

Starlight Mesa Hillside Maintenance Policy

Preface

The 2008 Board in the course of researching the following hillside maintenance policy has consulted with geologists, native plant experts, the CC&R's, lawyers, the Los Angeles County Fire Department Forestry division, Station 82 of the LA County Fire Department and past Board members.

We acknowledge that water or the lack thereof on certain hillsides in the Mesa has been troublesome to some residents. We stand behind the policies and decisions of past Boards.

The Board has determined that the CC&R's do not dictate that hillsides must be watered nor do the CC&R's give preference to some hillsides over others due to location. The authority we and past Boards act under is the established course of conduct between Mesa Boards and Mesa homeowners.

While trying to establish a water policy for the Mesa, the 2008 Board has come to understand that simply turning on or off water is not a water policy. Both erosion control and fire safety are irrevocably intertwined with a water policy.

We therefore set forth this broad-based policy that will address all three areas of concern: water, erosion and fire safety. We will layout and adopt specific written programs for the hillsides that are multi-year in magnitude and designed to be portable to future Boards. The policy will be specific to individual hillsides.

The goals in adopting this policy are to make the Mesa as fire safe as possible, deal long term with erosion and be financially responsible.

The Board, in researching Mesa history, finds that the honor system has to be preserved in order to make any policy work. Residents who disagree with policy can not, as recourse, take control of irrigation timers or valves so as to water hillsides as they see fit.

If a hillside maintenance policy is to succeed it must be allowed to succeed. In a community such as ours the honor system is the only way. No Board wants to police the hillsides.

History

Over the years, the cost of water and the cost of now-mandated brush clearance have escalated significantly. In the mid to early 1990's, the board began to discontinue watering specific hillsides. After speaking to several board members from that time period, we found the guiding principle was watering a hill to grow brush only to have to clear it was an unnecessary financial burden to The Mesa and ultimately did not contribute to fire safety. (The 2008 board concurs.)

Lot 93 (the eight acres below Mariners View Lane and Lower Stardust) was the first to be turned off in the mid-90's and allowed to "go natural."

Water on the hill behind Upper Stardust and above lower Stardust was turned off in approximately 2000.

Water on the hill north and west of the tennis court and directly behind the pool has been off since approximately 1999.

Water on the hillside behind Starlane Drive was turned off by the 2006 Board following the same guiding principle that watering a hill to grow brush only to have to clear it was an unnecessary use of limited Mesa finances.

All of the hillsides, where water was discontinued, have survived with no unusual erosion and due to diligent brush clearance no increase in fire danger. Fire safety has improved due to the removal of fuel.

The exceptions to these actions have been hills directly visible from a resident's front door. Thus the lower portions of the hill opposite the homes on lower Stardust; the hillside opposite 316 - 330 Starlane Drive; and the hillside along the 200 block of Starlane Drive have continued to be irrigated. Water has also been kept on for a portion of the hills surrounding the pool and tennis courts but not all of this area, as stated above.

As each hillside survived successfully for a couple of years without water, the water meters for said hillside were decommissioned. In the late '90s the board realized the cost of keeping an inactive meter was about \$360 per year. In 2008, the cost of a single Mesa water meter has risen to as much as \$960 a year before the use of water.

Various boards since the 1990's have decommissioned in total at least seven Mesa water meters. The last two of that number being authorized for decommission by the 2007 Board.

Going Forward

To return to indiscriminate watering with today's costs would increase the Association dues by a significant and ever increasing amount. We recognize that some homeowners are willing to pay more but realize that some are not. The board is also mindful that continuously escalating dues will begin to lower property values. Historically and presently, our dues are a non-issue for perspective buyers.

In terms of the 2009 budget, a return to full watering would impact our operating costs for water, irrigation repairs and brush control by approximately \$40,000. More importantly, it would not necessarily address fire safety or erosion control. In fact, in some cases it may make the conditions of the latter two worse.

Watering of hillsides does not by itself necessarily contribute to fire safety. Irrigating a hillside year round will cause a significant increase in brush and wild grass growth

throughout the entire year thus indiscriminately increasing fuel for a wild fire. With the recent extension of our fire season into October and November, it would be necessary to clear brush twice a year to maintain fire safety. LAFD actually prefers not watering, as long as we are willing to cut out dead brush. Green brush and wild grass is very flammable. It is wild grass and weeds which supply the ladder fuel to connect all of the shrubs and trees allowing a fire to spread rapidly.

The 2008 Board has extensively researched hillsides and fire control. Sources have included the LA County Fire Department Forestry Division, several conversations with officers of the local fire station, Las Palitas Nursery (one of the largest native plant nurseries in Southern California) and a native plant landscape designer contracted by the Mesa.

A hillside can never be made fire proof, but the objective in following the LA County FD fuel modification plant list and maintaining breaks between plants is to create a hillside that is fire resistant and burns at a slower rate. A slower rate of burn allows fire companies a chance to arrive and defend homes. The Board suggests that residents follow LAFD guidelines for planting and clearing in their private yards and next to their homes. Creating defensible space around a home is the basis for effective fire protection of property and life. See appendix C.

Watering of hillsides by itself does not prevent erosion. A hill covered with wild grass is more prone to erosion than any other hill other than a barren one. It is the combination of varying depth of the root system of trees and shrubs that prevent erosion. This combination prevents erosion first by causing rainfall to reach the surface dirt at an uneven rate. Second, native plants connect with each other underground. The microorganisms that live in association with native plants produce tiny threads that ramify through the soil, coiling around particles of sand and clay and holding them, and also producing glue-like compounds to hold the soil particles. Grass, iceplants and other alien plants do not possess these microorganisms. See appendix D.

Geologists, while inspecting some of the Mesa's hillsides, have told us that over watering of hillsides will soften them over time, cause hydro-static pressure below the surface dirt and contribute to instability. There is a line between helping a hillside with irrigation and harming it. This is why we sought expert opinions.

In designing a hillside maintenance policy, the board realizes that all the hillsides of the Mesa are not the same. The Mesa has hillsides that are cut, natural, fill, visible to residents, not visible, etc. Therefore the erosion and fire safety plans should be relevant to location and type of hill. We have customized an assessment and plan for each area.

The hillsides of Lot 93 –

This eight-acre site holds both natural and fill hillsides. Both types appear to be performing as expected. There was a moderate movement of the top clay-soil on the fill hillside below Mariners View during the intense rains of 2005. The hillside is considered stable. The movement of the top one to two feet of soil did not affect the integrity of the

hillside. The soil was cleaned out of the culvert and the hillside has been functioning as expected since. The culvert repairs of 2007-08 are unrelated.

The 2008 Board began a program of eradicating the sumac plant that grows wild on this hillside and spreads rapidly. This plant is extremely combustible. Garlon 4 herbicide available from Gempler's mail order and licensed in California has been found to be the only herbicide affective with sumac. It takes two years of treatment to kill this stubborn plant. Herbicide application can be incorporated into brush clearance and fall culvert cleaning with minimal additional labor costs. See appendix A.

The Garlon 4 herbicide is not harmful to our wildlife. The half life in the soil is between 10 and 30 days on average with a maximum of 45 days.

Pampas grass/fountain grass is spreading below lower Stardust. See appendix A. This non-native grass is invasive, kills other vegetation and is listed on the LA County Fire Dept. fuel modification list as a "do not plant" species. We have been very mindful to cut this grass back to the ground during brush clearance and future boards should continue this policy. Left uncontrolled pampas grass will take over a hillside, eliminate all fire breaks between plants and in a fire storm contribute to a hillside burning rapidly.

In 2009, a program of fuel modification to limit and eventually eradicate the pampas grass/fountain grass needs to be started in this location. Fuel modification is when highly combustible native or ornamental vegetation is partially or totally replaced with drought-tolerant, low-fuel-volume plants.

Reduction and elimination can be accomplished simply with Round-up, leaving the roots in the ground so as to not disturb the hillside. This is a multi-year project in that it is inadvisable to completely neuter a hillside at once.

First, the pampas grass/fountain grass needs to be thinned out. The breaks between clumps enlarged. After a thinning process, sections can be completely eradicated and native, drought tolerant, fire resistant plants can be installed. See appendix B for a list.

These plants should be installed during the rainy season and Rain Bird Irrigation Supplement slow release gels should be used for the first year to achieve a higher success rate of establishment of plants without irrigation. The list was developed based on erosion control, ability to survive without irrigation and their presence on the LA County FD fuel modification list.

Culverts need be maintained. An area with culverts represents a fill hillside. The culverts need to function as designed to help prevent erosion.

In 2009, a program to repair cracks in the concrete will be commenced. Major cracks throughout the Mesa will be dealt with immediately. After which, the Mesa's culverts need to be divided into maintenance zones and every year a zone should be repaired. When all zones are completed, the program should begin again. This initiative will prevent catastrophic (read expensive) repairs that we experienced in '07 and '08. It is

suggested that a board member walk the culverts at least once a year to prevent problems from going undetected and getting out of control.

The hillside between upper Stardust and lower Stardust –

This slope is a fill hillside with culverts. The bottom section (as divided by culverts) has been and should continue to be watered. This lower portion of the hill is clearly visible to the homeowners of lower Stardust. The vegetation in this area should continue to be trimmed to controllable standards during brush clearance.

The middle and upper section (as divided by the culverts) of this hillside have performed well with no irrigation for approximately eight or nine years. Wild brush continues to grow and needs to be properly cleared during June brush clearance. The majority of trees on this hillside are small and pose little fire threat. The eucalyptus trees should be replaced with an Oak species as they die. We lost one this past year.

Canyon Oaks can be planted in their place. Oak trees are available from the LA County FD fuel modification nursery for no cost other than the labor to plant. Rain Bird slow release gel should be installed when trees are planted and refreshed through the first year or two till the trees are established and able to survive on their own,

New plantings of shrubs from the appendix B list should be installed on this hill with slow release gels on an occasional basis. The eradication of sumac in this area should continue with the aforementioned herbicide.

The hillside behind homes on Starlane Drive and above upper Stardust –

This hill stretches from the bend at the bottom of Starlane Drive to the end of our property on upper Stardust Road.

The portions opposite the four homes at 316 – 330 Starlane Drive have been irrigated and should continue to be. It is believed that honeysuckle was planted on this portion by the '05 Board. It should be replaced eventually with a more drought tolerant species but should not be a high priority. A cost analysis of installing drip irrigation or bubblers could be explored.

A section of the culvert at the top of the hill was replaced in 2008. This culvert should be part of the crack maintenance program.

North of this portion (from the junction of Starlane and Stardust moving north on Stardust) the irrigation was turned off in 2006. The hill has performed well. Some brush has died off and has been thinned out during brush clearance. This is a natural occurrence and makes for less fuel.

There has been problems with homeowners drain pipes be brought out to this hill. In one location this drainage caused a small section, about 8 feet by 15 feet, to move during heavy rains. This movement was merely a foot or two of top earth. The hillside itself is grossly stable. The drainage problems have been corrected.

Of note, dumping residential drainage out to a hillside is both a violation of the CC&R's and city ordinances. This Board believes with any future infractions, the homeowner should be held financially responsible.

Some residents on Starlane Drive water the plants at the edge of their yards and top of this hill. Residents are reminded that there is a line between lush privacy and excessive fuel for fire close to homes.

An experimental program was begun in 2008. Three to four inches of mulch was blown onto about 400 linear feet of the slope. Contrary to common wisdom, mulch contributes significantly to the fire safety of a hillside. Its use is highly endorsed by the LA County Fire Dept. and LA County Brush Control and Weed Abatement.

Mulch stops grass and weeds from growing and provides a fire break between plants in a fire. Mulch, if it burns at all, will burn very slow and with a flame only about an inch high. The ground will also retain moisture longer helping the plants that are there retain moisture as well making them more resistant or at least slower to burn.

Mulch will also help control erosion. Rain water seeps into the earth at a slower rate helping to stop run-off.

The experimental part of this program is whether the mulch will stick to the hillside during heavy rains. This winter will be the judge. During a rainfall of two inches in one day, there was no movement of the mulch.

If this program continues, new erosion control, drought tolerant and fire resistant plants should be added before the new mulch. (See Appendix B.) Slow release water gels should be used with the planting. If the mulch program does not continue new plants should still be added in more barren areas.

Brush clearance should continue on the non-mulch portion of the hillside. Acacia trees need to be trimmed annually and removed as they die. Scrub oaks would make a good replacement. Eradication of sumac should continue on this hillside, as well.

The hillside opposite the 200 block of Starlane Drive –

This hill was planted in 2007 with delosperma cooperi, myopurom putah creek and rosea.. At present time about three-quarters of the hill is filled in.

The groundcovers used were selected for drought tolerance and fire resistance. This hill was the Mesa's first total replanting. We learned that our deer during extreme drought (summer '07) will eat anything except delosperma cooperi.

Iceplants are usually not advisable to plant on a hillside. The traditional iceplant forms long runners (sometimes 15-20 feet) above ground from one shallow root. They will absorb and hold a great deal of water during the rainy season. This causes the plant to

become extremely heavy and can lead to the overloaded iceplant pulling down part of the hill.

For many years the FD and some nurseries recommended planting an iceplant “red apple” on hillsides. This is wrong and not a good recommendation for the above reason. Additionally, “red Apple” needs a significant amount of water in the summer. The FD no longer recommends this plant for hillsides, in fact advises against planting it.

The three species of iceplants installed on the Starlane hillside have the attributes of being small leaved (less weight) and of re-rooting as they spread. Thus a large plant will have multiple root systems to sustain the weight.

This hill is still being irrigated but at a decreasing rate as the plants establish. Hopefully, in '09 this hill will exhibit flowers for many months.

Sumac has been eradicated here. The culvert at the top of this hill should be part of the aforementioned repair program.

The hillsides around the pool and tennis court –

This area of the Mesa is one of the most varied in terms of hillsides. There are fill slopes, cut slopes and natural slopes in the bowl around the pool and tennis court park.

It has been maintained with inconsistent and conflicting methods over the years. Some area were watered, others were not. Some areas were planted by homeowners, sometimes with incorrect plants such as red apple. Some original plants were allowed to get too big and/or spread to cover large portions.

The policy established herein will try to unify the treatment of this area. These hills surround our largest common assets, the pool and tennis court. The board retained Argia Designs, a native plant landscape design firm, to create a multi-year plan to convert these hillsides to native, fire resistant, low or no water plants. See appendix F. The criteria for selecting plants and creating the design were fire safety, erosion control, low water usage and beauty. This plan is portable to future boards.

Our contracted landscapers, Toribios, will be instructed in the proper planting techniques and the care of native plants to help insure the success.

The design plan calls for a mixture of shrubs, trees and groundcovers that vary with the compass settings of slopes. A southward facing slope will not be planted in the same manner as an eastward. The design will incorporate proper spacing for fire breaks.

The first stage is to install as many of the trees and scrub oaks called for in the plan as feasible. The LA County Fire Department nurseries will give us many of these plants at no cost. The eradication of sumac, which was begun in the summer of 2008, should be completed during this phase.

The second phase, which will take more than one year, is to convert the west (entrance area) and east (adjacent to JPL hill) ends as called for in the plan. These areas are scheduled first because they presently have irrigation. Conversion of these areas will include the eradication of the pampas grass that inhabits the area now. As before, this grass is not fire safe, whether watered or not. If this grass is allowed to spread, the hills would eventually have no fire breaks between shrubs. Other non-native plants will be eliminated as well.

Irrigation is part of the plans for at least the first two years to establish new plants. Following establishment, irrigation will be decreased, in a constantly reviewed method to possibly twice a month during the summer. This water goal is based on consultation with Argia Designs, our plant expert.

The third and fourth phase will be the hillsides that wrap around the tennis court to the west and north. These phases could take up to three years. It is possible that these phases could happen faster because on the learning experience of the first two to three years of the plan. This landscape plan will evolve over time and be adjusted both in plant content and style, as necessary.

Irrigation will have to be brought back to these areas at the time of planting. By that point, the west and east ends should be established enough to start minimizing water so that the cost of water in this park area of the Mesa can remain level.

Argia Designs will have to be consulted by future Boards from time to time to ensure the plan's success. Plants may be adjusted based on performance. Patience will be needed during the implementation. Plants will be small at first and seem inconsequential, but with patience and perseverance this plan can benefit all.

Summary

The 2008 Board has implemented the above hillside maintenance plan with a sense of fairness to all Mesa homeowners and with the stated goals of increasing Mesa fire safety for all, maintaining a natural beauty to our hillsides and being financially responsible.

Appendix A



fountain grass



pampas grass



sumac



Appendix B

Plant list created by Argia Design, native plant landscape designer:

- *Rhus ovata* Sugarbush 6'x6'
- *Rhus integrifolia* Lemonadeberry 5'x6'
- *Arctostaphylos franciscana* Manzanita 2'x6' (manzanitas great under pines)
- *Arctostaphylos* Wayside Manzanita 2'x6'
- *Arctostaphylos* Sunset Manzanita 4'x6'
- *Arctostaphylos* Sentinel Manzanita 6'x5'
- *Heteromeles arbutifolia* Toyon 6-8'x6'
- *Lonicera subspicata* Chaparral Honeysuckle 4'x6' (good under oaks or part shade)
- *Iva haysiana* Hayes Iva 2-3'x6' *Prunus illicifolia* Hollyleaf Cherry 6'x6'
- *Yucca whipplii* Our Lords Candle 3'x3'
- Various oak species

Appendix C

<http://www.fire.lacounty.gov/Forestry/FuelModificationPlan.asp>

Appendix D

<http://www.laspilitas.com/garden/howto/slope.html>

Appendix E**STRATA-TECH, INC.**
G E O C O N S U L T A N T S

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October 20, 2008

W.O. 256808-R

Mr. Joe Bergen
c/o Starlight Mesa HOA
jbergen@earthlink.netSubject: Memorandum, Limited Engineering Geologic
Observations of Greenbelt Slopes, Vicinity
5201 Starlight Mesa Lane, La Canada,
California

Mr. Bergen:

Herewith is the limited report of geologic observation, which you requested on September 25, 2008. This report and accompanying graphics are intended to identify geologic conditions, which may affect long-term stability of the three slopes below the properties known as; "Goddard property 5203 Starlight Mesa Lane; Miller property 5201 Starlight Mesa Lane; Berryman property 5202 Starlight Mesa Lane." A walk on examination was conducted on September 26, 2008. This report is based on geologic interpretation of topographic characteristics of the site and environs including aerial views of the site. Confirming geologic data were obtained from outcrops on this and adjacent properties. General geologic and seismic data applicable to the area were reviewed in published reports and maps.

Steep embankments characterize the slopes on the Pleistocene age Alluvial Fan deposits, which underlie the local environs. Westward-facing cut embankments along the flank of the ridge below the Goddard and Miller lots were probably employed to maximize the common recreation area during tract development. The slope has a low retaining wall at the base where talus deposits have accumulated over the years as part of the natural erosion processes. Trees and shrubs mantle the talus slope composed of silt sand mixed with gravel and cobbles. The talus slope exhibits some evidence of creep but is judged to

APPENDIX E cont'd.

STRATA-TECH, INC.
G E O C O N S U L T A N T SMr. Joe Bergen
Geologic Memo

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W.O. 256808-R
October 20, 2008

be grossly stable. The uppermost portion of the slope has become steeper than previously built as the weathering process has eroded the slope. Drought resistant vegetation is encouraged but over watering is not. The southward-facing "Miller slope" is composed of engineered fill with concrete swales and irrigation that is performing well in spite of the passage of time and normal wear- and- tear. The slope transitions to a natural slope, the "Berryman slope," which is weathering to produce a thin mantle of loose soils which have from time to time migrated down slope during intense storms. Debris fences have been installed by down slope homeowners to protect against souse cobbles rolling dawn into their back yards. The slopes are not affected by land sliding. Minor slippage in the form of creep and erosion weathering during intense or pronged storm conditions affects the first slope. It can be expected to continue to weather and ravel with exposure to weather, particularly in heavy rainstorms. Periodic maintenance consisting of plantings and low water irrigation is advised. Concentrated drainage over the tops of slopes should be avoided at all costs and drainage and erions devices should be patched and maintained as intended.

Should you have any questions please do not hesitate to contact the writer. We appreciate this opportunity to be of service to you.

Respectfully submitted:
STRATA-TECH, Inc.

Roland Acuna
CEG 2113

Appendix F



Click here for higher resolution of this landscape plan—
[http://starlightmesa.org/Starlight Mesa hillside planting v.2 2-16-09.pdf](http://starlightmesa.org/Starlight_Mesa_hillside_planting_v.2_2-16-09.pdf)