop	

**PUBLIC COMMENT**

There were no members from the public wishing to speak.

**SUMMARY OF ACTIVITIES**

The Southern Nevada Water Authority's (Authority) Nonfunctional Turf Removal Advisory Committee (NTRAC) met on Wednesday, September 22, 2021. The meeting began at 3:00 p.m.

*#1 Approve agenda and minutes from the August 18, 2021 meeting.*

Scott Black moved to approve the meeting agenda and the minutes from the August 18, 2021 meeting. The motion was approved.

*#2 Receive a presentation on Assembly Bill 356 and the Nonfunctional Turf Removal Advisory Committee.*

Colby Pellegrino, Deputy General Manager of Resources, provided an overview of Assembly Bill 356 that was signed into law by Governor Sisolak in June 2021. This law states that on and after January 1, 2027, the waters of the Colorado River distributed by the Authority or one of the member agencies of the Authority may not be used to irrigate nonfunctional turf on any property that is not zoned exclusively for a single-family residence. She stated that the bill also set forth a number actions and responsibilities to the Authority board which are to define "functional turf" and "nonfunctional turf" and promulgate the definitions in the service rules of member agencies, and to develop a plan to identify and facilitate the removal of nonfunctional turf that establishes phases for the removal of it, based on categories of water users, and establishes deadlines for removing it. Ms. Pellegrino also stated that the bill established the NTRAC, outlined its responsibilities, and put forth provisions related to turf removal. This also includes an undefined waiver or extension process. She also discussed the differences between NTRAC's responsibilities and the Authority's other conservation-related programs. She concluded by giving an overview of the NTRAC process and next steps.

*#3 Receive a presentation on functional and nonfunctional turf in Southern Nevada.*

Ms. Pellegrino gave background information on Southern Nevada's growth in the 1980s and 1990s and how the drought, which began in the early 2000s, forced the community to rethink its growth and

development, specifically as it related to water efficient principles. In 2004, turf restrictions were put into municipal codes and limited turf in both residential and commercial applications, and while those new codes helped, existing unusable turf remained from prior development. Because of this, the Authority focused its efforts on incentivizing the removal of unused turf. Ms. Pellegrino discussed the turf removal rebate increases throughout the years and how they impacted conservation program participation. She stated that Southern Nevada needs to continue to make progress in removing unused turf since water usage is increasing and drought conditions continue, adding that incentives are no longer effective and thus the need for AB356. Dale Hahn asked what year the Water Smart Landscape easement began, to which Ms. Pellegrino responded that the Authority began placing easements in 2009 on properties that participated in its conservation programs.

Ms. Pellegrino discussed how nonfunctional turf is handled in the community for new development, highlighted the following conditions and gave specific examples of each:

- The installation of turf on public and private parks and schools is limited to active or programmed recreation areas such as sport fields
- Turf should not be installed in areas less than 1,500 contiguous square feet
- Turf cannot be less than 30 feet in any dimension
- Turf cannot be installed closer than 10 feet to a street
- Turf cannot be installed in front of entryways to residential neighborhoods or subdivisions where other recreational amenities do not exist
- The maximum slope of a turf area will not exceed 25 percent and turf areas should be graded to prevent runoff, except in designated drainage areas

She stated that most of the grass that exists today would not be installed under today's codes and that NTRAC will develop recommendations to implement AB356 in a three-part process: 1) consider and develop definitions by sector (commercial, multifamily, municipal, public services, churches, HOAs, etc.); 2) waivers; and 3) reviewing the plan and recommendations.

#### *#4 Discuss defining functional and nonfunctional turf.*

Zane Marshall, Director of Resources, led the discussion on defining functional and nonfunctional turf. He began by defining what the Authority considers as functional turf, which includes the following:

- Used on a near daily basis
- People are actively using it for recreation (not walking through it)
- Safe and easy to access
- Large enough to irrigate efficiently
- Offers multipurpose use (sport fields excluded)
- Adjacent to other amenities (benches, restrooms, shade)

Mr. Marshall then defined what the Authority considers as nonfunctional turf, which includes the following:

- Not being used in a recreational application
- Too small to offer meaningful benefit
- Located adjacent to streets or thoroughfares that affect its use
- Located in areas difficult to access or limited access
- Difficult to irrigate efficiently (sloped, oddly shaped)
- Without nearby amenities

Larry Fossan asked about dog walking areas and if current areas would need to be modified to meet the standards and definitions set forth by the committee. Mr. Marshall confirmed that is correct. Ms. Pellegrino added that there will be a waiver process, but the goal is to be uniform and consistent. Tena Cameron asked if there will be an extension waiver for those who need more than the five years to remove turf. Ms. Pellegrino responded that the legislation states that nonfunctional turf cannot be irrigated after 2027; so, while there may be extensions, it will be easier and more cost effective to do it early and altogether rather than waiting or phasing it.

Tabitha Simmons, Director of Legal Services, discussed some goals for the committee to help create a regulatory framework in drafting definitions. These goals include consistency in the application of the law, clear definitions that can be applied uniformly and objectively, and thorough definitions that inform whether turf will or will not be permitted under the law.

Mr. Marshall continued the definition discussion by giving several sample definitions and citing specific examples. He highlighted the following functional turf types:

- Active/Programmed Recreation Turf means irrigated lawn grass in an active/programmed recreation area on homeowner association-owned or managed property or at a public park or water park (excluding park streetscape and community frontage areas).
- Athletic Field Turf means irrigated lawn grass used as a programmed sports field or for physical education and intermural use that is 1,500 contiguous square feet or greater, not less than 30 feet in any dimension, and located at a school, daycare, youth recreation center, senior center, public park, private park, water park or religious institution.
- Designated Use Area Turf means irrigated lawn grass designated for special use at cemeteries and mortuaries.
- Golf Course Play Turf means irrigated lawn grass at a golf course in driving ranges, chipping and putting greens, tee boxes, greens, fairways and rough.
- Pet Relief Turf means irrigated lawn grass in a property providing commercial and retail services for pets that is designated for pet use (such as veterinarians or boarding facilities); may not exceed 200 square feet.
- Playground Turf means irrigated lawn grass in designated play areas with playground amenities, including but not limited to slides, swings and climbing structures on homeowner association-owned or managed property or at a public park, water park, school, daycare, youth recreation center, senior center or religious institution.
- Resident Area Turf means up to 150 square feet of irrigated lawn grass per dwelling unit at multi-family residential properties or assisted living and rehabilitation centers used by tenants for recreation and leisure.

Mauricia Baca spoke about existing properties and their ability to establish the use of turf as functional. Mr. Marshall responded that something like that would be part of a waiver process. He added that it is important to define the use so that there is an established criterion and mentioned that longevity of use is not necessarily a component of the criteria. Ms. Pellegrino added that the waiver would be separate from the definition and the waiver would need a set of factors that would need to be defended. Scott Black asked about future conversion projects and if the Authority or NTRAC will have a consultative approach where recommendations can be made. He gave an example of a high school soccer field with a slope near the bleachers on the outside of the field. Ms. Pellegrino said staff would be willing to look at any examples but are trying to make these definitions with a broad stroke, realizing that not every circumstance will be covered under the definitions. Ms. Baca asked if this is just for existing athletic turf or for future development. Ms. Pellegrino stated that the definitions under NTRAC's purview are for

existing properties and that municipal codes already exist for future development. Regarding the Pet Relief Turf definition, Mr. Hahn stated that 200 square feet is not enough turf for those facilities to care for pets. Ms. Pellegrino stated that this is informed by what is seen in the community today, as many of these facilities have 200 square feet or less and many utilize artificial turf. Mr. Hahn then asked if there is any restriction on sprinklers for artificial turf, primarily for cleaning. Mr. Marshall said there is nothing prohibiting sprinklers on artificial turf and said that it is common to have some spray irrigation for cleaning and maintenance of artificial turf. He added that the amount of water used for this is still far less than what is used for regular turf. Regarding the definition for Residential Area Turf, Larry Fossan clarified the formula for calculating turf allocation. Mr. Marshall added that the turf must be in areas reasonably accessible for active use by residents and not located in streetscapes, parking lots, roundabouts, medians, etc.

Mr. Marshall then presented the definition for nonfunctional turf which means irrigated lawn grass area not meeting the definition of Functional Turf, including without limitation, such areas as streetscape turf, frontage, courtyard, interior and building adjacent turf and certain HOA-managed landscape areas. Tena Cameron spoke about office parks and properties, stating that there are turfed areas next to a building where employees actively go to eat lunch or spend time outdoors on their break. Mr. Marshall stated that particular use is not currently defined as functional but may be part of a waiver process. He recommended that other ways be considered to give employees a nice outdoor experience without the use of turf.

David Strickland commented that many older office parks in the valley need to differentiate themselves from the newer ones, which create amenities inside, to compete for tenants, and they create outdoor spaces for employees to gather for health and well-being. He indicated that a nice grass area plays a large role in creating that space and experience. He later suggested that perhaps the structure of these office parks can be set up much like the multifamily residential where a formula per unit could be used to determine turf allotment. Ms. Cameron stated that many of these areas are an extension of the workplace and are functional in that regard. She added that she hopes there are some exceptions to this definition or ways to show an active use of these spaces.

Mr. Fossan commented that these conversions will have a large economic impact on many of these sectors and costs will likely be passed on to the tenants and residents. Ms. Pellegrino stated that the Authority is sensitive to the economic impact and while it is not the intent of the NTRAC to look at a potential incentive structure, Authority staff will need to re-evaluate some of the conservation program requirements. She added that there is a lot of work that needs to happen in the land use planning sector related to water supply.

Mr. Hahn asked if the committee would help define irrigation efficiencies. Ms. Pellegrino stated that the Authority has an existing program and incentive for cool season to warm season conversions and that irrigation efficiency definitions will not be the purview of the NTRAC. Mr. Black commented that from a governmental oversight standpoint, it is important to adhere to the three guiding principles for these definitions mentioned earlier about consistency in the application of the law, clear definitions that can be applied uniformly and objectively, and thorough definitions that inform whether turf will or will not be permitted under the law.

The next meeting is scheduled for Wednesday, October 27<sup>th</sup>.

**PUBLIC COMMENT**

Three members from the public, Robert Gibson, Stacy Standley and Anabel Najarro, submitted written comment in advance of the meeting. Their comments are attached to this meeting summary.

**ADJOURNMENT**

The meeting was adjourned at 4:37 p.m.

# WRITTEN PUBLIC COMMENT SUBMITTED FOR THE RECORD

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**From:** Robert Gibson <hoot@hootrjgibson.com>  
**Sent:** Friday, September 17, 2021 12:23 PM  
**To:** &PublicComment  
**Cc:** Mitch Bishop SNWA  
**Subject:** {EXTERNAL} Nonfunctional Turf designations

I am a full time Las Vegas resident with two Golden Retrievers. My wife and I walk our dogs nearly everyday along the strip of grass which adjoins the community wall between Innisbrook Ave and Hacienda St. This strip of grass has two dog waste stations with "poop bags" for the residents' use.

During the hot months( about 5 months of each year) the asphalt street and concrete sidewalk are too hot and would burn the dogs' paws. Thus, this grass is essential for our dogs' exercise ( as well as following my cardiologist's orders for my 75 year old heart). Replacing the grass with decorative stone will not avoid this danger.

The availability of this grass for our walks was an important factor in our decision to purchase our home.

I am greatly concerned about the SNWA being overly aggressive in determining what is actually "nonfunctional" turf. For example, it is reported that SNWA has used aerial photography to determine the amount of nonfunctional turf to be removed. I don't recall seeing any aircraft overhead when I walk our dogs.

Consequently, I am writing to encourage the Advisory Committee and SNWA to adopt a common sense approach in defining functional turf to protect the grass used by residents, like my wife, our dogs and me.

Also, there needs to be a user friendly method for residents to challenge any adverse findings without having to hire expensive lawyers.

Thank you for your consideration in saving our very functional grass.

Robert Gibson  
43 Innisbrook Ave  
Las Vegas, NV

Sent from my iPad

# WRITTEN PUBLIC COMMENT SUBMITTED FOR THE RECORD

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**From:** ANABEL NAJARRO <anabel.najarro@gmail.com>  
**Sent:** Tuesday, September 21, 2021 9:14 AM  
**To:** &PublicComment  
**Subject:** {EXTERNAL} Nonfunctional Turf

Good morning, my comments and question are as follows:

We live in a 55+ HOA that owns a "maintenance easement" on all the front yards of 179 single family residential units. The HOA owns the grass, the trees, the bushes and the irrigation. We, the individual homeowners, don't control or pay for the water used and wasted on the front yards.

Our CCRs state that the front yards are for the visual enjoyment of the HOA and for the exclusive use of the unit's owner. The grass is only walked on when the landscapers are mowing it and it is only used when people bring their dogs to pee and poop on it even though they are not supposed to according to our CCRs. The grass on the front yards is not used for sports, play, picnics, or other recreation purposes. **It is only to look at and it belongs to the association.**

Doesn't this grass on the front yards qualify as nonfunctional?

In our last HOA meeting, the board announced that they would allow homeowners who want to convert to desert landscaping to do so if the homeowner pays for the conversion and hooks up the irrigation to their own water.

My husband and I want to convert to desert landscaping but we don't think that it is equitable to pay for the conversion and the water to maintain it, when the HOA is paying to replace the rest of the homeowners' useless grass and the water to maintain it even when the homeowners don't care about water waste. We feel like we are being penalized for wanting to convert to desert landscaping in order to conserve water.

Thanks for your attention and I hope that you will take our unique situation into consideration when defining non functional turf.

Anabel Najarro

# WRITTEN PUBLIC COMMENT SUBMITTED FOR THE RECORD

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**From:** stacy standley <stacystandley@hotmail.com>  
**Sent:** Sunday, September 19, 2021 5:06 PM  
**To:** &PublicComment  
**Subject:** {EXTERNAL} Questions and points to address for the NFTRC  
**Attachments:** QUESTIONS for\_Non-Functional Turf Removal Advisory Committee\_NTRAC\_9\_5\_2021.pdf

Please find attached my thoughts and questions on AB356, I will look forward to hearing the response during the meeting on Wed.

Thank you

702-443-1302



# Non-Functional Turf Removal Advisory Committee (NTRAC)

Comments for consideration by NTRAC

submitted on behalf of

Clark County

**“Common-interest Community”**

with Non-Functional Turf subject to removal by 2027

## SNWA water use and sources.

Today SNWA only uses a little more than its 2020 yearly 234,000-acre feet per year (AFY) of its allocation of 276,205 AFY of the Nevada 300,000 AFY allocation from the Colorado River water because since 2000 water use goes down 47% from 211 gallons per capita per day (GPCD) to 101 GPCD and consumption goes down 23% while population increased by 52% ... and water use is projected to be 98 GPCD by 2035 while there will be new growth of 820,000 people.

The SNWA also created a new Colorado River water supply from “Return Flow Credits”, “Water Reuse”, “Flood Control Surplus”, “Domestic Surplus”, plus over 2.1 MAF of new water supply from “Intentionally Created Surplus” (ICS, actually a variety of surplus categories), “Water Banks”, reuse recycling agreements with MWD and irrigation water created by cooperative agreements for following Colorado River irrigation. <https://www.snwa.com/assets/pdf/water-resource-plan-2020.pdf>

The SNWA and LVVWD (and the other local Clark Country water suppliers) have accumulated about **49,961 AFY of local Nevada groundwater supplies** that are **not Colorado River water** subject to the annual Nevada cap of 300,000 AFY agreed to by Nevada under the “Law of the River”, and **importantly also not subject to AB 356 compelling removal of Non-Functional Turf by 2027.**

Yes, commendation for SNWA and its 7 local water suppliers is certainly in order for excellent leadership.

## **Now comes the hard part for SNWA and NTRAC!**

Clark County's population is projected to grow from 2,347,920 today to reach approximately 3.02 million by 2035 and nearly 3.38 million by 2060.

<https://files.clarkcountynv.gov/clarknv/2021%20CBER%20Population%20Forecasts.pdf?t=1623772343737&t=1623772343737>

Much of that new population growth will be on about 30,633 acres of Bureau of Land Management (BLM) land sold to land developers for housing an additional 820,000 people if the Southern Nevada Economic Development and Conservation Act (SNEDCA) proposed as S. 567 by Senator Cortez-Masto (D.-NV) becomes law.

About 29,150 AFY of water supply needed for that new growth is projected to be supplied by removal of 3,900 acres of Non-Functional Turf by Clark County "**Common-interest Community**", and other businesses.

**Will this be: "Robbing Peter's Well to Pay Paul's Well ... Until Both Wells Run Dry".**

**Without a doubt, every current resident in Clark County "Common-interest Community" would do anything in their power to reduce water use for the benefit of their fellow citizens in desperate time of need.**

But one wonders if they would do that for 820,000 new people who will be using the water **every current resident in Clark County "Common-interest Community"** stops using for irrigation of Non-Functional Turf ... and without any significant compensation for the millions of dollars existing residents have been paying since at least 1985 for improving and expanding and enhancing the Clark County water systems and making their local housing developments the beautiful pride of the desert.

It looks like only the land developers actually benefit from all of this sacrifice by existing residents for future new residents.

How much do the land developers stand to make: billions if not tens of billions no doubt.

How much do the existing homes owners stand to lose, equal hundreds of millions if not billions no doubt.

This is wealth transfer plain and simple.

But not wealth from existing homeowners to new homeowners, instead more wealth is transferred to land developers ... which developers also contribute money to politicians ... and developers also pay fees to SNWA and the 7 local water suppliers so these agencies can prosper!

## Consider what local homebuilders actually say:

Conservation frees water, reduces per capita consumption and strengthens builders' arguments that the desert can accommodate more growth, Walker said for Southern Nevada Homebuilders' Association. "And the benefits are the ability to keep doing what we do, which is building homes."

Las Vegas, for example, mostly ignores toilets, showers and dishwashers because the water authority is able to treat and recycle indoor wastewater and let it flow through a natural wash into Lake Mead — the Colorado River reservoir behind Hoover Dam. It is filtered again for reuse.

Las Vegas needs to drastically reduce the 5,000 acres of "non-functional turf grass" in Las Vegas at the cost of the homeowners and HOA's and give the water supply and treated water capacity to new growth.

<https://www.reviewjournal.com/news/politics-and-government/2021-legislature/with-water-shortage-likely-snwa-targets-decorative-grass-2325788/>

## Will removing Non-Functional Turf actually reduce water use over the long haul?

SNWA says yes.

The General Assembly of the State of Nevada says yes.

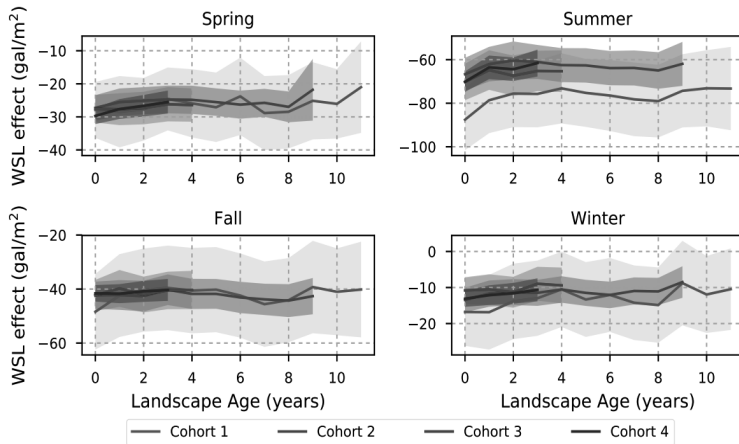
The land developers say yes.

The NTRAC will now need to say yes or maybe or no or grant waivers or ?

But what do independent experts say?

## WRITTEN PUBLIC COMMENT SUBMITTED FOR THE RECORD

### **“Rebound effect” shows water reduction by “xeric” landscaping declines over time.** **OAK RIDGE NATIONAL LAB REPORT ON SNWA INDICATES WATER SAVINGS OF ONLY 18%** **NOT THE SNWA’S PROJECTED 50% FROM TRUF REMOVAL**



Smart Are ‘Water Smart Landscapes?’ provides an independent Turf grass (Mesic means humid region grass) and replacing it (‘hic’). The conclusion is there is an unintentional “rebound down to only about 18% instead of the projected 50% or more

Figure 6: Regression results showing the relationship between the age of a WSL conversion and the water savings generated.

## Whose water is it after all?

As we said above, the SNWA has accumulated about 49,961 AFY of local groundwater supplies that are not Colorado River water subject to the annual cap of 300,000 AFY agreed to by Nevada under the “Law of the River”. (according to SNWA’s Water Resource plan 2020)

The local groundwater supplies (i.e.. wells) stated above were created by the legal beneficial use of Nevada groundwater under Nevada Water Law from about 1985 to 2021.

Who created that 49,961 AFY of groundwater rights?

They were created by new growth from about 1985 to 2021 which included residential homes in “Common-interest Community”.

Clark County approvals mandated the installation of the cold weather turf grass (“Mesic” plants) for “functional” and “non-functional” turf grass in yards, parks, amenities, open space, homes and surrounding areas using the 49,961 AFY of local groundwater.

Thus, no water is currently applied to “non-functional” turf in any “Common Interest Communities” between 1985-2021 from the Colorado River and thus, is not subject to the new AB 356 law requiring the removal of “non-functional turf” irrigated by Colorado River water. (**non function turf is 4,000 ac, water use on non function turf is 29,000 ac ft, and ground water is 49,961 ac ft, thus no Colorado River Water is used for non-functional turf**)

Therefore, the “Non-functional Turf Removal Advisory Committee” shall recommend a waiver of removal of any non-functional turf for such “Common Interest Communities” created from 1985-2021 because they were not and are not using Colorado River water for “non-functional turf” which is prohibited by AB 356.

## Other important considerations for NTRAC.

The use of "Netafin" and other similar irrigation water use reduction management systems are not successful in actual practice.

New growth contributes to traffic congestion, CO2 emissions, dust PM2.5 emissions, health impacts, reduction in quality of life, unnecessary water usage, higher ambient temperature, and generally is not a net benefit to Las Vegas or Nevada.

The reduction in non-functional turf creates a heat island where temperatures will rise well over 7 degrees (with some evidence of up to 31 degrees) CO2, and also adversely impacts mature trees which add cooling and cleansing of CO2 emissions.

Leaks in the SNWA and 7 local water suppliers' systems are excessive exceeding more water than could be saved from removal of non-functional turf, and leaks are not a good beneficial use of valuable water, and, thus, more water can be saved from loss and waste by an aggressive leak prevention program instead of non-functional turf removal.

Water fees and charges in the Las Vegas area by SNWA and the 7 local water suppliers are far too low compared to other growth cities ... and SNWA has lost too much revenue since 2015 due to low fees ... and all water related fees and charges must be brought up to higher competitive levels befitting a city in a desert.

<https://www.bluefieldresearch.com/download/29913>

SNWA should simply set a water reduction goal for each "Common-interest Community" and let them figure out how to achieve the goal, like SNWA does for the local golf courses and public parks already. Most "Common-interest Community" have already been leaders in all forms of best practices for water use reduction. Encourage success.

## IN SUMMARY

- About 29,150 AFY of water supply needed for new growth is projected to be supplied by removal of 3,900 acres of Non-Functional Turf by Clark County "Common-interest Community", and other businesses.

**Will this be: "Robbing Peter's Well to Pay Paul's Well ... Until Both Wells Run Dry"?**

- The 820,000 new people who will be using the water **every current resident in Clark County "Common-interest Community"** stops using for irrigation of Non-Functional Turf ... and without any significant compensation for the millions of dollars existing residents have been paying since at least -1985 for improving and expanding and enhancing the Clark County water systems- **WHERE IS THE EQUITY IN THIS?**
- This is wealth transfer plain and simple-and may well be an illegal "taking"- $-\$3$  psf is not compensation please defend this!
- Conservation frees water, reduces per capita consumption and strengthens builders' arguments that the desert can accommodate more growth, Walker said for Southern Nevada Homebuilders' Association. "And the benefits are the ability to keep doing what we do, which is building homes." Why should C-I Cs give up water to land developers, and suffer depreciation of their home values?
- **Will removing Non-Functional Turf actually reduce water use over the long haul?** A report by Oak Ridge National Laboratory entitled "How Smart Are 'Water Smart Landscapes'?" concluded "there is an unintentional "rebound effect" that over time significantly reduces savings of water down to only about 18% instead of the projected 50% or more by SNWA" So the real impact of 4,000 AC turf removal is not 36,000 ac feet annually but only 12,900 ac feet annually, enough water to support 25,000 homes or 100,000 people. Where is the water for the other projected 720,000 people going to come from?  $(720,000/4=180,000$  homes/2 homes/ac ft= $90,000$  ac ft of  $H_2O$ )

- **IN CONCLUSION:**

- **Whose water is it after all? Since no Colorado River Water is used for non-functional turf, AB356 is a moot point and it cannot require the removal of non-functional turf.**