

Agua Dulce Landscape Background and Guidance

Revision 1.08
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Prepared for the Association by Landscape and Community Volunteers

Table of Contents

<i>Executive Summary</i>	5
<i>The “Why” of This Guidance</i>	6
<i>Scope</i>	8
<i>Tree, Shrub, and Groundcover Maintenance</i>	10
Tree Maintenance	10
Background	10
Witnessed Stress, Sunburn and Recovery	13
Tree Maintenance Current Practice	15
Two-Year (2024) Update on Revised Tree Maintenance Approach	16
Money Savings from New Pruning Approach	16
Shrub and Groundcover Maintenance	17
Guidance	17
Winter Pruning	18
Mulch	19
Traffic Visibility	20
<i>Weeds and Herbicides</i>	21
Guidance	21
Recommendations	21
Invasives in Non-treated Areas	23
Residential Notifications and Opt-Out	24
Wildflower Lifecycle and Management	26
Managing Non-Natives and/or Undesirable Plants	27
London Rocket	28
Common Groundsel	31
Desert Broom	33
Weeds to Watch for in Residential Yards	35
<i>Association Coordination with Landscapers</i>	36
Background	36
Landscape Maintenance Service Areas	37
Landscape Service Cadence	38
One Page Bilingual Guidance	39
New Map for Herbicide Treatment	40
Packrats and Ground Squirrels	41
<i>Irrigation</i>	42
Background	42

General Considerations	42
Maps (Meters, Timers, Irrigation Zones)	43
Watering Frequency	44
<i>Common Area Restrictions</i>	45
Common Areas B and D	45
Proposed Hiking Trails	46
Common Area Vegetation Impacting Private Property	47
Non-Viable Vegetation	47
Viable vegetation	51
<i>Water Harvesting and Erosion Control</i>	54
Ten Years of Building Community Through Conservation	54
Water Harvesting Features	55
Landscape Story Map	56
Landscape Committee Open Meetings	57
Repairs	58
LID Certification	59
<i>Animal/Pet Scat</i>	61
<i>Volunteer Activities</i>	62
Water Harvesting Feature Maintenance	63
Basin Development	64
Mulch Distribution	69
How Effective is Mulch in Agua Dulce?	71
Leak Detection and Repairs	72
Tucson Water Reimbursements	78
Irrigation Shutoff	82
Hunter Node 100:	84
Irritrol RD-600R:	85
Hunter X CORE	86
Backflow Preventer and Ball Valves	86
Landscaper Coordination Flagging	88
Animal Waste Cleanup	94
Newsletter Entries	95
<i>Concerns Regarding Wildfire Risk</i>	97
<i>Wildlife Encounters in Common Areas</i>	99
<i>Resident Concerns / Requests</i>	101

<i>El Paso Natural Gas Company Easement</i>	<i>101</i>
EPNG 2024 Notification of Excavations	103
Protected Restoration Area	107
First Community Notice sent to Residents	108
Coordination with EPNG	110
Prepared Community Notices	111
Follow-up Communication Capturing Issues	113
Resident Concerns Voiced to Landscape Chair	114
Revegetating Areas Cleared by EPNG	116
<i>Landscape Guidance Revisions</i>	<i>117</i>
<i>Appendix</i>	<i>119</i>
Points of Contact	120
Approved Plant List	121
ArcGIS Online Maps	121
Parcel Boundaries	122
Common Areas Boundaries (B and D)	124
Irrigation Timer, Pucks and Zones	125
Tucson Water Meters	127
Aggregate Meter Consumption and Cost Over Time (2019-2022)	129
Discretized Meter Cost Over Time (2019 – 2022)	130
Discretized Meter Consumption Over Time (2019-2022)	131
Cost Distribution by Meter (2019-2022)	132
HOA Consumption by Season (2019-2022)	133
Common Area Service Zone	134
Critical Corner Visibility Maintenance	134
Arborist Summaries	136
Best Practices for Landscaping Management for Native Desert Plantings	137
Landscape “General Maintenance” RFP Template	139
Account Details	139
Reserve Study Input	141
Revision History	141

Executive Summary

Agua Dulce (Sweetwater in the Foothills) is an exceptional community, designed and established within our Sonoran Desert with natural native vegetation as a centerpiece. The work done by so many volunteers over the years as well as our National Wildlife Federation (NWF) certification highlights the uniqueness and ongoing appeal of our Tucson neighborhood. By aligning best practices for water use and care of our native trees and vegetation, future challenges can be managed and met with the goal of supporting property values while encouraging sustainability for future generations.

To date, no operational guidance exists to help volunteers and/or landscape chairs manage common areas and/or guide landscaping contracts. This poses challenges as volunteers retire through loss of institutional knowledge and keyman failure. Without guidance to memorialize lessons learned and/or capture ideas for improvement, we miss opportunities for ensuring our common areas can meet their full potential. **In response, this guidance has been prepared to help the Association manage our landscape in line with the goals of our NWF certification while ensuring practices that are sensitive to soil and water conservation.** Through smart landscape management, we can also lower operational costs for the HOA.

This document captures years of institutional knowledge practiced by community volunteers on recommended landscape practices and procedures. Associated references and recommendations may be used to develop a formal standard operating procedure (SOP) for the Association. Until then, this document captures the procedures being practiced by the Association under commercial landscape contract and by its volunteers.

This guidance may be shared as a model with other HOAs similarly seeking ideas on sustainable landscape practices and needing a template from which to freely copy, paste, and modify for their own unique requirements under Creative Commons license:

(<https://creativecommons.org/licenses/>).

The “Why” of This Guidance

This living document evolved to cover base information that will be helpful to a large number of Association stakeholders. Well indexed, the format makes it simple to edit going forward as this *Background and Guidance* is used, edited and improved in real time.

BOARD: When shared at the annual meeting and posted on the Association website, it:

- Shows positive engagement to provide best practices for landscape health, saving HOA funds with landscape services and tracking and proving major water savings in line with future Tucson climate and water challenges
- Provides a base document that can be easily adapted to specific needs, such as a narrower Standard Operating Procedure (SOP) to meet the needs of the Common Areas Chair
- Assures Association background history and operational requirements are documented so that Board or personnel changes will not adversely impact the community through loss of institutional knowledge
- Exhibits transparency and builds a better and more useful Resource link for the Association
- Places the Association in line for recognition and certification for best practices in landscaping (e.g. Pima Association of Governments Low Impact Development Case Study candidacy) while supporting other certifications that increase property values. (e.g. National Wildlife Federation Certification)

LANDSCAPERS: For contracted landscapers, arborists and other professionals, it:

- Echoes guidelines already captured in requests for proposals and contracts to include Association history, background, and expectations for any company serving Agua Dulce
- Echoes guidelines already captured in requests for proposals to include history, background and expectations for any company servicing Agua Dulce
- Supports common area guidelines with both static and interactive maps
- Answers basic questions that previously would require personal contact with Association board members or Sienna staff clearly demonstrating that accountability is expected

VOLUNTEERS: For residents considering aiding the community:

- Table of contents indexes areas of potential interest for their review, with live links
- Demonstrates thoughtful, well-reasoned work, assuring them that their service will be part of deliberate best practices and a well-organized plan for the Association
- Existing volunteers have resource links to documents and videos to build their own knowledge base
- Trained volunteers can now immediately assist with irrigation after threshold storms to avoid water waste

RESIDENTS: Association landscape practices are now transparent

- Provides new, useful and interesting information to build community awareness and pique interest in xeriscape yards and volunteering throughout the community
- Assures residents that their HOA dollars are being spent wisely and deliberately
- Gives resource links to assist new or formerly out-of-state residents to familiarize themselves with xeriscape practices
- Identifies local groups that can aid with landscape design and water use in their own yards
- Reveals how enhanced property values can result from deliberate planning

ASSOCIATION Supports cutting-edge low impact landscape management

- Raises our Association's profile among County and NGO sustainable organizations
- Provides a licensed template for other HOAs within their management to do the same
- Demonstrates GIS opportunities for community management

Scope

This document outlines recommended practices for managing the Association’s common areas in regards to landscape and irrigation. These recommendations are specific to the areas shown in blue and red below with some exceptions.



- Areas shown in blue are the primary focus areas for our contracted landscaper. The blue areas host community assets such as walking paths, our community pool and our community entrance. Cadence for management of these areas is summarized in the section of this guidance entitled “Landscape Maintenance Service Areas”.
- The areas shown in red are designated Common Area B and D (open space and drainage) by Pima County and in our CCRs. These areas are maintained on an as-needed basis in line with restrictions summarized in the section of this guidance entitled “Common Area Restrictions”.

- Landscape issues sourced to private property are not managed by the Landscape Committee **with the exception of developer-installed walking paths and trees on or immediately adjacent to private property along Robert Daru**. This ensures high-visibility community assets originally installed by the developer on private property are managed in accordance with the recommendations of this guidance.
 - Out of respect for private property rights and to keep Association costs in check, maintenance of the same should only take place only on an as-needed basis and through considerate consultation with property owners if or when a problem arises.
- Although the pool and community entrance are considered common area, this guidance does not cover management of the community pool or fountain at the community entrance. *The Landscape Committee defers management of those community assets to the Common Area Chair and/or its subcommittees where appropriate.*
- This section “Weeds and Herbicides” contains recommendations for managing non-natives and weeds on private property. Respective guidance may be referred to by our property manager or homeowners as it relates to ensuring a “natural but neat” aesthetic protective of overall property values *but neither the Landscape Chair nor committee volunteers are responsible for communicating or managing complaints associated with private property.*

Tree, Shrub, and Groundcover Maintenance

Common Area practices should incorporate desert landscape maintenance guidance published by the University of Arizona Master Gardener's Cooperative Extension (<https://extension.arizona.edu/master-gardener>). The UofA provides specific guidance on pruning of Mesquite and Palo Verde as well as other native and desert adapted bushes and plants, and gives recommendations for desert landscape watering. It is helpful to recognize that specific "seasonal requirements" may differ from plant to plant. A helpful, concise overview of suggestions for consideration by local HOAs relating to desert landscaping is available here: <https://extension.arizona.edu/sites/extension.arizona.edu/files/pubs/az1613a.pdf>. The appendix includes a summary of additional resources, but the main points are summarized here for ease of reference.

Tree Maintenance

Background

In 2022, Agua Dulce invited an ISA-certified arborist (Aleck MacKinnon) to review the status of our common area trees and vegetation. Aleck was selected since he has no interest in serving the HOA via a formal tree-maintenance contract thus avoiding conflict of interest.

The walkthrough was hosted on October 11, 2022 with invitations sent to the community for participation via Cadden Connect and eBlast. The walkthrough was well attended taking approximately four hours to cover the main loop of the HOA as well as Magnetite. During the walkthrough, Aleck paused at each tree and captured notes for inclusion in a final report.

On October 13, 2022, we received a final report with recommendations for ensuring the health and viability of our common area trees moving forward. Of greatest significance, Aleck recommended AD allow the inner canopy of our trees to recuperate over the next one-to-two years (**2023-2024**). Aleck noted the inner canopy is critical for food production thus contributing to thicker branches which in turn will make our trees healthier and more stable in high winds. In addition, inner canopies are essential for protecting trees from sunburn. Thirteen trees were subsequently removed due to sunburn and age in line with arborist observations. A final report highlighting challenges and recommendations for improving tree health was shared with the community via Cadden Connect and eBlast notification.

As a check on recommendations, we consulted with a second ISA-certified arborist for bid on annual maintenance of our trees. Angelo Romeo (Romeo Tree Service) echoed Aleck's comments by suggesting no maintenance of trees for **the next one-to-two years** outside of dead wood removal or reduction cuts for safety with re-evaluation of common area trees in one year (**November, 2023**). Angelo observed that most of the pruning in the Association has been focused on thinning cuts which are not conducive to tree health since thinning can lead to lion-tailing and sunburn. Angelo recommended that where needed for path clearance or safety,

pruning cuts should be focused on reduction rather than thinning cuts in line with **ANSI-300 pruning standards**.

Agua Dulce is following the advice of both arborists with the goal of returning our native trees and bushes/forbs back into correct sync with the seasons, with pruning only occurring at the correct time of year and only as needed. In response, common area trees are now hosting small sprouts on trunks where they are not being maintained which is in turn realizing shade on sunburned trunks and soil. Here's an example of trunk with exposure to the sun that is now realizing new growth to the benefit of the tree:



This growth is intentional and indicative that respective trees are healthy, vigorous, and recuperating in line arborist recorded comments available here: <https://youtu.be/xFLoueCfGZs>.

In addition, we are now seeing new growth on long limbs. In line with ISA-certified arborist recommendations, this growth will add girth to limbs thus making them more resistant to breakage in high winds while creating shade for walkers:



To be clear, the benefits of these new practices will take time. In the interim, we are likely to still witness breakages in high winds until inner canopy growth is restored. Follow-up arborist walkthroughs are scheduled for October and November (2023) to ensure existing practices are realizing the expected benefits.

A final report regarding 2022 ISA-certified arborist recommendations available on this Google Drive link: <https://drive.google.com/file/d/1ZeTqgYzLLyaqg0PLY9S1Gb-KH9WgSbww/view?usp=sharing>.

Original observations supporting Association consultation with an ISA-certified arborist are filed on this Google Drive link for reference by future landscapers/arborists as it relates to practices we wish to mitigate moving forward:
<https://drive.google.com/file/d/1uWrNgX5VtpDt0SBtWLpB3NFawBMwLpDg/view?usp=sharing>.

Angelo Romeo Explaining the Importance of Inner Canopy for Sunburn Protection:
<https://youtu.be/xFLoueCfGZs?t=69>

Witnessed Stress, Sunburn and Recovery





Over time, trees will lose their ability to heal.



This tree is trying to shade its exposed sunburnt trunk. Given it's growth towards the path, this tree will be maintained through annual **reduction cuts** rather than **thinning cuts** that leave the trunk exposed. Annual maintenance should be restricted to a certified arborist.

Tree Maintenance Current Practice

In 2023, the Association consulted with two ISA-certified arborists regarding the health of our trees. The Association also solicited feedback on the effectiveness of our current landscape approach as it relates to tree maintenance. Both arborists noted our trees are in good health and recommended respective practices continue.

In December of 2023, the Association followed this advice by hiring Romeo Tree Service to do a community-wide selective-pruning of trees in common areas. In line with our guidance, pruning was addressed by a certified arborist at the right time of year.

This guidance recommends our landscapers to continue following the advice of both certified arborists by (1) allowing growth to continue on trees with minimal maintenance for another year (through 2024); and (2) ensuring any pruning will be conducted by a certified arborist following ANSI-A300 pruning standards as outlined here:

https://tcia.org/TCIA/Blog_Items/2016/Tree_Pruning_to_ANSI_Standards.aspx. Specifically, pruning should be approached thoughtfully through reduction cuts rather than tree thinning. Where necessary, tree maintenance will be focused on:

- Removal of dead branches that will likely self-prune in high winds
- Removal of live branches that interfere with traffic visibility or safety of walkers
- Always focus on reduction rather than thinning in line with ANSI A300 pruning standards

Arborists adhering to the ANSI A300 pruning standard will not:

- leave branch stubs
- make unnecessary heading cuts
- cut off the branch collar (not make a flush cut)
- top or lion's tail trees (stripping a branch from the inside leaving foliage just at the ends)
- remove more than 25 percent of the foliage of a single branch
- remove more than 25 percent of the total tree foliage in a single year
- damage other parts of the tree during pruning
- use wound paint
- prune without a good reason
- climb the tree with climbing spikes

Once our trees recover their inner canopy, then as-needed minimal pruning (under 10-feet) can be incorporated into regular maintenance at the right season by an ISA-certified arborist. Of course, any issues with trees that a professional crew feels need immediate attention may be

communicated and addressed via coordination with the Agua Dulce Common Area Chair *with the understanding the association encourages reduction rather than thinning cuts.*

Two-Year (2024) Update on Revised Tree Maintenance Approach

Page 1 of 2 **Proposal**
Mesquites & Palo Verdes
by
ROMEO TREE SERVICE, LLC
LICENSED & INSURED
email: RomeoTreeService@yahoo.com (520) 603-0143
web: RomeoTreeService.com

Proposal Date: Nov 5, 2024
Name: AGUA DULCE HOA
Address:

TREES	Size	Health	Objectives and Specifications	Amount
1 MESQ.T.	K/K	K	NW CORNER HARCAN MINE/TOMBOLO	\$430
1 MESQ.T.	A/A	A	3529 N. HARCAN MINE	285
13 MESQ.T.	K/A	A	S TOMBOLO BETWEEN HARCAN MINE/ REED BASIN	1,265
1 PALO VERDE	K/V	V	N TOMBOLO W OF RB ACROSS FROM HYDRANT	385
2 MESQ.T.	K/V	V	NW CORNER TOMBOLO/BANNER MINE	560
1 MESQ.T. 1 P.V.	A/V	V	NE CORNER BANNER MINE/TOMBOLO	990
1 PALO VERDE	K/V	V	4162 N. TOMBOLO	685
1 MESQ.T.	K/A	A	INSIDE POOL @ GATE	385
1 DEAD P.V.	K/V	V	ON SIDE OF PALASITE	185
1 PALO VERDE	K/V	V	ACROSS FROM 37TH N. PALASITE	495
1 PALO VERDE	K/V	V	NW CORNER MARINETTE/COLES WASH	285
5 PALO VERDE	A/V	V	NW CORNER MARINETTE/COLES WASH	530
Estimate: ANGELO			Proposal valid for 90 days	Pg. 1 TOTAL \$ 6,470

THE PALO VERDES ALONG THE PATHS AT AGUA DULCE HAVE SIGNIFICANTLY IMPROVED IN HEALTH & STRUCTURE SINCE ONE YEAR AGO. THIS IS EVIDENCED BY ROBUST NEW GREEN GROWTH IN THE INNER CROWNS, GIVEN THIS POSITIVE DEVELOPMENT, I RECOMMEND NO PRUNING AT THIS TIME. A FOLLOW-UP ASSESSMENT NEXT YEAR IS ADVISED TO ENSURE CONTINUED HEALTH & VIGOR. THE TREES CURRENTLY NEEDING PRUNING ARE LISTED ABOVE.

Date: Signature:

See back for definitions, terms, and conditions.

ISA Certified Arborists adhere to ANSI-A300 Pruning Standards

Trees requiring improved canopy structure and/or pruning for path or road clearance are individually itemized and attended to once-a-year by a certified arborist.

ALL Pruning MUST adhere to ANSI-A300 standards.

(Minor maintenance can take place throughout the via 1:1 coordination between the Landscape Chair and an arborist properly trained in performing reduction cuts rather than thinning cuts (quality vs quantity). **General maintenance landscapers should NOT execute these cuts.**

It will take some time for trees to recover from prior poor pruning practices, **but we are slowly making progress.**

Abandoning this approach would end two years of Association investments in corrective actions through 2024. Doing so may contribute to poor canopy development, sunburn and diseases, and necessary investments in tree replacements (\$\$\$). Please consider staying the course!

Money Savings from New Pruning Approach

While preparing a new budget for 2025, the Finance Committee used prior billing to project future expenses. Of note, our new landscape approach focusing on quality of pruning cuts over quantity of green waste is yielding significant savings. By keeping our tree maintenance isolated from our general maintenance contract, the Association saved ~\$15K* over two years relative to what we would have paid if we stayed with our former landscape company. Not only is this approach healthier for our trees, it's saving the Association significant amounts of money.

https://docs.google.com/spreadsheets/d/1kBmXGLEU6VohHmN65CTTTeiiVLMF9Egd/edit?usp=share_link&ouid=110634341293889019430&rtpof=true&sd=true

*\$15K is conservative. It assumes Complete Landscape would have reduced its initial 2022 bid by 8.5% through negotiation for contract renewal. Complete was given the opportunity but did not meet the requirements of the RFP so that negotiation did not take place. If we base the savings on Complete's initial bid of 65K with no negotiation for contract renewal, **actual savings are closer to \$25K over two years.** Most HOAs would renew through their management company without negotiation whereas we assume a conservative negotiated reduction.

Shrub and Groundcover Maintenance

Guidance

Agua Dulce encourages natural landscape practices that mirror our wildlife-friendly aesthetic more in line with a Tohono Chul or Arizona Desert Museum practices. The following procedures will support the desired naturalistic standard in line with our National Wildlife Federation certification.

Landscapers and volunteers will maintain a natural aesthetic when pruning (e.g. no shearing into rounded bushes with hedge trimmers). Specifically, the vegetation is not to be 'shape formed' (e.g., cut into a circular shape or squared off), but is to be in the same appearance as it would appear in its natural growth form.

Groundcover should be "maintained to their native state", specifically grasses, scrubs [e.g. forbs and bushes], wild flowers, sage and cacti." Shrubs which are not immediately adjacent to the walking paths or roadways will be left to grow naturally, with judicious trimming as needed only if causing a walking or visual hazard as follows.

- Creosote and hopbush/dodonea are not to be pruned, unless seriously encroaching on pathway or roadway.
- Jojoba is preferably hand pruned to thin, reduce and naturally shape only those areas encroaching on street or pathway.
- Texas Ranger sage and Chihuahuan sage are to retain natural shape, and restorative/rejuvenating pruning in late winter/early spring every 2-3 years may be used to rejuvenate sage that has been over-sheared and stressed in the past.
- Native flowering plants such as brittlebush, desert marigold, globe mallow, senna, triangle leaf bursage, and penstemon may be trimmed if needed after the flowering season, but herbicide is never to be applied in respective common areas. String trimmers are not to be used! Instead, pruning will take place to maintain at least 6 inches of growth on dormant plants. Respective details are captured here:
- Asclepias/milkweed is never to be trimmed.
- Vegetation will be monitored for disease and health status and issues brought to the attention of the Association as needed.

To ensure the safety of walkers and traffic, Agua Dulce will adhere to the following guidelines

- Community sidewalks and pathways will be maintained with pedestrian safety foremost. Provide a clearance on pathways of 5' in width (meaning 2.5 feet on each side of the center of the pathway, rather than beyond the pathway), trimming only bushes that infringe on the path side to assure safe pedestrian passage.
- There are corners in the community where shrubs must be maintained under 18 inches to prevent traffic visibility issues. Respective shrubs have already been cut back to the ground but need to be maintained moving forward at the locations shown in the

appendix in the map “Critical Corner Visibility Maintenance” and in the following section entitled “Traffic Visibility”.

Winter Pruning

Once the hot weather and blooming season is over, it is time for **pruning** or **rejuvenation** **pruning** of specific desert native plants:

- **Texas Ranger Sage** and **Chihuahuan Sage** may be pruned if needed to a natural shape (not sheared) between November and late February.
- **Rejuvenation pruning** of sages as needed should occur Nov-Feb. The bush base should be between 10-16”, NO SHORTER to allow for new growth.
- **Sages** that have a lot of dead woody interior growth, have “floppy” long branches or an open middle are good candidates for rejuvenation pruning. Follow the best practices for proper pruning (refer to UA guide as needed).
- **Bushes that should never be pruned** (unless directly in way of path or road views) are **jojoba**, **hopbush** and **creosote**.
- **Cassia** may be rejuvenation trimmed only if needed if plants are in the way of paths or road view. Leave at least 10” at base for new growth.

Keeping native bushes and shrubs in a natural, healthy shape is the goal.

Other winter-time plant trimming:

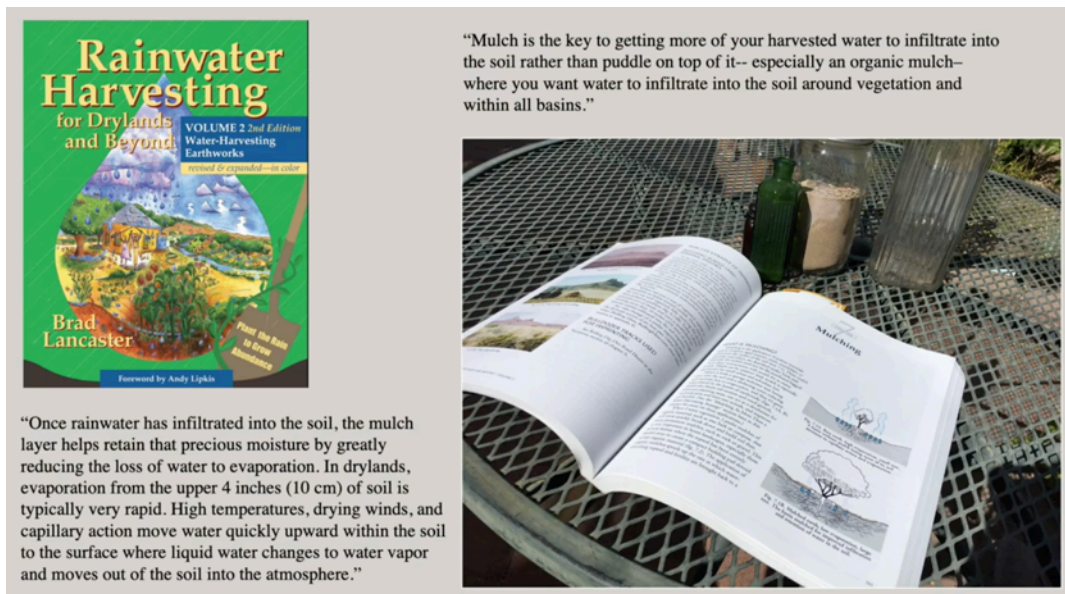
- The **Mexican Bird of Paradise** needs to keep the long branches for **frost protection** until mid-March when the last frost is past. It can then be trimmed leaving about 8” at the base. Remove any dead interior canes.
- If **brittlebush** was not trimmed earlier, tall ones can be trimmed back.
- The edges of the **trailing dalea(indigo bush)/dalea greggii** can be trimmed if it hangs over the road curb or pathways. Never cut across the top of the this plant, it is supposed to be full and “puffy” on top, that’s where the blooms come to attract butterflies. This plant can be seen on the SE corner of Pallasite and R Daru for example.

Mulch

To promote water retention; healthy and cooler soil and control erosion, any natural mulch applied to tree/plant basins should **not** be removed or disturbed. “Smalls” waste (less than 6” in length) from maintenance can be left in place as useful no-cost natural mulch without presenting aesthetic problems. (By maintaining mulch less than 6” in length, we avoid promoting habitat for packrats.) In particular, leaves are a free source of mulch for nutrient cycling which diminishes our reliance on synthetic fertilizers at no cost to the HOA.

Blowers (electric preferred for both noise and pollution control) may be used as long as mulches and soils in tree basins and areas off-path remain in place.

Guidance on mulch is supported by research conducted locally within Agua Dulce summarized here: <https://ecorestore.arizona.edu/news/2020/10/using-mulch-prevent-heat-stroke-desert-landscapes> as well as Brad Lancaster’s “Harvesting Rainwater for Dryland Ecosystems and Beyond, volume 2”.



Further details are captured in the Volunteer section entitled “Volunteer Activities” of this guidance.

Traffic Visibility

Based on a community survey and feedback from residents, eight corners have been identified as having visibility challenges for drivers making left hand turns. These are:

1. Banner Mine and Pallasite
2. Baragan and Robert Daru
3. Banner Mine and Tombolo
4. Magnetite and Tombolo
5. Pool parking exit and Magnetite
6. Coles Wash and Magnetite
7. Magnetite and Nash Creek
8. Banner Mine and Pallasite

In 2022-24, respective shrubs were maintained to an elevation of 4 inches for the safety of residents. As these shrubs recover, they were maintained to an elevation of no more than 18 inches to maintain traffic visibility.

Please see map in Appendix under “Critical Corner Visibility Maintenance” for a community overview of critical corners requiring maintenance. A downloadable PowerPoint template is available via this link for easily modifying the same in response to future needs:

https://docs.google.com/presentation/d/1VX4fIY-fsvehC4zhHBr_CgDq-VWx0LU7/edit?usp=sharing&ouid=110634341293889019430&rtpof=true&sd=true

Weeds and Herbicides

Guidance

Herbicides and pre-emergent application will continue along community court strips ONLY where present along roads and in front or along the side of homes.

AD understands that in other areas and where growth of plants mutually agreed to be 'weeds' is prolific, application of herbicides may be necessary. However, since Agua Dulce is designated a **National Wildlife Federation Community Wildlife Habitat™**, infrequent and judicious use of pre- and post-emergent is preferred with manual weed removal being the primary method of control. Cutting with mechanical devices will be allowed.

All herbicides and pre-emergent shall be used by or under the direct supervision of a licensed applicator and shall be used in accordance with the standards and regulations set forth by the EPA and the appropriate state, county and local regulatory agencies. A green dye is to be mixed with herbicides to provide visible indication where they have been sprayed. NOTE: Herbicide spraying is not to occur at the front entrance. The contracted landscaper will inform the ADLC which fungicides, insecticides and pre-emergent, post-emergent herbicides will be used to include quantities and time of year for application. Safety Data Sheets must be provided to the Association for any and all products used which will be publicly posted on the Agua Dulce community website before application commences.

The contracted landscaper shall give the ADLC at least a two-week notice when applying bi-annual or annual pre-emergent to the community court strips so that the community may be notified. Care must be taken NOT to apply pre-emergent in front of those homes that have "opted out" via coordination with the ADLC.

No poison bait for small animal control of any kind is to be used in the community. If needed, the selected contractor will notify Association through required reports of any issues and recommendations for appropriate control measures.

Native forbs/flowers are not to be treated with any type of herbicide

Following stormwater pollution best practices, chemicals will not be applied within 3 days of an anticipated storm.

Recommendations

For guidance on improving herbicide practices, the HOA reached out to colleagues at Sustainable Tucson. A response and references follow for consideration and improvement of moving forward:

“Recommend hiring people who have learned; are in the process of learning, or are accredited about soil biology and nature's cycles. There are great people teaching and demonstrating the importance of soil health which are having wonderful successes *without* using chemical fertilizers and weed suppressants. In the interim, the debate will continue between those that believe we "need" chemicals and those who understand nature supplies all it needs *when the soil biology is healthy*. Forests, deserts, savannahs and other natural areas are self-sufficient systems without watering, trimming, blowing, spraying, etc.. It is a major paradigm shift to pivot to natural vs. managed processes. The following observations and references are included for your consideration:

- Perennials- deep roots provide exudates that feed plants as nature intended.
- Understory and overstory- diversity of species shares resources below the soil, alerts to threats, creates health, balance, as well as visually pleasing landscapes. (See *The Secret Life of Trees*, *Fantastic Fungi* and other books, films, presentations).
- Suppress Disease: Competition, Inhibition, Consumption (no more pesticides)
- Nutrients available at rates plants require (eliminate fertilizer) leading to flavor and nutrition for animals and humans.
- Build soil structure (reduces water usage, increase water holding capacity, increase root depth, decomposes toxins)
- Exposed soil is an invitation for nature to fill it: that's where "weeds" thrive. Offset through use of mulch which also assists in water retention. Weeds growing in open areas consume more water, re-seed, grow, etc.
- Chemical "weed killers" disturb the soil biology. Dirt (lifeless soil) needs more water to sustain vegetation- up to 70% more water.
- Protect soil from evaporation with ground cover.
- Ask, is this the right plant species for this location?
- The U.S. Geological Survey notes that pesticide consumption totals 1 Billion pounds per year in the US, <https://www.usgs.gov/centers/ohio-kentucky-indiana-water-science-center/science/pesticides>.
- Toxins have the potential to accumulate and affect surrounding areas, even if they are not sprayed. Animals, **children**, insects, and pollinators (bees, lady bugs, dragonflies, etc.) are especially vulnerable to neonicotinoids and other toxins.”

References recommended by Sustainable Tucson Habitat Restoration (STHR):

Elaine Ingham: <https://www.soilfoodweb.com/>

Permaculture: <https://permaculture.org/>

NRCS soil food web: <https://search.usa.gov/search?affiliate=nrcs&query=soil+food+web>

NOFA/ Northern Organic Farming Association: <https://nofa.organiclandcare.net/>

Beyond Pesticides: <https://www.beyondpesticides.org/>

Organic Materials Review Institute: <https://www.omri.org/omri-lists>

Gabe Brown <https://soilhealthacademy.org/team/gabe-brown/>

The Association would like to thank our colleagues at STHR for always promptly responding with guidance on regenerative land care practices within HOAs. We look forward to continuing this collaboration as we learn and share from our mutual experiences moving forward.

Invasives in Non-treated Areas

Given the absence of herbicide use beyond common area court strips, Agua Dulce recognizes the possibility of hosting Buffelgrass* and/or other invasives. In the event these are witnessed by volunteers or landscapers, respective details will be communicated to the Association and our contracted landscaper for remedy.

Buffelgrass:



*Buffelgrass is a perennial bunchgrass growing up to 4 feet tall and 3 feet wide. Older plants branch profusely and densely at nodes, giving mature plants a messy appearance. These branches produce new leaves and flower spikes very quickly after light rains, making buffelgrass an extremely prolific seed producer. (Source: Sonoran Desert Museum). Buffelgrass image sourced to Cronkite News

(<https://cronkitenews.azpbs.org/2022/04/15/buffelgrass-sonoran-desert-arizona-invasive-plant/>)

As needed, please consider consulting with Tucson Audubon regarding appropriate herbicides for application in a wildlife-friendly habitat should common area application outside of court strips be required. (<https://tucsonaudubon.org/contact-us/>).

One contact at Tucson Audubon that is familiar with wildlife-friendly alternatives is Jonathan Horst (jhorst@tucsonaudubon.org). Additional guidance regarding both native and non-native maintenance is summarized in the new section entitled “Sonoran Desert Wildflower Lifecycle and Management” added in 2024.

Residential Notifications and Opt-Out

Agua Dulce maintains clear communication with residents regarding dates for herbicide application; what’s being applied, and options for opting out. The following notices will be shared in advance of any herbicide application via eBlasts coordinated through Sienna Management.

Notice 1:

Friends and Neighbors,

Our Landscapers are checking on dates for pre-emergent (herbicide) application in common areas. For your information, the SDS sheet for Pendulum AquaCap is located in this link:

<https://drive.google.com/drive/u/2/folders/1NABiuEolTVBaj0O7wZfoYzia-9ETVAav>

Given the wildlife-sensitive nature of our community, we give you the opportunity to opt-out should you wish to not have pre-emergent applied in front of your home. If you are or wish to be on the opt-out list, please confirm by sending your name and address to [landscape contact email].

Notice 2:

Friends and Neighbors

On [scheduled date], landscapers will be applying pre-emergent community wide. After application, please avoid walking on sprayed common strips to avoid tracking herbicides into your home. For your reference, the SDS sheet for Pendulum and Semera is located in this link:

<https://drive.google.com/drive/u/2/folders/1NABiuEolTVBaj0O7wZfoYzia-9ETVAav>

Notice to those that opt-out:

Hello Neighbor,

Thanks for notifying us of your decision to opt out of pre-emergent. This email confirms receipt of your notice.

The day before herbicide application, a volunteer will flag your common area court strip to ensure the tech does not spray. Please do not remove this flagging. We are happy to accommodate, but please keep in mind that you must continue maintaining your court strip in line with our CCRs including weed removal.

Have a great day!

Current opt-out addresses must be communicated to landscapers and respected. Once a resident “opts-out”, he must take the initiative to “opt-back-in” by informing the Common Area Chair of the subsequent change. If a property changes ownership, it is the obligation of the prior property owner to inform the new resident of herbicide-application status.

The opt-out list is now maintained in a private section of the Agua Dulce Google Drive to protect the privacy of homeowners. Respective addresses will not be shared in public communications. The spreadsheet is available in the “private” section of our landscape google drive and is entitled “herbicideOptOut.xls”. The landscape chair has access for updating as needed.

Wildflower Lifecycle and Management

The spring flowering season in the Sonoran Desert ranges from mid-February to mid-June with a peak from mid-March to late April depending on rainfall and temperatures during the growing season. Agua Dulce welcomes this cycle as it relates to natives adding color and cover to our common areas solely relying on rainfall rather than irrigation. That lifecycle is demonstrated by these photos taken at the community exit which manifested a lush dense Lupine bloom after seasonal rains (January – April, 2024).

Lupine taking root in February



Lupine blooms at their peak in early March



Lupine allowed to reseed in April (Intentional)



As desert natives start to die off, they will reseed and renew in response to the summer monsoons or next winter rains. Understandably, residents may consider the respective die-off and reseedling as something that needs to be maintained by our landscapers in order to keep our community looking “neat”. To avoid having to rely on artificial means of reseedling and planting (which costs money), we ask the community for patience in allowing common areas

time to reseed naturally through the natural life and death cycle of our desert natives before removing the same. Dead plants will be removed once given an opportunity to drop seeds.

Depending on rainfall timing and totals, there will be a period between April and June when plants will die off and be left alone to reseed. This should not be interpreted as negligence or laziness by our landscapers or volunteers, rather shifting our approach to a more careful natural-based management approach rather than one that is overly managed, expensive and unsustainable. As such, dead plants will be removed once landscapers and volunteers have ensured respective plants have completed the reseeding cycle.

Managing Non-Natives and/or Undesirable Plants

There is an exception to our natural approach. In line with our “natural but neat” philosophy, there are two non-native (and one native) species that we have instructed our landscapers to maintain without the use of herbicides. By their common names, these are (1) London Rocket; (2) Common Groundsel; and (3) Desert Broom.

As it relates to non-natives, landscapers are instructed to remove London Rocket and Common Groundsel* when encountered in common areas. Although these plants do well and add color to common areas naturally, they have a tendency to propagate profusely and crowd out other desirable natives resulting in lack of diversity if left unchecked.

Although Desert Broom is a native, it also has a tendency to aggressively crowd out other desirable natives if left unchecked. This can realize a mono-landscape lacking in the color and diversity that’s beneficial to the landscape appearance and wildlife. As such, Desert Broom is promptly removed from our common areas once identified.

When these three species are encountered, we have instructed our landscapers to remove them immediately BEFORE things go to seed. Community volunteers who have coordinated with the Landscape or Water Harvesting Committee and have been trained to identify respective plants may assist with removal as well. Photos and further details for targeted species follows:

*Note that Common Groundsel may be mistaken for Stinknet- another aggressive and noxious invasive impacting the Sonoran Desert. Based on consultations with Tucson Audubon and Pima County, Stinknet has NOT yet been formally identified in Agua Dulce through April, 2024.

London Rocket

Sisymbrium irio (London rocket), is a flowering plant in the cabbage family which is native to the Middle East, north Africa and southern Europe. It has spread widely around the world as an invasive plant of dry, disturbed land in towns, deserts and farmland. This species is in the cabbage family and tastes like mustard and consequently some collect this plant as an edible. (Although London Rocket is an edible plant that tastes like mustard, it may be confused with Common Groundsel which is also present in our community and poisonous to humans if ingested. Please be aware if you collect this plant.)

London Rocket has an attractive yellow flower and is desert adapted to our area but also has a tendency to crowd out other natives if left unchecked. In response to significant rains in 2024, Pallasite hosted a dense forest of London Rocket on both sides of the common area walking paths-- principally between Banner Mine and Magnetite.

Most HOAs pretreat common areas with herbicide. In Agua Dulce, our natural approach requires landscapers to remove this invasive by hand. If an area is overwhelmed, string cutters may be used *judiciously and only if done with care to prevent damaging adjacent natives*. Volunteers that are coordinating with the Landscape Committee and have been trained in properly identifying this plant are also welcome to pull this out by hand preferably before it goes to seed.

London rocket first forms a rosette of leaves low to the ground. With ample water it can reach to a foot across and the flower stalks reach 3 feet in height.



Source: <https://www.bloomingatacademyvillage.org/london-rocket/>



This photo shows an area on Pallasite between Banner Mine and Magnetite that was overtaken by London Rocket after the significant rain witnessed in early 2024.

Volunteers and landscapers subsequently removed this stand by hand with the goal of allowing brittle bush seedlings in the same area have an opportunity to compete.

Note the small brittle bush seedling trying to compete for light in a stand in an emerging stand of London Rocket.

If left unchecked, the invasive may have outcompeted this seedling for light and water resulting in a mono-culture landscape.



London Rocket was removed by hand from around the emerging brittle bush. Had mechanical means been used, this seedling would likely have been lost.

For this reason, string cutters are only to be used as a last resort in areas that have already been completely overtaken. The Association should work with landscapers to avoid this from happening and emphasize judicious use of string cutters only when absolutely necessary.

Common Groundsel

Senecio vulgaris (Common groundsel) is an annual weed in the daisy family (Asteraceae) native to Europe, North Africa and temperate Asia. This weed is typically found in disturbed sites along roadsides, in waste areas, cracks in pavement or edges of walls, in cultivated fields and in sunny gardens, lawns and along edges of yards. In our own community, it is frequently encountered in front yards and along rock strips.

Plants can be in bloom from early spring to late fall with individuals flowering for about 3-4 weeks. A single plant can produce a million other plants in a year if allow to produce seed. Given its prolific and aggressive nature, it should be removed as quickly as possible when encountered in common areas.

In the past, photos of this plant have been shared with both Tucson Audubon as well as Pima County for proper identification. Both entities have independently identified photos shared by different individuals as Common groundsel. In the past, this plant has been confused with Stinknet which is another aggressive invasive but not one that has yet been conclusively identified in our community.

Fortunately, this plant is rarely encountered along our common area paths but is quite common along sidewalks and front yards. When it is encountered on private property, residents are encouraged to remove this as quickly as possible to avoid distribution to common areas.



Common groundsel produces numerous yellow flowers in terminal clusters. The small flower heads ($\frac{1}{4}$ to $\frac{1}{2}$ " long) look somewhat like a dandelion that never opens.

The leaf pattern can be confused with London Rocket. Unlike London Rocket which is edible, this plant is poisonous.

Photo Source:

<https://hort.extension.wisc.edu/articles/common-groundsel-senecio-vulgaris/>



This photo shows a haul of Common groundsel collected from a neighbor's front yard by a volunteer. The plant is easily removed and should be bagged prior to disposal to avoid spreading seeds.



This photo demonstrates prolific seed dispersal from one small Common groundsel flowerhead. The photo was taken where Common groundsel is frequently encountered along court strips and front yards. It is rarely spotted in common areas along walking paths.

This is a photo of Stinknet discovered in a parking area at Picacho Peak. Although Stinknet has been reported in our community, we don't have formal confirmation from Pima County or Tucson Audubon based on photographs shared by volunteers. This photo was confirmed to in fact be Stinknet showing a distinct difference in the bloom relative to Common Groundsel.



Desert Broom

Native to northern Mexico and the southwestern United States, *Baccharis sarothroides* (Desert Broom) is an evergreen flowering shrub with nearly leafless, brilliant green erect branches that are present throughout the year in our area.

From late summer to fall, a profusion of white or cream puffy flowers often completely covers the plant. Although this is a drought tolerant evergreen native in our areas that also helps with soil erosion, it's prolific and may aggressively overtake the landscape particularly in areas where soil has been disturbed. For this reason, it's best to keep it in check so as to ensure a more diverse landscape hosting a variety of other natives.



Photo Source: <https://www.flickr.com/photos/finaticphotography/8360497390>



(Thanks to Santa Rita and community volunteers for keeping ahead of this prolific plant.)

This is a closeup of the same plant showing the leaf structure.

This is the only desert broom I could find in our community common area in April, 2024.

This is a recovering specimen from one that was cut back to the ground rather than removed from the root. These can be very difficult to remove when the ground is dry but will generally pull from the root with a little effort after a rainstorm.

If you cannot remove from the root, another option is to cut it to the ground and place an inverted tuna or cat food can over what's left thus depriving the plant from any sunlight.



Weeds to Watch for in Residential Yards

Non-natives such as London rocket can also prove a problem in resident's own yards, and even some native species can become problematic. It's been said that a weed is a "plant out of place" and it's helpful to know what to watch for.

We understand it can be annoying to receive a "weed letter" leaving residents wondering what what requires management. In response, one of our volunteers prepared a newsletter entry that has an excellent summary and photos of problematic weeds requiring maintenance. For reference, a download link to the newsletter with a section entitled "Some of the most common Agua Dulce weeds/undesirable culprits" is available here:

https://drive.google.com/file/d/1Wxt99K-mZ0f5HWD1Amlm77v6xDsgzy87/view?usp=share_link

Once you click on the link, please scroll down to the third page of the newsletter for a nice summary with clear photos with a brief plant description showing the most common culprits that arrive in Agua Dulce yards in the spring and after the summer monsoon rains. They're easy to deal with when small, and a hula hoe is a great tool that quickly lifts out the plant with the roots and slides easily under rocky yard mulch. If you aren't familiar with a hula hoe, simply search for the same on Amazon or ask for assistance at your local hardware store.

Example of a common hula hoe:



If pre-emergent is used in your yard, be aware that it can also affect wildflowers and other plant species.

Association Coordination with Landscapers

Background

In December of 2022, Agua Dulce put its landscape contract out to bid. The Landscape Committee hosted a suite of open meetings to review proposals; capture community input; solicit additional information; and select a landscape company for serving our common areas. For transparency, the landscape RFP; committee reviews of proposals; rationale for landscape selection; and the final contract awarded to Santa Rita Landscape are available for community review via this link:

<https://drive.google.com/drive/u/2/folders/1kTjNDvs68m10IBLIRun0oV4sydYzARYI>

A new contract with Santa Rita Landscape was initiated February 1, 2023. During the last two years, we have been working closely with Santa Rita management and ground crews to ensure contract requirements are met and practices are in line with our procedural guidance.

Respective updates to our practices are captured in this queued link :

https://youtu.be/sl1wfkOF99o?si=HVdta05C_Dp3baB5&t=240

In response to community concerns about recent changes and practices, we are now meeting weekly with the Santa Rita Crew Chief for our community *the day before* the work crew is on site. During these meetings, volunteers walk the community with the crew chief and flag priority areas that require attention by work crews the following day. Respective flagging may focus on corner visibility issues; broken branches from high winds that require removal; irrigation leaks; unlevel concrete/natural pathway transitions; sweeping of concrete paths; walker safety; and ensuring the overall aesthetic of the community is “natural but neat.”

This new approach has proved successful in ensuring that time during weekly visits is used appropriately and efficiently. We also welcome this opportunity to also reinforce the sustainable practices outlined in this guidance via one-on-one coordination. These weekly meetings will continue *as long as volunteer resources are available to support the same*. Further details are summarized in the Volunteer section of this guidance.

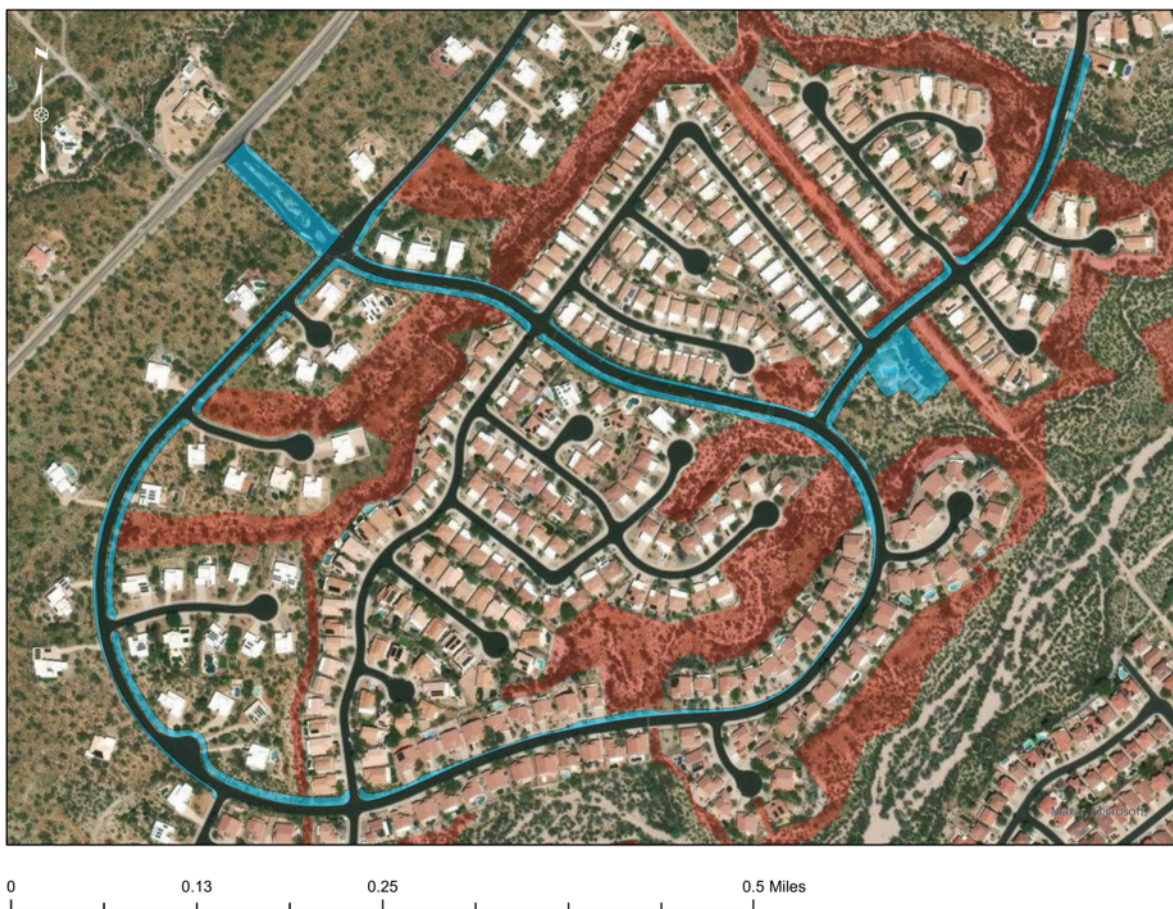
2024 Update: A new RFP summarizing lessons learned is now posted in the associated directory available via this link:

https://drive.google.com/drive/folders/1n6-B9R2uj0bdyYZCtVD7rRwss1qbSQXk?usp=share_link

Landscape Maintenance Service Areas

The areas shown in blue on this map are the focus areas for our contracted landscaper. The areas shown in red are designated Common Area B and D (open space and drainage) by Pima County and in our CCRs. These should not be formally landscaped outside of removal of non-viable vegetation, garbage, or pruning back tree limbs that may be encroaching over a neighbor's property line. Removal of viable vegetation is discouraged except for desert broom when it's growing along a property line and encroaching on a boundary. Although Desert Broom is a native, it is prolific to the detriment of biodiversity so we keep it in check where reasonable – specifically along property lines.

Service Area Overview



Landscape Service Cadence

This map summarizes the cadence of service to be provided by our landscape contractor. Of greatest importance is the red zone associated with the community entrance and pool area given its first-impression and high-visibility impact for residents and prospective home buyers. All paths are to be raked weekly regardless of color. The remaining zones are to be focused on in line with the schedule shown below.



Red zones are maintained **weekly**

Blue zone is maintained during **week 1**

Yellow zone is maintained during **week 2**

Green Zone is maintained during **week 3**

Light Blue Zone is maintained during **week 4**

If a maintenance day falls during week 5 of a given month, the Landscape Chair may ask for help removing garbage or dead branches from a common area washes or wildlife corridors identified in the red zone of the Service Area Overview Map. Live vegetation will not be disturbed in these areas per Pima County restrictions unless it is growing onto private property.

One Page Bilingual Guidance

As is common with landscape companies, landscape work crews may be staffed by individuals with poor English and high turnover. In response, Landscape Committee volunteers have prepared a one-page guidance for reference by those doing the “boots on the ground” work. The Association has requested that copies of this guidance be maintained in the Santa Rita vehicles when servicing our community to ensure our guidance may be easily referenced and there is accountability for following the same.

A copy of the one-page guidance is included via these links:

English: <https://docs.google.com/document/d/1AHMpEANZcgzmzgOZOofUB9euV2fKLcTkW/>

Spanish: <https://docs.google.com/document/d/1T1lgLXwt7hJTILRliXQm4SW9B5x9VTYt/>

2024 update: In 2023, we learned that hand-removal of non-natives during the spring bloom is inefficient in the context of not using herbicide in our common areas. As such, the one-page guidance requires an update noting that string cutters will be allowed for removal of spring non-natives such as London Rock only when used judiciously and with care around established vegetation. This change was been communicated to our landscaper in 2024 in order to get ahead of non-native blooms. We will experiment with this approach in 2025 and update the one-page guidance based on new lessons learned.

2025 update: We have not had a sufficient rain in 2025 to fully evaluate the need for the return of string cutters for managing overgrown areas. We will revisit in 2026.

New Map for Herbicide Treatment

In 2022 and 2023, we encountered challenges as it relates to areas being improperly treated both with respect to common area and residential court strips. In response, a new map was created in 2024 capturing both common areas as well as the wishes of Association members that don't wish to have herbicide in the vicinity of their homes. The map is presented here to facilitate improved accuracy in regards to treatment and is also available in Google Earth format via this link:

https://drive.google.com/file/d/1ZxqhdXOpA2nsEP7UHLsxuDmIDV9Mx08-/view?usp=share_link

. A formal list of addresses is summarized in a spreadsheet accessible by the landscape chair for updates. The list is not included in this document since it contains contact information for residents and is thus maintained separately for privacy.

Herbicide Application Zones



Packrats and Ground Squirrels

Due to the significant amount of open space hosted by Agua Dulce in the foothills of the Tucson Mountains, our community hosts many native species. Numerous rodents are ubiquitous throughout the community, the most common being the packrat (one of 8 species of woodrats in Arizona), kangaroo rats, pocket mice and Harris' antelope squirrel. Packrats in particular are understandably a concern as it relates to potential damage to private property. As such, volunteers with the Landscape Committee employ non-destructive measures that discourage their presence along walking paths adjacent to homes.

- Pack rats are nest builders. They use plant material such as twigs and prickly pear pads to build above-ground nests. As such, their nests are easily identifiable and thus routinely flagged for removal when encountered along community paths.
- In order to further discourage their presence, non-viable vegetation measuring greater than six inches in length (e.g. fallen branches, dead prickly pear pads) are routinely collected by the Landscape Chair and volunteers during weekly surveys. This material is flagged and neatly stacked next to community garbage cans to ensure prompt removal and disposal by Santa Rita on a weekly cadence.
- Some packrat nests some may go unnoticed if not easily visible from community paths. Should a resident encounter a nest that has not been flagged or maintained, please notify our community manager (Ms. Jena Carpenter: jenaC@siennaaz.com) so that removal can be added to the weekly workorder prepared for Santa Rita.

When cavities and burrows are noted along paths and in the common areas we ask that landscapers quickly collapse the cavities and rake them flat in line with the surrounding landscape elevation. Homeowners can do the same when encountering burrows/cavities on their property. This serves two purposes: (1) it is a very benign yet effective manner of pest management as it encourages antelope squirrels and other burrowers to move along, (2) It covers and preserves any exposed plant roots, allowing for more even distribution of rainwater and a more uniform appearance. Rodents hate being disturbed, and continuing raking over of burrows and cavities will quickly send them into territory off the paths. This also prevents tripping hazards if cavities are encountered in a walking path.

Should you encounter packrat activity on private property and/or witness damage please reference these links for strategies on how to keep them from choosing your home or vehicle as a living space:

<https://birdingthebrookeandbeyond.com/2012/07/09/how-to-get-rid-of-pack-rats-in-arizona/>

<https://www.arrowexterminators.com/learning-center/blog/engine-invaders-how-to-keep-pack-rats-out-of-your-car>

Irrigation

Background

Common Areas within the Agua Dulce Homeowners Association are hosted by six Tucson Water meters. Tucson Water relies in part on Central Arizona Project (CAP) Colorado River allocations. Lake Mead water levels have fallen to historic lows triggering Federal intervention on respective state allocations. Given historical water conservation efforts within our community, the Agua Dulce HOA (AD) is uniquely positioned to document and improve respective practices necessary for ensuring climate change resiliency.

In general, guidance for common area maintenance is critical to (1) establish a baseline of procedures that can be improved over time; (2) ensure institutional knowledge is not lost in response to changes in leadership; and (3) realize documentation that can be shared with other HOAs that facing similar common area maintenance, water-shortage, or financial challenges associated with high water bills.

General Considerations

- ¾ inch polyline irrigation tubing is exposed in several areas of the HOA. This material is subject to UV degradation and should be buried *at a 2-3 inch depth* immediately after discovery to prevent progressive exposure during the next rainfall event. If certain areas need to be exposed for access, they can be flagged.
- Excessive watering can lead to fast and overly excessive growth of desert natives. Excessive growth can impair visibility along streets with safety issues for walkers. This can increase maintenance costs and impact limited resources for other community projects. Contractors may advise generous watering since it creates higher demand for their services at the HOA's cost, both with respect to water bills as well as maintenance. When working with contractors, ***Agua Dulce must make it clear that water use will be closely monitored with efficiency being the priority.***
- During a recent survey of irrigation timers with our former landscape contractor (Complete), two sites were observed to be hosting soil-moisture and/or rainfall detection hardware. These sensors are meant to interrupt irrigation when soil or atmospheric conditions are appropriate. One soil moisture meter has no power, and it is unclear if the others are working or are integrated with irrigation control valves. In addition, one soil moisture sensor is installed under the roofline of the gatehouse, which may yield false data. Our former landscaper has no details as to depth of installation for soil moisture sensors. Soil moisture monitoring is worthy, but sensors should be

revisited, and the installations improved moving forward. (In progress here: <https://youtu.be/lb4HdcpYWCQ>).

Maps (Meters, Timers, Irrigation Zones)

Our irrigation system is now over 10-years old and showing its age. In 2024, the system suffered from polyline leaks, solenoid failures and backflow valve failures contributing to high water use and extraordinary bills. In response, the Landscape Chair worked with Santa Rita Landscape on a system-wide audit to realize repairs; install new irrigation control pucks; install manual control valves for emergency shutoffs; and create new maps for the same.

Pucks are named the same as the zones they control in a map presented in the Appendix for the section entitled “Irrigation Timer, Pucks and Zones”. Details are also available in Google Earth format via this link:

https://drive.google.com/file/d/1rfATUWM7-JbyKDLsqr5e2lc_WO2A8p1Y/view?usp=share_link

In 2024, new manual control valves were installed throughout the community. These allow certain sections of irrigation to be shut down without having to modify timer or puck programming. Details and locations regarding those valves will be included in a future release of the guidance.

Recommendations for irrigation upgrades and replacement are summarized in the “Reserve Study Input” prepared for the Agua Dulce Board in August 2025 included in the Appendix.

Watering Frequency

On October 11, 2022, Agua Dulce invited an ISA-certified arborist (Aleck MacKinnon) to review the status of our common area trees. This was in response voiced by community members that trees were being over pruned resulting in lion-tailing and sunburn. One member of the community raised concerns about our native trees not being watered enough. In response, we requested advice on irrigation as it relates to scheduling while ensuring efficiency. Below was the response:

“The landscape has irrigation, but only a single line that waters both trees and shrubs. Ideally the trees would be on their own line and run less frequently for several hours at a time. For example, as often as weekly in the summer down to monthly or less over winter with 3-4 hr. run times. While the shrubs are also desert adapted their run times could be 1.5-2.5hrs. every second or third day in summer. Exact schedules would depend on how many drippers are installed and their flow rates.”

A second ISA-certified arborist was invited to evaluate and comment on tree health and watering. Angelo Romero agreed with Aleck's comments and observed that common area trees in general are vigorous as evidenced by new growth on limbs in line with new pruning guidelines. Scheduling that is sensitive to water conservation and vegetation health will be requested of our landscapers and monitored to avoid waste.

Association water consumption and schedules have also been evaluated by Tucson Water with a summary of observations captured here: <https://youtu.be/wfiZ3cgYva0?t=804> . The Association has since been carefully adjusting irrigation schedules in line with our seasons and Tucson Water recommendations. In response, irrigation timers were most recently reprogrammed in October 2025 to optimized for infrequent but deep irrigation as follows:

Winter Watering Schedule Entering Fall (October 21, 2025)

Stations 1,3,4 (gatehouse clock): 1 hour Sunday and Thursday starting at 6 AM

Station 2: 1 hour Wednesday and Saturday starting at 6:00 AM

Station 5: 1.5 hours Tuesday and Friday at 6:00 AM

Station 6: 1.5 hours Monday and Thursday at 6:00 AM

Station 7: 1.5 hours Monday and Thursday at 9:30 AM

Station 8: 1.5 hours Tuesday and Friday at 6:00 AM

Station 9: 1.5 hours Monday and Thursday at 6:00 AM

Station 10: 1.5 hours Thursday and Sunday at 6:30 AM

7-10 is on a different backflow than 1-6 to ensure no pressure issues will occur. Santa Rita is monitoring vegetation health and may modify this schedule if needed or in response to a change in season. A new summer schedule program will be included here when the programming is adjusted in 2026. Respective stations match zones presented in the irrigation maps included in the Appendix – see “Irrigation Overview”.

Common Area Restrictions

Common Areas B and D

Pima County has regulations defining the different types of common areas within our community, and what can/cannot be done with them. Those County rules are summarized here: https://drive.google.com/file/d/1iGYcvMCy3pwUCapLub9z_MnqzAJqOdsg/view?usp=share_link.

"Open space" restrictions outlined in section 4.4.3 apply to the Common Area B and D layers as delineated in our new GIS (see map in appendix entitled "Common Area Boundaries". Of interest, erosion control measures are allowed in these areas as corroborated via 1:1 communication with Eric Shep, Pima County Floodplain Administrator. Mr. Shep communicated that existing/future erosion control work in Common Area B is defensible assuming we respect the other restrictions. It's critical that the next Common Area Chair become intimately familiar with these Pima County regulations as captured in the Association's CCRs in section 4.4.3.

4.4.3 Natural Open Space. Property shown on the Plat as Natural Open Space may also include such additional designations as "Erosion Set-Back" and/or "Natural Erosion Set- Back" and/or "Functional Erosion Set-Back." That portion of the Property designated as "Natural Open Spaces," "Functional Open Spaces," or "Conservation Easement" on the Plat, whether located on Common Area or any other portion of the Property, shall, except as stated in (i) and (ii) below, **be subject to the following restrictions: such portions of the Property shall remain undisturbed in their natural condition and no improvements of any nature, no livestock grazing, and no landscaping of any nature shall be placed thereon, nor shall any of the native vegetation be destroyed or removed, provided however, that wire fencing and underground utility and sewer installations as a part of Approved Construction, and necessary alteration for roads, pedestrian or equestrian pathways, entry monuments, signs (not otherwise prohibited in this Declaration), supplemental or replacement plantings of native vegetation, .passive recreation facilities and benches, and approved flood and erosion protective measures are permitted. The above restriction is subject to the following exceptions and additional restrictions:**

4.4.3.1 Erosion Set-Back and Functional Erosion Set-Back. Any portion of the Property designated on the Plat as "Erosion Set-Back" or "Functional Erosion Set-Back" may be landscaped in accord with Approved Landscape Plans. No other structures, equipment or improvements shall be placed upon the "Erosion Set-Back" or "Functional Erosion Set-Back" except the following allowed improvements: ramadas, retaining walls, public utilities, patio walls and approved fences (not higher than four (4) feet from natural grade), any private recreational improvement which will not impact the 100-year flood water surface elevation or any slopes greater than 15 percent (15%). No improvement itemized above shall be deemed an "allowed improvement" unless it is a part of Approved Construction.

4.4.3.2 Natural Erosion Set-Back. Notwithstanding anything to the contrary stated above, portions of the Property designated as “Natural Erosion Set-Back” shall be subject to the following additional restrictions: “Natural Erosion Set-Back” shall be maintained in its natural condition, except for pathways and required utility and drainage easements, if any, required by the Owner and Developer of the subject Property or Pima County or public utility suppliers, and such supplemental native vegetation as shall be approved in writing by the ARC.

Some residents have raised concerns about flood conveyance and/or fire hazards associated with common area corridors in areas B and D, and subsequently requested maintenance by the Association. The association has addressed these concerns by (1) raising the elevation of vegetation in these corridors through these corridors via judicious pruning to improve flood conveyance *without* removing vegetation; and (2) consulting with the Fire Department for feedback and recommendations on resident’s concerns.

If needed, more aggressive maintenance should follow recommendations of the Fire Department pending consultation with Pima County to ensure the Association does not violate agreed-upon county restrictions established when then development was approved. (Please be aware that prior association practices *do not* legitimize repeating the same without careful consideration moving forward.) Please see section on “Concerns Over Wildfire Risks” for an update addressed in 2024.

Proposed Hiking Trails

Please note that ideas have been shared regarding the introduction of hiking trails and paths in drainage and common areas (B and D) currently serving as wildlife corridors. Current paths and walking trails within Agua Dulce were designed and planned very deliberately to meet Pima County Open Space regulations at the inception of the community. The fact that paths were specifically **not** put into wildlife corridors, drainages and open common areas speaks to the original planners meeting the letter of the law within the strict County regulations. Extreme care should be taken to continue to meet these restrictions as originally and intentionally adopted when the original CCRs were submitted and registered to Pima County October 10, 1993 (Book 51, Maps & Plats Page 37).

If the Association still decides this is something it wishes to pursue, it is recommended this be approached with the utmost care as it may well not meet established County regulations. Please be aware respective activities may compound erosion; introduce litter into natural areas; impact the quality of wildlife habitat; realize potential security issues for neighbors; and potentially introduce pet scat near people’s homes which will require additional maintenance.

Regarding pet scat, this has been a demonstrated challenge for residents whose back yards reside along the gas-line trail resulting from dog-walkers who historically used this low-profile

area to relieve their pets without collection. The resulting odors were raised as a concern by residents in prior years with board members, particularly during the summer.

In response, proposed changes or improvements to Common Areas B and D must be given very serious thought and shared with the community for feedback before moving forward out of consideration for long-standing Pima County regulations; neighboring residents, and the unique environment in which we live.

An appropriate contact for checking with the county on potential violations has been communicated by Ms. Julia Fonseca (Pima County Senior Planning Manager) as follows:

“Chris Poirier or others at **Development Services** are the authority that can respond to violations of the plat. I think it is within their purview to review whether trails would be a zoning violation. A phone call should be sufficient to get you to the planner on duty.

The website for development services which includes contact information is available here: https://webcms.pima.gov/government/development_services/ .

Ms. Fonseca also reminded us that the Fish and Wildlife Department is currently conducting bobcat research on the urban fringe to include research within our own community. (Bobcats frequent our corridors as witnessed by multiple residents.) Cheryl Mollohan (bobcatsintucson@gmail.com) may provide additional details regarding concerns about opening wildlife corridors within our community to additional foot traffic.

Common Area Vegetation Impacting Private Property

Non-Viable Vegetation

In 2024, we received a complaint from a neighbor regarding vegetation encroaching on a private property. The request was to have respective vegetation removed altogether given concerns about it being sickly, leaning over, and impacting neighbors.

The Association consulted with Pima County and confirmed that we cannot remove viable vegetation from common areas. In response, we consulted with a certified arborist regarding the viability of the respective tree and were informed that in fact the tree was perfectly healthy but could be pruned back to offset the impact to neighbors. In line with the advice of that professional, the Association covered the cost of pruning back the respective vegetation in line with ANSI-A300 pruning standards thus addressing the neighbors concern while abiding to our Pima County and our own CCR common area restrictions.

In one case, we had a downed saguaro adjacent to the property line of a resident who raised concerns about saguaro becoming a home to rodents and/or snakes. Pima County evaluated the downed saguaro and confirmed that in this case, the vegetation could be removed since it was

no longer viable. Again, the Association covered the cost of the same without violating Pima County or CCR restrictions.

Again, to ensure we abide by our own CCRs and rules established by Pima County, any requests to remove vegetation require careful consideration and coordination with the county as well as professionals such as certified arborists.

To help with future coordination, respective communications are copied and pasted for future reference:

On Mon, Jul 15, 2024 at 9:44 A

Hello Sandra,

I'm writing to request the removal of a beautiful large saguaro cactus located in the **common area** that resided just south of our property which was sadly blown over by the horrific wind force/storm last night. This cactus now lies at the border of our property but still within the water flow area for our street drainage. Our house is on lot 295, 4124 W. Golder Star Place. The other sad event is that woodpeckers and other birds used this as their habitat and we fear they were killed in the topple. The wind was ferocious.

I'm sure there is other **common area** damage in our community that needs attention. I'm not sure who oversees the **common area** service so requesting the HOA to service this concern. The HOA has cleared a saguaro in this **common area** that fell in a prior storm. I think Bill was the person who oversaw the **Common areas** back then. Bill had the Landscape company contracted out for the community to come and remove I it.

Attached are a few pictures for perspective to view. Thank you for your service to our community.



Hans Huth <aquadulcehans@gmail.com>

Sep 5, 2024, 10:10 PM



I'm just now learning about this homeowner concern via the forwarded thread. I sincerely appreciate the time you took to clearly and respectfully share these details and your concern.

Our CCRs for which were developed with input by the county are fairly clear on what we can and can't do in **Common Area B**. I understand rules were bent under prior leadership. This is one of the reasons we developed the landscape guidance so that there's full transparency regarding **external** constraints and to ensure we don't get sideways with the county and our own CCRs, especially when leadership changes.

Having said that, I am in no way dismissing your concern. Out of respect for the same, I will contact the county for feedback on your communication and suggested action. I will likely set up an in-person meeting which I will inform you of in the event you would like to participate so nothing is lost in translation. As a volunteer, please allow me two weeks to coordinate. Today's date is September 5.

I will email you separately when I have more details.

Regards,

Hans Huth



Hans Huth <aquadulcehans@gmail.com>

Fri, Sep 6, 1:29 PM



Hello Charles,

Thanks for meeting with me this morning and for allowing me to take some photos. Seeing the site myself helped me understand the urgency of the situation so rather than wait for a callback, I followed up with a call to Pima County Development Services. I spoke with Mr. Chris Poirier (520-724-6596 ; chris.poirier@pima.gov) .

I explained the situation as it relates to health and safety concerns that may result from leaving the fallen saguaro in place so close to your home. Chris reviewed the plat; the aerials; and the CCR constraints for Common Area B adjacent to your property. **In regards to county regulations for removing vegetation and natural areas (Title 18), Chris explained that respective protections are only for viable Saguaros. If the Saguaro is not viable as is the case with yours, then those protections are lost.** This is good news for you in this particular case.

Now we need to decide how to proceed. Chris recommended we consider three options: (1) leave the Saguaro in place since it provides much more than just habitat for pack rats; or (2) cut it into pieces and drag it away from your property line where it can still serve its natural purpose in the desert; or (3) remove it entirely.

Chris noted option 3 is the least favorable from a natural standpoint but is allowed under Pima County rules. In regards to (3), Chris recommended we first check with the State rules to ensure moving the fallen saguaro doesn't require any permits. On this point, I suspect our landscapers are well versed. Chris also suggested taking multiple photos of the downed saguaro (which we have) in case the county receives a complaint from a neighbor regarding its removal from the common area. This is good advice.

I appreciate you giving us time to investigate how to address the sad loss of the Saguaro the right way. Please allow me to follow up with Sandra and Santa Rita Landscape regarding how to proceed- I will certainly keep you in the loop. We will be updating our landscape guidance with this invaluable information.

Regarding the drainage, I'll volunteer some time on my own to start elevating the hopseed branches to avoid drainage issues and yes, I will address that Texas Ranger.

Hope this helps,

Hans Huth



Hans Huth <aguadulcehans@gmail.com>

Mon, Sep 9, 1:22 PM



Hello Charles,

Santa Rita has given us a quote for removal of the downed **saguaro** as well minor pruning of a tree in another wash. Including waste disposal fees, the total cost for the service is \$1800 which will be covered by the Association. A date for removal is in the works.

This is a significant expenditure so to keep costs from escalating further, volunteers will address your concern regarding drainage maintenance at the end of the cul-de-sac. I'll be piling debris adjacent to the culvert near the wash so if you observe the same, that's me working in the area.

Regards,

Hans Huth

The respective saguaro was subsequently removed and the drainage cleared at Association expense.

Thanks to input shared by Pima County (Chris Poirier) as well as community members, the Association has since learned that fallen saguaro's have a second life. Fallen limbs may still bloom after falling while the downed saguaro itself provides habitat for desert animals. (https://tucson.com/news/local/giant-dead-saguaro-flowers/article_37110e00-094c-11ee-8fe9-7bd695bdfda5.html). Furthermore, keeping downed limbs on site may significantly lower Association costs since landfill-disposal expenses are avoided.

Where saguaros fall along property lines, it is reasonable to respect residential concerns who may wish the same be moved away. However, there is no need to have respective limbs taken to the landfill given the benefits they host for our local wildlife community.

Moving forward, the Landscape Committee recommends relocating downed saguaros to Common Area B.

Viable vegetation

There are homes along Nash Creek that may be impacted by vegetation growing in the common area wildlife corridor that runs along respective back yards. The Landscape Chair has met with concerned residents one-on-one and explained restrictions associated with removal of viable vegetation within that corridor.

At the same time, we understand the nuisance that may be realized by overhanging branches and have thus worked with our landscaper to have respective branches pruned back in line with ANSI-A300 guidelines. We are also monitoring the associated corridor for garbage and debris

which our landscape company is removing when present during a fifth-week rotation and will remove Desert Broom against common area walls and through fences.

Here is a clip of the communication with the respective homeowner demonstrating the concern was addressed in a responsible way that respects both county and CCR restrictions.

As a courtesy, I spoke with Santa Rita today and requested they remove the Desert Brooms behind your wall -- they are flagged for removal tomorrow. Our new RFP will include removal of dead branches and garbage for that corridor every 5th week when it occurs during a month.

I walked the corridor behind your home and can confirm the dead woody debris and garbage has been removed. In fact, you can walk straight through with little interference if you wish- it's quite beautiful back there now.

The landscape guidance that captures all the institutional knowledge about our common areas and how we manage the same is available via this link: Agua Dulce Landscape Guidance (Revision 6): https://docs.google.com/document/d/1okcsHQL-B4RDijluxJo1fcjKHdeU78lp/edit?usp=drive_link&oid=110634341293889019430&rtpof=true&sd=true

This guidance is updated every six months reflecting new lessons learned. Our next update will be in December to include new irrigation maps based on extensive surveys we conducted this summer. (As a side note, other HOAs are now using our guidance as a template for their own communities given recognition by Pima County on our sustainable approach.)

Our contact at Pima County that assists with guidance on Common Area B restriction is:

Mr. Chris Poirer

chris.poirier@pima.gov

520-724-6596

Sincerely hope this helps clear up any misunderstandings from prior engagement or lack of response from Association representatives. I'm glad Sandra invited me to meet with you today.

Regards,

Hans Huth

Volunteer

Here is a photo of the properly pruned tree relative to the property boundary:



Should concerns come up again, it is recommended the site be evaluated and our landscapers contracted for branch removal only as necessary. **Residential claims that trees are non-viable and should be removed need to be corroborated by an expert such as an ISA-certified arborist to avoid violating our CCRs.** Since evaluation, pruning and/or removal realizes costs for the Association, photographs should be taken **before and after** to (1) document that the concern is legitimate and (2) demonstrate it was addressed responsibly and in line with ANSI-A300 pruning standards.

Contact information at Pima County that assists with Common Area B restriction is:
Mr. Chris Poirer (chris.poirer@pima.gov ; 520-724-6596 and has been shared with residents so they may ask questions directly rather than have the Landscape Chair be the go-between.

Water Harvesting and Erosion Control

Given the megadrought impacting the Southwest, our HOA realized the potential of installing rain gardens, gentle swales, and rock dams for capturing rainfall. In addition to lowering our reliance on imported water, these features relieve pressure on eroded paths and downstream flooding. Earthworks also contribute to improved land cover and shade through native plant recruitment.

Ten Years of Building Community Through Conservation

In 2014, volunteers began to assist with the development of water harvesting and erosion control (WHEC) features throughout the community. Presently, we have 14 registered volunteers that support surveys for erosion; communicate irrigation leaks; support path maintenance; and develop new earthworks. These activities have helped us save water in the following ways:

- Relative to our 2016 baseline, the 7-year aggregate cost savings relative to (pre) drip-system repairs and Committee activities has yielded **5.7 million gallons of water saved with a cost savings of \$21,555**. *Actual cost savings are likely much higher since the analysis doesn't account for annual increases in water costs dating back to 2016.*
- Water use in 2023 relative to 2022 decreased significantly by 320K gallons (38%) for the year. Not accounting for inflation, this contributed to a \$697 decrease in water billing relative to 2022. Actual cost savings are likely much higher due to incremental increases in Tucson Water billing not accounted for in the year-over-year analysis.
- In order to foster continuous improvement, 2023 water cost and consumption will act as our new baseline moving forward.

A summary of WHEC history and metrics-based benefits to the community measured over time are captured in the following videos:

- Latest Water Harvesting and Erosion Control Report shared in 2024:
<https://docs.google.com/document/d/1cFOJpdimtbq6rCZslY2iZ0mawKyt4OCm/edit?usp=sharing&oid=110634341293889019430&rtpof=true&sd=true>
- HOAs - An Overlooked Water Sustainability Opportunity in the Desert:
<https://youtu.be/wfiZ3cgYva0>
- Water Harvesting - Arizona Hydrological Symposium Presentation 2021:
<https://youtu.be/r2fky3MZoa8>

- Agua Dulce Water Harvesting and Erosion Control – July, 2022
<https://youtu.be/v7cjzdYb5Is>
- Water Savings Opportunities in HOAs- What's Next:
<https://youtu.be/vaXliBsCZ-A>
- Ten-Year Anniversary Presentation for the UA's Annual Horticulture Conference in 2025:
<https://youtube.com/playlist?list=PLqJ5k4cakypwwhGvOlbMG0O74kcpDooM&si=K6lc7-f6xCArwUV->

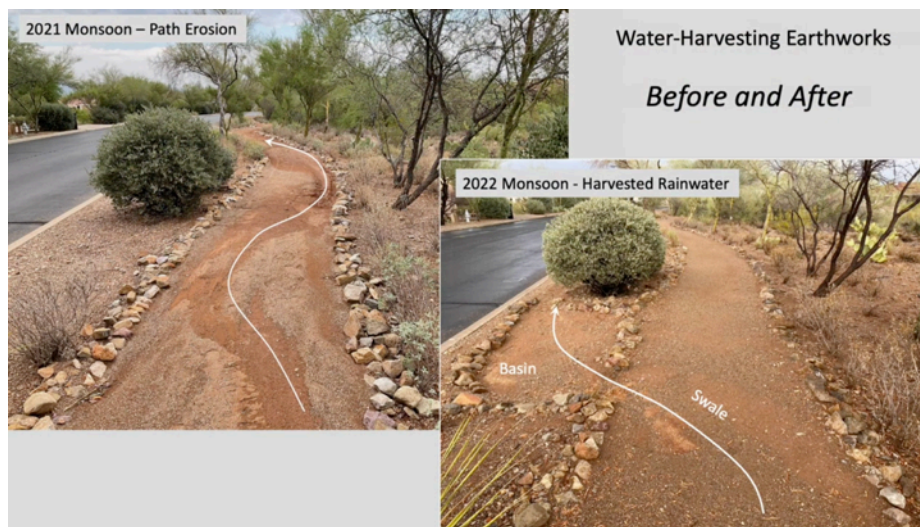
Note that in 2025, the Water Harvesting and Erosion Control Committee was combined with the Landscape Committee. Respective activities are now captured under the Landscape Committee Charter adopted by the Agua Dulce Board on August 27, 2025. Updates to the original charter will make volunteer recruitment and operations easier to implement.

The new “Landscape Committee Charter” is available for community review here:
https://drive.google.com/file/d/1xS_H4uuxe6r8ONL4Lg7WCR5Z8TApuScW/view?usp=share_link

Water Harvesting Features

Water Harvesting features within the association have been installed as early as 2014 through guidance provided by Watershed Management Group (WMG) and certified volunteers. Respective features are designed to put problematic stormwater to beneficial use. As an example, the following page shows a simple example of a basin and swale installed on a community path for relieving erosion by shunting stormwater into a shallow basin that waters a local desert native. The same feature can be viewed in action via this link:
https://youtu.be/YYCAh_NfiFI .

Example of a Water Harvesting and Erosion Control Feature



Water Harvesting feature design principals are simple as summarized by Watershed Management Group in this link: “Build Your Own Basin: Virtual Workshop”: <https://youtu.be/1s8gSxAE-IA> . Additional details are summarized in the new “Volunteer Activities” section last updated in release 1.07 of this guidance.

Although installed features have conclusively helped with path erosion, these features are incomplete without (1) having a properly designed spillway to shed overflow stormwater where we need it; and (2) a 2-inch layer of mulch to help cut down on basin evaporation after a storm event while improving soil health. **Thanks to contributions of time by volunteers and mulch reclaimed from landscape, many of our features were improved in 2023-2025 to include new spillways as well as mulch application.** A guidance on basin design is in development for the next iteration of this guidance- stay tuned!

General guidelines for respective improvements are cued below:

From “Build Your Own Basin: Virtual Workshop”
<https://youtu.be/1s8gSxAE-IA>

Plan for overflow
<https://youtu.be/1s8gSxAE-IA?t=838>

Adding mulch
<https://youtu.be/1s8gSxAE-IA?t=2537>

Please see the section “WHEC Repairs” for more information. For details on learning, volunteering, maintaining, and/or improving community features, please consult with the Water Harvesting and Erosion Control (WHEC) Chair who can be contacted via this email: aguadulcehans@gmail.com.

Landscape Story Map

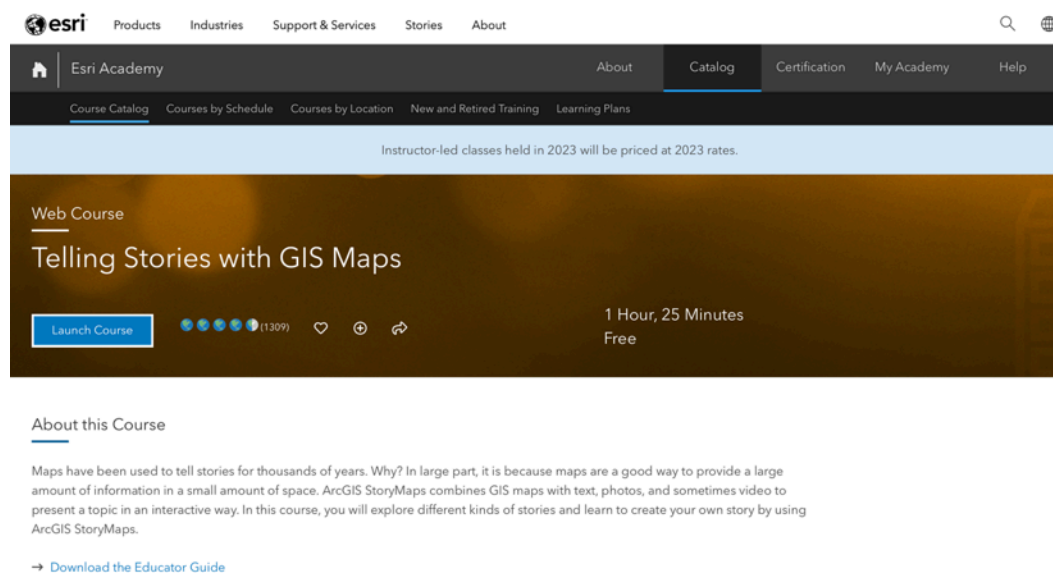
In 2022, WHEC volunteers compiled an online story map entitled “Agua Dulce Walkthrough - Historical Imagery for Visualizing Landscape Change.” The map is accessible via this link: <https://arcg.is/1WWGmb> and was most recently updated in 2025 capturing installation of a new urbanite feature behind the community pool.

This application provides a historical library of photos and videos with descriptions dating back to 2013 demonstrating how our community has tackled erosion issues and modified its landscape practices in line with our National Wildlife Federation certification. When referenced on a phone, the app gives residents the opportunity to visit mapped sites and see how the landscape has changed over time. The application will help new volunteers discover forgotten features; facilitate maintenance where needed; and ensure sustainability moving forward. For sustainability, the map is hosted using a non-commercial free ESRI story map account with access details included in the “Account Details” portion of this guidance. The process for

updating the map is intuitive simply requiring drag-and-drop photos amended with brief descriptions.

ESRI provides online trainings for those wishing to improve or update this community add-on over time. If the map is not maintained, it will remain static with no need for maintenance as long as ESRI continues providing the free service. However, if residents or volunteers wish to add more photos and narratives, ESRI offers free online trainings in the same. These are accessible by logging into ESRI's ArcGIS training website via this link:

<https://www.esri.com/training/> .



Landscape Committee Open Meetings

Per our updated Landscape charter, the Landscape chair should plan a minimum of two meetings per year: one to summarize the year's accomplishments for the annual meeting, and a second to survey features requiring repair prior to the monsoon.

The first meeting should be scheduled for late January in anticipation of the annual meeting in February. Late January will ensure that the water billing totals for the prior year are available per January Tucson water billing. This facilitates year-over-year consumption and cost summaries for the annual report. Here is a suggested agenda:

- **Review year-over-year water savings based on Tucson Water Billing**
- **Summarize year's activities, challenges, and accomplishments for annual meeting**
- **Review proposed budget and next steps**

The second meeting should be scheduled in the Spring to take inventory of any features that require modification or repair. This will set the agenda for any community work that takes place

prior to temperatures getting too hot for working outdoors to realize necessary repairs that may be required in response to anticipated or prior-year's monsoonal damage. Additional meetings may take place during the summer to realize repairs as needed.

NOTE: Due to a lapse in leadership in 2025, no Spring meeting was hosted in that year. However, an October meeting was hosted in 2025 to review updates and revisions to the Landscape Guidance as required by the same.

Repairs

Per the Landscape Committee charter, if repairs require movement of less than 1-cubic yard of soil, they may be addressed immediately by registered volunteers without board consultation. (Registered volunteers have filed a volunteer liability waiver form with the HOA). This will ensure headcuts can be remedied immediately before they realize further damage rather than waiting for board review and approval on a monthly cadence. If repairs require movement of more than 1 cubic yard of soil, respective details should be communicated to the board with a plan for remedy.



This is an opportunity for Rainwater Harvesting Identified by Volunteer Observations. Specifically, sediment and erosion across paths points to opportunities for upstream water harvesting. Consider working upstream to slow down stormwater before it realizes downstream impacts.

Regarding mulch, please consider using a heavier grade (3-inch minus wood chips) for water harvesting features. This will help avoid loss of materials via wind or stormwater. Of course, landscapers should be sensitized to the presence of this material to avoid it being removed by blowers. *This can and has been a challenge as it relates to high turnover in the landscape community, and lack of communication with new employees on behalf of management.* **New contracts must specify this material should remain in place.**

Any purchase of rock or mulch will require communicating staging plans and timelines for drawing down the material during repairs. Historically, material has been staged in the pool parking lot without incident or complaints given the community is sensitized to the need. Communicate with the Landscape Chair and/or directly with the board via Sienna management.

Note that in 2023, Santa Rita offered to chip neighborhood tree clippings at no cost to the HOA for use as mulch. Respective material was staged at the pool area and distributed throughout the community in our modest water harvesting features. This is a free alternative to commercial purchase which can save the HOA hundreds of dollars per year. We have already taken advantage of this service as summarized in his queued link from in our annual landscape report shared in 2024: <https://youtu.be/sl1wfkOF99o?si=WaST4XnF8tHYSKei&t=615> .

Additional details are summarized in the new “Volunteer Activities” section last updated in release 1.07 of this guidance.

LID Certification

The Agua Dulce HOA’s National Wildlife Federation’s certification is an attractive feature of our community. There are opportunities for seeking additional certifications reflecting the years of volunteerism and efforts on water conservation and erosion control.

One such opportunity is to have the Association recognized as a Low Impact Development (LID) case study community by the Pima Association of Governments (PAG). Representatives of the Association regularly attend and present at PAG meetings to discuss water conservation opportunities within HOAs and elevate our community as a candidate for LID recognition.

On April 6, 2023 Pima County recognized Agua Dulce as a Low Impact Development (LID) Case Study Site and invited us to present at the Santa Cruz Watershed Collaborative Spring Conference. An award was given to the association and a plaque now greets residents and prospective home buyers at the community’s entrance.



If you are a real estate agent, please consider pointing to both Pima County's LID and National Wildlife Certifications as setting us apart from other HOAs. Not only does this support property values, these make Agua Dulce a desirable place to live.

Animal/Pet Scat

Given our wildlife setting, it's not uncommon to run into coyote and bobcat scat in common areas. Unfortunately, walkers may also encounter obvious impacts from a minority of irresponsible pet owners. Sadly, this has been a recurring theme for decades and is not unique to our Association, although conditions have improved over the years. The Association has and will continue facilitating progress in the following ways:

- A professional cleanup service is presently contracted by the Association to collect scat from common areas on a weekly basis. Although this helps but does not eliminate the challenge.
 - The cost for these services is something that is shared by all residents as reflected in association fees. Highlighting this shared cost in newsletter entries or polite conversation can help sensitize the community to the challenge and hopefully encourage personal responsibility.
- Garbage cans have been strategically relocated throughout the community in areas that are impacted most frequently. From a customer service standpoint, the goal is to make it easier for residents to collect and dispose of pet scat thus discouraging irresponsible behavior.
 - If some areas continue to be repeatedly impacted by scat, the Association may consider installing additional garbage cans in respective areas. This strategy has proven effective in the past.
 - Respective collection sites should be emptied on a **weekly basis** by our contracted landscapers (or other entity) to prevent odors from impacting walkways, particularly in the summer.
- Some community volunteers have taken the initiative to collect scat on behalf of the Association when it's encountered. We are fortunate to have caring neighbors who address this need without recognition. In this regard, it's hoped (but not expected) that all neighbors will respect our common areas appropriately out of appreciation for those who contribute their own time and resources towards maintaining the same.
 - Again, highlighting these personal contributions in newsletter entries or polite conversation may encourage a change in culture that might otherwise be left unchecked.

Sadly, this problem is one of the most contentious for the Association and is not likely to be eliminated without all of us taking some responsibility. Needless to say, "be the change that you want to see in the world" is a bit cliché, but a good mantra towards realizing progress on this front, and is certainly more effective than the alternatives.

Additional details are summarized in the new "Volunteer Activities" section prepared for release 1.07 of this guidance.

Volunteer Activities

In the interest of building community, residents are invited to help Agua Dulce maintain a sustainable and natural Sonoran Desert aesthetic within its common areas. Volunteer contributions have grown organically over time and are captured here for others who may wish to contribute to the same*. Respective activities include:

- Water Harvesting Feature Maintenance
- Basin Development
- Mulch Distribution
- Leak Detection and Repairs
- Tucson Water Reimbursements
- Irrigation Shutoff
- Common Area Flagging and Landscape Coordination
- Animal Waste Cleanup
- Newsletter Entries

Each is outlined in further detail below.

* NOTE: Volunteers supporting activities requiring manual labor must fill out a volunteer form and be approved as members of the Landscape Committee by the Board. This formality ensures the Association's Worker Compensation Insurance is current and volunteers are covered in the event of an injury. We kindly ask that you DO NOT support activities involving manual labor unless you have filled out the respective form and coordinated with the Landscape Chair to ensure you are formally recognized as a volunteer and Landscape Committee member.

Water Harvesting Feature Maintenance

As summarized in the section entitled “Water Harvesting Features”, stormwater impacting common area paths is currently directed to shallow basins along walking area paths. This ensures stormwater is put to beneficial use rather than contributing to unsustainable cycle of erosion and repairs. This strategy has worked well for Agua Dulce but does require some incidental maintenance. Over time or in response to extreme storms, paths may still erode and basins fill with sediment thus losing their effectiveness. In response, volunteers dig sediments out and use the same to repair upstream paths. The following two figures demonstrate the repair.





When this occurs and repairs are needed, opportunities for installing new basins upstream of impacted areas should be investigated in order to relieve pressure on downstream features.

Basin Development

New basins may be proposed for the purpose of either (1) removing standing water from paths or (2) relieving pressure on downstream erosion-control features. In order to facilitate immediate repairs for the purpose of halting headcut progression during the monsoon, new features may be developed without board approval as long as they disturb less than one cubic yard of dirt. (See Water Harvesting and Erosion Control Charter for further details.)

Here is an example of an area on Pallasite that is hosting standing water on a walking path. Although this water will quickly infiltrate to for the benefit of adjacent plants, some may find it a nuisance when walking the paths after a storm.

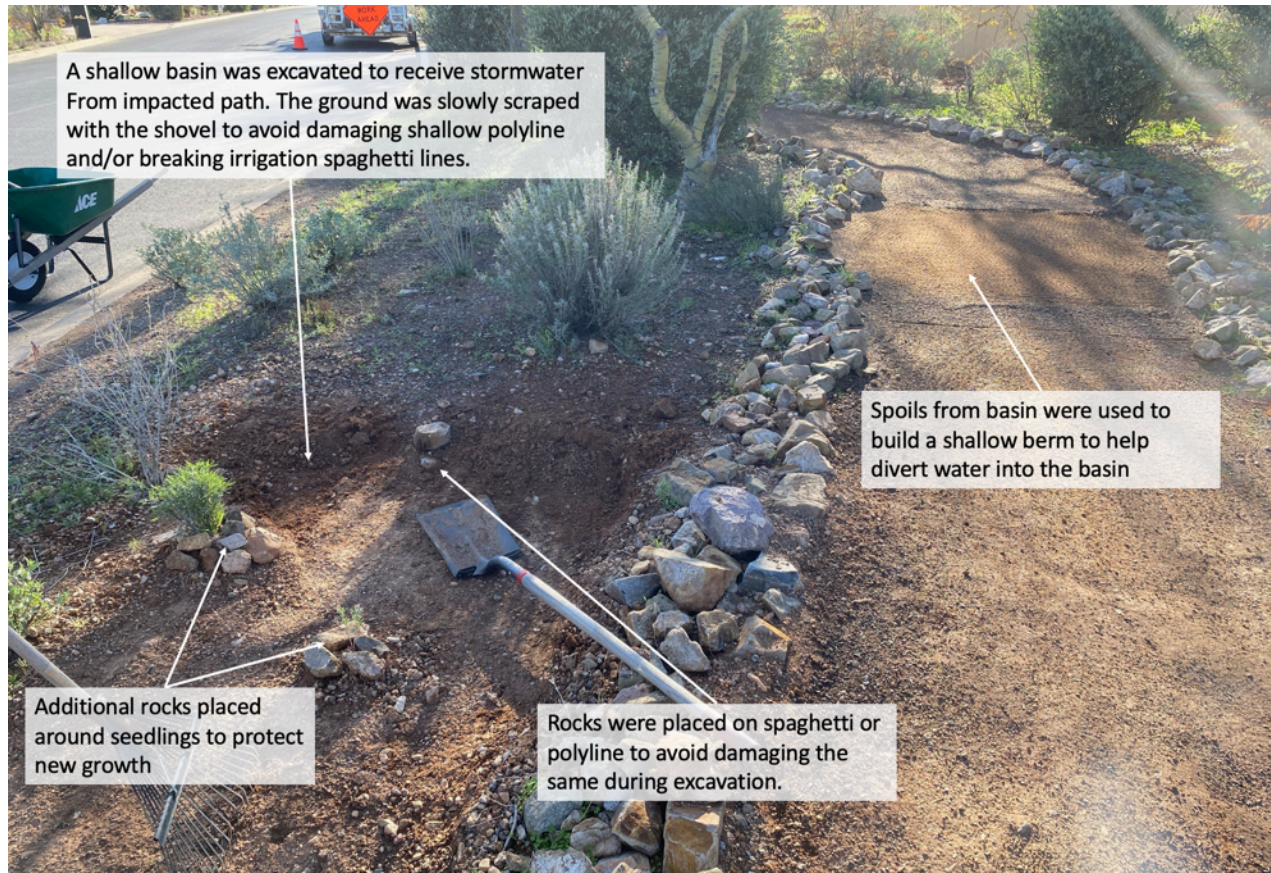


In response, the resident the who identified this as an issue stepped up to be part of the solution. Here is a general summary of how the work was realized by the volunteer in coordination with the Landscape Chair.

- The process begins by gently scraping a shallow basin adjacent to the path. This should be done with caution so as to not damage shallow irrigation lines or snagging spaghetti lines. (Report any damage to irrigation lines to the Landscape Chair for immediate repair.)
- Basins should not be dug deeper than 6-inches to avoid having to engage blue stake or trigger requirements for formal site design requiring board approval (e.g. avoid moving more than 1 cubic yard of soil).
- The spoils from the basin are spread on the path downstream for the purpose of realizing a shallow berm (< 2") to channel water into the basin. Make this wide and shallow in order to prevent a tripping hazard and to ensure long-term sustainability of the feature (e.g. 36-inches wide by 2-inches tall). Tamp down the soil and rake over with adjacent decomposed granite. This approach will also make the berm practically invisible.
- A small rock apron may be installed upstream of the berm where water is channeled off the path into the basin for the purpose of preventing erosion of the associated bypass.
- All basins should have an outlet that channels water to the street or another basin rather than back onto the path.
- Revisit the feature during or after a storm to ensure it functioning appropriately. Adjustments may be needed where elevations are determined by eye rather than by

using a water level or formal survey equipment. Adjustments should be relatively simple requiring minor movement of soil.

The following photos summarize how a new basin was developed to build the first of two ponds just south of Pallasite and Robert Daru now affectionately known as “Shavon’s Ponds”.







Mulch Distribution

Mulch is recognized as an important strategy for climate-change resiliency. Mulch shields soils from exposure to direct sunlight, thus increasing the availability of incident moisture to plants over time. As opportunities arise, the Landscape Chair has coordinated with both landscapers and community members to have mulch donated to the community for personal and/or communal landscape use. **All donations must be weed-free and thus usually constrained to reclamation of native trees that were damaged or destroyed during wind or monsoon events preferably from within our own community.** All trees are run through a chipper and neatly maintained in the corner of the pool parking area for collection and redistribution. The volume of mulch stored on site should not exceed five yards to keep things manageable for volunteers and the pool area looking neat.

Mulch donations are stored on the south end of the parking area and may be allowed to ferment as needed for several weeks. Try to constrain placement to no more than once parking space without block in the parking area drainage.



Regarding distribution, it helps to have a volunteer with a truck to facilitate the same. If a truck is not available, volunteers can bag the mulch or place it in buckets and drive it basins that need to be topped off. ***NOTE: It is HIGHLY RECOMMENDED a dust mask be worn when collecting or distributing mulch since disturbing the piles can release dust.***

Mulch can also be bagged or placed in buckets which can then be placed in your vehicle to facilitate distribution throughout the community.



Mulch used to top off a water harvesting feature to a depth of 2-3" on Pallasite



There is a wheel barrow and shovels in the pool area to help with collection and distribution

Contact aguadulcehans@gmail.com if you'd like access to tools or are available to help with distribution.



How Effective is Mulch in Agua Dulce?

The open-source hardware movement coupled with inexpensive environmental sensors has made it possible for a citizen scientist to quantify the impact of mulch on soil cooling in Agua Dulce as follows:

- Within Agua Dulce, a water-harvesting basin was installed and instrumented for measuring the impact of mulch on soil temperature during the 2024 summer monsoon. Over 3,400 air and soil temperature records were collected between July 26 and August 31 using an open-source datalogger and multiple temperature sensors.
- A mulch effectiveness index was created by subtracting soil-surface temperature from air temperature. When soil temperatures are low, the potential for water storage is improved and the index is greater than 0. When soil temperatures are relatively high, potential water storage is diminished and the index is less than 0.
- The addition of mulch to the bare basin in August, 2024 realized a sustained and dramatic impact on the index independent of rainfall.
 - The difference between air and ground temperature cools by 8 degrees F.
 - Cooler temps helps keep moisture in the soil column thus diminishing the need for irrigation.
- Details are queued here for individuals wishing to learn more:
<https://youtu.be/-E5HU79nfWs?si=mQOdIT61Dgh20kwd&t=1059>
- Additional details are also captured in this summary prepared for the University of Arizona's EcoRestore Portal in 2020:
<https://ecorestore.arizona.edu/news/2020/10/using-mulch-prevent-heat-stroke-desert-landscapes>

Leak Detection and Repairs

Irrigation leaks are a perennial challenge for the Association. This is a consequence of our community using polyline for common-area irrigation, aging infrastructure, and wildlife damaging spaghetti emitters. If left unchecked, this can result in thousands of dollars of wasted water over the year so we rely on volunteers to notify the Association when something doesn't look right.

Below is an example of saturated area along the path that is providing no benefit given its location relative to established plants. Specifically, there are no trees nearby and the adjacent creosote requires no irrigation. This is likely sourced to an old spaghetti emitter that was damaged or removed by wildlife. Volunteers who have received training may flag and communicate the location to the Landscape Chair for follow-through.





Committee volunteers may send a photo and description via email to the Landscape Chair for follow-through. An example of a respective communications is shown below.

It's important to log these events should we encounter a high water bill and be questioned about the same by the Finance Committee which is just doing its due diligence regarding expenditure oversight.



Hans Huth <aguadulcehans@gmail.com>

Tue, Nov 12, 8:11PM (10 days ago)



tc

Hello Jason,

**Chair follow-through with
landscapers**

Let's put this on the list for tomorrow. Based on your mapping, I believe this particular line is controlled by Node 8. The drip was on yesterday per the schedule you shared but it's odd that it would still be leaking significantly at 10:30 since the schedule suggests this came on for 1.5 hours starting at 6:00 once a week. The date is right but the time is off.

From the photo, it appears the line is exposed.

See you at 10:00 AM tomorrow.

Thank You,

Hans



----- Forwarded message -----

From

Date: Tue, Nov 12, 2024 at 9:56 AM

Subject: Big leak in poly on gasline

To: Sandra Drain <sd.aguadulce@gmail.com>, Hans Huth <aguadulcehans@gmail.com>

**Notice from
Committee Volunteer**

As walking this morning I saw a big leak in the polyvline where the gasline drops down to the north. This was at 9:30 this morning. I tagged it with pink ribbon. The line is exposed as you go down to the north (west). See attached picture.



High Water Use Cause Identified



Inbox x



Hane Huth <hanadulcehans@gmail.com>

Wed, Nov 20, 7:43 AM (2 days ago)



I logged in quickly to see what's going on in case I need to point something out to Jason today.

The meter tied to this high water use is associated with the timer at the gatehouse (meter 449946) which hosts irrigation at the entrance/exit of the community.

We had a chronic leak at the exit of the community originally discovered by Sandra. It took several tries by SR to get this one fixed after repeated requests by both Sandra and I. The root cause was determined to be wildlife and it was eventually repaired.

On the bright side, the watering has been cut back to weekly now that plants are going dormant so the billing should come down.

Gatehouse stores cinnamon which we can use as a natural wildlife deterrent. (This is yet another item I will add to the procedural guidance for our upcoming meeting on December 7).



Motions to close

Inbox x



Hans Huith <aquadulcehans@gmail.com>

6:06 AM (16 hours ago)



Hello,

1. Attached are the Finance Committee Meeting notes highlighted with motions that passed last night. Please let me know what I can do to assist with these actions.

2. I'm attaching a communication with Sandra as it relates to a high water bill that you will see on the next financial report. Thanks to diligent monitoring by David and Sandra, the associated leak has been resolved. These chronic leaks are sourced to wildlife so we are testing natural deterrents to remedy the same.

3. Thanks again to David for working with Tucson water for reimbursement on bills associated with repaired backflow valves. I confirmed a credit for the refund was applied through a diminished balance-due on one of our meters.

What a month! Thanks to everyone (especially Sandra) for the tireless advocacy to ensure stuff gets done. The community is lucky to have you all.

Regards,

Hans

Agua Dulce High Water Use

👉 Inbox x



Hans Huth <aquadulcehans@gmail.com>

📧 Tue, May 21, 9:49 AM



Hello Jason,

Hope all is well.

The volunteer that monitors our monthly water bills reached out to alert us that during our last billing cycle, water use had increased significantly.

Of note, we witnessed two Tucson Water meters **that are showing historically high consumption dating back to 2016**. Please see the attached spreadsheet that shows the summary and location of respective meters in historical context.

Sandra informs me some programming was recently changed given the upcoming summer. As a water conscious community, I'd like to discuss what we can do to offset respective increases. If this is in response to new plantings, please note we have volunteers that can water selected plants by hand so that we aren't overwatering an entire zone to accomodate a few new plants. If not, perhaps we have a leak?

I look forward to your review and coordination.

Thank You,

Hans Huth
520-262-4599

Tucson Water Reimbursements

It's inevitable that we will encounter high water bills due to failing irrigation infrastructure and impacts from wildlife. Since volunteers promptly follow up and document repairs, we can ask for a partial refund of high water use bills from Tucson Water. The requirements for the same are listed below:

- (1) Tucson Water needs to allow for one billing cycle to pass after the repairs are completed so they can see what normal usage looks like compared to the high volume usage during the periods of leakage.
- (2) We can request the relief adjustment if another one has not been granted in the previous three years. The three-year cadence applies to each individual meter rather than the HOA as a whole.
- (3) Tucson Water can only discuss adjustments with someone who is authorized on the account. The HOA president can add/change authorized names by sending the request, on HOA letterhead to: tw_customerservice@tucsonaz.gov

At this time, Hans Huth, David Worton, and Sandra Drain are authorized to coordinate with Tucson Water for repairs. Once coordination has taken place, Tucson Water will notify us of the amount to be credited and will apply the credit towards a future billing cycle.

At this time, meters 443322 and 43336 have received reimbursements in 2024 so these cannot be revisited for three years for another rebate. The remaining meters are still eligible for reimbursement in the short run.



September 21, 2024

To Whom it May Concern

I am writing to formally request a price adjustment for leaks that have occurred within our neighborhood, Agua Dulce HOA. Despite multiple attempts to report these issues to your office, we have encountered difficulties due to outdated contact information.

To expedite the resolution of this matter, I would like to request that the following members of our Board of Directors be granted access to inquire about our association's account:

- Hans Huth: 2024 Treasurer
- Sandra Drain: 2024 President
- David Worton: Volunteer

Below is a list of accounts associated with our HOA. The accounts highlighted have experienced unusually high water usage from May to July, likely due to the leaks.

Magnetite Lane #A - Utility Bill	-443310
Pallasite Drive - Utility Bill	-443322
Tombolo - Utility Bill #	443336
North Magnetite - Utility Bill	-443364
4191 Tombolo - Utility Bill #	-449444
3790 North Pallasite - Utility Bill :	-449946
3720 N Magnetite Ln - Utility Bill #	-456902

Thank you for your prompt attention to this request. We look forward to working with you to resolve this issue.

Sincerely,

SAUNDRA DRAIN, PRESIDENT
sd.aguadulce@gmail.com

www.cadden.com

5225 W Massingale Rd, Tucson, AZ 85743
(520) 297-0797

----- Forwarded message -----

From: **TW-CSR** <TW-CSR@tucsonaz.gov>
Date: Wed, Sep 25, 2024 at 4:04 PM
Subject: Re: [EXTERNAL] Agua Dulce HOA High Water Usage
To: sd.aguadulce@gmail.com <sd.aguadulce@gmail.com>

Thank you for contacting Tucson Utility Services. Your documents have been accepted and filed. The accounts have been updated.

Best regards,
Jodi

Utility Account Representative
City of Tucson | Tucson Water
Telephone: 520-791-3242
tw_customerservice@tucsonaz.gov



David Worton

to SD, me, Jose ▾

Thu, Oct 3, 4:48 PM



OK, it took two call backs from the first agent who didn't get the calculations correct and then a call to a second agent who consulted someone who knew what they were doing, but now I have the results for our requests. I did not instruct them to proceed with the adjustment refund until it is approved on our end through the appropriate Board process. The request and calculations are logged and we have 7-months from the adjustment months to request fulfillment (because we are looking at a June and July bill, that essentially means by the end of this calendar year, but the second agent recommended not waiting to the very last month, so we should let them know if we want the refunds by November). The details:

- 1) The adjustment can only be made for one months bill for each account
- 2) They look at the highest month for each account and compare it to the same month in the previous calendar year
- 3) They typically calculate the adjustment as one-half of the difference, however they needed to factor in the rate-hike that occurred on July 1 for the 336 account (but not for the 322 account) and, more consequentially, because are meters have flat-rate baselines, that lessens the amount we receive back even moreso
- 4) For account 443322: June 2024, \$779.03. June 2023, \$255.79. Adjustment refund: \$209.91
- 5) For account 443336: July 2024, 714.91, July 2023, 309.66; Adjustment refund: 117.44
- 6) We cannot request another adjustment for three years for each account. Other water accounts we hold are not held under that stricture

Please let me know after the Board (or the finance committee) meets if I should go ahead with the request. I will essentially be out of communication from October 19 through the end of the month, but can take action during November.

Let me know if you have any questions,

David



Hans Huth <aguadulcehans@gmail.com>
tc

Oct 4, 2024, 8:32 AM



Hello Finance Committee,

Forwarded captures the volunteer work that David Worton addressed on behalf of the Association to realize a refund on some of some of the high water use billing which I know has been a concern.

Thanks to repairs addressed this summer and water use returning to normal levels, **David managed to realize a refund of \$327.35- the maximum we could yield given Tucson Water rules for the same.** This was not a simple task- it required significant coordination with both the Board and Tucson Water.

Thank You David for putting in the hard work to get this to done!

Regards,

Hans Huth

Irrigation Shutoff

Volunteers have observed that our drip irrigation system frequently comes on immediately after a drenching winter rain or summer monsoon as detailed here: <https://youtu.be/guiFajdEsl> . This does not mirror Agua Dulce's water conservation ethic. In response, volunteers have been trained to respond to rains by shutting down the irrigation until soil moisture conditions merit a return to watering. **Any modifications to irrigation should be communicated to contracted landscapers as well as the Common Area Chair- both when timers are shut down as well as turned back on!**

Based on experience and our soil type, volunteers shut the irrigation down when Agua Dulce witnesses 0.40 inches of rain within a 48-hour period (increased from 0.25 inches in revision 1.07). The irrigation is kept off for a *minimum of two* days in the summer, and one week in the winter. Reset cycles may be extended based on ground conditions. The cycle resets if we encounter additional rain when the irrigation system is off. For background on the experimental data used to determine this threshold, details are queued here: <https://youtu.be/-E5HU79nfWs?si=Ni2ifis20PgqoVif&t=499> .

Please watch the entire video if you need further details.

In regard to monitoring rainfall depth, <https://rainlog.org/> provides publicly accessible rainfall-monitoring data for numerous rain gages installed within our community at no cost to the HOA. Check this link for local conditions maintained by an Agua Dulce resident living on Tombolo who updates rainfall totals daily: <https://rainlog.org/data/daily/ytd/1306> .

You may navigate to irrigation control valve locations by referencing the maps in the Appendix of this document. What follows is a flow chart capturing the overall process of responding to precipitation as well as details as to how to disengage irrigation timers manually.

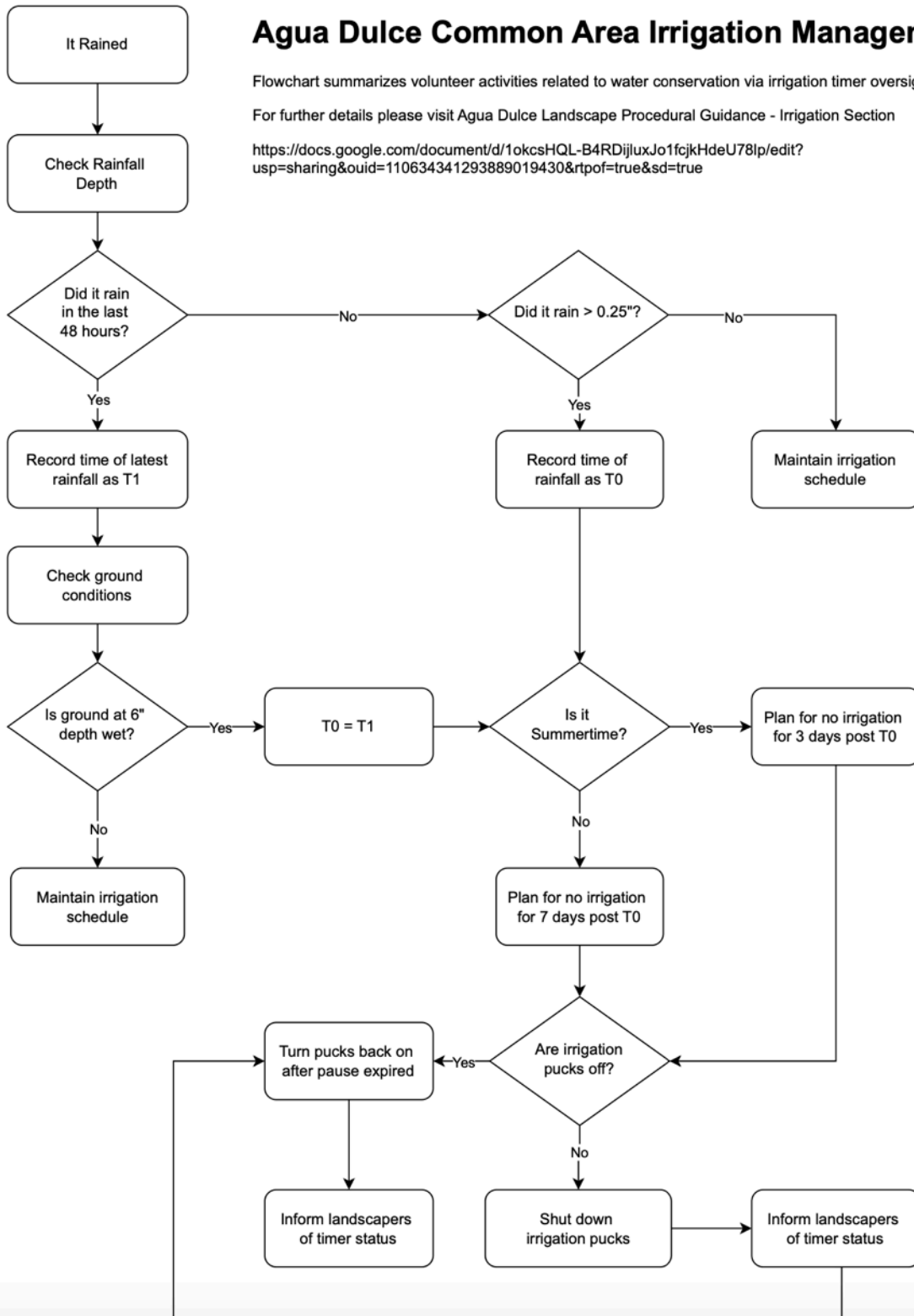
Please note that the following flowchart references 0.25 inches as the threshold. An update to the flowchart is pending for it to properly capture the new threshold of 0.40 inches pending access to the commercial software used to generate the flowchart.

Agua Dulce Common Area Irrigation Management

Flowchart summarizes volunteer activities related to water conservation via irrigation timer oversight.

For further details please visit Agua Dulce Landscape Procedural Guidance - Irrigation Section

<https://docs.google.com/document/d/1okcsHQL-B4RDijluxJo1fcjkHdeU78lp/edit?usp=sharing&oid=110634341293889019430&rtpof=true&sd=true>



Hunter Node 100:

A demonstration of manual engagement of the Hunter Node 100 timer is cued here: https://youtu.be/-vFYr14h_Lk. This is an unlisted video accessible only to those with the link. A video procedure will be improved once a chair appointment is made.

The Hunter Node 100 is a battery powered timer that controls a single irrigation solenoid. This controller is ideal for areas where there is no local power available. For details on how to program or modify for different seasons, please see the manual available here: https://www.hunterindustries.com/sites/default/files/OM_NODE_dom.pdf

NOTE: Because this is a battery-operated controller, batteries should be replaced annually to avoid solenoid remaining open in the event of failure. An open solenoid due to a dead battery may result in a valve remaining open over time coupled with a very expensive water bill.

NOTE: Tucson water meters still need to be matched and mapped to specific nodes to respond to abnormal water use when witnessed in the geographic information system. This is a work in progress subject to the availability of volunteers and/or landscape staff to assist with the same.

In case of testing or emergencies requiring manual on/off attention, you will need to open an in-ground ICV box for access to the timer.

SAFETY FIRST: Be extremely cautious when opening in-ground ICV boxes for timer adjustment. These boxes are frequented by tarantulas, scorpions, black widows, rodents, and/or snakes. (Note that the box on Tombolo has a large crack/hole in it making it easy for critters to hang out, so be especially careful at that location.)

- Wear long sleeves and gloves when opening these boxes
- Open boxes slowly to not surprise animals that may react accordingly.
- Be hyperaware of a potential encounter.
- Have a plan ready should you be stung or bitten- be prepared with antihistamines or transportation to your local hospital if needed.
- Do NOT open these boxes if you don't feel comfortable doing so. Coordinate with our contracted landscaper if necessary.

The process for engaging and disengaging these timers for a system test or mapping of irrigation lines was demonstrated by Complete on 8/5 as captured in this video: https://youtu.be/-vFYr14h_Lk . Respective highlights are captured below.

- (Needs image) Once you have access to the node, click on the center arrow button. When it shows you the time on the display, you are in the program. From there, you can execute one of the following manual operations.
1. To manually engage discharge for a system test or mapping of irrigation lines:

- Hold right (forward arrow) button down – the display shows how long it will come on for, and then it will count down before it starts to discharge- usually a few seconds. You should then witness discharge which will continue for the pre-programmed time.
2. To manually disengage discharge after test or mapping is complete:
 - Click the center button one more time so that it reads OFF, and it should turn off. Then click one more time to turn the timer back on which will be evident by the time being shown on the display. System is now back to its normal timer interval.
 3. To turn system off due to a leak or saturated ground conditions.:
 - Click on the center button until you see the OFF indicator, and its off. After repairs are made or ground is dry, click the center button one more time to see the time, and the timer is now reverted to its normal programming.

Irritrol RD-600R:

This is an outlet-powered timer that can control up to six solenoids. For details on how to program or modify for different seasons, please see the manual available here:

https://www.rain1.com/manuals/manual_raindial07.pdf

This timer is located at the Gatehouse on the south side of the building. As currently configured, 5 solenoids (zones) are controlled by this timer.

In addition, there is a Hunter “Soil-Click” sensor installed adjacent to the Irritrol RD-600R. This unit is meant to interrupt the programmed watering cycle in the event of moist soil, but it is unclear as to whether this unit is operational or engaged at this time.

The process for engaging and disengaging these timers for a system test or mapping of irrigation lines was demonstrated by Complete on 8/5 as captured in this video:

https://youtu.be/-vFYr14h_Lk?t=74 and is explained in this document.

- In case of testing or emergencies requiring manual on/off attention, you can execute one of the following manual operations:
1. To manually engage discharge for a system test or mapping of irrigation lines, ensure the slide switch is moved to the right in the “RUN or MANUAL” position. Next, click on the SEMI AUTO square button until the solenoid/zone of interest is shown in the LCD display (a number from 1 to 5). Once test is complete, move the slide switch to the left for “OFF or STOP”, and then back to the right to “RUN or MANUAL”.

2. To turn system off due to a leak or saturated ground conditions, simply slide the switch to “OFF or STOP”. When system needs to be returned to program mode at conclusion of test or dry soil-moisture conditions, simply slide the switch to the right back to “RUN or MANUAL”.

Hunter X CORE

This timer manages a section of Tombolo and is currently OFF. It’s not clear how long this unit has been off. The site houses a soil moisture sensor and rain detector. Tucson Water billing suggests a stretch of Tombolo has been off irrigation for several years. Sweet Acacias have retreated in response to having to rely solely on rainfall whereas established Jojobas, Texas Rangers and Palo Verdes are holding up well. Where needed, vegetation will be replaced in the Fall of 2023 and irrigation on Tombolo east of Banner Mine will be revisited at that time.

Backflow Preventer and Ball Valves

These may be closed when we have a leak upstream of an ICV. Brief details are cued here: https://youtu.be/-vFYr14h_Lk?t=158 . Also, Santa Rita has recommended we add the following text to our guidance:

“In case we do have to turn it off and turn it back on we need to turn the valve handles slowly, because if you turn it on too fast, all that pressure could bust the seals inside the backflow and cause it to leak. When turning on the backflow, you can’t turn it on like a water faucet like you would home. Just remember slow turns when turning it back on .

A major leak may also be managed by shutting down Tucson Water main valve, and then slowly opening the valve as needed. Respective valve locations are shown in the map “Tucson Water Meters”.

This photo shows a leak downstream of backflow preventer at the sediment Filter upstream of the Tucson Water Meter and Valve Box. This requires turning water off upstream of Tucson Water Meter. This will require turning ball valve on backflow preventer upstream of Tucson Water Meter to the OFF position.



When turning ball valve to OFF position, due so very slowly to avoid water hammer which can damage delicate glands in the backflow preventer.



Landscaper Coordination Flagging

Landscape Committee volunteers now meet weekly with the landscape crew chief for our community *the day before* the work crew is on site. During these meetings, volunteers walk the community with the crew chief and flag priority areas that require attention by work crews the following day. Respective flagging may focus on corner visibility issues; broken branches from high winds that require removal; irrigation leaks; unlevel concrete/natural pathway transitions; sweeping of concrete paths; walker safety; and ensuring the overall aesthetic of the community is “natural but neat.” This new approach has proved successful in ensuring that time during weekly visits is used appropriately and efficiently. We welcome this opportunity to also reinforce the sustainable practices outlined in this guidance via one-on-one coordination.

These weekly meetings will continue until we feel confident work crews are adequately trained and priority areas are being attended without Association intervention. If there is high turnover within our contracted landscaper workforce or priority areas are not being addressed appropriately, we may reset these weekly visits as needed.

What follows are examples of items flagged by approved Landscape Committee Volunteers for attention by our contracted landscapers. Flagging should only be installed by volunteers approved by the board and who have received training in the same by the Landscape Chair.

Low hanging branch that needs to be judiciously reduce (NO THINNING CUTS!)



Volunteer cactus growing close to walking path require removal



Fallen branch from summer storm removed from street and/or path requires collection



Broken branch hanging off tree can be gently removed and placed on ground and out of the way for collection by landscapers. DO NOT remove branches that are still partially attached to a tree since you might damage the tree by pulling on the same.





If a branch is hanging and cannot (or should not) be removed by hand, a cone can be placed under the same to flag walkers regarding the same until the landscapers can address it properly.



Additional examples of flagged items prepared in PDF format or Santa Rita's attention in advance of a visit in December can be reviewed via this link:

https://drive.google.com/file/d/1JT-7KKP0MRlg3-6BgecmdwryApqCeF3/view?usp=share_link

Example communication regarding inventory of sites to be addressed by landscaper on their weekly visits.



Hans Huth <aquadulcehans@gmail.com>

to Sandra

Apr 8, 2024, 5:17 PM



Sandra,

Hi Sandra,

Okay - I met with

1) I have a location on the damaged Palo Verde. She is correct - it is uprooted and should probably be removed since it will likely die. It's located just south east corner of Olivette and Tombolo. She was kind enough to put a bright pink string on it to make it easier to find. I placed a broken limb with flagging next to it as well.

2) Ellen also has some dying prickly pear that is right off the path in front of her home. It is on private property but maybe we can give her a hand to remove since her plants have been damaged by the HOA in the past (long story / different common area management). It's on Tombolo a little south of the downed tree. If the HOA can't address this, it's totally understandable but perhaps Santa Rita can provide an estimate for removal since they will already be on site.

3) There is a branch hanging off a Palo Verde in front of 4242 Tombolo that could potentially fall on a walker. Photo attached- I couldn't pull it down so I placed a **cone** under it for safety.

Hope this helps-- Thanks Sandra for adding these to the list for Santa Rita's visit on Thursday (and thanks Ellen for keeping us posted!)

Regards,

Hans

Animal Waste Cleanup

Some community volunteers have taken the initiative to collect scat on behalf of the Association when it's encountered. We are fortunate to have caring neighbors who address this need without recognition. In this regard, it's hoped (but not expected) that all neighbors will respect our common areas appropriately out of appreciation for those who contribute their own time and resources towards maintaining the same.

Along those lines, we asked one of our star volunteers to give us an update on the status of domestic animal waste in the community for the latest release of this guidance. What follows is current as of December, 2024:

in 2024, we have some positive community news to report; there has been a reduced amount of dog poop on the walking trails and common areas of our community. Volunteers report that responsible dog walkers are complying with our requests to clean up after their pooch.

As a reminder:

- Parasites and bacteria pose threats to our health and the health of our pets. Picking up waste prevents these threats from coming into contact with us, our kids, and pets. Nobody wants to step in it and drag it into their home on their shoes.
- Dog waste is not a fertilizer. It contaminates the soil and contributes to water pollution. It also attracts other pests (flies, maggots, rats) that make the environment less enjoyable. Poo stinks!

In general, it helps to remind the community of all the work done by dedicated volunteers. When summarizing the same in an eBlast or newsletter entries, it doesn't hurt to gently mention the same as follows:

"Needless to say, there's a LOT of volunteer support and coordination that makes all this happen. Understandably, it's disappointing when we see these efforts disrespected by those who aren't responsible with pet waste. A special thanks to our star volunteer- Shavon Theis- who helps keep our paths looking great by assisting with cleanup. PLEASE help Shavon and the rest of the Landscape Committee focus on more productive tasks by picking up after your pets. Be a good neighbor and scoop the poop so everyone can enjoy our beautiful community. Thank you for being a responsible dog walker!"

Newsletter Entries

One of the most important things volunteers can help with is in maintaining open communication with the Association regarding our nuanced approach to the landscape. This is accomplished through open meetings and newsletter entries that captures the reasoning behind our sustainable approach unique to our Association.

Because this approach is unique, communication is critical- especially an era of social media which has unfortunately helped spread misinformation to the detriment of dedicated volunteer contributions and property values. This in no way is meant to dismiss concerns raised by residents who just may not be well informed or are seeking more information. Newsletters help us address this need.

Out of due diligence, the Association welcomes volunteer contributions to newsletter entries **that are informed by legitimate or credentialed sources** such as University of Arizona Cooperative Extension Master Gardener Program; certified arborists and landscapers; or individuals who carry appropriate credentials in sustainable landscape management.

An example of a recent newsletter entry prepared for our 2024 winter newsletter that exemplifies this approach is presented here as it relates to informing residents regarding why we do not trim back common area shrubs during the Winter. Sharing respective details helps residents understand why we do things differently to the benefit of our landscape and the health of our vegetation while helping us live in harmony with the Sonoran Desert.

A history of prior newsletter entries is available for review here:

https://drive.google.com/drive/folders/15uMhxtoujIX4oWS_G22AicaYVUu_onzU

GARDENING TIPS FOR COLDER WEATHER

BY MARY GRAF

After the hottest October on record, you can almost hear the plants saying “ahhhh” as cooler nights and days become the norm. If you have an irrigation system it’s time to crank that back to less water for healthier plants and a lower water bill. Mulching is still helpful and serves as an insulator on colder nights; it’s a year-round aide to healthier trees and plants. <https://extension.arizona.edu/publication/watering-trees-and-shrubs-simple-techniques-efficient-landscape-watering>.

While it may be tempting to trim some of our more common bushes and plants now, the growth on the Mexican Bird of Paradise actually protects it from upcoming freezes. The long branches may freeze, but the base of the plant is protected. Trim those after danger of frost is past, usually about mid-March. Now that blooming is past, between now and February is the best time to refresh scraggly and over-trimmed (lots of dead branches inside) Texas Ranger and Chihuahuan sages. A ‘rejuvenation cut’ will give them a new start toward healthier growth. The sages at the community gate exit are examples of healthy regrowth after rejuvenation pruning. <https://extension.arizona.edu/publication/pruning-shrubs-low-and-mid-elevation-deserts-arizona> , a great guide to the ‘how-to’ of pruning.

For all-season landscaping ideas, visit the Pima County Demonstration Gardens at 4120 N. Campbell (free). The UA Cooperative Extension Service has great articles and assistance available on their website, too: <https://extension.arizona.edu/topics#home-gardening-amp-landscaping>.

Enjoy the cooler temps and winter walks in our beautiful neighborhood!



Concerns Regarding Wildfire Risk

In the past, residents have raised concerns about wildfires taking over our common areas during the driest summer months. We work closely with our landscaper regarding associated risks but out of respect for those concerns, our Association President consulted with the Fire Marshall on June 5th, 2024 for a formal visit and recommendation. A summary was communicated in a newsletter entry in June, 2024. A copy of the formal report follows on the next page supporting our landscape approach.

June 2024 Newsletter Entry

FIRE HAZARD CONCERNS

We recently received online comments regarding common area landscaping and potential fire hazards. Your Board takes all resident concerns seriously.

On June 5th, a Northwest Fire Department inspector reviewed our community and found it to be a beautiful natural habitat contributing to the desert ecosystem.

During hot months, plants may appear dry and brittle, but they're actually conserving resources. Our landscapers are aware of this and actively manage these areas to maintain a healthy look while addressing brittle brush.

We take pride in preserving the natural beauty of our mountain preserve environment.

If you have any fire safety concerns, please reach out to the Board. In case of a fire emergency, dial 911 immediately.



NORTHWEST FIRE DISTRICT FIRE INSPECTION REPORT

Date: 06/05/2024

Jurisdiction: Pima County

Inspector: Hensley, Aaron

Inspection Type: Site Visit

Inspection Number: 24-1616

Occupant Information

Name: Agua Dulce HOA

Phone:

Address: North Pallasite Drive Pima County, AZ
85745

Email:

Primary Contact

Contact Drain, Sandra

Email sd.aguadulce@gmail.com

Inspection Findings

Violations

No violations observed at time of inspection.

Comments

Inspection Notes: An on-site walkthrough was conducted in the Agua Dulce neighborhood with HOA representative Sandra Drain. This site visit was conducted in order to give recommendations regarding vegetation growth in and around the neighborhood and its associated common areas.

After the site visit the following recommendations were developed:

1. Continue and maintain HOA's current landscaping schedule in regards to the property associated with HOA control.
2. Continue and maintain HOA's current evaluation and adjustment of vegetation and trees associated with HOA control.

No fire hazards or life safety issues were identified during the site visit. Current landscaping and vegetation maintenance schedules are appropriate for the continued mitigation of fire hazards.

Signatures

Type	First Name	Last Name	Signature
Inspector	Aaron	Hensley	

Wildlife Encounters in Common Areas

Given our natural setting and gentle approach, we create landscape conditions that are more inviting to birds, reptiles, and apex predators. As such, walkers may encounter wildlife more frequently than might otherwise be witnessed in other communities or urban settings. In response, some residents have raised concerns about encountering mountain lions, bobcats and snakes resulting from conditions that are more inviting to wildlife along our walking paths.

By creating a natural habitat for respective animals, there will be tension between those that prefer a more manicured or urban setting for the sake of safety and those that prefer leaving things natural out of respect for our community's placement in the Sonoran Desert. In line with our National Wildlife Federation Certification, Agua Dulce leans towards the latter.

Although we don't dismiss concerns regarding safety, we observe that encounters with apex predators and snakes along our paths are rare and not as significant as other safety challenges like high-speed traffic. We recognize that when encountered, predators do not have an incentive to engage with humans rather are simply passing through natural corridors to less populated areas where foot traffic and pet scenting (urine) is less likely to scare off prey that they rely on.

Having said that, there are things we can do to balance the legitimate desires of those concerned over safety and those wanting to realize the most natural setting possible for our community:

- We can minimize the availability of habitat for rodents along our walking paths. We already do this by requiring that any mulch left on site be cut to a minimum six-inches length or removed altogether if that's possible. In addition, dead prickly pear plants within six feet of a walking path are removed when reported by residents or encountered very close to streets. This removes natural habitat that prey may consider attractive close to those areas frequented by community walkers.
- As a community, we can avoid littering in our common areas since respective wrappers and food waste may lure rodents which in turn attracts snakes and other predators. By keeping our walking paths litter free, rodents will look for food elsewhere and the prey that relies on them will do the same.
- We can properly dispose of food waste and/or habitat in our own homes that might attract rodents and javelina deeper into our community thus removing an incentive for respective predators to follow.

These actions will not eliminate the presence of apex predators and snakes in our common areas. After all, we live in the heart of the Tucson Mountains in a community that hosts 40% open space. At the same time, such actions acknowledge a balanced approach that respects our community's wildlife-welcoming aesthetic. Of course, it's recommended walkers take appropriate precautions-- the most significant of which is heightened awareness.

Finally, note that Agua Dulce is the domain of a bobcat family whose matriarch is known as Avery. She and other bobcats on the urban fringe have been the focus of study by Arizona Game and Fish through a non-profit known as Bobcats in Tucson (BIT). Below is a copy-and-paste of a recent newsletter entry summarizing a visit by BIT to Agua Dulce to inform and answer questions about Avery and her kittens.

On June 1, Agua Dulce hosted a meet-and-greet with Bobcats in Tucson (BIT). Mr. Kerry Baldwin- a certified Biologist and co-project coordinator- shared details of BIT's research and answered questions about bobcats sighted in our own community. The meeting was well attended with lots of interest in Avery who has claimed Agua Dulce as her own and successfully raised four litters of kittens on local roofs and yards. Ms. Gale Sherman – BIT's photographer and web admin- shared stories about how bobcats have enriched her own community at Starr Pass. We had an excellent turnout with close to thirty residents and board members asking engaging questions. Although the audience was positive and supportive, we did take time to ask challenging questions on behalf of those who may be afraid or prefer not to see bobcats in their yards. Kerry explained that the associated risks are very low but shared details of how to safely prepare for respective encounters and/or discourage visits if you fall in that camp. Respective details are captured in an audio recording which is available online for anyone wishing to learn more from the experts! Please google "BIT Agua Dulce" and you'll see a link where you can hear the meeting in its entirety, or visit <https://bobcatsintucson.net> for details of ongoing research. A special thanks to the BIT team for sharing and making us laugh-out-loud several times over. It was a wonderful and inviting community-building experience.

If you'd like to see Avery raising her kittens in Agua Dulce, a neighbor has posted a YouTube playlist documenting the same in 2024 at this link:

<https://youtube.com/playlist?list=PLqJ5k4cakypyu4JNOd4DSSWcRvTFw3Mqq&si=d7WDGETRSZT9vi1X>

A student at Catalina Foothills Highschool also created a video summarizing field notes collected by a resident during Avery's stay in an Agua Dulce backyard in 2024:

<https://youtu.be/rHFvvszVst8?si=d5wollre01D5OpBV>

Award winning AZPM Video:

Bobcats are thriving in Tucson, Arizona despite metropolitan growth in the Sonoran Desert:

https://youtu.be/r1aToFS6hDU?si=uOIDQt_5VwcU3Ad1

Arizona Wildlife Federation interview with Cheryl Mollahan (BIT)

<https://podcastq5.podbean.com/e/bobcats-in-tucson/>

In 2024, BIT invited Agua Dulce to right an addendum regarding our community for its grant-funded study and final report submitted to Arizona Game and Fish. Based on our submission, BIT will be highlighting Agua Dulce as a model community for living in harmony with wildlife in the Sonoran Desert. Needless to say, this kind of recognition elevates Agua Dulce as a special place to live which in turn supports property values.

Resident Concerns / Requests

As noted in the email autoresponder for the Landscape Chair:

Please note this email account is no longer monitored regularly. If you are reaching out regarding a work order request, please submit through our property manager (Ms. Jena Carpenter : JenaC@siennaaz.com) or by using the work order system on Agua Dulce website. <https://www.aguadulcehoa.org/> .

Ms. Jena Carpenter will include any requests in a weekly workorder system developed for communicating issues or repairs with our contracted Landscaper (Santa Rita). Please note that although the Landscape Chair also walks the community weekly and contributes to weekly work orders, he does not monitor email regularly. To ensure quick and prompt response, please prioritize communications with Ms. Jena Carpenter.

El Paso Natural Gas Company Easement

EPNG current maintains a pressurized natural gas line that runs through the Association and has a legal easement for the same. If or when the Association receives notification from EPNG of work to be conducted along the easement, it is recommended Kinder Morgan be reminded of the associated sensitivities. For context within our community and other communities that may encounter similar concerns:

- Maintenance of the line may requires heavy equipment moving along the easement which may result in damaged vegetation. Damage should be limited to the easement boundaries.
 - Immediately photograph conditions upon receiving notice to help coordinate with utility on best practices and confirm concerns are heard and addressed properly.
 - Residents that have yards abutting the easement have expressed concern about vegetation being removed where it provides privacy. Be aware EPNG may remove vegetation if needed to access the pipeline for repair.
- Volunteers have installed erosion control features downstream of the pool-parking area to prevent a head cut from migrating upstream where it might damage Association infrastructure (images attached below). EPNG has confirmed this is outside of their easement and will not park vehicles or equipment in this area.
- Trees that are pruned rather than removed along the easement should be addressed under the guidance of a qualified arborist. EPNG has been willing to work with our own landscapers to receive training and exercise appropriate pruning methods.
- Maintenance should not occur during holidays when family and friends may be visiting so as to not disturb respective activities. In 2024, EPNG was sensitive to the same.
- Any Saguaros tagged for removal must be relocated per Arizona State Law. EPNG may coordinate with our contracted landscaper to ensure the transplant is done per best practice and also to find a suitable location for relocation within our community.

- o Be aware that Saguaros that are removed and transplanted without proper orientation to the sun will likely burn and not survive.
- Ask that EPNG not chip and spread cholla or cactus over the easement. Wildlife and pet-walkers travel these areas and doing so creates serious hazards.
- Once topsoil and vegetation has been removed, EPNG must treat respective areas using common dust control measures such as spreading water. This is critical to ensure neighbors with respiratory ailments are not impacted by dust from bare soil kicked up by wind.
- If dust control is not addressed after soil and vegetation has been removed, residents may file a complaint with the Arizona Department of Environmental Quality via this link: <https://legacy.azdeq.gov/function/compliance/complaint.html> . Complaints will trigger a state inspection and appropriate follow-through by EPNG.

In 2024, Landscape Committee members met with representatives of Kinder Morgan in advance of work to be addressed in December. Screenshots summarizing associated communications and commitments are included below to help with coordination as it relates to future planned excavations in 2026. Respective files to facilitate copy-and-paste are available via this link: https://drive.google.com/drive/folders/17f2WIMbfVdDi8MqHJ9I3S78ikv4_T02T?usp=share_link . **It's important to be present and communicate Association concerns and expectations during these sensitive operations. In 2024, EPNG was willing to work with us on the same.**

EPNG 2024 Notification of Excavations



**El Paso
Natural Gas Company**
a Kinder Morgan company

Tucson Division Office
5151 E Broadway Blvd, Ste 1680
Tucson, Arizona 85711
520-663-4223

October 18, 2024

Agua Dulce Homeowners Association
ATTN: Cadden Community Management
5225 W Massingale Td
Tucson, AZ 85743-8416

LANDOWNER NOTIFICATION OF PIPELINE MAINTENANCE

RE: EPNG's L1008 Pipeline Modifications for ILI: MP 121 to Mission Rd
Dig 3.1 at MP 112+1887 and **Dig 3.2** at MP 112+2041 (Sites 4 & 5)
Within the NE¼ of Sec 30, Twp 13S, Rng 13E
On Pima County Parcel Nos. 103-12-3990 and 103-12-4900
Project MOC 60197

Dear Community Manager:

El Paso Natural Gas Company, LLC (EPNG) finds it necessary to perform maintenance work on one of its pipelines (Line 1008) on the Agua Dulce HOA's above-described property, in two locations near N Magnetite Lane (see the enclosed location map).

The work will involve excavating an area of about 20' wide and 200' long in each of these locations, to expose the pipeline, inspect it, and perform any remediations, repairs, or replacements that may be needed. EPNG's work should not impact travel on N Magnetite Lane. All work will occur within EPNG's existing pipeline easement, or right of way (ROW). EPNG expects to complete this pipeline maintenance work between Monday, November 4th and Friday, December 31, 2024.

The HOA's property will be impacted by the excavations and by EPNG's crews traveling across the property (on the ROW and existing roads) to access the work sites. Please be assured that EPNG strives to be a good neighbor and will exercise care to ensure that the HOA's property is not damaged. All disturbed areas will be restored to their pre-construction grades and, to the extent practical, to their pre-construction condition.

EPNG has established a process for resolving any concerns or issues you may have about this maintenance project and/or the ongoing operation of the pipeline facilities. First, please contact me, **Kelley Sims, Senior Land Agent, at 520-663-4223** or Kelley.Sims@kindermorgan.com with any questions. I am the ROW Agent for your area, am the most familiar with the project, and should be able to respond quickly to your concerns.

If you have additional questions, do not receive timely answers, or need further assistance with an issue, please call EPNG's 24-hour toll-free number: (877) 598-5263 and request to speak with Melissa Cowan, EPNG/Kinder Morgan Land and ROW Manager, about the above-referenced Project. EPNG will endeavor to respond to all calls immediately. However, should the matter require additional research, EPNG will return your call with an appropriate response as soon as practicable.

Finally, if you are not satisfied with the response that you receive from the ROW Agent, EPNG Management, or their timeliness in responding, you may contact the Federal Energy Regulatory Commission (FERC) "Commission's Landowner Helpline" using this contact information:

Toll-free Telephone: (877) 337-2237

Email: LandownerHelp@ferc.gov

Mailing Address: Commission's Landowner Helpline,
Federal Energy Regulatory Commission
888 First Street NE
Washington, DC 20426

By this letter, EPNG is making a good faith effort to notify you at least five days prior to beginning the above-described maintenance activities on your property. If you have any concerns about the timing of the project, or want to discuss any other special circumstances such as tenants, livestock, or crops, please phone me as soon as possible.

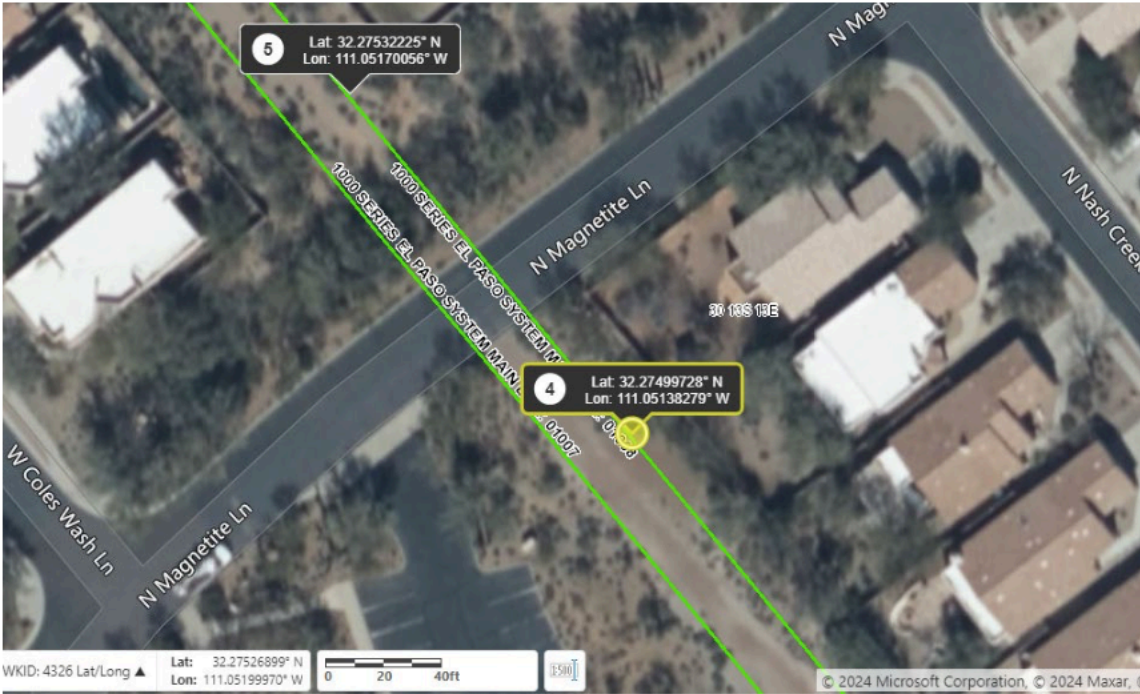
Thank you for your time and cooperation as EPNG endeavors to continue operating and maintaining a safe pipeline system in our community.

Sincerely,



Kelley Sims, SR/WA
Senior Land Agent
El Paso Natural Gas Company, LLC

EPNG Pipeline Repair Locations (Sites 4 and 5)



Protected Restoration Area



To ensure the “boots on the ground” get the message, the associated area may be flagged with a safety cone and message as shown below.



First Community Notice sent to Residents

Association News

Posted by Community Association Manager (Jose Becerra) on Nov 13, 2024 2:31 pm

EPNG Notice of Upcoming Work

El Paso Natural Gas Company reached out to notify the community of upcoming work within the Agua Dulce community.

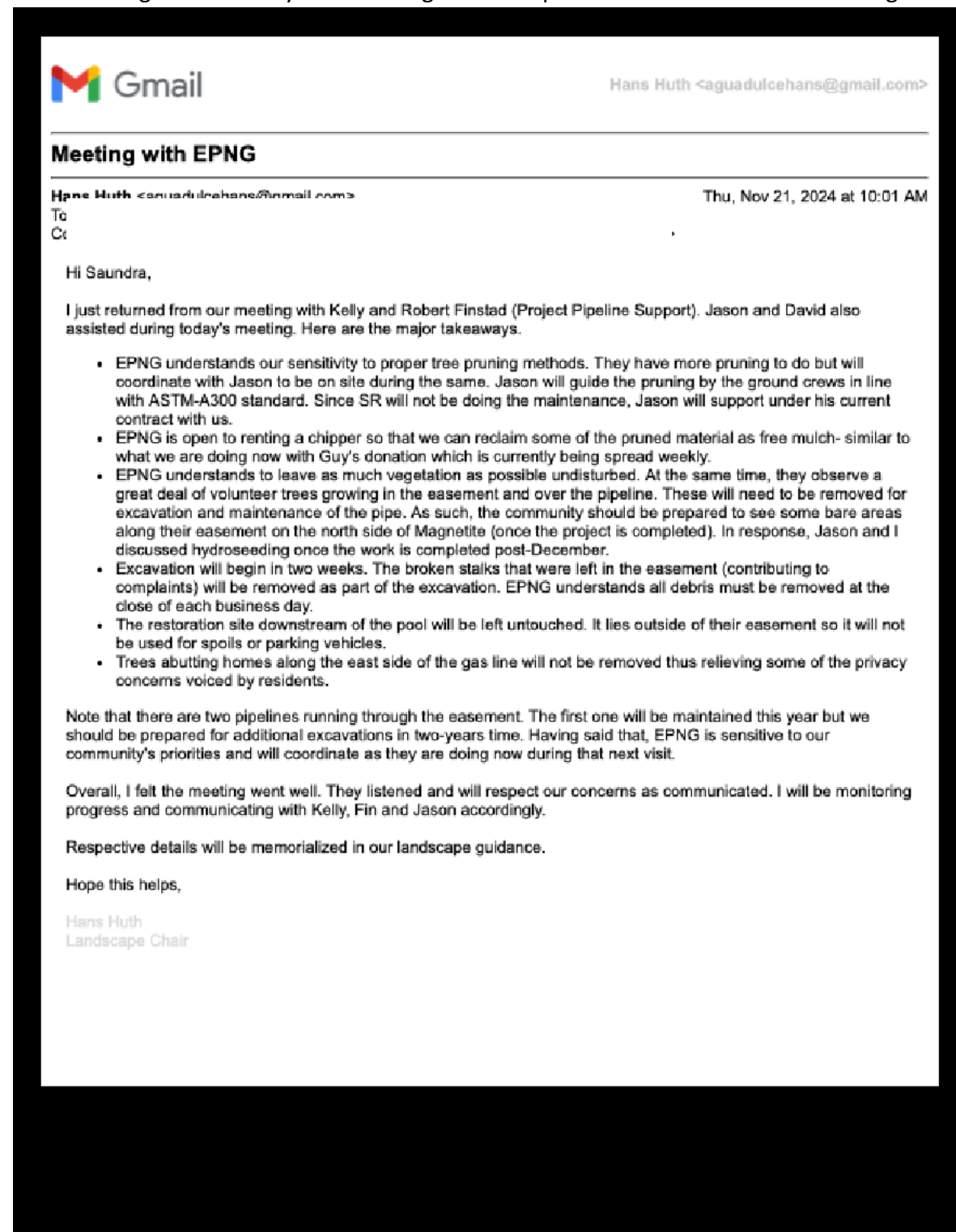
EPNG does not expect to disturb or damage the pavement near Magnetite Lane, where the work will be performed. EPNG's work will not impact travel on N Magnetite Lane.

EPNG expects to complete this pipeline maintenance work between November and the end of December, 2024.

Thank you,

Coordination with EPNG

The following is a summary of a meeting that took place with EPNG and Kinder Morgan.



Prepared Community Notices



Hans Huth <aguadulcehans@gmail.com>

Notice regarding EPNG work

1 message

Hans Huth <aguadulcehans@gmail.com>

Fri, Nov 22, 2024 at 6:46 AM

To

Cc

Hi Sandra,

Per Paul's request, please edit as needed and share with the community as appropriate. I've attached a summary of the meeting for Paul's reference as well.

Dear Residents,

El Paso Natural Gas Company (EPNG) holds a gas line easement that runs through our community. Maintenance of the hosted gas line will begin in approximately two weeks and continue through the close of December. At that time, you will witness heavy machinery and excavation taking place 200-feet north and south of Magnetite along the gas-line easement.

The Landscape Committee has met with representatives of EPNG requesting that vegetation and water harvesting features in this area be disturbed as little as possible. We've also ensured that any tree pruning required for access take place under the supervision of a qualified arborist which we have arranged at no cost to the HOA.

Regardless, some trees will need to be entirely removed to facilitate excavation within the easement. We want the community to be aware and prepared for the same. Rest assured we will work with our landscapers to have the area reseeded with ground cover and restored to the best of our ability once the work is complete.

Thank You.



Gmail - Meeting with EPNG.pdf

46K

**** Second Notice for Community

Inbox x



Hans Huth <aquadulcehans@gmail.com>
tc

Sun, Nov 24, 11:42 AM (22 hours ago)



Hi Sandra,

Please send this update as follows:

Hello Neighbors,

As you may have noticed, work began earlier than originally communicated by El Paso Natural Gas (EPNG) and Kinder Morgan on the gas line easement.

We again raised concerns about the poor pruning practices and debris in the vicinity of Magnetite. EPNG acknowledged some accidental damage to vegetation and again promised to work with our landscaper on corrective actions for all trees that were pruned improperly.

EPNG informs us the bulk of the clearing is now complete unless the excavations reveal the need to extend the length of the pipeline replacements. The crew has minimized the tree removal to just the area they've estimated to be necessary for the pipeline work. They plan to wait until Monday, December 2nd to begin excavations so that residents won't have the disruption, the open trench, or unsightly construction equipment in the area over the Thanksgiving Holiday weekend.

The Landscape Committee is closely monitoring the situation, communicating our concerns and working with our own landscaper to ensure this work is executed with sensitivity and in line with promises of being a good neighbor. Respective details will be captured in our upcoming landscape guidance updates but please understand we can only influence what takes place in the EPNG easement which predates our community.

We apologize for the disruption and appreciate your patience.

Follow-up Communication Capturing Issues

Saturday, November 23, 2024

They're done for the day. They did a lot of clearing on the other side of Magnetite and must have run out of haul-away capacity because there are still several piles sitting in the middle on that side. On our side they did some more tree trimming. The good news is they trimmed back smallish branches presumably to clear a line for the excavation to take place, which implies (I hope) that they are planning to leave those trees standing. The bad news is that they were not cut with best practices in mind as Jason was explaining to the project managers the other day. It is probably not too late to have those branches trimmed down to the proper joints, but as of now they look exactly like the tree we were talking about on Magnetite, cut halfway along branch lines.

Resident Concerns Voiced to Landscape Chair

Sunday, November 24, 2024

We were devastated to see the swath of habitat ripped out, especially as we hadn't received any communication from the company. There were mature trees lining our back wall that were home to many species, it's where the javvies bedded down, the quail called from, and they housed hummingbird nests. I'm so upset for them.

Additionally we are concerned about a direct, new line of sight into our yard from the easement and from Magnetite. We used to have a vegetation privacy screen which has disappeared in a day. This could affect our safety and property values. I understand the easement is owned by the company, but this was brutal-- especially as stated they didn't give us any warning! Is there any plan to replant anything?

Finally, when habitat is disturbed, animals either die or flee. Evidence: this morning Nick and I found a western diamondback snake in the backyard. This is highly unusual (particularly for November), and I'm glad we found it before the doggie, but this could have been a terrible situation due to the snake losing its habitat.



Monday, November 25, 2024

4:28

86%

Like

Comment

Share



Sweetwater in the Foothills - ...



1h

if you're still a kid at heart like me and have to explore "what's goin' on" I offer this bit of advice...this piece of machinery has dug up and spread bits and pieces of cholla across the gas line north of Magnetite...it was like a game trying to avoid stepping on and having your shoes impaled by those nasty bits...



Revegetating Areas Cleared by EPNG

In 2024, EPNG was sensitive to scraping top soil back and setting aside, restoring topsoil, and reseeding post maintenance with a desert-native mix. At the same time, residents were understandably concerned about loss of privacy resulting from removal of established vegetation.

For residents with homes abutting the easement that were impacted, you may consider revegetating areas adjacent to block walls with Hopseed Bush. This is a thornless, low-water use, wildlife-friendly shrub that should provide privacy without excessive growth into the adjacent easement (https://tucson.com/lifestyles/plant-of-the-month-hopseed-bush/article_35ccb9ac-3363-11eb-9cc9-e3eb738bb1b7.html). Just remember to plant the bush no farther than five feet from your wall so that easement rights are not impacted when heavy machinery returns in 2026.



Landscape Guidance Revisions

A revision process will help improve this guidance as the Association learns and grows from existing practices. Recommendations for updating this guidance are welcome via submission of the form on the following page to our community manager: Ms. Jena Carpenter (JenaC@siennaaz.com). Ms. Jena will forward your edits to the appropriate contact maintaining this document.

Please submit one form per suggested revision. If space is an issue, the form may be submitted as a word processing document as long as all the elements are captured. Incomplete submissions will not be considered.

2024 Update: We are now two years into formalizing our landscape approach. Although we've sent multiple eBlasts inviting residents to improve our guidance and hosted multiple open meetings soliciting feedback and recommendations, none have been received outside of those volunteers who use this guidance to support common-area activities. This is positive in that it suggests our community welcomes and supports the approach we've implemented over the last two years. In response and out of respect for volunteer time, the cadence for updates will now be extended from biannual to yearly. Requested revisions will be collected by the Common Area Chair and discussed in open meeting no later than December of each year.

Agua Dulce Landscape Operational Guidance Document
Requested Revision for Release 1.08

Name:

Street Address:

Date:

Page / Paragraph in Question:

Recommended text to be changed, added, or deleted:

Reason for requested change:

Please return this form to the Association's Community Manager:
Ms. Jena Carpenter (JenaC@siennaaz.com) for appropriate routing.

Appendix

Points of Contact

Entity	POC	Context
Audubon Society	Jonathan Horst jhorst@tucsonaudubon.org	Expert on appropriate herbicides for application in a wildlife-friendly habitat should common area application outside of court strips be required.
The Pedaling Arborist	Aleck MacKinnon thepedalingarborist@gmail.com 520-388-1231	Aleck is the ISA-certified arborist who reviewed our common area for recommendations on tree maintenance moving forward.
Romeo Tree Service	Angelo Romeo 520-603-0143 (text only)	Angelo is an ISA-certified arborist who has the staff to provide annual/semi-annual maintenance to HOAs of our size. Angelo was recommended by Aleck as well as several other arborists for serving our own HOA. Angelo was consulted for contract, but indicated no maintenance is needed at this time. He is scheduled to revisit and re-evaluate HOA needs in November 2023.
Santa Rita Landscape	Rebecca Jacobson Cell: 520-300-1684	Vice President Sales and Marketing. She has been most responsive in reviewing Agua Dulce's RFP and submitting questions on behalf of SR for clarification. She is good contact for getting items and meetings on calendars.
Santa Rita Landscape	Jason Drain jason@srlandscaping.com	Crew Chief and POC for team servicing Santa Rita. Please coordinate any communications or concerns through Ms. Jena Carpenter (JenaC@siennaaz.com)
Pima Association of Governments	Mead Mier Watershed Planning Lead MMier@pagregion.com (520) 792-1093	Mead hosts the Low Impact Development (LID) working group hosted by Pima Association of Governments. She has invited Agua Dulce on multiple occasions to share our conservation strategies from the POV of a HOA. We coordinated with Mead to have the Association recognized as a county-LID case study site (April 6, 2023).
Pima County Development Services	Chris Poirier Deputy Director Chris.Poirier@pima.gov (520) 724-6596	Contact Chris for any work proposed in Common Areas B and D as outlined in this guidance. This will ensure the Association is operating in accordance with Pima County regulations to avoid violations of the plat.
UA Cooperative Extension	Pima County Master Gardeners Phone: 520-626-5161 WEB: extension.arizona.edu	Assisted with reviews and provided relevant references.
Landscape Committee	Hans Huth aguadulcehans@gmail.com	Landscape Committee Chair
EPNG	Ms. Kelley Sims – Senior Land Agent Kelley_Sims@Kindermorgan.com	Primary POC for work on El Paso Natural Gas easement which runs through our community.

Approved Plant List

The approved plant list for the Association is in the Design Guidelines of the Architectural Review Committee. To facilitate easy access, a copy of the document is available via this link: https://drive.google.com/file/d/1g2Pm9_So8CoB5gne-LRjVKLiKvHwYFbg/view?usp=sharing

(Advance to page 19 for the relevant section within the provided link.)

ArcGIS Online Maps

The following maps are hosted online via this link:

<https://tva22.maps.arcgis.com/apps/mapviewer/index.html?webmap=48066f1f539e4c2b8ac1a1f5cbe782f7>

The associated maps are maintained by Hans Huth for non-commercial purposes at his own cost in support of Association. *Mr. Huth pays for respective licensing and neither receives nor expects any compensation for development or maintenance of the same. As such, any support realized for the Association via ArcGIS is done so as needed subject to his availability.*

To date, ESRI has allowed Mr. Huth to host these layers without purchase of a commercial license. Should a commercial license be required by ESRI and/or Mr. Huth discontinue supporting this project, a license may be renewed by the Association via discussion with Sienna Management to include hiring a consultant to support the same.

Should it be needed, procedures and “the why” for maintaining the online geographic information system (GIS) venue is summarized via the following cued links:

Agua Dulce Water Harvesting and Erosion Control (July, 2022)

<https://youtu.be/v7cjzdYb5Is?t=152>

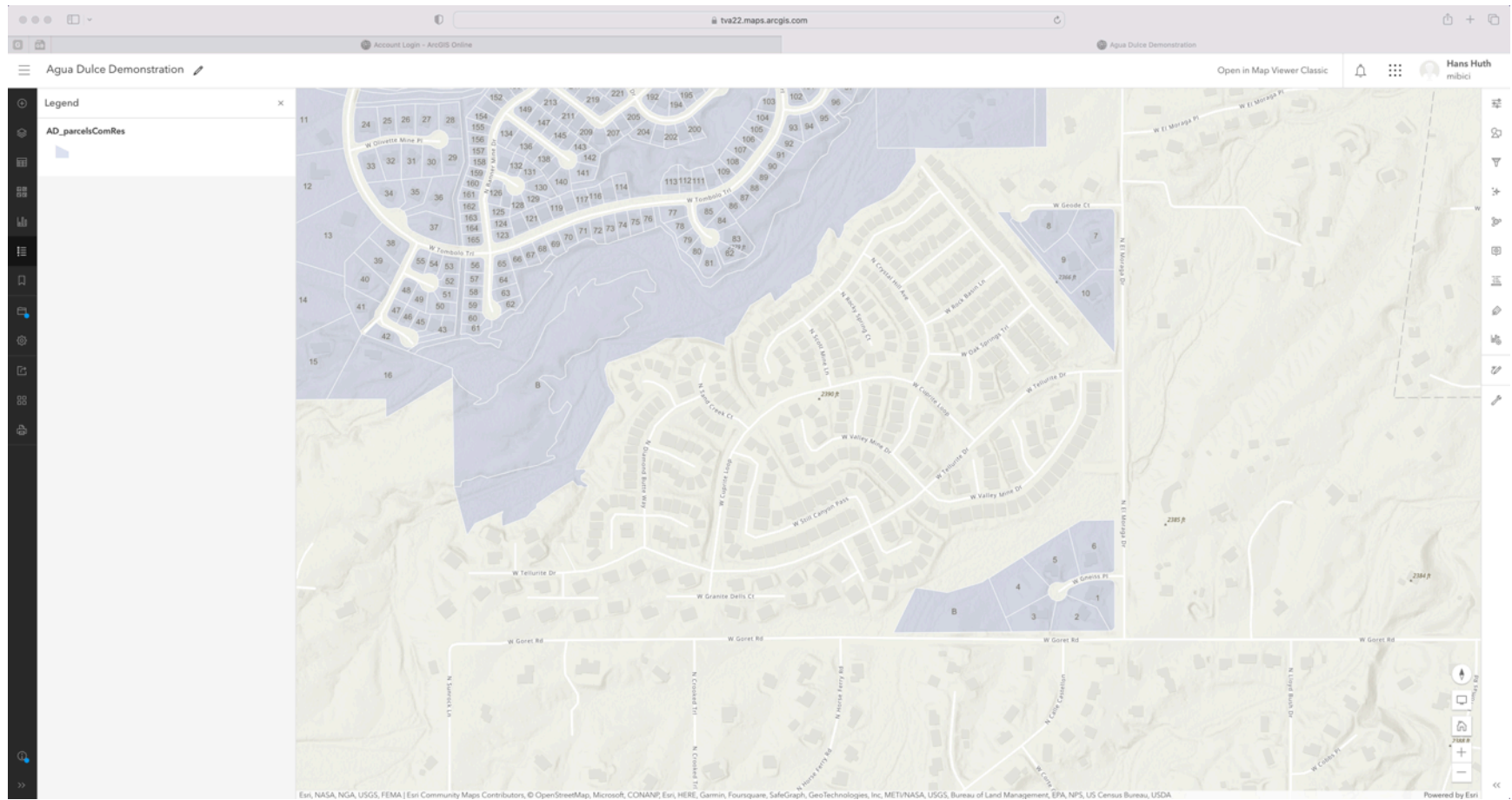
Water Savings Opportunities in HOAs- What's Next (September, 2022)

<https://youtu.be/vaXliBsCZ-A?t=440>

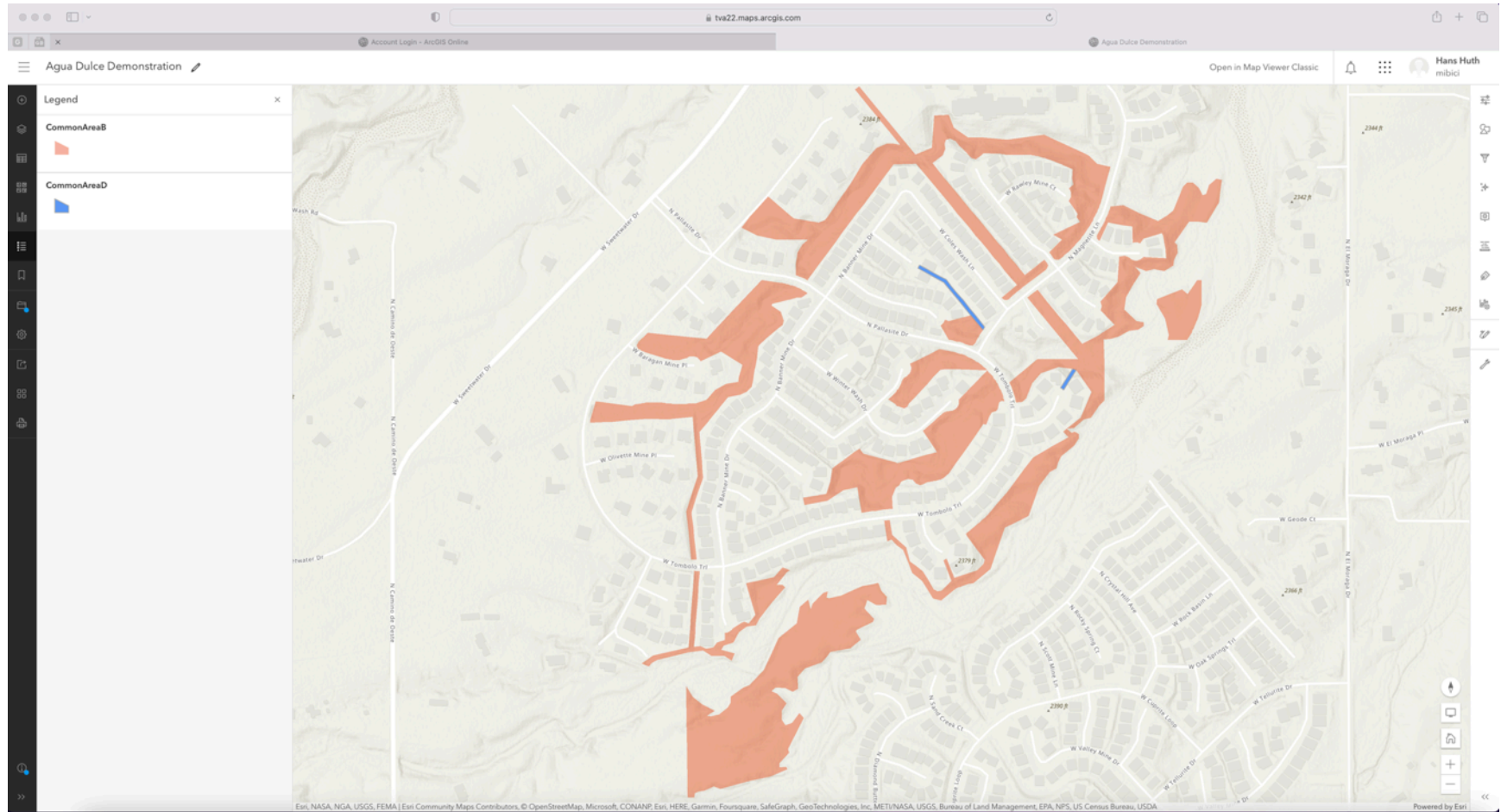
In the event the license is abandoned by Mr. Huth or the Association, hardcopy maps and water consumption graphs are included in this section to ensure institutional knowledge is preserved (current through 9/1/2023).

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Parcel Boundaries Continued



Common Areas Boundaries (B and D)

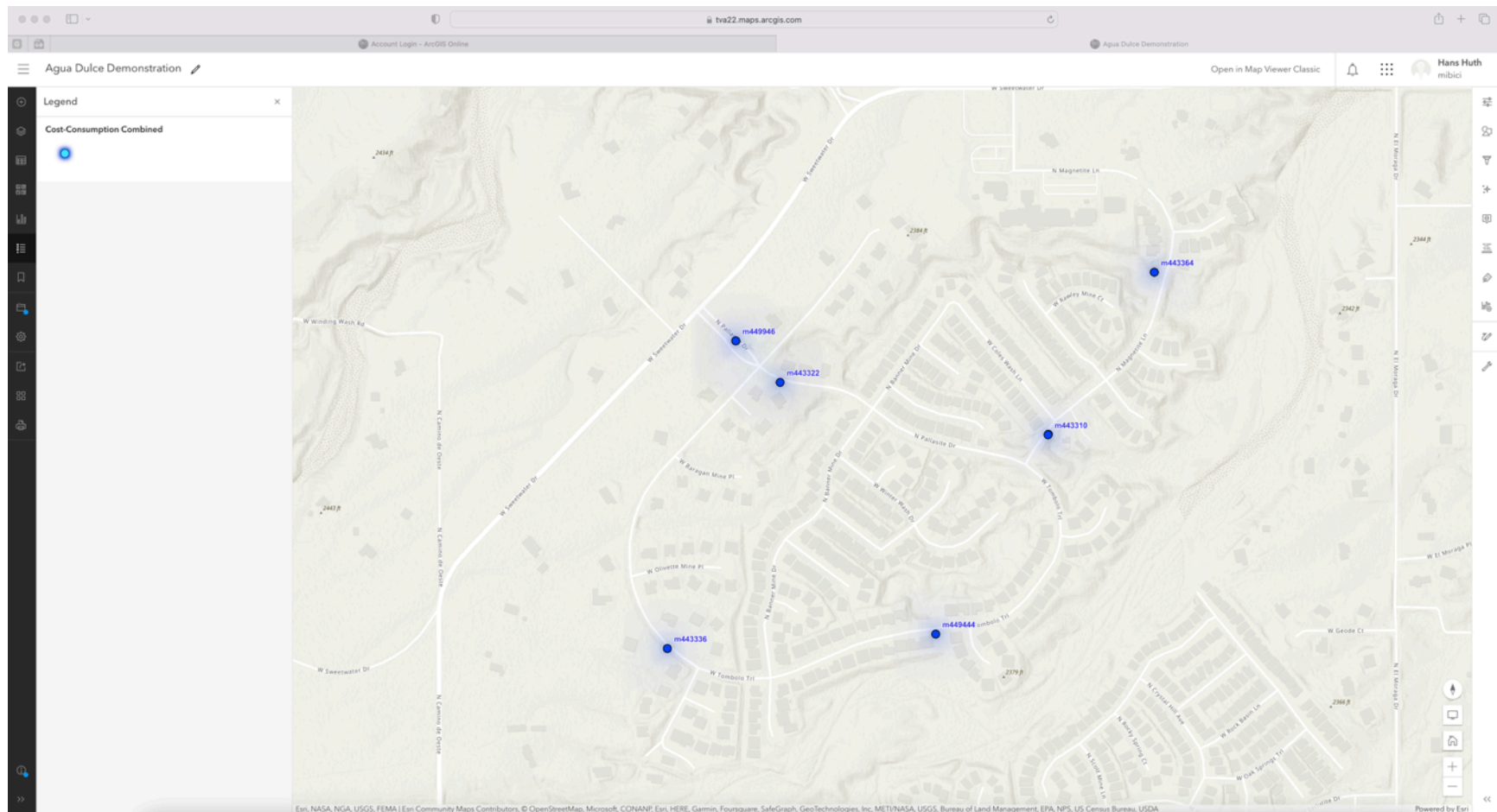


Irrigation Timer, Pucks and Zones

Irrigation Overview



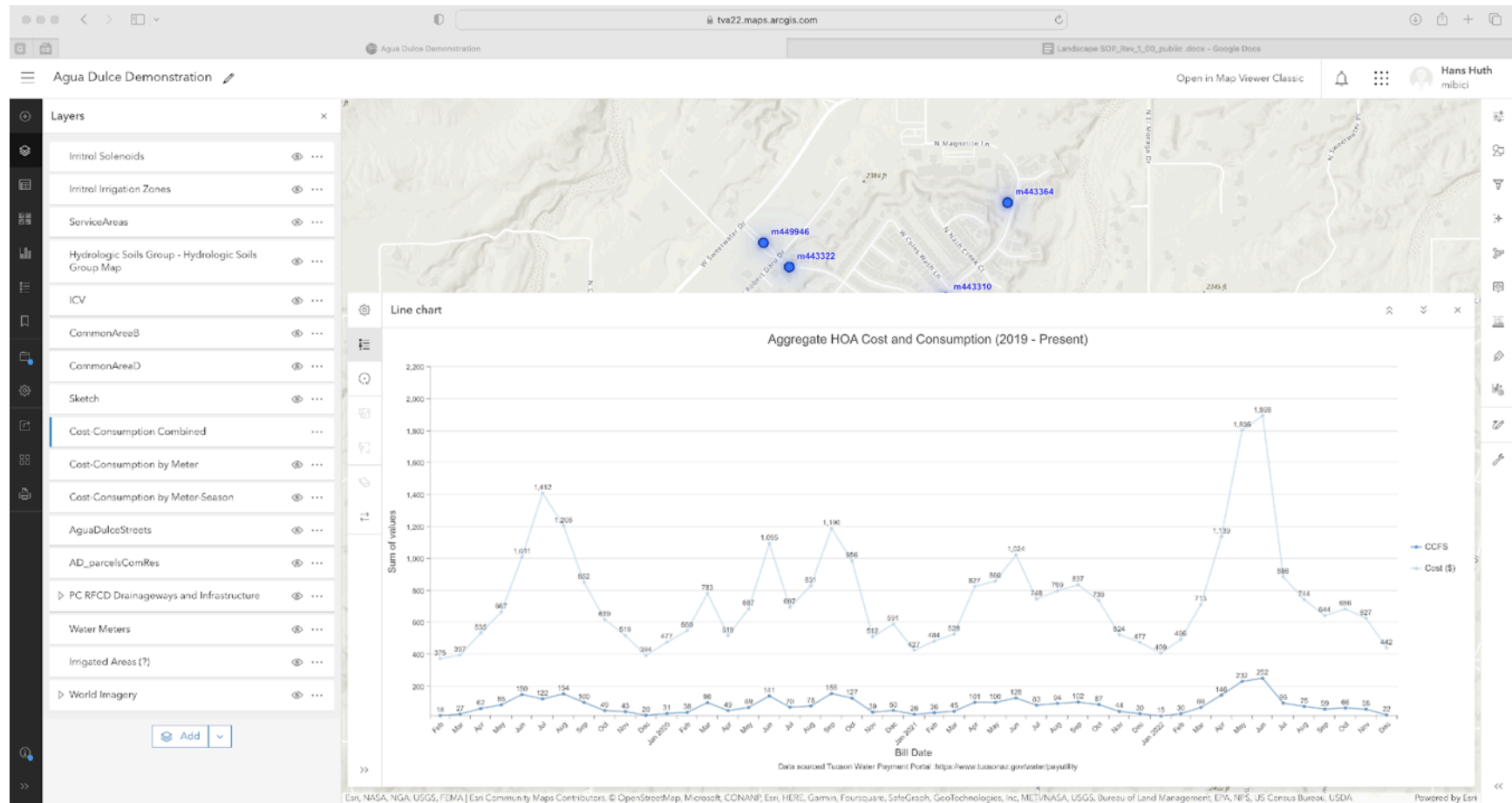
Tucson Water Meters



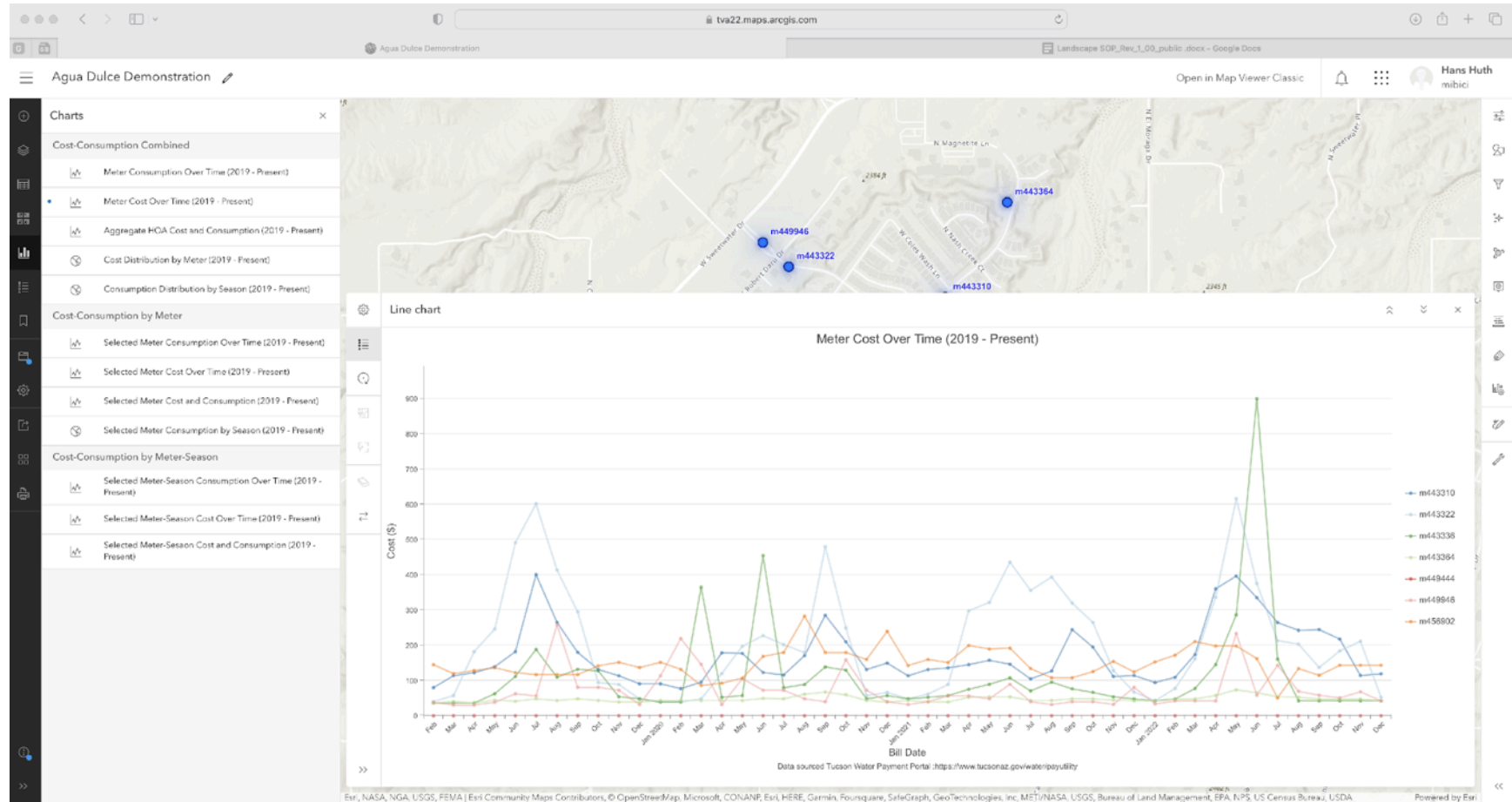
Tucson Water Meters Continued



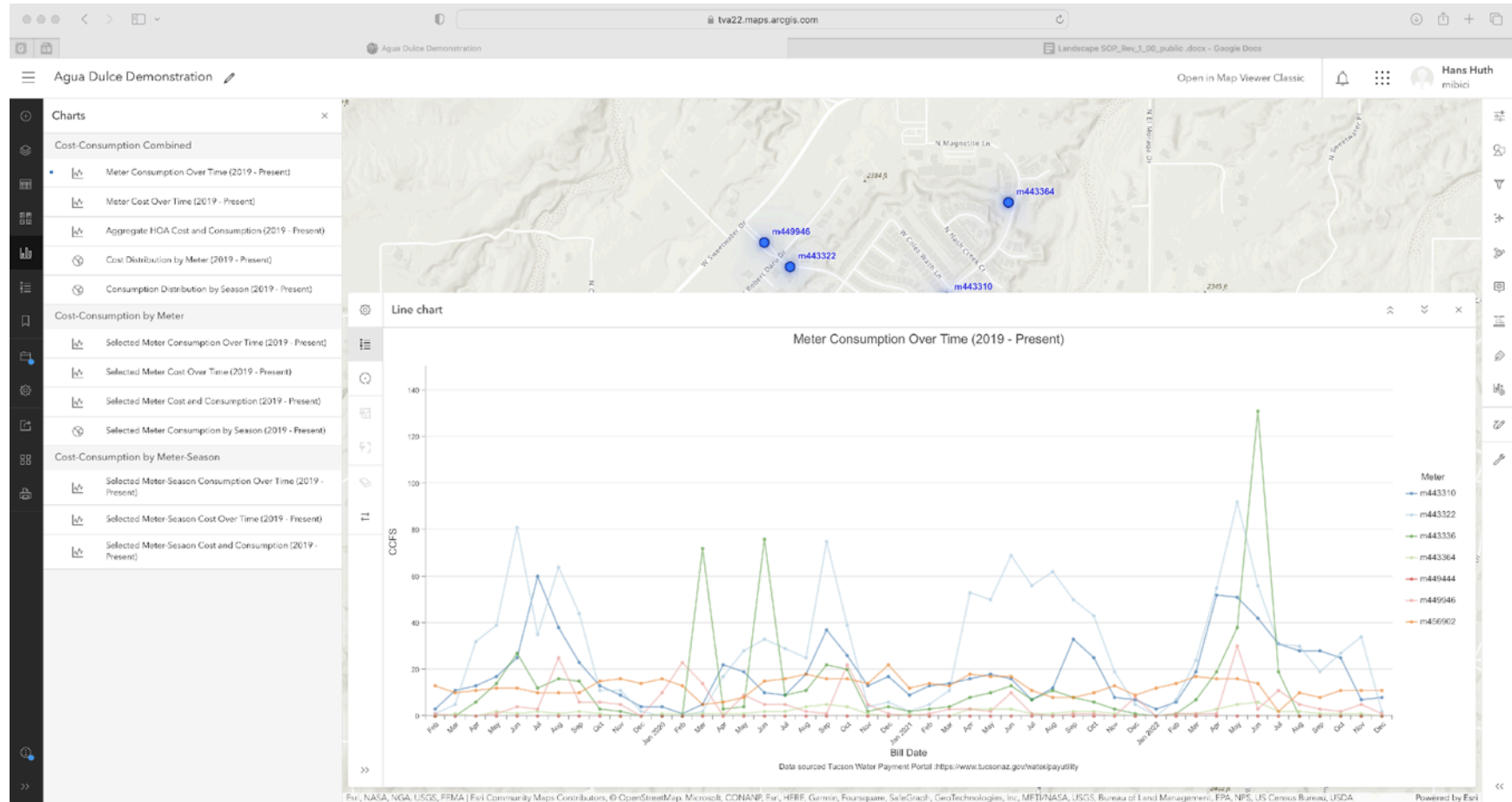
Aggregate Meter Consumption and Cost Over Time (2019-2022)



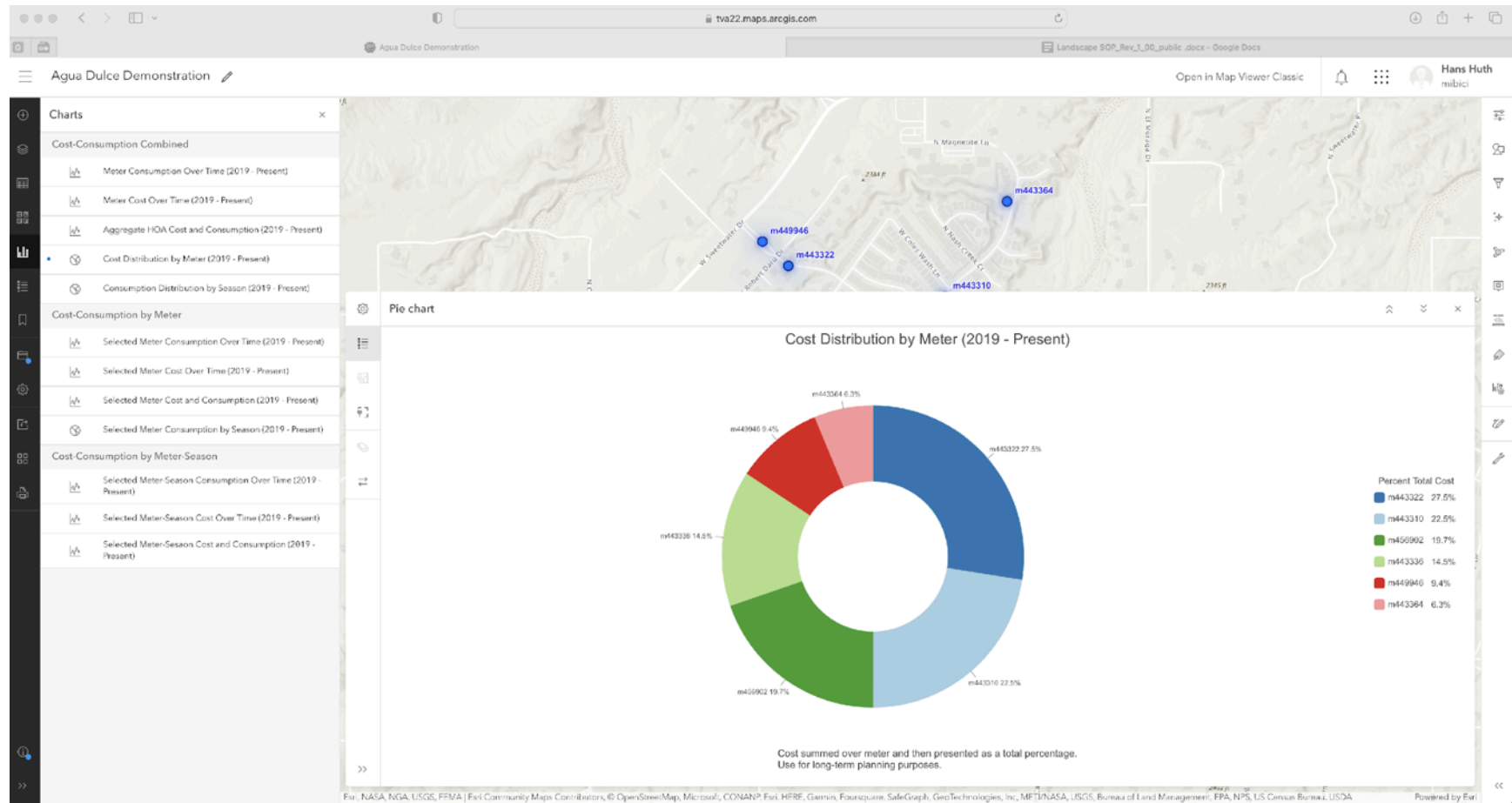
Discretized Meter Cost Over Time (2019 – 2022)



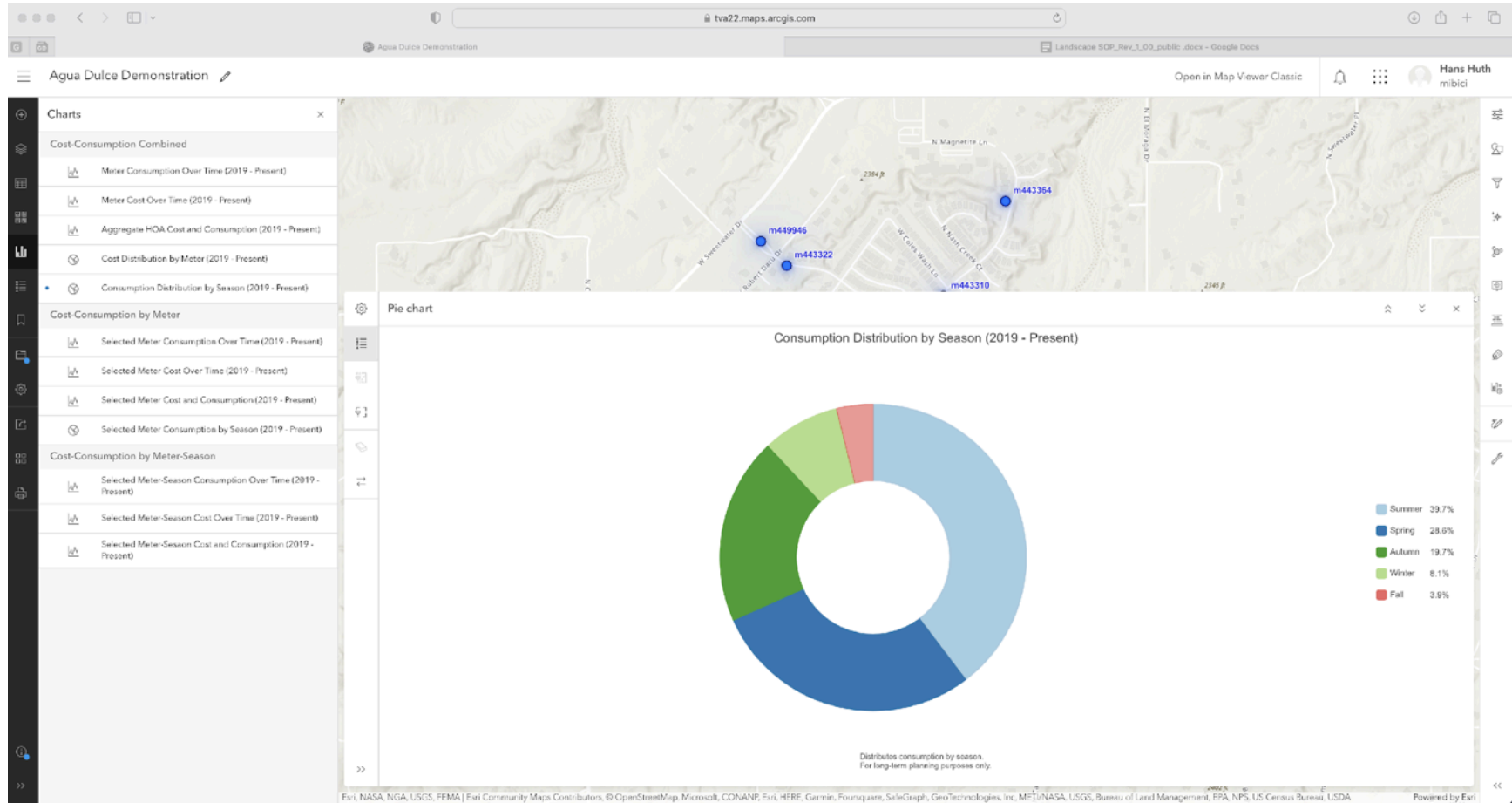
Discretized Meter Consumption Over Time (2019-2022)



Cost Distribution by Meter (2019-2022)

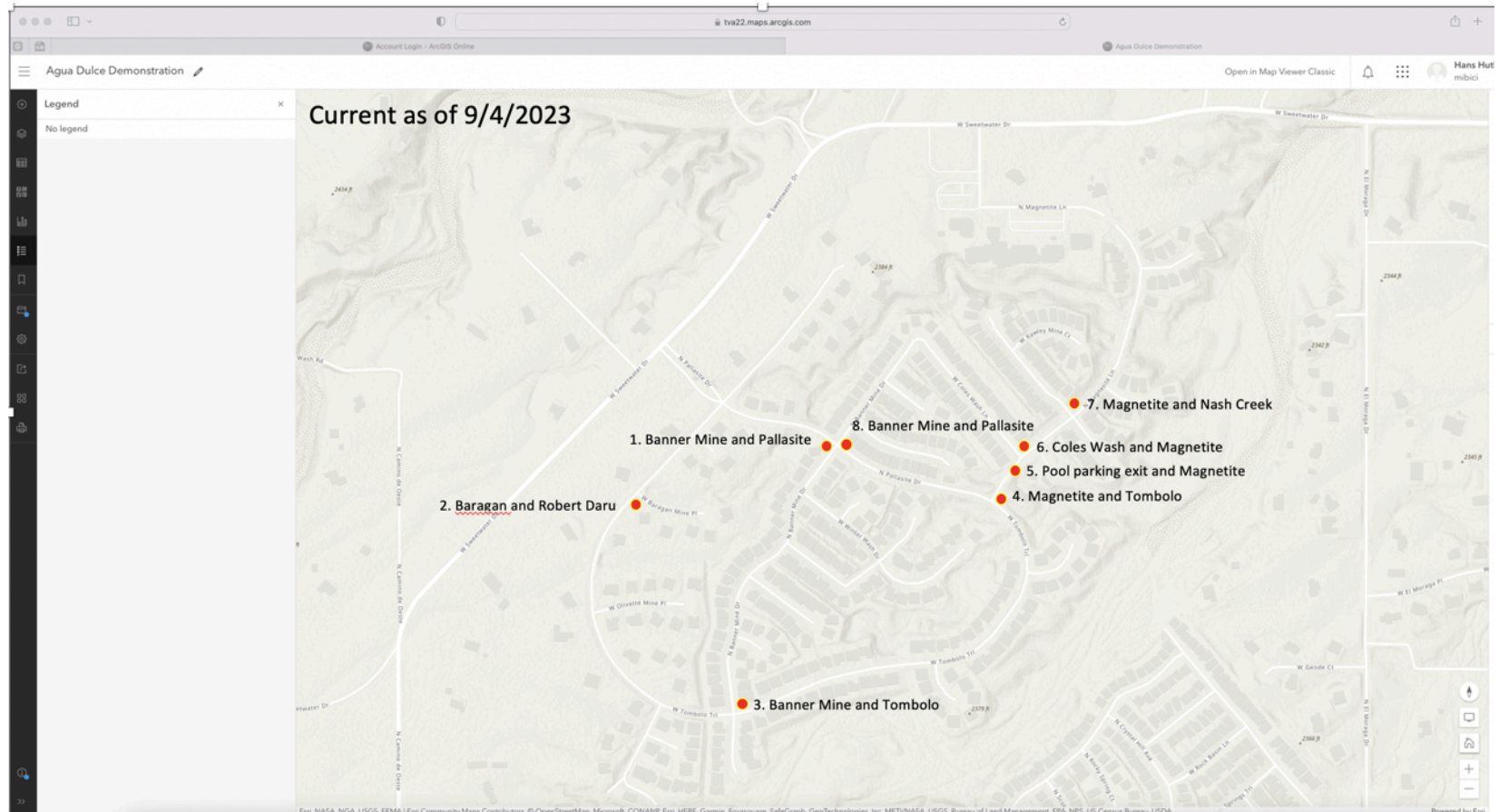


HOA Consumption by Season (2019-2022)



Common Area Service Zone

Critical Corner Visibility Maintenance



https://docs.google.com/presentation/d/1VX4fIY-fsvehC4zhHBr_CgDq-VWx0LU7/edit?usp=sharing&oid=110634341293889019430&rtpof=true&sd=true

Arborist Summaries



ARBORIST MEETING UPDATE

October 28, 2022

Hello Neighbor!

The HOA has received a final report with recommendations for ensuring the health and viability of our common area trees moving forward. Of greatest significance, Aleck MacKinnon recommended AD allow the inner canopy of our trees to develop over the next one-to-two years. Aleck noted the inner canopy is critical for food production thus contributing to thicker branches which in turn will make our trees healthier and more stable in high winds. In addition, inner canopies are essential for protecting trees from sunburn. As such, you may see common area trees hosting small sprouts on trunks that are not being maintained. This is intentional and indicative that respective trees are healthy, vigorous, and recuperating.

In line with arborist recommendations, we are also starting the process of rebuilding our common-area basins and soils. Specifically, organic debris less than six inches in length will be allowed to accumulate off-path to assist with nutrient-cycling and moisture-retention. Paths themselves will be raked to keep them looking neat and welcoming.

As a check on recommendations, we consulted with a second ISA-certified arborist for bid on annual maintenance of our trees. Angelo Romeo (Romeo Tree Service) echoed Aleck's comments by suggesting no maintenance of trees for the next one-to-two years outside of dead wood removal or reduction cuts for safety. This should result in significant cost-savings to the HOA as it relates to our next landscape contract.

Finally, recommendations were made for removal of trees that are sunburned or aged. Although respective trees might survive, they have lost too much inner canopy and/or cambium from sunburn to realize significant growth moving forward. Fifteen trees are flagged and will be removed along Pallasite, Magnetite, and Tombolo over the next two months.

Given Winter is approaching, not all trees will be replaced before the Spring, but we will be developing new basins to host future transplants. To expedite this process, volunteers are most welcome! If you can wield a pick and shovel and would like to help with this project, please contact Hans Huth at aguadulcehans@gmail.com.

If you'd like to read Aleck MacKinnon's final report or see video highlights from Angelo's survey of Agua Dulce, links are posted on our website under "Resources -> WHEC Landscaping."

Sincerely,

GERALD CODY, VICE-PRESIDENT
COMMON AREA CHAIR
adhoa.glceicloud.com

www.cadden.com



5225 W Massingale Rd, Tucson, AZ 85743
(520) 297-0797

Given file size, the associated report has been uploaded to the aguadulcehoa@gmail.com google drive for public access and is available via this link:
<https://drive.google.com/file/d/1ZeTqgYzLlyaqg0PLY9S1Gb-KH9WgSbww/view?usp=sharing>

A video summarizing a second (Angelo Romeo) ISA-certified arborist review of common area trees is available via this link: <https://youtu.be/xFLoueCfGZs>.

“Landscape Maintenance Considerations for Homeowners Associations: Save Money, Be Safe, Look Good!”

(Publication az1613a.2014, as a pdf 19pg.)

Authors: Kelly Murray Young, Asst. Agent, ANR/Horticulture & Haley Paul February 2014

<https://extension.arizona.edu/sites/extension.arizona.edu/files/pubs/az1613a.pdf>

Succinctly outlines considerations for HOAs as they manage community landscaping, with particular emphasis on desert native plantings and their needs, and the importance of well-functioning irrigation systems.

“Pruning Shrubs in the Low and Mid-elevation Deserts in Arizona” *

Author: Ursula K. Schuch, Extension Specialist-School of Plant Sciences

(Publication az1499 Revised 01/16 as a pdf 10pg.)

<https://extension.arizona.edu/sites/extension.arizona.edu/files/pubs/az1499-2016.pdf>

Practical guide with illustrations detailing the needs of shrubs/bushes--which vary from no pruning in desert natives to seasonal appropriate pruning based on the specific plant. Discusses why shearing is inappropriate in desert natives, and renovation/rejuvenation trimming to bring back plants such as sages to healthy conditions. (Renovation trimming also discussed in the HOA az1613a publication shown)

****This publication is also available in Spanish (June 2022)***

“Poda de arbustos en los desiertos de baja y media elevacion de Arizona”

<https://extension.arizona.edu/sites/extension.arizona.edu/files/pubs/az1499S-2022.pdf>

extension.arizona.edu/pubs/az1499S-2021.pdf 10 paginas

TRADUCCIÓN: María Torres

Programa de Traducción e Interpretación. Departamento de Español yPortugués.

Esta información ha sido revisada por el profesorado de la Universidad.

“Care of Desert Adapted Plants”

Authors: Della C. Fletcher & Patricia H. Waterfall

(Publication az1048, 1998 as a pdf and printed as a booklet, 19p.)

<https://extension.arizona.edu/sites/extension.arizona.edu/files/pubs/az1048.pdf>

Guide to the care of xeriscape plantings, with detailed information on trimming, appropriate pruning methods and how to irrigate as the plant grows and matures. Addresses both desert natives as well as use of desert adapted plants in the xeriscape, i.e. low water use landscape.

“Mesquites and Palo Verde Trees for the Urban Landscape”

Authors: Ursula K. Schuch and Jack J. Kelly

(Publication az1429, Revised 04/12 from 2003 as a pdf, 10p.)

<https://extension.arizona.edu/sites/extension.arizona.edu/files/pubs/az1429.pdf>

Overview of two popular Sonoran desert native trees in the landscape and their characteristics, needs and potential problems.

“Watering Trees & Shrubs: Simple Techniques for Efficient Landscape Watering”

Authors: Robert Call and Cado Daly at: <https://waterwise.arizona.edu/>

(Publication az1298, 08/2017 as a pdf and brochure)

<https://extension.arizona.edu/sites/extension.arizona.edu/files/pubs/az1298-2017.pdf>

One of many informational publications done by this UA Cooperative Extension Program from the UA-CALS college. Brief but detailed suggestions to make the most of your water resource as you care for your desert landscape.

RESOURCES from the Waterwise Office of the UA Cooperative Extension Service:

<https://waterwise.arizona.edu/>

Excellent best practices information on landscaping and water conservation topics.

Including but not limited to:

Rain harvesting: <https://waterwise.arizona.edu/harvest-rain>

Grey Water: <https://waterwise.arizona.edu/gray-water>

Water efficient irrigation systems: <https://waterwise.arizona.edu/irrigation>

Water saving tips: <https://waterwise.arizona.edu/water-saving-tips>

Low water landscaping: <https://waterwise.arizona.edu/low-water-landscaping>

Links to additional resources and groups: <https://waterwise.arizona.edu/additional-resources>

Landscape “General Maintenance” RFP Template

RFPs prepared for bid through the Common Area Chair and Cadden Management (former property manager) are available via this link:

https://drive.google.com/drive/folders/1kTjNDvs68m10IBLIRun0oV4sydYzARYI?usp=share_link

Account Details

The following account details are necessary for managing linked google docs and/or the freely hosted ESRI story map.

Following account details must be hidden from community release.

These details are included at the start of the document and highlighted to avoid oversight.

Login Page for managing google docs: <https://mail.google.com/mail/u/0/#inbox>

Account details hidden from public view

Login Page for editing story map: <https://storymaps.arcgis.com>

Account details hidden from public view

Login Page for Tucson Water Billing: <https://ipn2.paymentus.com/cp/twaz?lang=en>

Account details hidden from public view

Reserve Study Input

The following landscape needs were prepared via consultation with Santa Rita and shared with the Agua Dulce HOA Board on August 7, 2025:

https://docs.google.com/document/d/1eHRvbw9IKYaVLBNJlcuyaefQTx-nik0Z/edit?usp=share_link&oid=110634341293889019430&rtpof=true&sd=true

Revision History

The initial release (revision 1.00) was shared with the Association Common Area Chair on 1/3/2023. It captures most of the requirements outlined in our current request for proposal (RFP) template used for evaluating prospective landscape contractors while also echoing contractual obligations. Respective requirements were approved by the Association Landscape Committee and discussed during an open meeting on December 2, 2022. As such, this guidance may be shared with our community and landscapers to provide additional insight on our Associations practices and needs while ensuring community transparency. The initial release also captures additional details specific to common area needs not covered under contract.

Edits and revisions will be tracked in this section explaining dates and reasons for amendments or deletions*

Revision 1.00 published 1/6/2023

- Initial release prepared by Hans Huth and Mary Graf for the Association reflecting approved RFP requirements as well as professional and open-meeting discussions.
- Initial release shared with Common Area Chair

Revision 1.01 published 1/17/2023

- Updated water consumption and cost graphs with last-quarter data for year 2022 (missing in revision 1.00). This will assist in budgeting future costs and/or identifying outliers in water consumption moving forward. Additional details will be summarized during an open meeting scheduled for 1/21/2023.
- Documented the existing online work order system established by the Association through Cadden Management to help volunteers respond to common area concerns and requests. This existing protocol is meant to ensure the Association is properly informed of challenges while also easing pressure on diligent volunteers in responding to issues.
- Updates shared with Common Area Chair

Revision 1.02 published 1/26/2023

- At the request of the Chair, removed the increased budget to support purchase of personal protection equipment and materials for repairs of a head cut on Tombolo. Budgeting will fall back on the existing line item for erosion-control in line with the 2023 budget already approved by the board (\$595).
- Updates shared with Common Area Chair

Chair raises concerns since (1) additional SOP elements still require research (e.g. “How are the tasks separated or do they overlap?”); and (2) requested institutional knowledge not be included in an SOP since this goes beyond needs of an SOP. In response:

Revision 1.03 published 1/29/2023

- Replaced all references to “standard operating procedure” or “SOP” with the term “guidance” or “background and guidance”.
 - The document may now be used to develop a formal SOP that will meet the Common Area Chair’s specific needs while ensuring transparency for the Association.
- For clarity, added the sentence: “Associated references and recommendations may be used to develop a formal standard operating procedure (SOP)” to the “Background” section.
- For clarity, migrated a paragraph regarding the revision process from “Background” section to “Revision History” section.
- In addition, added Audubon and UA Cooperative Extension contacts to “Points of Contact” section per volunteer request.

As it relates to additional edits, the document was shared publicly on Cadden Connect by the President with an invitation to discuss next steps in an open meeting hosted on February 2, 2023. In response to feedback recorded in the meeting summary:

Revision 1.04 published 2/3/2023

- Renamed “Background” as “Executive Summary” at the President’s request
- Added the following sentence to the Executive Summary: “This document captures years of institutional knowledge practiced by community volunteers on recommended landscape practices and procedures. Associated references and recommendations may be used to develop a formal standard operating procedure (SOP) for the Association.

Until then, this document captures the procedures being practiced by the Association under landscape contract and by its volunteers.” This was added to better fit the “Executive Summary” theme.

- In line with approved contributions prepared by Mary Graf presented at the meeting, created a section on the “WHY, WHAT, and HOW of this Guidance”. This is now immediately after the Executive Summary to assist with added context.
- With major revisions discussed in open meeting session prior to public release, moved revision tracking and guidance to the appendix and updated text.
- In line with the President’s request, created a revision form and provided guidance for realizing future revisions moving forward on a six-month cadence. This is captured in the new “Revision Guidance” section prior to the Appendix.
- Modified subheading of title page to read “Prepared for the Association by Landscape and Community Volunteers” since not all contributions were realized by committee volunteers.

The document will now be posted to the Association website to ensure transparency with an invitation to review and help the community improve. Future revisions must now follow the “Landscape Guidance Revisions” section with updates to be discussed in open meetings every six months.

Revision 1.05 published 10/12/2023

Public input was solicited of the Association by Cadden via email notifications on August 8, 2023 with multiple reminders sent out as follows:



August 9, 2023

Hi Friends and Neighbors,

At our annual meeting, we shared a new Landscape Procedural Guidance prepared by the Landscape Committee for the Association. This guidance ensures that we don't lose institutional knowledge when volunteers or committee chairs turn over in the community.

We will be hosting an open meeting to share revisions based on new lessons learned. Updates will include clearer guidance for our landscapers, corrected maps of our irrigation system, improved protocols for responding to irrigation leaks, improved transparency regarding seasonal irrigation, updated contacts, and new guidance on Common Area B management.

We would love for you to come to the meeting and provide your feedback. We will be hosting it on Saturday, September 9 at 7:00 AM at the playground by the pool. This will give you a chance to talk to us about any concerns you have, such as a corner where vegetation is posing a visibility risk for drivers. We can then review and update our corner visibility maps for priority maintenance.

You can find the guidance here: https://docs.google.com/document/d/1PoulWeyS-lu2ce3hpn8XFJwkh_b9aTdX/edit#heading=h.2ce457m.

For your convenience, you can also use this form to prepare any recommendations for requested changes: <https://forms.gle/4hlgYD2tkHo4LYQs6>.

We look forward to seeing you there!

Sincerely,

SAUNDRA DRAIN, LANDSCAPE CHAIR
sd.aguadulce@gmail.com
www.cadden.com

5225 W Massingale Rd, Tucson, AZ 85743
(520) 297-0797

On September 9, 2023, revisions were discussed in open meeting session. Suggested revisions shared in line with 1.04 guidance requirements are itemized here:

https://docs.google.com/document/d/1LIA2dLuvBIAmj5ilrDEwHtsrzcXOS37X/edit?usp=share_link&oid=110634341293889019430&rtpof=true&sd=true

All revisions were approved. Respective updates are now reflected in Revision 1.05 of this document. A meeting summary was shared with the community by Cadden on September 20 and is available here for review:

https://docs.google.com/document/d/1j2R7Ma3YcPgeUpzkt9ARYnM8V1ClgQGk/edit?usp=share_link&oid=110634341293889019430&rtpof=true&sd=true

Revision 1.06 published 4/20/2024

On April 20, 2024, revisions were discussed in open meeting session. Suggested revisions shared in line with 1.05 guidance requirements are itemized here:

https://drive.google.com/file/d/1RPYTG8LEjdpOpykJ3MmcNI2cbSDBLaVx/view?usp=share_link

All revisions were approved. Respective updates are now reflected in Revision 1.06 of this document. A meeting summary was shared with the community by Cadden on XXXX and is available here for review: (will be updated shortly).

Revision 1.07 published 12/15/2024

Page 11-12 - Photos showing progression of sunburn on over pruned trees and update on tree health.

Page 21 – reference to privately maintained opt-out list for herbicide

Page 30 – new section on “weeds to watch for in residential yards”

Page 31 – reference to new RFP with link reflecting lessons learned

Page 32 – 33 – new maps summarizing service areas and weekly cadence in RFP

Page 35 – new map and link to google earth KMZ for herbicide treatment

Page 37 – reference to new maps and google earth KMZ for updated/remapped irrigation

Page 38 – summarizes current irrigation schedule for Fall

Page 42 – new section on common area vegetation impacting private property

Page 49 – Update commemorating 10-years of community service

Page 56 – New section capturing volunteer activities including Water Harvesting Feature Maintenance, Basin Development, Mulch Distribution, Leak Detection and Repairs, Tucson Water Reimbursements, Irrigation Shutoff, Common Area Flagging and Landscape Coordination, Animal Waste Cleanup, and Newsletter Entries

Page 88 – Wildlife encounters section updated with information regarding bobcats in our community.

Page 91 – EPNG Easement observations, response and preparation for 2026

Page 105 – Cadence for updates extended to one year.

Page 108 – Contacts table updated

Based on community feedback during an open meeting on December 7:

- An edit was made to non-viable vegetation in the section on common area restrictions. The edit references proper management of downed saguaros respecting county and local-expert recommendations for a “second life” approach.
- A section was added entitled “Winter Pruning” in response to questions asked about leaving selected plants unpruned during the cold season.
- Photos summarizing mulch distribution added post-open meeting.

Given these updates, page numbers were updated and may change slightly from those listed above.

Revision 1.08 (Drafted 10/20/25)

- 1) A new section entitled “Scope” now outlines what this guidance and the landscape committee will focus on to ensure improved coordination with private property owners and avoid conflict with Common Area Chair responsibilities.
- 2) Under the section “**Invasives in Non-treated Areas**”, a photo of buffelgrass is now included for reference.
- 3) The “Landscape Story Map” section notes the community’s story map was updated in 2025 capturing a new urbanite feature behind the community pool. Within that map, a YouTube video summarizing background and details of why and how the feature was constructed was linked to ensure institutional knowledge is not lost. For those that are interested, the video is available here:
<https://youtu.be/uTrrgslW7Cc?si=LVPsZAgYOXm69v4H>
- 4) A new charter capturing landscape activities was approved by the board on August 27, 2025. The new charter combines water harvesting and landscape activities under one charter now known as “**Landscape Committee Charter**”. Updates to the original charter will make volunteer recruitment and operations easier to implement. A link to the new charter is included in the guidance in the section entitled “Ten Years of Building Community Through Conservation”. The section now also includes a link to a presentation prepared for the 2025 UA Annual Horticulture Conference summarizing work completed to date. For those that are interested, the presentation link is:
<https://youtube.com/playlist?list=PLqJ5k4cakypwwhGvOlMG0O74kcpDooM&si=2GpoQv1QRUf1z--w>
- 5) References to “Water Harvesting and Erosion Control” Charters and meetings are now replaced with “Landscape” in line with the updated charter. All References to “Cadden Management” and contacts are now replaced with “Sienna Management” and contacts given recent changes in leadership.
- 6) The section “Resident Concerns and Requests” requests community concerns be communicated directly to our community manager. Ms. Jena Carpenter. Please note that although the Landscape Chair also walks the community weekly and contributes to weekly work orders, he does not monitor email regularly. To ensure quick and prompt response, please prioritize communications with Ms. Jena Carpenter who will amend the landscape chair’s work orders with your own.
- 7) In support of a new reserve study, the chair prepared recommendations and costs for overdue landscape items such as hydroseeding and polyline replacement. Reserve study input was shared with the board on August 7 for its consideration WRT future investments and expenditures. A link to the same is now included in the Appendix.

- 8) Watering cadence has been updated for the Fall given recent changes in scheduling to conserve water in response to cooler temperatures.
- 9) Threshold for turning off irrigation has been increased to 0.40 inches in line with local research.
- 10) Included a section on “Packrats and Ground Squirrels” under Landscaper Coordination
- 11) Contacts Table Updated

Pending for Revision 1.09:

Since concerns regarding wildfire risk have been raised in the past, the Chair has been consulting with Pima County staff regarding associated risks. The Chair discovered the county is currently working on a Community Wildfire Protection Plan - a collaborative effort to identify wildfire risks, prioritize high-risk communities, and develop strategies to protect people, property, and natural resources. **The plan is still in development but should be referenced in the guidance for Association tracking and participation by interested members.** In addition, **a link to a 2021 “Homeowners Firewise Guide for Arizona” prepared by multiple local and Federal agencies should be included in the guidance for individual homeowner consideration and review. This is work in progress.**

Agua Dulce hosts open areas and wildlife corridors through the Association. **For anyone who is interested in the impact of natural areas on real estate values, the guidance will soon include links to local research demonstrating a positive link.** This may be of use to real estate agents serving customers in our community and in particular those homes abutting undisturbed natural areas. **This is work in progress.**

* Please maintain MS-Word for editing this guidance. Exporting this to other formats will disturb page layouts and break the Table of Contents. This will pose challenges for volunteers working on document maintenance.