

**MOORPARK CITY COUNCIL
AGENDA REPORT**

TO: The Honorable City Council

FROM: Jeremy Laurentowski, Parks and Recreation Director 
BY: Jessica Sandifer, Senior Management Analyst 

DATE: May 27, 2015 (CC Meeting of 06/03/15)

SUBJECT: Consider Drought Action Plan

BACKGROUND

The winter of 2015 has now been documented as the driest winter in California on record. On April 1, 2015, Governor Brown signed Executive Order B-29-15 ("Order") which called for the first ever statewide mandatory water reductions. The Order directs mandatory water reductions of 25% statewide using 2013 water use as a baseline for reduction. In addition, the Order contains several other provisions that also impact City operations directly, including a statewide requirement to remove 50 million square feet of lawn and replace it with drought tolerant landscaping, and a prohibition on the use of potable water to irrigate ornamental turf in public street medians.

On May 6, 2015, the State Water Resources Control Board ("SWRCB") adopted Emergency Regulations designed to carry out the requirements of the Order. The Emergency Regulations set up tiers of water reduction under which the various urban water suppliers must meet conservation standards in order to achieve the statewide mandatory reduction target. Ventura County Waterworks District #1 (VCWWD), the City of Moorpark's water supplier, is in conservation Tier 8, which calls for a 32% reduction in potable water use. If VCWWD customers do not achieve the mandatory reduction target set by the SWRCB, VCWWD will face large fines and penalties that would then be passed down to the ratepayers, including the City, in the form of higher water rates.

Current Water Conservation Efforts

On January 17, 2014, Governor Jerry Brown declared a drought emergency in the State of California and urged Californians to voluntarily reduce water consumption by at least 20%. In response to the worsening drought and the Governor's voluntary call for water reduction in 2014, the City had initiated several long term objectives to address the issue of water conservation.

The adopted City of Moorpark Mission Statement, Priorities, Goals, and Objectives for FY 2015/2016 contain several departmental objectives that coincide with water conservation and the need to reduce consumption. Updates regarding the projects are highlighted below:

IV. A. 6. Install the second phase of a centralized irrigation system for City facilities, parks and landscape maintenance districts by September 30, 2015.

In 2011, the City Council approved an Agreement with HydroPoint Data Systems, Inc. (HydroPoint) for the replacement of 44 existing irrigation controllers with WeatherTRAK ET Pro2 irrigation controllers within the City's Landscape Maintenance Districts (LMD's) and several parks. WeatherTRAK controllers receive real time weather and evapotranspiration (ETo) data via HydroPoint's system software and adjust irrigation schedules on a daily basis to reduce overall irrigation water consumption. In FY 2009/2010, prior to the installation of the WeatherTRAK controllers, the City reduced water consumption by approximately 16.5%, as compared to the prior fiscal year. Staff has tracked the City's water use and has determined that overall the City has saved an average of approximately 9.4% in irrigation water at locations where the WeatherTRAK controllers have been installed, as compared to the baseline of water use established in FY 10/11.

HydroPoint Data System Water Use Summary							
FY 11/12, 12/13, 13/14 Analysis							
	FY 10/11	FY 11/12		FY 12/13		FY 13/14	
	HCF Baseline	HCF	(%) saving	HCF	(%) saving	HCF	(%) saving
Total LMD/Parks	85,492	70,134	18.0%	76,130	11.0%	86,106	-0.7%
Overall Savings	9.40%						

The resulting savings is proportionate to the general weather conditions over the last several years and comparable to the significant drop in precipitation due to the drought conditions. The water savings from installing the WeatherTRAK controllers has declined from approximately 18% in FY 10/11, 11% in FY 12/13, and in FY 13/14 was relatively equal to the baseline of water use established in FY 10/11. This would be expected, as the controllers are generally programmed to supplement available precipitation when needed. Given the severe drought conditions during 2013 and 2014, the controllers have exceeded staff's expectations and have shown substantial overall savings.

Phase II of the project includes the installation of fifteen (15) ETo controllers at the following City parks: Glenwood Park, Tierra Rejada Park, Campus Park, Poindexter Park, Mountain Meadows Park, Miller Park, Campus Canyon Park, and College View Park. Currently, staff is in the process of comparing several central irrigation systems, as well as the HydroPoint system, to ensure that the system we choose for Phase II does not compromise the City's ability to manage the parks. The parks are more difficult to manage than the LMD's, as schedules constantly need to be adjusted to accommodate for turf renovation practices, youth sports organizations, rentals and large City events, such as the 3rd of July Fireworks Extravaganza. Staff will return to the City Council on July 1, 2015 with a selected central irrigation system.

V. A. 25. *Develop design plan to refurbish median landscaping and hardscape on Tierra Rejada Road from Spring Road to Los Angeles Avenue, Campus Park Drive from Princeton Avenue to Collins Drive, and Princeton Avenue from Condor Drive to Campus Park Drive including cost estimates, financing, phasing and water conservation measures by December 31, 2015.*

At the February 19, 2014 City Council meeting, staff discussed the need to develop a comprehensive plan to renovate all of the landscaping on Tierra Rejada Road, including the slopes, parkways, and median islands, with drought tolerant and California native plant material, or other low water use options. In addition to the need to reduce water, the majority of the Tierra Rejada Road streetscape requires funding from the general fund to supplement normal maintenance costs. The Tierra Rejada Road streetscape lies within LMD Zone 2 (Steeple Hill Area Tract 2865), LMD Zone 5 (Pheasant Run Tracts 3019 & 3525) and LMD Zone 10 (Mountain Meadows Planned Community). LMD Zone 2 is fully funded and there is funding available for normal maintenance procedures. However, funding for general maintenance procedures in LMD zones 5 and 10, has historically been supplemented by the General Fund. These two zones were accepted by the City prior to the passage of Proposition 218 (*The Right to Vote on Taxes Act*) in 1996. Historically, LMD Zones 5 and 10 have exhibited negative fund balances of approximately \$41,437 and \$51,118 respectively, resulting in substantial funding from the general fund to supplement normal maintenance procedures. The cost of water for these two zones in FY 14/15 is estimated at \$87,000, which is equivalent to approximately 94% of the negative fund balance.

Per City Council's approval, staff has solicited the services of Architerra Design Group (Architerra) to prepare a landscape master plan for the complete redesign of the Tierra Rejada Road corridor. In addition, as a special consultant to the design team, Architerra has enlisted the assistance of Robert (Bob) Perry of Perry and Associates Collaborative. Bob Perry is a recognized expert in the field of drought tolerant and California native planting design, as well as sustainable landscape development. To date, staff has met several times with Architerra on site to review the existing conditions

and to coordinate design efforts. Staff anticipates that a final concept plan will be available for City Council review on July 1, 2015.

In addition to the renovation plans for the Tierra Rejada Road streetscape, staff feels that it will be necessary to initiate a community outreach program to inform the public of the future plans for the Tierra Rejada Road corridor, as well as the decline of the Coast Redwoods that make up the majority of the urban forest along Tierra Rejada Road. Many of the Coast Redwoods that were planted along Tierra Rejada Road have slowly been in decline due to localized environmental stress conditions and the presence of a fungal disease commonly called Sequoia canker. The canker disease is the result of the pathogen *Botryodiplodia spp.*, a fungus that infects trees that are exposed to environmental stress or weakened by site conditions. Unfortunately, most trees infected with the canker eventually die and at this time, a cure for this disease has not been identified.

Currently staff has taken an aggressive approach to water conservation within our City parks, LMD's and various City properties. In an attempt to get a head start on the 32% water reduction goal, all irrigation controllers have been reduced 50% since the Governor signed the Order earlier this year. Staff has also completed several minor projects to lower water use. For instance, irrigation heads at the post office parking lot were replaced with low precipitation nozzles. Staff anticipates that this work will reduce the overall water use at this location by approximately 20%. In addition, the turf was recently removed at several City owned properties on Moorpark Avenue, as well as on High Street. In 2013 and 2014 the Helping Hands volunteers assisted staff with the conversion of approximately 30,000 s.f. of turf to native landscaping at Mammoth Highlands Park. On April 25, 2015, the Helping Hands organization assisted staff with the conversion of approximately 27,000 s.f. of turf at Glenwood Park and 6,700 s.f. of turf at Country Trail Park. Earlier this year, City staff removed approximately 21,000 s.f. of turf at Tierra Rejada Park and installed a decomposed granite walking path and exercise equipment. In 2010, staff initiated a mulching program in the LMD's and City parks that is implemented by the landscape maintenance contractors. Staff estimates that the overall reduction in water use is equal to approximately 5% of the water budget in the areas that it is installed. On April 25, 2015, staff initiated a free mulch program for residents of Moorpark. Due to the success of the program, staff has scheduled a quarterly program to offer free mulch to City residents. The mulch giveaway will be offered the second Saturday in January, April, July, and October.

DISCUSSION

The City of Moorpark is one of VCWWD's largest water customers and utilizes approximately 10% of VCWWD's total water production. As such, the City's efforts to reduce water will have a large impact on the ability of VCWWD's customers as a whole to meet the water conservation standard. However, in order to meet the reduction

target, the City needs to implement additional measures to further reduce water use immediately.

The adopted City of Moorpark Mission Statement, Priorities, Goals, and Objectives for FY 2015/2016 contains the following departmental objective that coincides with water conservation and the need to reduce consumption:

IV. A. 31. *Develop a Water Conservation Policy and Implementation Plan to meet mandatory water use restrictions for parks, facilities, and City administered maintenance districts to include turf reduction, changes to the Landscape Design Standards and Guidelines to assist private efforts, and funding recommendations for City activities by September 30, 2015.*

In response to the City Council's desire to develop a Water Conservation Policy and Implementation Plan, staff has prepared a Drought Action Plan to guide the City's efforts in meeting the conservation standard mandated by SWRCB. The Drought Action Plan contains water conservation practices and associated action items. Several of the items need to be implemented immediately in order for the City to achieve a 32% overall reduction in water use by the February 2016 deadline established by SWRCB. These items are summarized below:

- Action Item A.1.a – Retrofit Existing Facilities with low water use appliances and fixtures – estimated cost: \$59,000
- Action Item A.1.b – Retrofit Park Restrooms with low water use fixtures – estimated cost: \$3,000
- Action Item A.1.d – Reduce operating hours of city owned and maintained fountains
- Action Item A.2.a – Implement turf conversion projects at all City parks – estimated cost, phase I: \$1,600,000 of which 100% will come from the General Fund
- Action Item A.2.b – Renovate planters and turf areas in Landscape Maintenance Districts (LMD's) and at City facilities with California native plants or other low water use landscaping – estimated cost, phase I: \$1,500,000 of which 57% or \$856,663 will be funded by the General Fund
- Action Item A.4.a – Implement and publicize a broken irrigation reporting system for City facilities, parks and LMD's – estimated cost: staff effort only
- Action Item B.1.a – Homeowner's Association (HOA) outreach - estimated cost: staff effort only
- Action Item B.1.b – Fast Track Landscape Renovation Approvals – estimated cost: \$35,000
- Action Item B.3.a – Community Outreach Campaign – estimated cost: \$2,000

Several of the summarized items will require considerable expenditure of funds and staff time to implement and/or create new policies and procedures outside of what's currently approved. These items are discussed in detail below. Please note that the Metropolitan Water District (MWD) has rebate programs available for some of the drought action items. As of the writing of this staff report, the rebate programs are being modified. Rebate amounts discussed in the summaries below are subject to this modification and may not be available depending on the outcome of the program changes.

Action Items A.1.a & b - Existing Plumbing Fixture Retrofits

Staff is recommending retrofitting the existing plumbing fixtures at City facilities with low flow toilets, waterless urinals, and solar-powered automatic faucets. Staff has identified 13 urinals, 32 faucets and 9 toilets to be retrofitted. The estimated cost, including installation and contingency funds for the retrofits is \$59,000. Currently, rebates for these retrofits are \$100/toilet and \$200/urinal for a total of \$3,500 and a net cost of \$55,500.

Staff is recommending retrofitting two urinals at Arroyo Vista Community Park on a trial basis to test the use of waterless urinals in a park application. The estimated cost, including installation and contingency funds for the retrofits is \$3,000. Rebates for these retrofits are \$200/urinal for a total of \$400 and a net cost of \$2,600. If the trial is successful, staff will return to City Council to obtain funding to retrofit all urinals at City parks to waterless urinals.

Staff will obtain competitive bids for this work and will return to the City Council at a later date with a detailed costs analysis for this work. Due to the age of many City facilities, staff anticipates substantial costs to retrofit aged plumbing systems.

It is not possible to estimate the overall water savings due to retrofitting existing plumbing fixtures, as use of these fixtures is variable and dependent on many factors. However, low flow toilets will reduce water use by approximately 30%, as compared to existing toilets installed in the City buildings and parks and staff anticipates a 25% reduction in water use due to the installation of solar powered faucets. Solar faucets are motion activated and shut off immediately after use.

Action Item A.1.d. - Reduce operating hours of city-owned and maintained fountains.

The two fountains that are maintained by the City are located at the Veteran's Memorial and the corner of Tierra Rejada Road and Mountain Trail. Although both fountains use recirculating water systems and are not covered under the SWRCB's emergency regulations, staff feels that reducing the operating hours to six hours per day at each of the fountain locations will reduce water loss due to evaporation. Staff does not feel that

it would be appropriate to completely shut off the fountains, as running the fountains for a limited period of time during the day will help to minimize long term maintenance costs. Generally, the recirculation pumps and plumbing systems need to be utilized on a regular basis to keep the system running and operational. When plumbing systems are shut down for lengthy periods of time, these systems tend to break down and may require extensive repairs in the future.

Action Item A.2.a - Turf Conversion Projects (Parks)

Phase I: Staff has prepared conceptual plans for each City park that outlines the turf areas proposed for removal and conversion to wood chips. The plans take into consideration usage at the parks by various sports leagues and other recreational opportunities. Staff's concept is to remove turf areas that have very limited or no recreational value and convert these areas to other uses, such as planters with California native or drought tolerant plant species, trails or other park amenities. The approximate percentage of turf conversion at each site is summarized below and outlined in Attachment 1:

Turf conversion (parks)					
Park	Turf Conversion (s.f.)	Turf Conversion Acreage	Total Turf (s.f.)	Total turf Acreage	Turf Reduction
Campus Canyon Park	50,200	1.2	205,500	4.7	24%
Campus Park	45,000	1.0	127,000	2.9	35%
College View Park	70,600	1.6	135,900	3.1	52%
Community Center Park	21,600	0.5	57,500	1.3	38%
Country Trail Park	149,600	3.4	184,000	4.2	81%
Glenwood Park	83,400	1.9	182,600	4.2	46%
Mammoth Highlands Park	69,800	1.6	190,000	4.4	37%
Miller Park	47,000	1.1	200,000	4.6	24%
Mountain Meadows Park	58,600	1.3	254,000	5.8	23%
Peach Hill Park	76,100	1.7	302,000	6.9	25%
Poindexter Park	20,800	0.5	163,000	3.7	13%
Tierra Rejada Park	131,921	3.0	235,689	5.4	56%
Veteran's Memorial Park	1,630	0.0	1,630	0.0	100%
Virginia Colony Park	17,000	0.4	38,000	0.9	45%
TOTAL	843,251	19.4	2,276,819	52.3	37%

The total acreage of turf proposed to be removed is approximately 19.4 acres, representing 37% of all the turf acreage in the various City parks listed above. These recommended turf conversions are in addition to turf removal that's already taken place at the parks. It's important to note that the plans staff has prepared are conceptual in

nature and that the percentage of turf removal could fluctuate based on actual field conditions when the work starts. Staff's goal is to maximize the conversion boundary by following parameters established by the layout of the existing irrigation systems. This will reduce additional costs of modifying the irrigation at a later date. As such the actual turf removal boundaries may need to be adjusted as the work commences. The estimated cost to remove the turf, retrofit the irrigation systems to maintain existing trees, and spread wood chips is estimated at approximately \$1.25/s.f. to \$2.00/s.f., depending on the complexity of the work. At the worst case scenario, the total cost for this work would be equivalent to approximately \$1,686,502. Currently, the City is eligible for rebates from the Metropolitan Water District (MWD) to offset a portion of these costs. As of May 26, 2015, the rebates for turf removal through MWD is \$2.00/s.f. up to 3,000 s.f. of turf area, \$1.00/s.f. for greater than 3,000 s.f. of turf area, with a limit of \$50,000 per property. The rebates for this work will total approximately \$569,660, which is equivalent to 34% of the cost to convert the turf to wood chips and retrofit the irrigation systems. The total cost to the City is approximately \$1,116,842 based on a turf conversion cost of \$2.00/s.f. It is important to note that the rebates are not guaranteed and applications are being processed and approved for rebate reservations on a first come, first serve basis until the funding runs out. Staff will obtain competitive bids for this work and will return to the City Council at a later date with a detailed costs analysis for this work.

The initial work required during this phase of the work will include documentation and the submittal of applications to MWD for the turf conversion rebates. After this has been completed, the irrigation systems will be turned off and/or modified in order to maintain the City's urban forest, and the grass will be allowed to die. Once the rebates are approved, the actual removal of the turf and placement of wood chips will begin. Due to the size of this project, staff is recommending hiring a landscape contractor to remove the turf and convert the area to wood chips or other landscape material.

Monte Vista Park has not been included in the above calculation due to the fact that this park already consists of native and drought tolerant plant species. A small turf area exists on park property adjacent to Laurelhurst Road, which is maintained by the Steeple Hill HOA. Staff will work with the HOA to remove this turf area. In addition, Walnut Acres Park has already been designed with the goal of minimizing irrigation water use. The turf area within this park is limited to a small recreational area consisting of Bermuda turf, the plant material consists primarily of California native plant species and the irrigation system has been installed with low volume spray heads, in addition to the many sustainable features designed into the park such as below grade storm water infiltration systems and the use of permeable paving.

It should be noted that Villa Campesina and Arroyo Vista Community Park (AVCP) utilize well water and are not subject to the 32% reduction mandated by the State and are not included in the above calculation. However, in 2014, the Fox Canyon Groundwater Management Agency adopted Emergency Ordinance E (Ordinance), in

response to Governor Brown's January 2014 proclamation declaring a drought emergency in the State of California. The Ordinance sets Temporary Extraction Allocations (TEA) based on an operator's average annual reported extractions. The Ordinance called for a phased reduction in groundwater extractions of 20% beginning on July 1, 2014. If an operator fails to reduce their groundwater extractions by the prescribed amount, they will be subject to an extraction surcharge for the amount of water that was extracted over the TEA. The first reduction will reduce well extractions by 10%. Further reductions of 5% will occur every 6 months thereafter, arriving at the full reduction of 20% in January 1, 2016.

The City of Moorpark's TEA has been established at 66.0 acre feet of water, resulting in a ground water allocation of approximately 53 acre feet in 2016 for operations at AVCP. The average well water use during a normal year is approximately 72 acre feet/year. However, over the last several years, the City used approximately 100 acre feet of water to irrigate the sport fields at AVCP due to turf renovation practices. The City Council approved a water budget of \$50,000 for FY 2015/16 to accommodate for overages in water use at AVCP. It should be noted that the cost to provide irrigation water at AVCP through a standard potable water source provided by VCWWD is estimated to be approximately \$275,000 annually at current water rates.

In order to fully eliminate future water costs at AVCP, the City would need to reduce well water use by approximately 50%. On February 5, 2014, staff brought to the City Council's attention the fact that the pump system for well water at AVCP was not only inefficient, due to the agricultural nature of the pump, but was also very difficult to manage the turf renovation practices started in 2011. The City Council approved staff's recommendation to install a variable frequency drive (VFD) system to help alleviate many of the irrigation system inefficiencies. In addition to a preferred turf management system, staff estimated that this system would save a minimum of 5% in irrigation water use. Combined with ETo based irrigation controllers, staff is confident that a 15% reduction in well water use can be achieved. Staff also believes that approximately 10% of the turf can be removed without any impacts to the overall recreational benefits at AVCP. Staff will prepare a plan to repurpose turf areas at both AVCP and Villa Campesina and incorporate them into the loop trail project that is scheduled to start construction during the fall of 2015. In addition to the water saving techniques previously mentioned, approximately 25% of the turf athletic fields would need to be removed to avoid future water costs. However, staff believes that the benefits of the turf fields from a recreational perspective outweigh the newly imposed costs of well water and does not recommend removing athletic fields at this time. Staff will evaluate the well water use at AVCP in 2016, and will prepare a follow up report for the City Council at that time. It should be noted that the turf at AVCP already consists of Bermuda turf, which goes dormant during a typical year and only requires nine months of irrigation during normal seasonal temperatures.

Phase II: Consists of the preparation of plans to replace converted turf areas with drought tolerant and/or California native plant species, or other recreational opportunities for review by the Parks and Recreation Commission and the City Council, prior to the future development of these areas. Staff will return to the City Council to summarize the costs associated with Phase I of this work and will request additional funding for future phases if required at that time.

Action Item A.2.b – *Landscape Maintenance Districts and City Facility Landscape Renovations*

LMD Zone 7 (LA Ave – Shasta Ave to Gabbert Road), , LMD Zone 8 (Shadyridge Buffer Zone), LMD Zone 12 (Carlsberg Specific Plan), LMD Zone 15 (Toll Brothers Tract 4928), LMD Zone 16 (Cabrillo Tract 5161), LMD Zone 18 (Colmer Tract 5307), and LMD Zone 22 (Pardee Tract 5045) have also been installed with high to moderate water use plant types and staff feels that there are opportunities to reduce water consumption within these LMD's, that can further help us meet the conservation standard, primarily the conversion of turf area to planters consisting of California native plant material.

Similar to the turf conversion projects within the City parks, staff is recommending the renovation of the landscaping within the Landscape Maintenance Districts and at City facilities. Staff has prepared a phased approach that will allow immediate water savings to be achieved while allowing time to design a drought tolerant or low water use plant palette for the designated renovation areas. Phase I includes removal of ornamental and high water use plant material, the removal of all turf areas, modification of the irrigation to maintain the health of affected trees, and placement of wood chips.

As mentioned previously, in addition to the need to remove turf at with all the LMD areas, the majority of the Tierra Rejada Road streetscape consists of 'red fescue' a high water use groundcover, similar to turf. The Tierra Rejada Road streetscape lies within LMD Zone 2 (Steeple Hill Area Tract 2865), LMD Zone 5 (Pheasant Run Tracts 3019 & 3525) and LMD Zone 10 (Mountain Meadows Planned Community). At this time staff is uncertain whether or not 'red fescue' will qualify for rebates under the guidelines established by MWD.

Staff has identified the areas for removal which are summarized on the following page:

Turf Conversion - Landscape Maintenance Districts	Turf Conversion (s.f.)	Turf Conversion Acreage	Turf Reduction
* Zone 2 (Steeple Hill Tract 2865)	147,000	3.4	100%
* Zone 5 (Pheasant Run Tract 3019 & 3525)	62,400	1.4	100%
Zone 7 (LA Ave - Shasta to Gabbert)	7,500	0.2	100%
Zone 8 (Shadyridge Buffer Zone)	147,000	3.4	100%
* Zone 10 (Mountain Meadows)	202,000	4.6	100%
Zone 12 (Carlsberg Specific Plan)	1,800	0.0	100%
Zone 15 (Toll Brothers Tract 4928)	83,000	1.9	100%
Zone 16 (Cabrillo Tract 5161)	1,200	0.0	100%
Zone 18 (Colmer Tract 5307)	2,400	0.1	100%
Zone 22 (Pardee Tract 4045)	90,000	2.1	100%
Citywide Zones	1,200	0.0	100%
TOTAL:	745,500	17.1	100%
* Conversion consists of the removal of 'red fescue' - staff is uncertain at this time if this plant material will qualify for rebates under the current guidelines established by MWD			
Turf Conversion - Facilities	Turf Conversion (s.f.)	Turf Conversion Acreage	Turf Reduction
Ruben Castro Human Services Center	4,500	0.1	100%
Moorpark Public Services Facility	400	0.0	100%
Police Services Center	3,800	0.1	100%
Miscellaneous City Properties	4,500	0.1	100%
TOTAL:	13,200	17.4	100%

The estimated cost for Phase I of the identified renovations is \$1,500,000. Turf rebates are available for this work, however, each of the LMD zones has a variable number of water meters, between 1 to 15 per site, each with an assigned address. Staff needs to obtain additional information from the rebate program staff about how the rebates will be calculated in the LMD zones. Staff will calculate the rebates and return to City Council in July with the net cost of these improvements. Phase II will consist of preparation of plans for replacement of the removed landscaping with drought tolerant and low water use plants. Staff will return to City Council for additional funding for this Phase.

Shadyridge Buffer Zone (Buffer Zone): The Buffer Zone is located at the western terminus of Shadyridge Drive within Tract 4341, the Belmont housing tract. It is bounded on the south and west by the Home Acres neighborhood and on the north by the Peach Hill Wash, a flood control channel managed by the Ventura County Flood Control District (VCFCD). The open space area consists of two passive turf areas without recreation amenities, shade trees, perimeter shrub planters, a paved emergency access road that travels in an east/west direction and a paved emergency /maintenance access road that travels north/south between the vehicular entrance on Shadyridge

Drive and the flood control channel. The entire site is fenced to limit vehicular traffic and on-site parking is not provided. Vehicular access gates are provided for emergency access and for City and County vehicles. In addition, pedestrian gates are provided to allow residents the opportunity to travel through the Buffer Zone during daylight hours. The Buffer Zone is locked between 10 p.m. and 6:00 a.m. daily.

The Buffer Zone was approved in order to create an open space buffer between the Mountain Meadows Planned Community and the unincorporated community of Home Acres. The Mountain Meadows Planned Community was approved by the County of Ventura prior to the City's incorporation in 1983 and encompasses over 850 acres of Southern Moorpark. Condition 17A of Tract 4341, Mountain Meadows West Village, stipulated that the developer shall offer for dedication to the City of Moorpark that area shown as lots 62 through 70 for the September 28, 1987 Vested Tentative Tract Map 4341 for the purpose of providing a park/buffer zone between Tracts 4340, 4341, 4342 and the Home Acres neighborhood.

The means to manage the Buffer Zone and fund the initial construction and continued maintenance of this area was created through a Joint Powers Agreement (JPA) between the City of Moorpark and the County of Ventura, which was executed in 1989. The JPA stipulates that the City shall administer the JPA and that the City and County shall, pursuant to the provisions of the Landscaping and Lighting Act of 1972, initiate the formation of an Assessment District to provide for the funding, improvement and maintenance of the Buffer Zone. In addition, pursuant to condition 17A of Tract 4341, the assessments levied by the District shall be borne 50% by the property owners of Tract 4340, 4341 and 4342 and 50% by the property owners of the Home Acres community. A special three-year assessment was levied to fund the construction of the Buffer Zone. The JPA also stipulates that the County shall not be liable for any of the costs or funding associated with the maintenance of the Buffer Zone, or compensation for damages to persons or property.

In addition to establishing a means to fund the construction and long term maintenance of the Buffer Zone, the JPA also established a Community Park Joint Development Coordinating Committee (JPA Committee) to advise the City, the County, the Mountain Meadows Homeowners Association and the Home Acres Neighborhood Council on any matters associated with the funding, improvement, or maintenance of the Buffer Zone. The JPA Committee consists of two City Council members, the County Supervisor from the Fourth District, a representative of the Mountain Meadows Homeowners Association and a representative from the Home Acres Neighborhood Council. During the design phase of the Buffer Zone, the JPA Committee was the liaison between the project designers and the homeowners within Tracts 4340, 4341, 4342 and the Home Acres neighborhood. In December, 1995, the landscape improvements and construction of the Buffer Zone were completed and accepted by the City of Moorpark.

The City of Moorpark's Landscape and Lighting Maintenance Assessment District 84-2 (LMD AD84-2) was formed in 1984 to provide funding for public street lighting and parkway/median landscape maintenance and improvement expenses through the levy of benefit assessments. In addition, Landscape maintenance, servicing and improvement costs for AD84-2 for unique Zones of Benefit are allocated to all benefiting properties within each given zone of benefit. The Buffer Zone was established as a Zone of Benefit to the residential areas within Tracts 4340, 4341, 4792 and a portion of Tract 4342. The Buffer Zone is known as Landscape Maintenance Assessment District Zone 8 (LMD Zone 8).

AD84-2 assessments were formed prior to the passage of Proposition 218, The Right to Vote on Taxes Act, which was approved by the voters of California on November 6, 1996, and is now Article XIIC and XIID of the California Constitution. Proposition 218 provides for benefit assessments to be levied to fund the cost of providing services, improvements, as well as maintenance and operation expenses to a public improvement which benefits the assessed property.

The 498 lots within Tract No. 4340, 4341, 4792 and a portion of Tract 4342 are assessed \$15.40 for 50% of the maintenance costs for the Buffer Zone. The remaining 50% of such costs are recovered via an assessment upon 201 lots in the Home Acres area, in the amount of \$37.69 per lot. These costs have not been increased since LMD Zone 8 was funded in FY 1996/97 due to the provisions of Proposition 218. Generally, the City may increase the annual District assessments based upon increases in the Consumer Price Index (CPI), not to exceed 3%. However, a cost of living adjustment (COLA) was not established with AD84-2 in 1984, and currently, the only means to increase the annual assessment is through formation of another benefit assessment district.

Since FY 2008/09, the Buffer Zone maintenance fund (2308) has had a negative fund balance. This is primarily due to rising maintenance costs and the inclusion of items such as staff salaries, benefits and cost plan charges associated with administering the Zone 8 maintenance contract and assessment fund. In years prior, these items were not included in the annual maintenance costs associated with the Buffer Zone. However, a regular distribution of these costs is necessary to accurately distribute the costs associated with administering the LMD. The FY 2014/15 year end expenditures for LMD Zone 8 is estimated at approximately \$32,431. As mentioned previously, the 498 lots within Tract No. 4340, 4341, 4792 and a portion of Tract 4342 are assessed \$15.40 annually and the 201 lots in the Home Acres area are assessed \$37.68 annually. This assessment will generate approximately \$15,243 for the maintenance of LMD Zone 8. However, this assessment will only contribute approximately 45% of the overall operating budget for FY 2015/16 and will require approximately \$18,682 of funding contributions from the General Fund in FY 2016/17. The Buffer Zone currently operates under an annual water budget of approximately \$17,650, which is equivalent

to approximately 116% of the total funding generated by the annual property assessment.

In an effort to reduce maintenance costs and mitigate the impact of rising water rates, staff has decreased the Scope of Services in the LMD maintenance contract several times over the last several years. Maintenance activities, such as turf aeration have been removed, and many regular maintenance activities have been reduced, such as fertilization, weed abatement, and tree maintenance. However, staff feels that further action should be taken to reduce the maintenance costs associated with LMD Zone 8 and lessen the impact on the General Fund.

Staff recommends removing the section of turf on the north side of the emergency access road, reducing the turf area on the south side of the access road, and replacing these areas with wood chips, shade trees and drought tolerant plant material. Currently, the total turf area within the Buffer Zone is approximately 1.3 acres in size. The elimination of the turf areas as proposed will reduce the total turf area by approximately 84%, and will save approximately \$15,000/year in maintenance and current water costs (see attachment 1).

Due to the fact that the only parking available is within the Belmont housing tract or adjacent Home Acres neighborhood, staff does not feel that active recreational activities should be planned for this area.

Action Item B.1.b – Fast Track Landscape Renovation Approvals

As a part of the drought action plan, staff is recommending implementing a fast-track landscape renovation approval process that encourages HOA's and commercial property owners to renovate their landscapes. It is staff's intent to prepare a submittal checklist to be provided to each applicant that would assist the applicant with preparing plans that meet the City's goals of water conservation and aesthetic value. The Community Development Director would be authorized to review and approve landscape renovation plans that are converting high water use landscapes to native and low water use landscapes. Under the process, a deposit of \$1,000 would be taken. The City would provide three hours of staff time and one inspection, at no charge. Any additional hours or inspections would be charged at the applicable billing rates and charged against the deposit. The applicant will have 120 days to complete the work or forfeit any remaining portion of their deposit. This fast track process would apply to all landscape renovation projects that are required to adhere to the City's adopted Landscape Design Guidelines and Standards, as amended and updated. The estimated cost for this process will depend on the number of applications received for renovation. To estimate the cost, staff used the following assumptions:

Applications (using # of HOA's)	48
Community Development Director (plan review)	0.5 hours @ \$200
Parks and Recreation Director (Plan review and inspection)	3.5 hours @ \$180

Based on these assumptions, the estimated cost is \$35,040. This cost could be higher if significantly more applications are submitted for Landscape Renovation Review.

Action Item B.3.a - Community Outreach

Community outreach is an important component to reaching the water conservation standard, highlighting the City's own conservation efforts and keeping the residents informed. Concurrent with this project, staff is preparing a community outreach campaign to encourage water conservation and educate the residents on why "Brown is the new Green!". Staff is hiring a graphic designer to prepare a theme for the campaign. The cost is minimal but staff feels the impact will be large and will help assist with the public's acceptance of the literal changing of landscape in the City. It is also felt that publicizing the City's efforts to conserve water will influence the community to conserve water and review their own water use more closely.

FISCAL IMPACT

The estimated total cost for all of the identified Drought Action Items is \$3,199,000 of which 76% or \$2,420,663 would come from the General Fund. The City is currently eligible for rebates which would reduce the costs to the City. At this time the total available rebates have not been calculated. In addition to the rebates, staff will be analyzing ways to reduce the costs of each of the drought action items through use of City staff and volunteer organizations for the turf conversion projects. Staff will return with a more detailed analysis, including available rebate amounts, and recommendations for funding the Drought Action items upon formal approval of the Drought Action Plan.

STAFF RECOMMENDATION

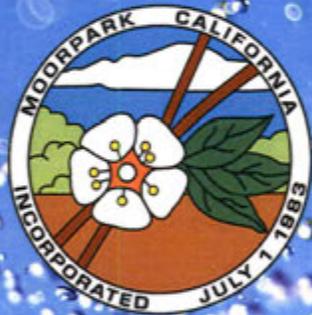
Consider Drought Action Plan and provide direction with formal adoption to be scheduled for July 1, 2015.

Attachments:

1. Drought Action Plan
2. Turf Conversion
3. LMD Conversion – Shady Ridge Buffer Zone

**CITY OF MOORPARK
DROUGHT ACTION PLAN**

**DRAFT
JUNE 2015**



**Prepared by:
Parks, Recreation and
Community Services Department**

A. WATER EFFICIENCY IN CITY FACILITIES, PARKS AND LANDSCAPE AREAS

1. USE WATER EFFICIENTLY

Enacting procedures to assess, maintain, repair, and retrofit existing plumbing fixtures, pipes, and irrigation systems in all City buildings, parks and facilities is critical to efficient water use.

Drought Action Items:

a. Retrofit Existing Facilities with Low Water Use Appliances and Fixtures.

Evaluate all City facility restrooms and kitchens and retrofit with low water use toilets, waterless urinals, hands free faucets and/or flow restrictors, and water efficient appliances such as dishwashers, where applicable.

Estimated Cost: \$59,000

b. Retrofit Park Restroom Facilities with Low Water Use Fixtures.

Evaluate all park restroom facilities and retrofit with low water use toilets, waterless urinals, hands free faucets and/or flow restrictors, where applicable.

Estimated Cost: TBD

c. Install Weather Based Irrigation Controllers and Drip Irrigation.

Install weather based irrigation controllers and retrofit irrigation systems with either drip irrigation components or spray nozzles with low precipitation rates in all landscaped areas at all City facilities, parks, and landscape maintenance districts.

Estimated Cost Weather Based irrigation controllers:\$275,000

Estimated Cost Irrigation System Modification: TBD

d. Reduce Operating Hours of City-maintained fountains.

Reduce the operating hours of city owned and maintained fountains to six hours per day to reduce water use due to water evaporation and refilling the fountains, while minimizing long term maintenance costs.

2. REDUCE IRRIGATED LANDSCAPING

Outdoor water use accounts for between 30% and 50% of water use, depending upon the type of material being irrigated. Enacting programs and procedures to

DRAFT – DROUGHT ACTION PLAN

reduce the amount and type of irrigated landscaping is critical to reducing overall water use.

Drought Action Items:

a. Implement Turf Conversion Projects at all City Parks.

Evaluate all parks to identify areas for turf conversion. Emphasis will be placed on removal of turf that has very limited or no recreational value. Care will also be taken to maintain the health of the urban forest during turf conversion activities. When turf conversion and irrigation modification take place, drip irrigation will be used around trees to ensure their water needs are met. Turf conversion will generally encompass two phases.

Phase 1: Identify areas for conversion, turn off the water, remove or modify the irrigation, and use bark mulch in the area to be converted.

Estimated Cost: \$1,600,000

Phase 2: Evaluate converted areas to determine whether they can be used for additional recreational opportunities or amenities such as trails, sport courts, playgrounds etc. or whether the area should be planted with native or low water use plants.

Estimated Cost: Varies, TBD

b. Renovate Planters and Turf Areas in Landscape Maintenance Districts (LMD's) and at City Facilities with California Native Plants or other Low Water Use Landscaping.

Evaluate planters and turf areas at City facilities and in the LMD's for re-design with California native plants or other low water use landscaping. The LMD's generally consist of median islands and streetscapes within the public right-of-way and other designated areas maintained by the City. Maintenance of the urban forest is important during these activities. Drip irrigation is to be placed around all trees to ensure their water needs are met. Renovation activities will encompass two phases:

Phase 1: Remove high water use plantings and turf areas, modify irrigation to maintain tree health, and cover with bark mulch.

Estimated Cost: \$1,500,000

Phase 2: Hire a landscape architect to re-design the designated areas with a drought tolerant or low water use plant palette.

Estimated Cost: Varies, TBD

3. RECYCLED WATER USE

Use of recycled water reduces demand for potable water. Under State Water Code Section 13550 et. seq., the use of potable water for non-potable uses is a waste or unreasonable use of water if recycled water is available. Water used in parks or landscape areas is identified as a wasteful or unreasonable use of potable water. Enact programs and procedures that work to increase use of recycled water in areas that currently use potable water and are identified as a wasteful or unreasonable area to use potable water.

Drought Action Items:

- a. Work with Ventura County Waterworks District on Provision of Recycled Water to City Parks and Landscape Maintenance Districts.

Currently, all available recycled water allocation provided by the Ventura County Waterworks District is being utilized. Staff will work with the District on plans for increasing recycled water amounts and how the City can access the increased allocation.

Estimated Cost: Staff effort

- b. Recycled Water Infrastructure for Parks and Landscape Maintenance Districts.

Evaluate logistics and costs to provide recycled water infrastructure to City parks and landscape maintenance districts

Estimated Cost: Staff effort

4. COMMUNITY REPORTING

Enlisting the public’s help to report broken sprinklers and pipes in Landscape Maintenance Districts, City facilities and parks adds to the City’s monitoring and response capacity and saves water that otherwise would be wasted. Creating and maintaining community reporting systems will assist the City’s efforts in monitoring our own water use.

Drought Action Items:

- a. Irrigation Problem Reporting System.

Work with Information Systems staff to implement and publicize a broken pipe reporting system. Evaluate setting up a dedicated phone line for residents to report broken water systems and publicize the use of the “Report” program available on the City’s website.

Estimated Cost: Staff effort

B. WATER CONSERVATION IN THE COMMUNITY

1. ENCOURAGE LOW WATER USE LANDSCAPE RENOVATIONS

An important aspect of water conservation in the community is adopting City procedures and programs that encourage conversion of landscaping to native and low water use landscaping.

Drought Action Items:

a. Homeowner's Association (HOA) Outreach.

Schedule a meeting with the Homeowner's Associations and representatives to discuss the City's views on drought tolerant landscape renovations and to educate them on the renovation approval process. Encourage the HOA's to adopt procedures and processes that support individual homeowner's in renovating their landscape to native and low water use landscaping.

Estimated Cost: Staff effort

b. Fast-Track Landscape Renovation Approvals.

Implement a fast-track landscape renovation approval process that encourages landscape renovations. Prepare a submittal checklist to be provided to the applicant that would assist the applicant with preparing plans that meet the City's goals of water conservation and aesthetic value. The Community Development Director would be authorized to review and approve landscape renovation plans that are converting high water use landscapes to native and low water use landscapes. Under the process, a deposit of \$1,000 would be taken. The City would provide three hours of staff time and one inspection, at no charge. Any additional hours or inspections would be charged at the applicable billing rates and charged against the deposit. The applicant will have 120 days to complete the work or forfeit any remaining portion of their deposit. This fast track process would apply to all landscape renovation projects that are required to adhere to the City's adopted Landscape Design Guidelines and Standards, as amended and updated.

Estimated Cost: \$35,000

2. LANDSCAPE DESIGN GUIDELINES

Landscape Design Standards and Guidelines (Guidelines) assist in the preparation of landscape plans while incorporating water conservation design aesthetics and landscape consistency throughout the City. Maintaining up-to-date landscape design guidelines is important to incorporate the latest trends in water efficient landscape and the most current standards of the State's Model Water Efficient Landscape Guidelines. In 2009, the City adopted Landscape

Design Standards and guidelines. The City’s Guidelines were last updated in 2012 to include Artificial Turf as an allowable landscape material.

Drought Action Items:

a. Modifications to Landscape Design Guidelines.

Modify the Guidelines to remove turf as an acceptable landscape material in non-recreational landscape areas within new residential, commercial and industrial developments and include the requirements of the Emergency Regulation of the State Water Resources Control Board, as it relates to the Landscape Design Guidelines.

Estimated Cost: Staff effort

b. Reduce Runoff and Promote Groundwater Recharge.

Include design criteria in development projects that use natural systems to minimize water waste in parking lots, playfields, parks, residential, and commercial and residential projects. Criteria should encourage the use of permeable hardscapes, bio-swales, and other natural features to promote groundwater recharge.

Estimated Cost: Staff effort

3. COMMUNITY OUTREACH

Community outreach is an important component to reaching the water conservation standard. In addition, changing the landscape design aesthetic of the City requires an effective campaign to inform residents about the status and implementation of water conservation projects and prepare them for the “new look” of landscape design around the City.

Drought Action Items:

a. Community Outreach Campaign, “Brown is the new Green”.

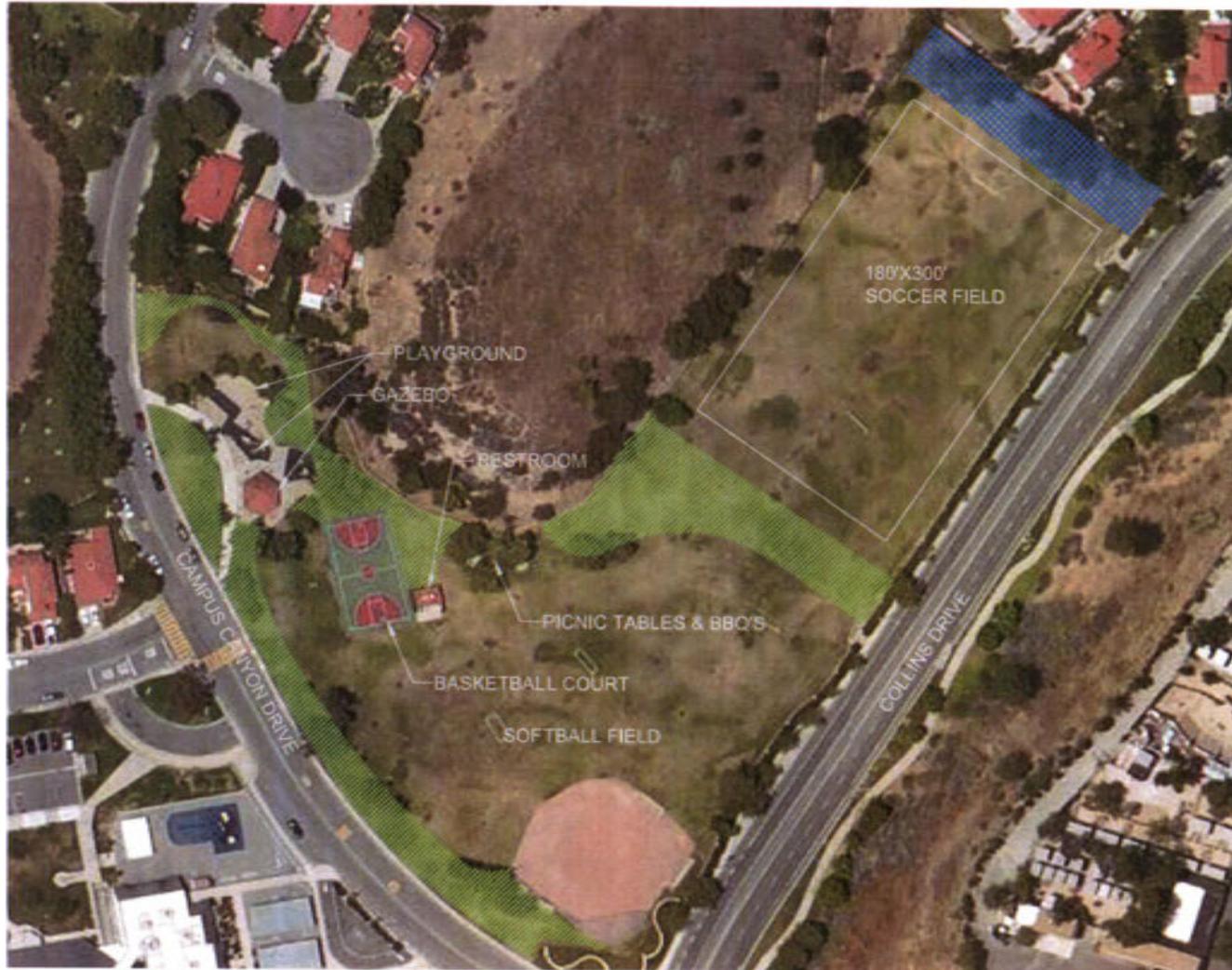
Design and implement a community outreach campaign, including branding. This campaign will be designed to keep residents up-to-date on the City’s turf conversion activities and educate them on the benefits of modifying ornamental landscape areas to native and drought tolerant plantings, and provide them with information on how they can reduce their water use. A component of the campaign should be partnering with the Waterworks district to assist with the community meeting the 32% conservation standard set by the State Water Resources Control board.

Cost Estimate: \$2,000 for brand design and printed materials



CAMPUS CANYON PARK

PROPOSED TURF CONVERSION PLAN



PHASE I TURF CONVERSION \approx 10,000 S.F. (\pm 0.2 ACRES)
(COMPLETED MAY, 2015)



PHASE II TURF CONVERSION \approx 40,200 S.F. (\pm 0.9 ACRES)

TOTAL TURF CONVERSION \approx 50,200 S.F. (\pm 1.2 ACRES)
(24% REDUCTION)

(EXISTING TURF AREA \approx 205,500 S.F. (4.7 ACRES))

NORTH



SCALE

N.T.S.

DATE

MAY 19, 2015



City of Moorpark
799 MOORPARK AVE
MOORPARK, CA, 93021

ATTACHMENT 2



CAMPUS PARK

PROPOSED TURF CONVERSION PLAN



TURF CONVERSION \approx 45,000 S.F. (\pm 1.03 ACRE)
(35% REDUCTION)

(EXISTING TURF AREA \approx 127,000 S.F. (\pm 2.9 ACRES))

NOTE



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COLLEGE VIEW PARK PROPOSED TURF CONVERSION PLAN



TURF CONVERSION ≈ 70,600 S.F. (±1.6 ACRE)
(52% REDUCTION)

(EXISTING TURF AREA ≈ 135,900 S.F. (± 3.1 ACRES))

NORTH



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DATE

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CIVIC CENTER & COMMUNITY CENTER PARK PROPOSED TURF CONVERSION PLAN



TURF CONVERSION \approx 21,600 S.F. (\pm 0.5 ACRE)
(38% REDUCTION)

(EXISTING TURF AREA \approx 57,500 S.F. (\pm 1.3 ACRES))

NORTH



SCALE

N.T.S.

DATE

MAY 19, 2015

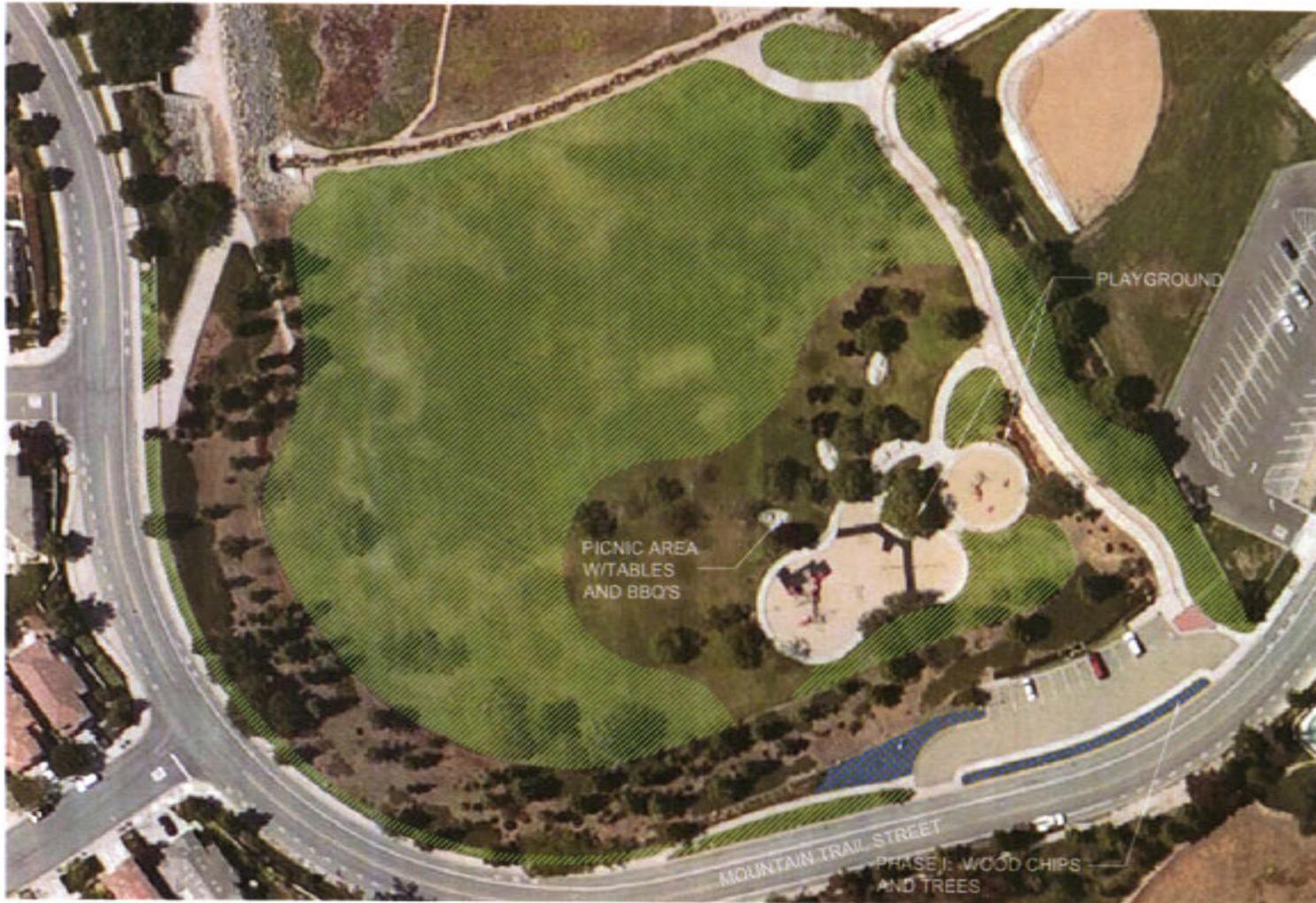


City of Moorpark
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MOORPARK, CA, 93021



COUNTRY TRAIL PARK

PROPOSED TURF CONVERSION PLAN



PHASE I TURF CONVERSION \approx 2,600 S.F. (\pm 0.06 ACRES)
(COMPLETED APRIL, 2015)



PHASE II TURF CONVERSION \approx 147,000 S.F. (\pm 3.4 ACRE)

TOTAL TURF CONVERSION \approx 149,600 S.F. (\pm 3.4 ACRES)
(81% REDUCTION)

(EXISTING TURF AREA \approx 184,000 S.F. (\pm 4.2 ACRES))

NORTH 
SCALE N.T.S.
DATE MAY 19, 2015



GLENWOOD PARK

PROPOSED TURF CONVERSION PLAN



-  PHASE I TURF CONVERSION \approx 42,300 S.F. (\pm 1.0 ACRES)
(COMPLETED APRIL, 2015)
-  PHASE II TURF CONVERSION \approx 41,100 S.F. (\pm 0.9 ACRES)
- TOTAL TURF CONVERSION \approx 83,400 S.F. (\pm 1.9 ACRES)
(46% REDUCTION)
- (EXISTING TURF AREA \approx 182,600 S.F. (\pm 4.2 ACRES))

NORTH 
 SCALE N.T.S.
 DATE MAY 19, 2015



MAMMOTH HIGHLANDS PARK PROPOSED TURF CONVERSION PLAN



 PHASE I TURF CONVERSION \approx 37,800 S.F. (\pm 0.9 ACRES)
(COMPLETED APRIL, 2014)

 PHASE II TURF CONVERSION \approx 32,000 S.F. (\pm 0.7 ACRES)

TOTAL TURF CONVERSION \approx 69,800 S.F. (\pm 1.6 ACRES)
(37% REDUCTION)

(EXISTING TURF AREA \approx 190,000 S.F. (4.4 ACRES))

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MILLER PARK

PROPOSED TURF CONVERSION PLAN



 **TURF CONVERSION ≈ 47,000 S.F. (±1.1 ACRE)**
(24% REDUCTION)

(EXISTING TURF AREA ≈ 200,000 S.F. (± 4.6 ACRES))

NORTH 
SCALE N.T.S.
DATE MAY 19, 2015



MOUNTAIN MEADOWS PARK

PROPOSED TURF CONVERSION PLAN



TURF CONVERSION \approx 58,600 S.F. (\pm 1.3 ACRE)
(23% REDUCTION)

(EXISTING TURF AREA \approx 254,000 S.F. (\pm 5.8 ACRES))

NORTH



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DATE

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PEACH HILL PARK

PROPOSED TURF CONVERSION PLAN



 TURF CONVERSION \approx 76,100 S.F. (\pm 1.7 ACRE)
(25% REDUCTION)

(EXISTING TURF AREA \approx 302,000 S.F. (\pm 6.9 ACRES))

NOTE

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DATE MAY 19, 2015



POINDEXTER PARK PROPOSED TURF CONVERSION PLAN



TURF CONVERSION \approx 20,800 S.F. (\pm 0.5 ACRE)
(13% REDUCTION)

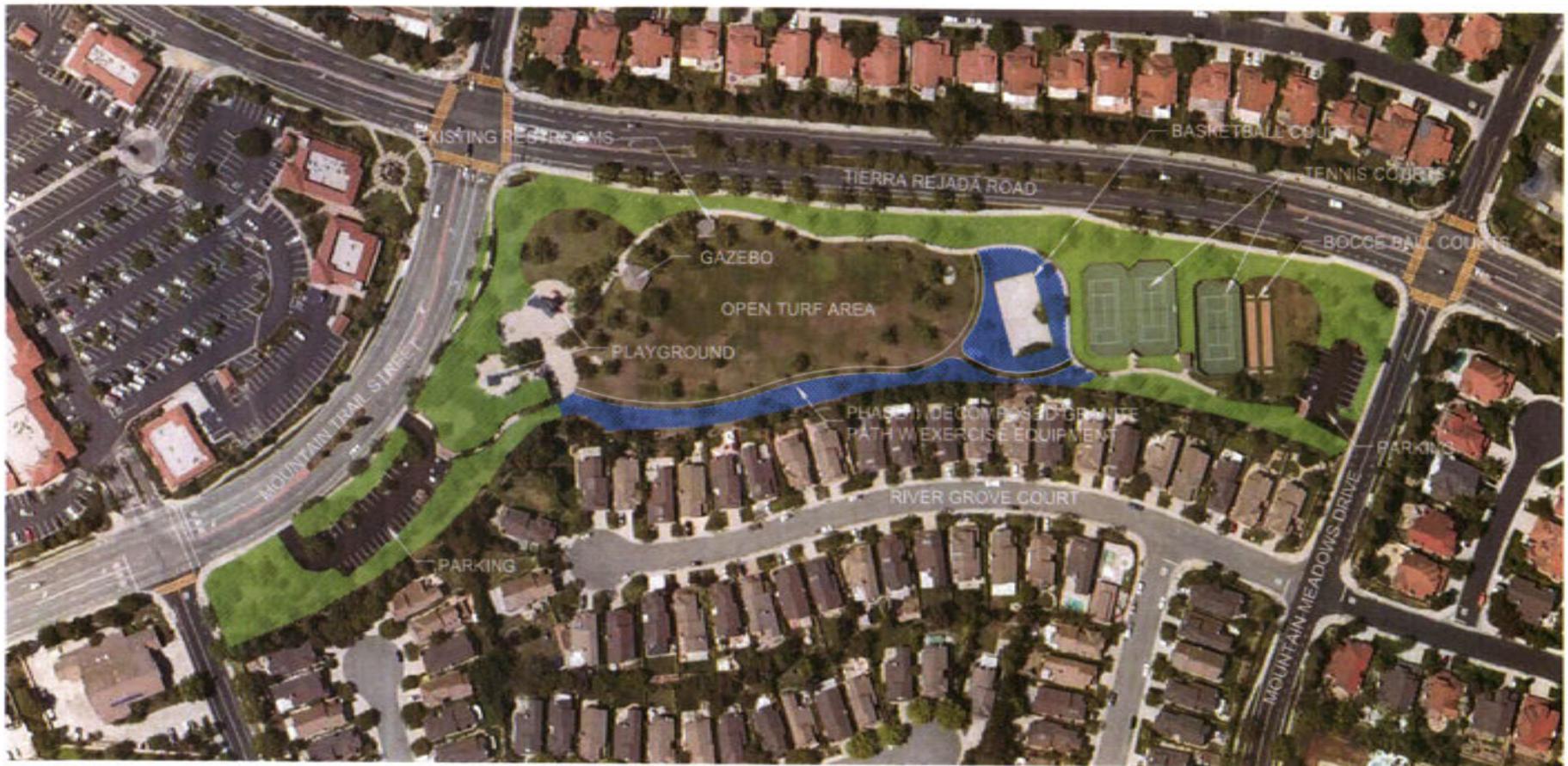
(EXISTING TURF AREA \approx 163,000 S.F. (\pm 3.7 ACRES))

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DATE MAY 19, 2015

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MOORPARK CA, 93021



TIERRA REJADA PARK PROPOSED TURF CONVERSION PLAN



PHASE I TURF CONVERSION \approx 28,400 S.F. (\pm 0.7 ACRES)
(COMPLETED FEBRUARY 2015)



PHASE II TURF CONVERSION \approx 103,521 S.F. (\pm 2.4 ACRES)

TOTAL TURF CONVERSION \approx 131,921 S.F. (\pm 3.1 ACRES)
(56% REDUCTION)

(EXISTING TURF AREA \approx 235,689 S.F. (5.4 ACRES))

NORTH



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MAY 19, 2015



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MOORPARK, CA, 93021



VETERAN'S MEMORIAL PROPOSED TURF CONVERSION PLAN



TURF CONVERSION \approx 1,630 S.F. (\pm 0.03 ACRE)
(100% REDUCTION)

(EXISTING TURF AREA \approx 1,630 S.F. (\pm 0.03 ACRES))

NORTH



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VIRGINIA COLONY PARK PROPOSED TURF CONVERSION PLAN



TURF CONVERSION \approx 17,000 S.F. (\pm 0.4 ACRE)
(45% REDUCTION)

(EXISTING TURF AREA \approx 38,000 S.F. (\pm 0.9 ACRES))

NOTE



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MAY 19, 2015



City of Moorpark
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SHADYRIDGE ROAD BUFFER ZONE - LMD ZONE 8

PROPOSED TURF CONVERSION PLAN



 TURF CONVERSION \approx 35,600 S.F. (\pm 0.8 ACRE)
(84% REDUCTION)

(EXISTING TURF AREA \approx 42,600 S.F. (\pm 1.0 ACRES))

NORTH



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DATE

MAY 19, 2015



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Attachment 3