TO: J. David Fraser, City Manager
FROM: Skip Spilman
   Development Service and Conservation Specialist
DATE: April 25, 2017
SUBJECT: For possible action: Consideration of Bill No. 1808, an
ordinance of the City of Boulder City, revising City Code Title 9,
Chapter 14, Boulder City Water Conservation Plan

Business Impact Statement: This action will not have a significant
economic impact on business and will not directly restrict the
formation, operation, or expansion of a business.

Action Requested: That the City Council consider Bill No. 1808,
revising City Code Title 9, Chapter 14, Boulder City Water
Conservation Plan.

Overview:

- Watering will not be allowed on Sunday from May through
  August.
- Fountain restrictions will be updated to be more consistent with
  other SNWA purveyors.
- Hand watering and irrigation system testing will continue to be
  exempt from restrictions.

Background Information: The Southern Nevada Water Authority
(SNWA) drought plan was developed in 2002 and adopted by the
SNWA Board of Directors on February 20, 2003 to induce a level of
water conservation necessary for the region to respond to various
drought conditions. The plan focused on reductions in consumptive
Colorado River water use, specifically changing the outdoor water use
habits of customers, since outdoor use accounts for the greatest
consumption of water. It also identified drought stages, response
measures and used a variety of tools to both regulate and encourage conservation during times of drought. The City of Boulder City, being a member agency of the SNWA, implemented a Drought Plan on September 17, 2003. It has been updated over time and in 2009 was converted from a drought plan into a conservation plan.

The SNWA has a long-standing history of commitment to water conservation efforts, the efficient use of water and reducing water demands in Southern Nevada. As drought conditions continue to impact resources, the SNWA and its member agencies evaluated opportunities within existing conservation-related ordinances to achieve additional water savings and provide for consistent regional messaging. A technical team, comprised of staff from SNWA member agencies, met at the end of 2015 to evaluate existing ordinances and developed recommendations.

The existing watering schedule permits outdoor irrigation on any day of the week; however, research demonstrates that Southern Nevada’s landscapes do not require daily watering. Taking a day off during summer watering schedules would garner additional water savings. The SNWA Ordinance Review Team evaluated the existing watering schedule and potential water savings, and supports moving from a 7-day irrigation schedule to a 6-day. SNWA’s Conservation division evaluated irrigation patterns and fescue health to support the SNWA’s Ordinance Review Team’s evaluations. Their research discovered that on average, customers already irrigate 6 days a week during the summer. Healthy turf can be maintained when watering 6 days per week and Sunday is the most commonly skipped irrigation day. The SNWA estimates a 6-day per week watering schedule could reduce usage of 2.5 billion gallons over the course of a year. The SNWA would lead outreach efforts associated with the new change, encouraging water users to “Take the Day Off”.

During the Ordinance Review Team evaluations of the SNWA Watering Schedule, the team also felt it was prudent to make the seasonal watering schedule consistent with time-of-day watering schedule. Currently, landscape irrigation is prohibited between the hours of 11 a.m. and 7 p.m. from May 1 until Oct. 1. However, the fall watering restrictions go into effect on September 1. The proposed change would prohibit landscape irrigation between the hours of 11 a.m. and 7 p.m. from May 1 until Sept 1.

An initial code comparison among the entities demonstrated that existing fountain policies varied within the county. The Ordinance Team agreed that a consistent valley-wide policy would more effectively communicate conservation initiatives and provide equity among Southern Nevada residents and businesses. After a series of meetings, the Ordinance Review Team supported the following ordinance principles:

- In general, ornamental water features are prohibited, with some exemptions to provide for economic benefits
- Allowable uses include irrigation reservoirs (like those on golf courses), ornamental features that are part of a cooling system or fountains constructed indoors (like those found within restaurants)
• Fountains are permitted on residential properties, provided that it is less than 25 square feet.

These restrictions will apply to new construction only. The proposed code amendment includes the creation of an abatement plan. The plan allows for construction of an ornamental water feature outside of the ordinance’s scope, provided the developer removes turf grass, paying an equitable fee into the SNWA’s Water Smart Landscapes Program or removing another water feature that would be equitable to the proposed water feature.

Boulder City Strategic Plan Goal: Goal 7, the city will develop and implement a sustainability plan that will reduce the consumption of natural resources. Public Works ensures compliance with this goal by updating City Code Title 9, Chapter 14, Boulder City Water Conservation Plan.

Department Recommendation: The Public Works Department staff respectfully requests that the City Council consider Bill No. 1808, revising City Code Title 9, Chapter 14, Boulder City Water Conservation Plan.

City Manager Recommendation: The City Manager concurs with the department recommendation for this item.

Attachment:
Bill No. 1808
Exhibit A City Code Title 9 Chapter 14
Exhibit A City Code Title 9 Chapter 14 - Redlined
Watering Zones Map
CHAPTER 14

“BOULDER CITY WATER CONSERVATION PLAN”

SECTION:

9-14-1: General Provisions
9-14-2: Definitions
9-14-3: Waste of Water Guidelines
9-14-4: Responsibility for Waste
9-14-5: Landscape Watering Restrictions
9-14-6: Landscape Material Restrictions
9-14-7: Other Outdoor Water Use Restrictions
9-14-8: Water Budgets for Golf Courses
9-14-10: Operation of Ornamental Fountains and Water Features
9-14-11: Enforcement
9-14-12: Appeals for Reconsideration
9-14-13: Legality the Boulder City Conservation Ordinance

9-14-1: GENERAL PROVISIONS:

A. Purpose and Policy: This document is intended to establish measures to enhance the efficient use of water and to prevent and discourage the wasting of water in Boulder City. Conservation is an essential resource to help meet water needs.

B. Scope: The provisions of this document shall apply to all water services (i.e., recycled, raw potable, and reclaimed, customers).

C. Administration: Except as otherwise provided herein, the Director of Public Works or designee, shall administer, implement and enforce the provisions of this document.

D. Enforcement: Enforcement will be accomplished through water rates and water resource impact fees.

E. Waivers: There shall be no waivers or variances granted to the standards listed in this chapter. Such a request shall be considered a request to amend the requirements of this chapter and shall only be considered in accordance with the proper procedures.

9-14-2: DEFINITIONS:

BUREAU OF RECLAMATION (BOR): Is part of the U.S. Department of the Interior entrusted with the management of the Colorado River.

COMMUNITY USE RECREATIONAL TURF: Any private or public park facility with the following characteristics:

1. A turf-dominated, multi-purpose recreational area of at least two-acres but not less than 100 feet wide in any dimension.

2. Accessible to at least twenty-five dwelling units or households.

COMMON AREA: Area held in common by an established Homeowners Association.
NON-POTABLE WATER: Water not suitable for drinking.
ONE ACRE-FOOT OF WATER: Equivalent to 325,851 gallons of water.
POTABLE WATER: Water suitable for drinking.
RECLAIMED WATER: Municipal wastewater processed to reduce contaminants. Not suitable for human consumption.
SOUTHERN NEVADA WATER AUTHORITY (SNWA): An organization formed by local agencies with an inter-local agreement to address Southern Nevada’s water needs on a regional basis.
SYRINGING: Process of applying small amounts of water to wet the turf canopy. Syringing cools the turf through evaporation of water from the leaf surface, which can help turf survive during mid-day stress periods.
XERISCAPE: A type of landscaping that incorporates drought-tolerant and low water-use plants with an organic or inorganic surface mulch layer as a water efficient alternative to traditional turf grass landscaping. Can be referred to as water smart landscaping.

9-14-3: WASTE OF WATER GUIDELINES:

A. Boulder City residents are subject to the following "Waste of Water Guidelines".

1. It is unlawful for any owner, occupant, or manager of real property served by the City of Boulder City to waste water.

2. It shall be deemed unlawful for anyone to permit the excess use, loss or escape of water through breaks, leaks or malfunction in the water user's plumbing or distribution facilities for any period of time after such escape of water should have been reasonably discovered and corrected as determined by the proper Authority.

3. Allowing water to flow or spray directly into a public street, alley, or right-of-way, gutter or drain for more than ten (10) minutes is prohibited.

4. Where sewer receptacles are available, it is recommended that swimming pool water drainage from any filter, scum filter, scum gutter, overflow, or pool emptying line be discharged into the sewer.

9-14-4: RESPONSIBILITY OF WASTE: Any waste of water as set forth in this chapter, together with proof that such waste originated at any residence or place of business, shall constitute, in evidence, a prima facie presumption that the owner, occupant for the time being of such residence or place of business was responsible for such waste.

9-14-5: LANDSCAPE WATERING RESTRICTION (RESIDENTIAL):

A. It is deemed unlawful to use water to irrigate exterior lawns, gardens, trees, grass, shrubbery, or other vegetation in variance with the following table:
Water Schedule for Spray Irrigation

<table>
<thead>
<tr>
<th>Schedule</th>
<th>Watering Restrictions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winter (November – February)</td>
<td>Once Per Week</td>
</tr>
<tr>
<td>Spring (March - April)</td>
<td>Three Days per Week</td>
</tr>
<tr>
<td>Summer¹ (May- August)</td>
<td>Any Day Except Sunday</td>
</tr>
<tr>
<td>Fall (September² - October)</td>
<td>Three Day per Week</td>
</tr>
</tbody>
</table>

Note: 1. Watering between the hours of 11 a.m. through 7 p.m. prohibited.

B. For the purpose of managing the water supply distribution system, specific watering days and/or schedules may be assigned by Boulder City Staff, provided that all affected water users have been provided reasonable notice prior to implementation of the policy. If assigned watering schedules are in effect, it shall be unlawful to irrigate turf, gardens, trees, shrubbery, or vegetation, except in compliance with the assigned days, dates times for the specific properties.

C. Regions will be designated and winter watering days assigned as follows:

1. Region A shall water on Monday
2. Region B shall water on Tuesday
3. Region C shall water on Wednesday
4. Region D shall water on Thursday
5. Region E shall water on Friday
6. Region F shall water on Saturday

7. Residents may provide a three-year watering schedule exemption for properties that utilize smart controllers (expires April 2010). These customers would be exempt from the mandatory watering schedule. Time of day restrictions would still apply. Permanent implementation of this exemption will be evaluated during the three-year study.

D. Spring/Fall (March/April and September/October) watering days assigned as follows:

1. A, C, E Monday, Wednesday, Friday
2. B, D, F Tuesday, Thursday, Saturday
3. Sunday is a “free day” for all groups.

4. Residents may provide a three-year watering schedule exemption for properties that utilize smart controllers (expires April 2010). These customers would be exempt from the mandatory watering schedule. Time of day restrictions would still apply. Permanent implementation of this exemption will be evaluated during the three-year study.

E. Community use recreational turf areas, public and private common use recreation turf will be permitted to water four times each 14 days or twice per week during the winter schedule.

F. Exemptions to time of day restrictions.

1. Hand watering with hand held hose.

2. Irrigation of new lawns or re-seeding of an existing lawn (annual), for a period of thirty days from the date of planting or installation.

3. Drip and/or bubbler irrigation systems.

4. Irrigation by licensed commercial gardens or plant nurseries.

5. Landscape irrigation audits where the application rate and efficiency of an irrigation system is being tested. The technician must be present to observe the system performance.

6. Municipal operations or procedures that are necessary to protect the health, safety and welfare of the community.

7. Golf courses shall be required to comply with water budgeting policies in lieu of specific water schedules.

9-14-6: LANDSCAPE MATERIAL RESTRICTIONS: Landscape materials for new residences shall be limited as described below. In the case of Building Permits issued prior to the adoption of these restrictions, the development rules at the time of permitting shall apply.

A. The following landscape material restrictions will apply.

1. Residential Landscape Restrictions:
   a. Single-family and multifamily homes are prohibited from installing new turf in common areas of residential neighborhoods. This restriction shall not apply to public or private community parks. The installation of new turf is prohibited in residential front yards and the use of drought tolerant landscaping materials is encouraged in residential front yards.
   b. For single-family residential lots, the installation of new turf shall not exceed a maximum of five thousand square feet.

2. Non-Residential Landscape Restrictions:
   a. The installation of new turf in non-residential developments is prohibited. This provision shall not apply to community use recreational turf, golf courses, or sports complexes.

3. Any person(s) or association(s), regardless of date of establishment, is prohibited from imposing private covenants, conditions, restrictions, deed clauses or other agreements between the parties, which prevent person(s) from utilizing water efficient landscaping
including but not limited to xeriscape, provided such landscaping receives appropriate architectural review and approval. In any event, landscaping materials and designs may not be prohibited solely on the basis that they make use of water-efficient landscaping.

9-14- 7: OTHER OUTDOOR WATER USE RESTRICTIONS:

A. Vehicle Washing

1. Washing of personal vehicles upon residential properties is limited to once per week per vehicle and requires a positive shut-off nozzle.

2. Commercial vehicles may be washed at a commercial facility where water is discharged to the sanitary sewer through city approved methods, or by a high-pressure, low volume sprayer using less than ten (10) gallons of waste per vehicle.

9-14- 8: WATER BUDGET FOR GOLF COURSES:

A. Unless otherwise stipulated in existing agreements, private golf courses will be subject to water budgets, with appropriate surcharges applied to any water used over the budgeted amounts. These surcharges will be calculated on an annual basis, billed monthly after annual water budget is exceeded and will be in addition to the price paid for water as described in the table below.

<table>
<thead>
<tr>
<th>Percentage of budget</th>
<th>101 to 120 percent</th>
<th>121 to 140 percent</th>
<th>Over 140 percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surcharge applied to water use in excess of budget</td>
<td>2.0 times the highest rate paid for water within budget</td>
<td>4.0 times the highest rate paid for water within budget</td>
<td>8.0 times the highest rate paid for water within budget</td>
</tr>
</tbody>
</table>

B. Municipal golf courses will be water budgeted based upon acre-feet of water for each acre currently irrigated. Irrigated acreage will be calculated based on irrigated areas as determined from aerial photography and field verification. The irrigated acreage will include lakes and ponds existing within a golf course. Once measured the irrigated acreage shall remain fixed, this creating an incentive for golf courses to convert unneeded turf to other styles of water efficient landscaping. However, if a golf course expands its course by increasing the number of playing holes, a new irrigated acreage will be determined.

C. New golf courses shall be exempt from water budgeting for the first two years after seeding to establish turf. Each golf course shall be required to submit its own water use reduction plan. A description of water use reduction strategies and timelines for implementing those strategies are required in the plan.

Exemption: Man-made lakes, where all or part of the water is used in whole or in part, as a functional reservoir for a golf course shall be included in the calculation of a golf course water budget.

9-14- 9: MAN-MADE LAKES PROVISIONS: All man-made lakes shall pay Boulder City rates on all fill water.

9-14-10: OPERATION OF ORNAMENTAL FOUNTAINS AND WATER FEATURES: Fountains and water features utilizing potable or non-potable water provided by the water purveyor shall be prohibited. The following uses shall be exempt:
A. Swimming Pools.

B. Fountains and water features of less than twenty-five (25) two hundred (200) square feet surface area at single-family residences. Swimming pools are not considered water features.

C. Fountains or water features that are necessary and functional components serving other allowable uses such as storage ponds on a golf course or aeration devices. Such device must be turned off during high winds. Allowable uses including but not limited to:

1. Irrigation reservoirs, such as for a golf course, park or cemetery;

2. An engineered component of a heat exchanger for a cooling system;

3. An interpretive feature of an educational exhibit.

D. Indoor water features, or features with the majority of the total water volume contained indoors or underground. If practical alternatives exist for separating indoor and outdoor components, they shall be separated and managed accordingly. (E.g., timers on shut-off valves).

E. Commercial fountains or water features vital to a core economic function of the region, as determined by the governing jurisdiction on a case-by-case basis in a process with input from the public, including but not limited to:

1. Recreation water parks, both public and private.

2. Water features integral or vital to an entertainment venue, such that substantial economic harm could be associated with discontinuation of use.

F. Fountains or water features necessary to sustain aquatic animals, provided that the animal population has been actively and continuously managed within the water feature prior to 2003;

G. Fountains and water features in place prior to September 1, 2009.

Special Exemptions: The Public Works Director shall be vested with the authority to make exemptions to the provision of this chapter, when in the opinion of the Director; these exemptions protect the public health, safety and well-being of the purveyor’s water system (i.e., hydrant flushing, valve testing and system maintenance). To be granted an exemption, the applicant must:

1. Submit an application to Boulder City Public Works:

2. Propose a modification to the property that will reduce consumptive demand by 20 times the estimated evaporative loss of the water feature, by participating in one of the following:

   a. Converting irrigated turfgrass upon the property to water efficient landscaping at a ratio of a minimum of 20 square feet converted for each square foot of water surface in the fountain or water feature;

   b. Reducing or eliminating an existing, compliant body of water upon the property that results in a net decrease in water surface area on the property;

   c. Supporting the regional water conservation program by paying a minimum of $40 for each square foot of water surface in the fountain or water feature to the Southern Nevada Water Authority conservation program.
9-14-11: **ENFORCEMENT:** The Public Works Director shall adopt and maintain administrative procedures for the enforcement of water conservation. Water resource impact Fees will be assessed where applicable for non-compliance with the provisions set forth in this conservation chapter.

<table>
<thead>
<tr>
<th>Meter Size</th>
<th>1st Violation</th>
<th>2nd Violation</th>
<th>3rd Violation</th>
<th>4th Violation</th>
<th>5th Violation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1” or less</td>
<td>$75.00</td>
<td>$125.00</td>
<td>$200.00</td>
<td>$300.00</td>
<td>$600.00</td>
</tr>
<tr>
<td>1” - 3”</td>
<td>$75.00</td>
<td>$125.00</td>
<td>$250.00</td>
<td>$500.00</td>
<td>$1000.00</td>
</tr>
<tr>
<td>3” and Greater</td>
<td>$150.00</td>
<td>$300.00</td>
<td>$500.00</td>
<td>$1000.00</td>
<td>$2000.00</td>
</tr>
</tbody>
</table>

9-14-12: **APPEALS FOR RECONSIDERTION:** Any User, permit applicant, permit holder, property owner, occupant, or responsible party affected by any decision, action or determination, including any enforcement action made by the City of Boulder City, interpreting or implementing the provisions of this chapter or in any permit issued herein, may file an appeal. All appeals for reconsideration shall be written requests filed with the Director or designee within ten days of such action, setting forth in detail the facts supporting the user’s request for appeal.

The decision of the Director or designee shall be rendered within 10 days of the date of the hearing of the appeal. Such decision shall be deemed to be the final administrative action on such appeal.

9-14-13: **LEGALITIES OF THE BOULDER CITY CONSERVATION ORDINANCE:** The City Council of the City of Boulder City has been informed by its legal department as to the constitutionality of this chapter, and based upon such information, it is adopting this chapter in good faith with reasonable belief that the actions taken by the City of Boulder City are not in violation of any rights, privileges, or immunities secured by the Constitution or by laws providing for equal rights of citizens or persons.
Note: Golf courses and certain non-residential facilities follow restricted approved water budgets that may not match this residential and small commercial water group schedule. Users in areas of Boulder City outside those shaded on the map should contact the Department of Public Works for their watering schedule.