# AGENDA REPORT

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| **Meeting Date:** | June 30, 2015 |
| **Item Number:** | F-2 |
| **To:** | Honorable Mayor & City Council |
| **From:** | Susan Healy Keene, Director of Community Development<br>Raj Patel, Assistant Director of Community Development/Building Official |
| **Subject:** | PROPOSED ORDER OF CITY MANAGER TO IMPLEMENT A FURTHER WATER CONSERVATION MEASURE TO PROHIBIT ISSUANCE OF BUILDING PERMITS FOR SWIMMING POOLS UNLESS EQUIVALENT WATER USAGE IS OFFSET. |
| **Attachments:** | 1. Section 9-4-307 BHMC<br>2. June 8, 2015 City Council Study Session Report<br>3. Santa Margarita Water District Summary |

## RECOMMENDATION

It is recommended that the City Council hold a public hearing regarding the City Manager's proposed order that prior to issuance of a permit to construct a new swimming pool, a permit applicant must demonstrate water savings equivalent to the estimated amount of water used during the first year of operation. The Emergency Water Conservation Plan details the requirements of each stage. In addition, Section 9-4-307 BHMC provides the City Manager the authority to order additional water conservation measures only after a public hearing is held (Attachment 1).

## BACKGROUND

On May 5, 2015, the City Council adopted a Resolution to institute a State D water conservation program. The Stage "D" Requirement 9-4-304 (D)(2)(e) BHMC now in effect states:

> "Refilling of swimming pools, spas or ponds shall be prohibited unless required for health reasons:

While this provision addresses water usage for existing pools, there is no measure specific to the initial filling of new pools. On May 27, 2015 the Public Works (PW) Liaison Committee consisting of Vice Mayor Mirisch, Councilmember Brien, PW Commission Chair Shalowitz, and Commissioner Wolfe reviewed three options to address water consumption for new pools. The options included:

1) Continue to allow the initial filling of newly constructed swimming pools;
2) Adopt an ordinance to prohibit the issuance of permits for the construction of new swimming pools during the State's drought declaration;
3) Prohibit the filling of new pools, unless the property owner offsets the increased water use.

The PW liaison generally favored the third approach to allow the initial filling of new pools where the property owner offsets this additional water usage.

This recommendation was presented to City Council at their June 8, 2015 Study Session (Attachment 2). The Council considered several options including temporarily prohibiting the issuance of permits for new pools as well as potential conditions under which issuance of new pool permits would be acceptable. Discussion included the safety and construction concerns potentially created in allowing a new pool to be built but not filled with water for an unknown period of time. Staff was asked to return with more specific information on the following issues:

- Possibility of filling pools with water supplied from a source outside of California
- Details on how water use of new pools could be offset

A second PW liaison meeting was held on June 15th. Staff reported at the current time there was very limited availability of out-of-state water. Staff also estimated a minimum of four 5,000 gallon tanker trucks would be required to initially fill a new pool creating possible concerns related to truck traffic.

The liaison also discussed the possibility of an applicant demonstrating either on-site or off-site water consumption savings equivalent to the amount of water used to initially fill the pool and to make-up for evaporative losses during the first year. At that meeting, the PW liaison recommended staff proceed to allow construction of new pools in cases where the applicant can show equivalent savings in anticipated water usage.

## DISCUSSION

Construction of a new pool requires issuance of a building permit. The current method of pool construction anticipates the immediate filling of a new pool with water. If building permits are issued and pools are not allowed to be filled, there may be an increased risk of cracking of the plaster through accelerated curing and structural damage due to hydrostatic pressure. In addition, enforcement of a prohibition on filling of a new pool is challenging as there is no efficient method of continuous monitoring of the site. The most effective method to control the use of water in new pools is to require an applicant to demonstrate conservation measures that offset the proposed water use prior to the issuance of a permit.

Water Used by Pools

In 2014, the Santa Margarita Water District, the second largest water district in Orange County, conducted a cumulative projected five year water use comparison between a pool, traditional lawn, and drought tolerant landscape. The annual water use is 28,035 gallons for a traditional lawn and 16,821 gallons for a drought tolerant landscape, An average size pool (475 square feet) with a pool cover (as required by the California Green Building Code) uses 26,643 gallons of water (17,765 gallons for the initial filling and 8,878 gallons of annual evaporative loss). The results of the study are summarized in Table 1:

Table 1: Santa Margarita Water Use Study

| Cumulative Water Use Comparison (Gallons) | | | | |
|---|---|---|---|---|
| | Pool w/o a Cover | Pool w/ Cover | Traditional Landscape (Grass Lawn) | CA Friendly Landscape (Drought Tolerant) |
| Year 1 | 32,561 | 26,643 | 28,035 | 16,821 |
| Year 2 | 47,358 | 35,521 | 56,070 | 33,642 |
| Year 3 | 62,154 | 44,398 | 84,105 | 50,463 |
| Year 4 | 76,950 | 53,276 | 112,140 | 67,284 |
| Year 5 | 91,746 | 62,154 | 140,175 | 84,105 |

The study concluded that although pools require thousands of gallons of water to fill initially, at the end of the third year, a pool used 39,707 gallons less than an equivalently sized lawn and 6065 gallons less than a drought tolerant landscape. (Attachment 3)

In Beverly Hills, there are currently 79 permits issued for the construction of pools which is consistent with the average number of pool permits issued over the past ten years. Based on historical permit activity, staff anticipates that 40 new pools could potentially be issued building permits between July 2015 and February 2016. The estimated total first year water use impact for 40 new pools is approximately 1,066,000 gallons of water or 0.03% of the city's reported annual water production.

Methods to Demonstrate Equivalent Water Savings

The PW liaison discussed alternatives to allow the construction and filling of new pools in a manner consistent with the city's water conservation efforts and suggested the concept of water use equivalency. If the water used for a new swimming pool could be offset by savings above and beyond any current requirements on the same property, the addition of a pool would have a neutral effect on the City's water consumption.

There would be two options for demonstrating equivalent water savings. The preferred alternative would be for a permit applicant to demonstrate equivalent onsite water savings. This would require the applicant to implement a variety of measures above and beyond the current California Green Building Code. If the appropriate onsite water savings is not possible, a second alternative would be to provide a financial contribution to the current citywide water conservation program which combines proposed capital programs and operations and maintenance designed to help reach the intended goal of a 32% reduction in overall water use.

1. Onsite Equivalent Water Savings

An applicant would demonstrate water savings equivalent to the first year use of a pool using a combination of measures that could include higher efficiency fixtures and appliances, rainwater capture and reuse, more water efficient landscaping, and the use of gray water and other alternate sources of water. The applicant's calculations would be verified prior to issuance of a building permit.

2. Offsite Equivalent Water Savings

If an applicant is unable to further reduce onsite water usage, funds could be contributed to the City's conservation effort with the intent of establishing increased water savings elsewhere in the City. The City's Water Enterprise Plan (WEP) contains a Water Conservation Program that includes elements such as establishing rebate programs, reducing system losses, and providing educational and outreach programs. The funds could be used to enhance these programs and also create additional opportunities for savings.

In developing a contribution amount, staff relied on costs identified in the WEP for water conservation efforts. The goal of the WEP was to reduce water usage by 20% by the year 2020. The WEP recommended simple, cost-effective measures estimated to save approximately 200 Acre Feet each year over the next six years. The implementation cost of these measures is approximately $4.8 million.

However, there is substantial additional effort and cost in achieving water conservation above the 20% target that is necessary to accomplish the new State mandate of 32%. Based on the totality of water conservation measures identified in the WEP, staff estimates the cost to conserve one gallon of water to be approximately $0.056. This amount would be applied to the total first year water use of a new pool including evaporation. The financial contribution would be directly related to the size of the proposed pool under the worst-case water use (pool without a cover). For example a 550 SF pool uses 37,704 gallons and the expected contribution would be approximately $2111.

## FISCAL IMPACT

If new pools were permitted without demonstrating an equivalent water savings, the additional water consumption would impact the City's ability to meet the required water reduction target. Should the City fail to reach the reduction target, the State may impose

fines in the amount of $10,000 a day. If new pools are permitted, and water use is offset either by further conservation onsite or offsite through the city's Emergency Water Conservation Program, there would be no additional water usage to report and no further fiscal impact.

Susan Healy Keene
Approved By

# ATTACHMENT 1

B. The notice shall contain a brief description of the facts of the violation, a statement of the possible penalties for each violation and a statement informing the customer of his or her right to a hearing on the merits of the violation pursuant to section 9-4-306 of this chapter. (Ord. 92-O-2139, eff. 4-2-1992)

9-4-306: **HEARINGS:** Any person receiving notice of a violation of any water usage percentage reduction provision set forth in section 9-4-304 of this chapter shall have the right to request a hearing to appeal the imposition of the water penalty surcharge. The city council shall establish the appeal procedures by resolution. (Ord. 09-O-2567, eff. 6-27-2009)

9-4-307: **ADDITIONAL WATER CONSERVATION MEASURES:** After holding a public hearing before the city council, the city manager may order implementation of water conservation measures including, or in addition to, those set forth in section 9-4-304 of this chapter, in order to encourage proper potable water use or to meet water conservation goals, regardless of supply. (Ord. 92-O-2139, eff. 4-2-1992)

9-4-308: **EXCEPTIONS:** Nothing in this article shall be construed to require the city to curtail the supply of water to any customer when such water is required by that customer to maintain an adequate level of public health and safety. (Ord. 09-O-2567, eff. 6-27-2009)

## ARTICLE 4. WATER EFFICIENT LANDSCAPING

9-4-401: **PURPOSE:** Water is a precious commodity of limited supply. In accordance with the water conservation in landscaping act ("act"), the purpose and intent of this article is to:

A. Promote the values and benefits of landscapes while recognizing the need to invest water and other resources as efficiently as possible;

B. Establish a structure for planning, designing, installing, and maintaining and managing water efficient landscapes in new residential or commercial development projects and when landscaped areas are altered by more than fifty percent (50%) in total area;

# ATTACHMENT 2

# STAFF REPORT

**Meeting Date:** June 8, 2015

**To:** Honorable Mayor & City Council

**From:** Trish Rhay, Assistant Director of Public Works Services – Infrastructure & Field Operations

Michelle Tse, Senior Management Analyst MST

**Subject:** Swimming Pools and Water Conservation Efforts

**Attachments:** None

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## INTRODUCTION

During the May 5, 2015 meeting, the City Council adopted a Resolution to declare a Stage D conservation program given continued State drought conditions. Stage D calls for a 30% water use reduction and outlines several water use restrictions in addition to the restrictions imposed by the State Water Resources Control Board ("State Water Board").

One of the water use restrictions outlined in the City's Stage D conservation program is prohibiting the refilling of swimming pools except for health or safety reasons. During the May 5, 2015 meeting, the City Council directed staff to develop a more comprehensive policy after raising questions on how to handle situations related to the initial filling of existing and newly constructed swimming pools.

## DISCUSSION

Stage D, as currently worded in the Beverly Hills Municipal Code, prohibits the refilling of pools, spas, or ponds except for health or safety reasons. Topping off pools with water to maintain water effectiveness and prevent standing water with breeding insects is considered filling for health reasons. The Municipal Code currently does not include provisions to address the initial filling of newly constructed swimming pools. The following sections outline options for the initial filling of new and existing swimming pools.

### Construction and Filling of New Swimming Pools

***Option #1: Continue to allow the initial filling of newly constructed swimming pools.***
Option 1 would allow the application process, permit issuance, and construction for new swimming pools to continue as usual. There are currently 79 newly permitted pools under construction within the City. Based on the current rate of swimming pool applications, it is projected there will be an additional 30-40 pool applications over the next nine months. The estimated water consumption for current and projected new swimming pools is approximately

2,380,000 gallons, with 800,000 gallons coming from the projected 40 pools which are not yet permitted.

The following table highlights the advantages and disadvantages for Option 1:

| Advantages | Disadvantages |
|---|---|
| • No impact to water customers wishing to construct new pools. | • While minimal, discretionary water consumption would be approximately 800,000 gallons.<br>• There may be some potential negative water conservation messaging to our regulators and customers. |

***Option #2: Adopt an ordinance to prohibit the issuance of permits for the construction of new swimming pools during the State's drought declaration.***

Under this approach, new swimming pool projects with a building permit already issued by the City will be allowed to fill when construction is completed. However, customers that have not yet been issued a building permit could still apply for a permit and submit plans for a new pool. The City would approve the plans but not issue a permit to construct the pool until the City rescinded the Stage D water conservation requirements. By not issuing building permits, it would minimize the impact of pools that may need to be filled in order to complete the curing process.

There are currently seven new pool applications that have been submitted to the City and not yet approved. As mentioned in Option #1, staff projects receiving 30-40 additional pool applications over the next nine months. Assuming it takes 20,000 gallons to fill the seven pending pool applications and a projected 40 pools during the next nine months, prohibiting the initial filling of these pools could save approximately 940,000 gallons of water.

There are several cities that have adopted similar policies of restricting the filling of swimming pools, such as the following:

- City of American Canyon
- City of Healdsburg
- City of Windsor
- Menlo Park Water District
- North Tahoe Public Utilities District
- North Marin Water District
- San Jose Water Company
- San Lorenzo Water District
- Santa Clara Valley Water District
- Santa Margarita Water District (but later rescinded)

Furthermore, this option would convey a strong message to the State regulators that the City is moving forward with significant actions to meet compliance with the 36% mandated reductions by February 2016.

The following table highlights the advantages and disadvantages for Option 2:

| Advantages | Disadvantages |
|---|---|
| • Other cities have adopted similar policies to limit the filling of pools<br>• Limiting pool filling during drought conditions sends a message to State regulators and residents that the City is committed to conserving water | • Pool construction projects will be put on hold<br>• Lifestyle impacts<br>• Not filling pools may impact property sales and property values |

***Option #3: Prohibit the filling of new pools, unless the property owner offsets the increased water usage***

The filling of newly constructed swimming pools would be prohibited under the current Stage D conservation program. However, customers could be given the option to demonstrate how their water use for pool filling would be offset by water efficient improvements made on the property that are not otherwise required by law. Additionally, customers could be given the option to pay a fee to the City that the City would then use to implement water conservation measures elsewhere in the City that would offset the water used to fill the pool.

If the City Council wishes to pursue this option, staff would develop the framework by which the property owner could demonstrate that he or she will offset the pool water usage or pay a fee to allow the City to do so.

The following table highlights the advantages and disadvantages for Option 3:

| Advantages | Disadvantages |
|---|---|
| • Customers would have the option to not fill their pool or take other actions to offset water usage or pay a fee to the City to allow the City to offset water usage.<br>• Collected fees could be used to further city conservation programs, leading to water savings elsewhere | • Additional time is needed to further develop the framework and criteria |

**Refilling of Existing Swimming Pools**

The current Stage D requirements clearly states that existing swimming pools shall only be drained and refilled for health and safety reasons, which includes certain repairs to fix leaks, structural, plumbing, or electrical deficiencies on a case by case basis. For contextual purposes, the City issued 64 permits for repair and/or remodel of existing swimming pools during the period January 1, 2014 through May 5, 2015.

Given the Stage D requirements, staff is recommending customers must submit a permit application to the Community Development department to drain, repair, and refill the pool. The application shall be accompanied by a statement from a licensed pool contractor stating the nature and duration of repairs/safety issue to be made and the date and method by which the pool shall be drained. Additionally, staff is recommending that effective May 5, 2015, which coincides with the City Council approval date to implement Stage D, a pool cover would be a condition for the refilling of pools. Pool covers can reduce evaporation rates by 30-50%. However, it should be noted that pool covers may be difficult for some types of public and private pool configurations.

These options for the filling of new and existing swimming pools were reviewed by the Public Works Liaison Committee during its May 27, 2015 meeting. The Liaison Committee generally favored providing flexibility to property owners to allow the initial filling of pools if the property owner offset the water usage through a fee paid to the City.

## FISCAL IMPACT

Option 3 which allows property owners to fill a pool and pay a fee to the City to offset water usage impacts would likely make funds available to promote City water conservation programs.

## RECOMMENDATION

The Public Works Liaison Committee generally favored an approach similar to Option 3, although the details of Option 3 were developed in conjunction with the City Attorney's Office after the Committee meeting.

For the refilling of existing swimming pools, staff is recommending existing swimming pools shall only be drained and refilled for health and safety reasons, which includes certain repairs to fix leaks, structural, plumbing or electrical deficiencies to be reviewed on an individual bases. Staff is recommending that permit applications to drain, repair, and refill the pool shall be accompanied by a statement from a licensed pool contractor stating the nature and duration of repairs/safety issue to be made and the date and method of which the pool shall be drained.

All new and refilled swimming pools shall be equipped with a pool cover to the extent feasible.

George Chavez

Approved By

# ATTACHMENT 3

## Santa Margarita Water District Widget

| | |
|---|---|
| 5 | Enter Average depth of Pool (Feet) |
| 475 | Enter Pool area (Square Feet) |
| 725 | Enter area of hardscape and decking (Square Feet) |
| 1,200 | to pool install (Sq.Ft.) |

| | |
|---|---|
| 17,765 | Initial Pool Fill Volume (Gallons) |
| 14,796 | Annual Pool Water Use without Cover (Gallons) |
| 8,878 | Annual Pool Use with Cover (Gallons) |
| 28,035 | Annual Water Use of Efficient Landscape (Gallons) |
| 16,821 | Annual Water Use of CA Friendly Landscape (Gallons) |

Cumulative Water Use Comparison (Gallons)

| | Pool without Cover | Pool with Cover | Traditional Landscape | CA Friendly Landscape |
|---|---|---|---|---|
| Year 1 | 32,561 | 26,643 | 28,035 | 16,821 |
| Year 2 | 47,358 | 35,521 | 56,070 | 33,642 |
| Year 3 | 62,154 | 44,398 | 84,105 | 50,463 |
| Year 4 | 76,950 | 53,276 | 112,140 | 67,284 |
| Year 5 | 91,746 | 62,154 | 140,175 | 84,105 |
| **5 Year Water Cost** | **$ 307** | **$ 208** | **$ 468** | **$ 281** |