



OVERVIEW

Tucson is a unique place with a special natural environment. The Sonoran Desert landscape is integral to the identity of the community. To remain good stewards of the land and reinforce Tucson's identity, Living Landscapes furthers the community's goals of expanding rainwater harvesting, conserving potable water, increasing our urban tree canopy, and promoting the use of native plant species.

Rainwater harvesting is a long-established practice of collecting, channeling, and storing runoff water from hard surfaces for later reuse. In commercial developments, rainwater can be harvested from building roofs and parking areas to flow into planting areas. This reduces the demand for irrigated water and allows plants to thrive. In residential subdivisions, rainwater can be harvested from streets. This water can be redirected to shared community areas and street trees to help shade pedestrian walkways and beautify the neighborhood.

Living Landscapes is an effort led by the City of Tucson to further rainwater harvesting and planting goals. The city's existing regulations for commercial rainwater harvesting were adopted by the Mayor and City Council in 2008. There are not currently any requirements for rainwater harvesting for residential subdivisions.

The existing commercial regulations require new commercial development to meet at least 50 percent of the site's landscape irrigation demand using onsite rainwater harvesting. This reduces potable water use by capturing rainfall and directing it to landscaped areas, reducing the need for supplemental irrigation.

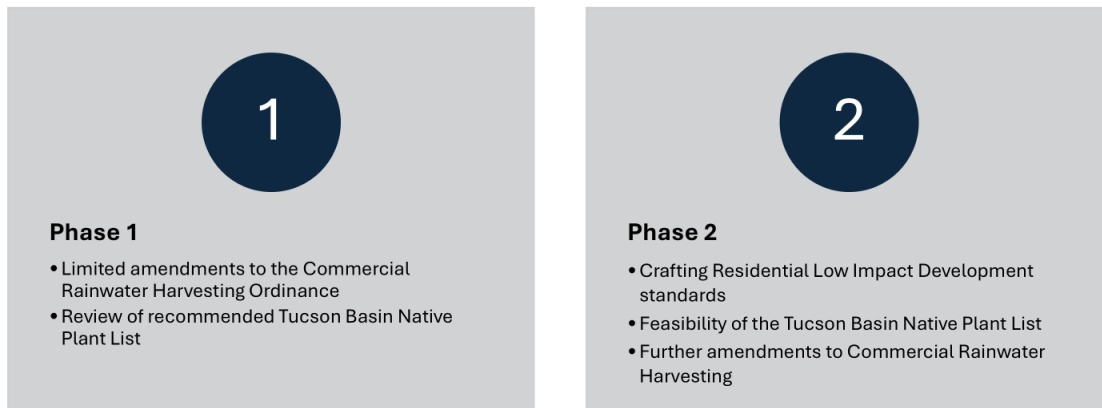
Over time, staff and stakeholders have identified opportunities to improve how rainwater harvesting systems are designed, constructed, inspected, and maintained. Based on this, at the Study Session on April 7, 2026, the Mayor and City Council directed staff to address the following policy objectives:

1. Stormwater Capture - Require depressed non-paved areas in new commercial development to capture additional storm runoff from developed portions of the site.
2. Right-of-way Runoff - Evaluate mechanisms to direct adjacent right-of-way runoff into onsite rainwater harvesting systems, where feasible.
3. Approved Plant List - Adopt a Tucson-specific plant list to guide landscape design and support water-efficient, drought-tolerant planting, led by the City's Landscape Advisory Committee.
4. Tree Canopy - Evaluate an increased tree-to-understory planting ratio to expand tree canopy coverage.
5. Applicability - Evaluate extending ordinance requirements to golf course, church, and cemetery parking lots.

The proposed code amendments are intended to strengthen the regulations by improving stormwater capture, supporting healthier landscapes, providing clearer standards, and improving long-term implementation.

Residential low impact development (LID) regulations requiring rainwater harvesting and green stormwater infrastructure in new residential development are in development, as directed by Mayor and Council in June 2022.

The Living Landscapes initiative is being completed in two phases. Phase one will address the updates to commercial rainwater harvesting standards and begin to phase-in the Tucson Basin Native Plant List. Phase two will establish residential Low Impact Development standards, evaluate further amendments to commercial rainwater harvesting standards, and explore feasibility of broader adoption of the Tucson Basin Native Plant List.



Phase 1: This document presents phase one items based on the April 2026 Mayor and City Council direction. These proposed amendments to the Tucson City Code, Unified Development Code, and Technical Standards Manual sections are proposed to strengthen implementation of commercial rainwater harvesting standards.

In connection with this effort, the City's Landscape Advisory Committee has developed a list of native Tucson plants to be used in planting areas. The proposed Tucson Basin Native Plant List (TBNPL) draws from the Arizona Department of Water Resources Low Water Use and Drought Tolerant Plant List for the Tucson Active Management Area. Phase one of this project proposes that the TBNPL is used as a recommended list until further community feedback on the list and its broader applications are gathered.

Phase 2: Future discussions regarding commercial and residential rainwater harvesting will be held as part of phase two. For consideration, City staff have already identified several commercial rainwater harvesting topics for potential future evaluation that would require further technical review and stakeholder input:

- A three-year conditional water-credit or reduction system for qualifying projects.
- Codified baseline irrigation demand figures to support consistent compliance calculations.
- New survey, control-point, and drainage design requirements to improve construction accuracy.
- A formal, staged inspection call-in protocol that ties grading, irrigation, and planting review together.
- Require new rainwater harvesting and landscape plans to be completed by a registrant, with exceptions

SUMMARY OF PROPOSAL

#	Topic	Code Sections	Change
1	All non-paved areas of new commercial development be 'depressed' in order to capture additional storm run-off	UDC 7.6.4.B	Require parking lot tree planting areas to be depressed a minimum of 6 to 9 inches below adjacent paved surface grade to capture and retain stormwater runoff. Require curb cuts or openings for surface runoff to enter planting areas.
		7.6.6.C	Add reference to standard details as the governing standard for all passive water harvesting features.
		TSM 4-01.2.1	Require planting areas adjacent to hardscape to be recessed and direct water into infiltration areas. Require use of standard details.
		4-01.7.1	Add preconstruction meeting requirement and inspection checkpoint for depression depth and elevation benchmarks. Add inspection of right-of-way connection points where applicable.
2	Ensure that all right-of-way (ROW) run-off may be utilized	UDC 7.6.4.F	Allow green stormwater infrastructure in the public right-of-way and expressly permit capturing of right-of-way runoff on private property, subject to engineering and flooding approval.
3	Landscaping — utilize a Tucson specific plant list	TSM 4-01.4.1	Update plant selection language to reference the City of Tucson Native Plant List (TBNPL).
		5-02.5.0	Include the City of Tucson Native Plant List (TBNPL) as recommended in commercial rainwater harvesting landscape areas. Add subsections establishing purpose, relationship to ADWR list, list maintenance, and non-native species policy.
4	Landscaping — increase tree to understory ratio	UDC 7.6.4.B.	Increase the size of the required tree planting area in parking lots.
		7.6.4.C.	Require a higher ratio of trees to linear feet of landscape border, with the option to provide some trees as shade to pedestrian areas.
5	Include golf course, church, and cemetery parking lots in the ordinance	TCC Sec. 6-185	Rewrite exceptions for golf courses and cemeteries. Church parking lots are not proposed to be exempt.
		TSM 4-01.1.3.	Add applicability clarification regarding exceptions.
6	Future topics	Various sections UDC TCC TSM	New 3-year conditional water-credit/reduction system Codified baseline irrigation numbers New survey/control-point and drainage design requirements Formal, staged inspection call-in protocol tying grading, irrigation, and planting review together Require new rainwater harvesting and landscape plans to be completed by a registrant, with exceptions

TUCSON CITY CODE (TCC)

CHAPTER 6 BUILDINGS, ELECTRICITY, PLUMBING, AND MECHANICAL CODE

ARTICLE VIII. RAINWATER COLLECTION AND DISTRIBUTION REQUIREMENTS

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SEC. 6-185. EXCEPTIONS.

A. That portion of a development which includes the following land uses shall be excepted from the fifty (50) percent rainwater harvesting requirements, except for the associated buildings, paved areas, or parking lots are not exempt:

1. Public parks and botanical gardens;
2. Outdoor recreation facilities, whether under public or private ownership, for public use, schools, and day care centers;
3. The playing areas of golf courses;
4. Cemeteries;
5. Natural open space;
6. Crop production.

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UNIFIED DEVELOPMENT CODE (UDC)

ARTICLE 7 – DEVELOPMENT STANDARDS

7.6. LANDSCAPING AND SCREENING

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7.6.4. LANDSCAPE STANDARDS

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B. Vehicular Use Areas

The standards in this Section 7.6.4.B apply to all developments that provide more than four motor vehicle parking spaces, except as provide in Section 7.6.4.B.1.c, Exemptions

1. Canopy Trees in Vehicle Use Areas

a. General Standards. Within a vehicular use area, one canopy tree is required for each four motor vehicle parking spaces or fraction thereof.

(1) The canopy trees must be evenly distributed throughout the vehicular use area. Every parking space must be located within 40 feet of the trunk of a canopy tree (as measured from the center of the tree trunk).

(2) Fifty percent of the trees required for landscape borders located within ten feet of the paved portion(s) of a vehicular use area may be counted towards both the minimum parking lot canopy tree standard and the landscape border canopy tree standard.

(3) An unpaved planting area, which must be a minimum of ~~34-144~~ square feet in area and ~~four-six~~ feet in width, ~~and must be provided~~ is required for each canopy tree. The planting area ~~may be at grade or depressed below the elevation of the adjacent paved surface~~ must be depressed a minimum of 6 to 9 inches below the elevation of the adjacent paved surface and graded to receive and retain stormwater runoff from the surrounding vehicular use area.

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2. Plant Protection. Areas where plants are susceptible to injury by vehicular or pedestrian traffic must be protected by appropriate means, such as curbs, bollards, or low walls.

3. Planter Area. For each tree required by this code, a planter area with a minimum unpaved area of ~~34-144~~ square feet and a ~~four-six~~-foot minimum width is required.

a. The planter area must have a raised border four inches high to prohibit the tires of the vehicle from encroaching onto the planter. Standard wheel barriers are acceptable but not encouraged, as they can be easily moved and could allow damage to the tree. The planter area must be depressed a minimum of 6 to 9 inches below the elevation of the adjacent paved surface to facilitate stormwater capture and retention. Curb cuts or openings must be provided to allow surface runoff to enter the planting basin, subject to engineering and flooding requirements.

C. Landscape Borders

There are two types of landscape borders: street landscape borders and interior landscape borders.

1. All Landscape Borders

The following apply to all landscape borders.

- a. One canopy tree is required for every ~~33~~25 linear feet of landscape border or fraction thereof, excluding vehicular ingress or egress points.
- b. A minimum of one canopy tree is required within a required landscape border.
- c. Trees may be planted at varying distances apart.
- d. No more than 25% of required canopy trees may be planted outside the required landscape border if intended to shade internal pedestrian circulation paths.

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F. Use of the Public Right-of-Way.

~~Nonrequired~~ Landscaping may be placed in the public right-of-way, if the following standards are met:

1. The landscaping is approved by the City Engineer or designee and complies with the City Engineer's standards on construction, irrigation, location, flooding and plant type;
2. All vegetation complies with the standards of Section 7.6.4, Landscaping Standards; and
3. Green Stormwater Infrastructure (GSI) improvements within the public right-of-way, including bioswales, curb extensions, and vegetated infiltration areas, are permitted where approved by the City Engineer or designee and consistent with approved standard details;
4. Runoff from adjacent public rights-of-way may be captured and directed into on-site Water Harvesting Infiltration Areas, subject to approval by the City Engineer or designee and compliance with DTM drainage engineering standards; and,
- ~~3-5.~~ The landscaping or rainwater harvesting areas do~~does~~ not interfere with the use of the sidewalk~~right-of-way and do not cause flooding on the private property.~~

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7.6.6. USE OF WATER

The following standards conserve water and assist in carrying out xeriscape design principles.

A. Water Conservation Design

Landscape plans shall incorporate water-conserving designs. A water-conserving design must take into account soil and drainage factors and microclimates, includes grouping of plants with similar water standards and use of efficient irrigation systems, and attempts to preserve on-site vegetation.

B. Use of Reclaimed Water

1. Reclaimed water must be used in new and expanded development in accordance with the adopted Mayor and Council Water Policies and other applicable state and local standards.
2. The availability of a reclaimed water service does not confer any right to plant turf areas except as permitted under this Section 7.6.4.D, Use of Turf.

C. Stormwater Runoff

Tucson's Living Landscapes – Phase 1

1. Storm water detention/retention basins not integrated with paved vehicular use areas must be designed in accordance with the Storm Water Detention Retention Manual.

2. Grading, hydrology, and landscape structural plans must be integrated to make maximum use of site storm water runoff for supplemental on-site irrigation purposes. The landscape plan shall indicate use of all runoff, from individual catch basins around single trees to basins accepting flow from an entire vehicular use area or roof area.

3. All passive water harvesting features, including depressed landscaping, bioswales, curb cuts, and stormwater infiltration basins, shall be designed in accordance with the adopted standard details.

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TECHNICAL STANDARDS MANUAL (TSM)

SECTION 4: HYDROLOGY

SECTION 4-01.0.0: COMMERCIAL RAINWATER HARVESTING

4-01.1.0 GENERAL

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1.3 Applicability.

This standard applies to all commercial and multifamily development plans submitted after June 1, 2010. notwithstanding exceptions in Tucson City Code Sec. 6-185.

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4-01.2.0 DESIGN CONSIDERATIONS AND TECHNICAL REQUIREMENTS

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2.1 Passive Water Harvesting

Passive water harvesting consists of the collection of stormwater directly in Water Harvesting Infiltration Areas without the temporary storage of water in containment systems. Passive water harvesting functions through gravity-flow of stormwater. It requires no tanks, piping, metering, pumps or other infrastructure associated with containment systems. However, in passive water harvesting, infrastructure components may be needed to route overflow water, pass water under roads, sidewalks, or parking lots, or for other purposes conducive to the effective functioning of the passive systems.

A. Passive Water Harvesting Design Considerations

An array of techniques and designs are available to accomplish passive water harvesting. Whatever techniques or designs are used, the items listed below should be considered to create safe, efficient and effective passive water harvesting systems.

1. Use Water Harvesting Infiltration Areas, where feasible, to offset the size of a retention/detention basin that may be needed at a site. Consult Appendix C of the City of Tucson Water Harvesting Guidance Manual for information on the allowed offset.
2. The area and depth of Water Harvesting Infiltration Areas should be determined according to the anticipated volume of harvested water that will enter these areas and the infiltration characteristics of the underlying soil.
3. Plants with similar water demands should be placed in the same areas within Water Harvesting Infiltration Areas.
4. Soils within Water Harvesting Infiltration Areas should be modified as needed to counteract the effects of mechanical compaction and/or poor soil infiltration conditions in order to ensure appropriate water infiltration.
5. The edge of Water Harvesting Infiltration Areas should be set back from building foundations or other structures to allow for positive drainage of water. Consult a soils professional where necessary.

6. Planting areas that harvest water ~~should~~ shall be recessed below the grade of adjacent hardscapes. Hardscape surfaces ~~should~~ shall be sloped toward adjacent recessed planting areas to direct stormwater runoff into Water Harvesting Infiltration Areas.

7. Pedestrian circulation ~~should~~ shall be designed to discourage cutting across recessed planting areas to avoid soil compaction, erosion, and damage to plants and to minimize the risk of injury to pedestrians.

8. Maximum reveal at the edge of public sidewalks and pedestrian circulation paths should be two inches or less to minimize the risk of injury to pedestrians. A minimum 12-inch wide shoulder with a maximum 2% cross-slope away from a public sidewalk or pedestrian circulation path should be provided where possible.

9. Water Harvesting Infiltration Areas should be stabilized for dust control purposes. Techniques could include spreading one-half inch or larger rock, hydroseeding with native seed mixes, or using other stabilizing techniques and materials. Fine-grained particles that could block water infiltration by clogging soil pores should be washed from materials prior to placement. Avoid the use of fine-grade decomposed granite within or directly adjacent to Water Harvesting Infiltration Areas due to the potential for shed silts and clays to reduce water infiltration.

10. Organic mulch is appropriate for reducing evaporation, controlling dust and increasing soil quality in Water Harvesting Infiltration Areas in those locations where the vegetation, water collection, erosion conditions, and slope characteristics are amenable to its use.

11. All passive water harvesting features shall be designed in accordance with adopted Green Stormwater Infrastructure (GSI) standard details.

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4-01.3.0 RAINWATER HARVESTING PLAN

A Rainwater Harvesting Plan shall be submitted with all applications for commercial developments at which landscaping is required. The Rainwater Harvesting Plan shall consist of two elements: a Site Water Budget and a Water Harvesting Implementation Plan. Preparation of the Rainwater Harvesting Plan elements requires coordination between project managers, site engineers and landscape architects from the inception of the project. The two elements of the Rainwater Harvesting Plan shall illustrate how water harvesting will meet 50% of annual landscape water demand, as required by the ordinance.

3.1 Site Water Budget

The Site Water Budget shall detail the landscape water demand and the harvested water supply needed to meet 50% of landscape demand. The Site Water Budget and the Water Harvesting Implementation Plan shall be consistent with one another.

~~A water budget format is shown in Exhibit A, along with the background data and assumptions used to develop it. This water budget format is available to applicants as an Excel spreadsheet at <http://www.tucsonaz.gov/PDSD/What_s_New/what_s_new.html>.~~ A water budget format, along with background data and assumptions used to develop it is available to applicants as an Excel spreadsheet maintained by PDSD and available on the PDSD website. Applicants may use this water budget format to enter site -specific data to develop their Site Water Budget. Alternatively, applicants may develop their own

Site Water Budget format. Whichever format is used, the submitted Site Water Budget shall incorporate and provide the information below.

A. Water Demand

Applicants shall use plant water demand categories and data provided in Exhibit A unless alternative assumptions are provided and satisfactorily justified.

B. Water Supply

Applicants shall use the effective monthly rainfall assumptions ~~shown in Exhibit A~~ provided in the water budget format available on the PDSD website, unless alternative assumptions are provided and satisfactorily justified to PDSD's Landscape Architect.

C. Output

Output of the Site Water Budget shall include calculations showing how 50% of landscape water demand as an average across the site will be met using harvested rainwater , and shall include assumptions and supporting calculations as necessary to document these outputs. Output of the Site Water Budget shall include total water demand and rainwater supply calculations for each Water Harvesting Infiltration Area at the site.

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4-01.4.0 LANDSCAPE AND IRRIGATION REQUIREMENTS

4.1 Landscape Requirements

A. Soil pretreatment

Due to construction site compaction, the soils in planting areas might need to be pretreated to ensure adequate infiltration of harvested water. Soil Pretreatment techniques, locations and schematics should be provided on the Implementation Plan.

B. Plant selection and placement.

Plants selected for use within discrete Water Harvesting Infiltration Areas should have compatible water needs. ~~Drought tolerant plants native to Tucson are adapted to the seasonal rainfall patterns present in the Sonoran Desert and present an advantage over low-water-use plants from other climates. It is recommended that plants be selected from the Tucson Basin Native Plant List (TBNPL).~~ Plants should be positioned to account for the level of expected inundation. They may be placed on the bottoms or sides of recessed areas or the tops of adjacent soil where their roots can grow toward adjacent moist soil. Other placement considerations should include sun exposure, maintenance requirements, shape, form, and aesthetics.

C. Mulch placement

Mulch shall be positioned away from the base of plant trunks to avoid excessive moisture there.

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4-01.7.0 ENFORCEMENT

The steps described below are required to ensure the site is constructed according to the requirements of the approved Implementation Plan.

7.1 Inspections

A. Prior to commencement of grading, a preconstruction meeting shall be held on-site with the project engineer, landscape architect, contractor, and PDSD inspector to verify that Water Harvesting Infiltration Area locations, depression depths, inlet and outlet elevations, and any ROW connection points are clearly staked and consistent with the approved Water Harvesting Implementation Plan. All site-scale grading related to water harvesting Sub-watersheds and Water Harvesting Infiltration Areas must be inspected and accepted by PDSD prior to application of any surface treatment (e.g., concrete, asphalt, rock, etc.) to verify that slopes, recessed areas, overflows, and other design elements have been properly graded. PDSD shall verify that Water Harvesting Infiltration Areas are depressed to the minimum required depth and that elevation benchmarks for inlets, outlets, and spillways are consistent with the approved Implementation Plan.

B. All landscape-scale grading in Water Harvesting Infiltration Areas where planting will be conducted must be inspected and accepted by PDSD prior to plant installation and application of organic mulch or rock to verify they have been properly graded. [Unchanged]

C. PDSD will inspect the site for compliance with the provisions of the Rainwater Harvesting Plan prior to issuance of a final certificate of occupancy. [Unchanged]

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SECTION 5-02.5.0: LANDSCAPE PLANT MATERIALS

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5-02.5.0 PLANT/SEED LISTS.

5.1 Origin of Plant/Seed Lists

A. Exhibit I, Native Seed List, was derived from the Low Water Use/Drought Tolerant Plant List as known native vegetation. The list is not inclusive of all native vegetation. For alternative selections, refer to Section 5-02.3.2, Native Seeds.

The seed list is established as a guide on how to mix the various types of seeds to provide a varying mix of native plant growth on the site giving it a more natural appearance. The pounds per acre listing is a guide for use by the designer to achieve a minimum growth pattern to the seeded area. Specific rates are based on the seeds that are used in the mix. The seed mix is to be certified by the seed supplier as to the growth coverage projected.

B. The ADWR Low Water Use/Drought Tolerant Plant List is prepared for use within the Tucson Active Management Area (TAMA) by the ADWR.

C. The Tucson Basin Native Plant List (TBNPL) is recommended by the City's Landscape Advisory Committee and includes a subset of plant species from the ADWR Low Water Use/Drought Tolerant Plant List and other locally recommended species. The list is available on the PDSD website. Plant material used for landscaping in commercial rainwater harvesting landscape areas is recommended to be selected from the TBNPL.

1. The TBNPL is specific to the Tucson urban metropolitan area and consists of primarily Sonoran Desert native and near-native species selected for water efficiency, climate resilience, and ecological compatibility.

2. A limited number of non-native species may be included on the TBNPL where they are demonstrated to be low water use, compatible with native species, and have established performance records in Tucson's public landscapes. Inclusion of non-native species on the TBNPL does not constitute a preference for their use over native alternatives.

5.2 Modification of Plant Selection

In order to use plants not listed in ADWR Low Water Use/Drought Tolerant Plant List, the plants are to be approved through the following process.

A. Any person seeking to add or delete a plant or plants from the low water use plant list may submit an application for modification of the list at any time to the Director of the ADWR. The application is made on a form prescribed and furnished by the Director of the ADWR.

B. The ADWR Director reviews each request for modification of the low water use plant list. The Director may request additional information from the applicant and may seek information from other sources as may be necessary to determine whether the list should be modified.

C. If the addition of a plant to the low water use plant list is approved, the ADWR Director will place the plant on a supplemental list as an addendum to the low water use plant list. The supplemental list shall be available upon request from the ADWR.

D. If the ADWR Director approves the deletion of a plant from the Low Water Use/Drought Tolerant Plant List, the deletion from the list will be issued with the annual modified review plant list.

E. The ADWR Director conducts an annual review of the low water use plant list and issues a modified plant list. As a result of the review, the Director may add or delete plants from the list.

5.3 Updates of Plant Lists

The plant and seed lists will be updated as necessary to provide the most current plant list based on Section 5-02.5.2.E., except for the TBNPL which shall be maintained by the Planning and Development Services Department and amended by recommendation of the Landscape Advisory Committee.