

15.1-A M.M.W.D. WATER CONSERVATION CHECKLIST

Water Conservation

- Fill out the project datasheet.
- Complete the Maximum Applied Water Allowance (MAWA) & Estimated Total Water Use (ETWU) spreadsheet.
- Submit a grading plan. The grading design will minimize soil erosion, runoff, and water waste. The grading plan must clearly and accurately identify:
 - Height of finished graded slopes
 - Drainage patterns
 - Pad elevations
 - Finish grade
 - Stormwater retention improvements, if applicable.
 - The grading design plan shall contain the following statement, **"I have complied with the criteria of the ordinance and applied them accordingly for the efficient use of water in the grading design plan."** It shall bear the signature of a licensed professional as authorized by law.

It is highly recommended that, when site conditions allow, project applicants consider grading so that all irrigation and normal rainfall remains within the property lines and does not drain on to non-permeable hardscape.

- Submit a landscape planting plan that accurately and clearly identifies and depicts:
 - New and existing trees
 - Shrubs, groundcovers, turf, and any other planting areas
 - Plants by botanical name and common name
 - Plant sizes and quantities
 - Property lines, new and existing building footprints, streets, driveways, sidewalks and other hardscape features
 - Pools, fountains, and water features
 - A minimum of 8" of non-mechanically compacted soil shall be available for water absorption and root growth in planted areas.
 - Incorporate compost or natural fertilizer into the soil to a minimum depth of 8" at a minimum rate of 6 cubic yards per 1000 square feet or per specific amendment recommendations from a soils laboratory report.
 - A minimum 3" layer of mulch shall be applied on all exposed soil surfaces of planting areas except in turf areas, creeping or rooting groundcovers, and direct seeding applications.

- Selected plants shall not cause the Estimated Total Water Use to exceed the Maximum Applied Water Allowance (see calculation in Appendix A).
 - Plants with similar water use needs shall be grouped together in distinct hydrozones and, where irrigation is required, the distinct hydrozones shall be irrigated with separate valves.
 - Low and moderate water use plants can be mixed, but the entire hydrozone will be classified as moderate water use for MAWA calculations (see WUCOLS).
 - High water use plants shall not be mixed with low or moderate water use plants (see WUCOLS).
 - All non-turf plants shall be selected, spaced, and planted appropriately based upon their adaptability to the climatic, geologic, and topographical conditions of the project site.
 - Turf shall not be allowed in the following conditions: Slopes exceeding 10%, planting areas 8 feet wide or less, street medians, traffic islands, planter strips, and bulbouts of any size.
 - Invasive plants as listed by the MMWD Invasive Plant list are prohibited.
 - Fire Safe Landscape Practices. The requirements in this chapter are intended to support and be in compliance with all local and state requirements related to Fire Safe Landscaping practices, including, but not limited to, requirements for Wildlife Urban Interface zones as specified by local authority (see map).
 - Identify any applicable rain harvesting, graywater, or catchment technologies (e.g. rain gardens, cisterns, etc.). Applicants are encouraged to employ alternative irrigation techniques as appropriate, and where permitted by law.
 - Identify location and installation details of any applicable stormwater best management practices that encourage on-site retention and infiltration of stormwater. Appropriate stormwater best management practices are encouraged in the landscape design.
- Submit an irrigation design plan that clearly identifies and depicts:
- The irrigation system point of connection (if existing, please mark all points of connection with the meter number).
 - Controller
 - Pipes
 - Remote-control valves
 - Sprinklers
 - Rain-shut off device
 - Check valves
 - Pressure regulating devices
 - Backflow prevention devices
 - Hydrozone table and summary table

- Irrigation systems with meters 1 ½" or greater require a high-flow sensor that can detect high-flow conditions and has the capability to shut off the irrigation system.
 - Isolation valves shall be installed at the point-of-connection and before each valve or valve manifold.
 - High-efficiency controllers, weather-based or other sensor-based self-adjusting irrigation controllers shall be required.
 - Rain sensors shall be installed for each irrigation controller.
 - Pressure regulation and/or booster pumps shall be installed so that all components of the irrigation system operate at the manufacturer's recommended optimal pressure.
 - Irrigation system shall be designed to prevent runoff or overspray onto non-targeted areas, and wherever overhead irrigation is located directly adjacent to hardscape areas, where runoff water flows into the curb and gutter; all spray heads shall be setback a minimum of 24" from hardscape edges.
 - Point source irrigation is required where plant height at maturity will affect the uniformity of an overhead system.
 - Minimum 24" setback of overhead spray irrigation is required where turf is directly adjacent to a continuous hardscape area where runoff water flows into the curb and gutter.
 - Slopes greater than 15% shall not be irrigated with an irrigation system with a precipitation rate exceeding 0.75 inches per hour (or lower if appropriate for site conditions as determined by the District).
 - A single valve shall not irrigate hydrozones that mix high water use plants with moderate or low water use plants.
 - Trees shall be placed on separate irrigation valves except when planted in turf areas.
 - Sprinkler heads, rotors and other emission devices on a valve shall have matched precipitation rates.
 - Head-to-head coverage is required unless otherwise directed by the manufacturer's specifications.
 - Swing joints or other pipe protection components are required on above-ground irrigation piping.
 - Check valves shall be installed to prevent low-head drainage.
 - Hydrozone table and summary containing new and existing landscape area
 - Point of connection labeled either as "New" or with the existing meter #
 - Water use table (provided by the district)
- For homeowner provided projects (meaning the homeowner will design the landscape and perform the installation themselves rather than hire someone), a completed homeowner's irrigation design statement may be submitted in lieu of the irrigation design plan to meet the irrigation specifications (see example on page

17). A signed, written statement shall be submitted to the District as part of the design review process, and shall include the following elements:

- Accurately and clearly describes the types and locations of all irrigation system point(s) of connection;
 - Accurately and clearly describes the types and location of all irrigation system components by valve zone, including high-efficiency irrigation controller, pipe, valves, high and low volume irrigation devices, rain shut-off device, check valves, pressure regulating devices, backflow prevention devices, and all other irrigation devices required by the district;
 - A completed hydrozone table;
 - A description of plant species irrigated in each valve zone by scientific name, water use of each plant as high, moderate, or low water use according to WUCOLS (Water Use Classification of Landscape Species), and plant height at maturity for each plant. Plant height is not necessary where drip or bubbler will be used;
 - A statement signed by the homeowner that includes the following certifying language: "The irrigation system will be installed as described in this statement, and in compliance with the requirements of the District".
- The following projects shall have either a district landscape water service meter or a private submeter. Check only one that applies, if applicable:
- A district landscape water service meter is required for all new landscapes, other than single –family and two-unit residential landscapes, for which the irrigated area is equal to or greater than 1,000 square feet.
 - A private submeter shall be required for all rehabilitated landscapes, other than single-family and two-unit residential landscapes, for which the irrigated landscape area is equal to or greater than 1,000 square feet.
 - A private submeter shall be required for all points of connection on single-family and two-unit residential sites for which the irrigated landscape area is equal to or greater than 2,500 square feet.

Water Features

- Recirculating water systems shall be used for water features.
- Recycled water shall be used when available and approved for use onsite.

Comments