CITY OF CLAYTON

Founded 1857 — Incorporated 1964

Certificate of Compliance
Landscape Design

Project Name and Address/Parcel No.: _____

Applicant Name: _____

Applicant Address: _____

Project Area Measurements

Total turf area: _____ square feet

Total non-turf landscape area: _____ square feet

Total water feature area: _____ square feet

☐ Landscape design has zero (0) square feet of turf that is not specified as "special landscape area" and water feature(s) with total surface area not more than 100 square feet.

☐ Landscape design includes: 1) turf that is not specified as "special landscape area"; or 2) water feature(s) with more than 100 square feet of total surface area. If this box is checked, applicant must prepare Water Allowance Work Sheets to demonstrate the landscape is designed to use less than the Maximum Applied Water Allowance.

Landscape Design Requirements

☐ Design incorporates most recent acceptable best management practices for water-efficient landscape design.

☐ Submit landscape plans, including planting, irrigation, and installation details.

☐ Plants selected are well suited to the local climate and soil conditions.

☐ Plants are spaced appropriately based on their expected mature size.

☐ Overhead irrigation not used if irrigation results in overspray.

☐ Plants are spaced so at mature size they do not block sprinklers.

☐ Distinct hydrozones are irrigated separately by one or more irrigation valves.

☐ No turf is specified in medians, areas narrower than 8 feet, or on slopes greater than 15%.

☐ Plan specifies smart irrigation controller(s) utilizing ET or soil moisture sensors.

☐ Plan specifies separate water meter(s) for landscape irrigation per the retail water supplier regulations.

☐ Recycled water is used if available.

☐ Run-off, low head drainage and overspray are prevented.

☐ No overhead irrigation is specified within 12 inches of any non-permeable surface.

☐ Sprinkler stations have matched precipitation rates for each irrigation zone with a maximum precipitation rates for each irrigation zone with a maximum precipitation rate of 1.2 inches per hour or 0.7 inches per hour for all slopes of 25% or greater.

- ☐ Irrigation controls are specified to maintain dynamic water pressure at sprinkler heads and other emission devices within manufacturer's specifications.
- ☐ No overhead irrigation is specified in areas less than eight feet wide in any direction.
- ☐ Manual shutoff valves are specified at each point of connection.
- ☐ Irrigation plan includes or specifies that controller map(s) and programming table(s) shall be placed in all irrigation controller cabinets.
- ☐ Plan specifies a separate irrigation valve and hydrozone for the top of a slope and bottom of a slope.
- ☐ A re-circulation system has been specified for all water features.
- ☐ Fountain(s) is designed and nozzles are specified so that no wind drift or overspray will occur.
- ☐ Design complies with Storm Water Control Plan requirements.
- ☐ Design minimizes any soil erosion from construction activities and maintains or improves the landscape soil's infiltration rate.
- ☐ Design to avoid drainage onto non-permeable hardscapes within the project and prevent runoff of irrigation and rainfall outside property lines.
- ☐ Only specify soil amendments that are appropriate for the selected plants.
- ☐ Plan specifies a minimum of two inches of mulch specified for all exposed soil surfaces in non-turf planting areas.

I/We certify that the landscape plans for the above-listed project comply with the Water-Efficient Landscape Standards and Landscape Plan Requirements of the City of Clayton Water Efficient Landscape Ordinance.

Designer's Name	Company Name
Address	Telephone
E-Mail	Professional License Number
Date	

Professional Stamp

CITY OF CLAYTON

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Certificate of Compliance
Landscape Installation

Project name: _____

Project Address/Parcel No.: _____

Applicant Name: _____

Applicant Address: _____

- ☐ Installed Project Area Measurements match those of the Landscape Design Plans.
- ☐ Plant material is the same as that specified in the plans and any substitutes are determined to be equivalent or less in water need, per *Water Use Classification of Landscape Species (WUCOLS)*.
- ☐ Installation incorporates most recent acceptable best management practices for water efficient landscape design.
- ☐ Any plant substitutes are well suited to the local climate and soil conditions.
- ☐ All plants are located per the design plan.
- ☐ Irrigation hyrdrozones are the same as plans and any field-adjusted irrigation zones were installed so that distinct hydrozones are irrigated separately by one or more irrigation valves.
- ☐ Changes to irrigation system or plant material shall maintain distinct hydrozones that are irrigated separately by one or more irrigation valves
- ☐ No turf is installed in medians, areas narrower than eight feet, or on slopes greater than 15%.
- ☐ All irrigation equipment is the same as specified, and any substitutes are equivalent.
- ☐ Automatic irrigation controller(s) installed utilize ET or soil moisture sensors.
- ☐ Point of connection (POC) is the same as specified in the plans.
- ☐ System has been installed and tested to prevent run-off, low head drainage, and overspray.
- ☐ No overhead irrigation is installed within 12 inches of any non-permeable surface.
- ☐ Sprinkler stations have matched precipitation rates for each irrigation zone, with a maximum precipitation rate of 1.2 inches per hour or 0.7 inches per hour for all slopes of 25% or greater.
- ☐ No overhead irrigation is used in areas less than eight feet wide in any direction.
- ☐ Manual shutoff valves are specified at each POC.
- ☐ A controller map and programming table were placed in all irrigation controller cabinets.
- ☐ Separate irrigation valves were installed and hydrozones created for the top of a slope and bottom of a slope.

- ☐ All water systems have functioning re-circulating water systems.
- ☐ Fountain(s) and their nozzles are maintained so that no wind drift or overspray will occur.
- ☐ Installation complies with Storm Water Control Plan requirements.
- ☐ Installation work minimized any soil erosion and maintained or improved the landscape soil's infiltration rate.
- ☐ Installation avoids drainage onto non-permeable hardscapes within the project and prevents run-off irrigation and rainfall outside property lines.
- ☐ Only specified soil amendments that are appropriate for the selected plants were used.
- ☐ A minimum of 2 inches of mulch for all exposed soil surfaces in non-turf planting areas.

I/We certify that the landscape has been installed as specified in the landscape plans for the above-listed project to comply with the Water-Efficient Landscape Standards and Landscape Plan Requirements of the City of Clayton Water Efficient Landscape Ordinance.

_____	_____
Installer's Name	Company Name
_____	_____
Address	Telephone
_____	_____
E-Mail	Professional License Number
_____	
Date	

Professional Stamp

CITY OF CLAYTON

Founded 1857 – Incorporated 1964

Certificate of Compliance
Landscape Water Audit

Project name: _____

Project Address/Parcel No.: _____

Applicant Name: _____

Applicant Address: _____

- ☐ Installed Project Areas match those of the Landscape Design Plans.
- ☐ Plant material is the same as that specified on the plans, with any plant material substitutes being equivalent or less in water need per *Water Use Classification of Landscape Species (WUCOLS)*.
- ☐ Project has incorporated most recent acceptable best management practices for water-efficient landscape design.
- ☐ Plants used are well suited to the local climate and soil conditions.
- ☐ Plants are spaced appropriately based on their expected mature size.
- ☐ Overhead irrigation was not used where it would result in overspray.
- ☐ Plants are spaced so at mature size they do not block sprinklers.
- ☐ Distinct hydrozones are irrigated separately by one or more irrigation valves.
- ☐ No turf is planted in medians, areas narrower than eight feet, or on slopes greater than 15%.
- ☐ Smart irrigation controller(s) utilizing ET or soil moisture sensors are installed.
- ☐ Point of Connection (POC) is same as specified in plans.
- ☐ Recycled water is used, if available.
- ☐ Irrigation system has no runoff, low head drainage, and overspray.
- ☐ No overhead irrigation is installed within 12 inches of any non-permeable surface.
- ☐ Sprinkler stations have matched precipitation rate for each irrigation zone, with a maximum precipitation rate of 1.2 inches per hours or 0.7 inches per hour for all slopes of 25% or greater.
- ☐ Dynamic water pressure at sprinkler heads and other emission devices is within manufacturer's specifications.
- ☐ No overhead irrigation is installed in areas less than eight feet wide in any direction.
- ☐ Manual shutoff valves are installed at each POC.
- ☐ Controller map(s) and programming table(s) are in all irrigation controller cabinets.
- ☐ Separate irrigation valves are installed for the top of a slope and bottom of a slope, and designated as separate hydrozones.
- ☐ A re-circulation system has been installed for all water features.
- ☐ Fountains and their nozzles have no wind drift or overspray.

- ☐ Project complies with Storm Water Control Plan requirements.
- ☐ Site's landscape soils infiltration rate is the same as or better than native soil of area.
- ☐ Project does not drain onto non-permeable hardscapes within the project, and no runoff of irrigation and rainfall can occur outside property lines.
- ☐ Only specified soil amendments that are appropriate for the selected plants were used on project.
- ☐ A minimum of two inches of mulch is installed for all exposed soil surfaces in non-turf planting areas.

I/We certify that the landscape for the above-listed project complies with the Landscape Water Conservation Standards of the City of Clayton Landscape Water Conservation Ordinance.

Auditor's Name	Company Name
Address	Telephone
E-Mail	Professional License Number
Date	

Professional Stamp

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Certificate of Compliance
Landscape Maintenance

Project name: _____

Project Address/Parcel No.: _____

Applicant Name: _____

Applicant Address: _____

- ☐ Changes in total landscape are shall be reported to the local water unity.
- ☐ Maintenance practices incorporate most recent acceptable best management practices for water-efficient landscape maintenance.
- ☐ Plants selected for replanting are well suited to the local climate and soil conditions.
- ☐ Plants for replanting are spaced appropriately based on their expected mature size.
- ☐ Any changes to overhead irrigation do not result in overspray.
- ☐ Replacement plants are spaced so at mature size they do not block sprinklers.
- ☐ Changes to irrigation system or plant material shall maintain distinct hydrozones that are irrigated separately by on or more irrigation valves
- ☐ Medians, areas narrower than eight feet or on slopes greater than 15%, shall not be re-planted in turf.
- ☐ Smart irrigation controller(s) utilizing ET or soil moisture sensors are in the ET or sensor mode.
- ☐ The existing irrigation point of connection (POC) is used for any irrigation system changes.
- ☐ Maintenance practices are incorporated to prevent run-off, low head drainage, and overspray.
- ☐ No overhead irrigation can be moved within 12 inches of any non-permeable surface.
- ☐ Sprinkler stations have matched precipitation rates for each irrigation zone with a maximum precipitation rate of 1.2 inches per hour or 0.7 inches for all slopes 25% or greater.
- ☐ Irrigation controls are used to maintain dynamic water pressure at sprinkler heads and other emission devices within manufacturer's specifications.
- ☐ No overhead irrigation is used in areas less than eight feet wide in any direction.
- ☐ Manual shutoff valves are maintained at each point of connection.
- ☐ A copy of the controller map(s) and programming table(s) are kept in all irrigation controller cabinets.
- ☐ Separate irrigation valves and hydrozones are maintained for the top of a slope and bottom of a slope.
- ☐ Re-circulation system(s) is maintained for all water features.

- ☐ Fountain(s) and their nozzles are maintained so that no wind drift or overspray will occur.
- ☐ Maintenance practices comply with Storm Water Control Plan requirements.
- ☐ Infiltration rates for site's landscape soils are maintained or improved with site maintenance practices.
- ☐ Site is maintained to avoid drainage onto non-permeable hardscapes within the project and prevent run-off of irrigation and rainfall outside property lines.
- ☐ Only use soil amendments that are appropriate for any replacement plants.
- ☐ Maintain a minimum of two inches of mulch for all exposed soil surfaces in non-turf planting areas.

I/We certify that the landscape maintenance for the above-listed project will comply with the Landscape Water Conservation Standards of the City of Clayton Landscape Water Conservation Ordinance and the Landscape Maintenance Schedule created for this project.

Designer's Name	Company Name
Address	Telephone
E-Mail	Professional License Number
Date	

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Water Allowance Work Sheets

Water Allowance Work Sheets are used to calculate water use in the form of Maximum Applied Water Allowance (MAWA) and Estimated Total Water Use (ETWU) for the landscape project.

These sheets are required if the project has turf or other high water use plants not qualified as a 'Special Landscape Area' or has water feature(s) with more than one hundred (100) total square feet of surface area. This is referred to as Option B of the Landscape Project Application Requirements of the Water-Efficient Landscape Ordinance.

Special Landscape Area is defined as an area of the landscape dedicated solely to edible plants, areas irrigated with recycled water, water features using recycled water, and areas dedicated to active play, such as parks, sports fields and golf courses where turf provides a playing surface.

The ETWU for the project can not exceed the MAWA for the project.

Calculate the MAWA for the project using the below formula and Factors:

$$MAWA = (ETo)\ (0.62)\ [(0.7 \times LA) + (0.3 \times SLA)]$$

Where:

MAWA	=	Maximum Applied Water Allowance (gallons per year)
ETo	=	Reference Evapotranspiration (inches per year)
0.62	=	Conversion Factor (to gallons)
0.7	=	ET Adjustment Factor (ETAF)
LA	=	Landscape Area including SLA (square feet)
0.3	=	Additional Water Allowance Factor for SLA
SLA	=	Special Landscape Area (square feet)

Step one: Multiple total project landscape area by 0.7, the ET Adjustment Factor

LA	Multiply	0.7	Equals	0.7 x LA
	x		=	

Step two: Multiple total Special Landscape Area by 0.3, the Additional Water Allowance Factor

SLA	Multiply	0.3	Equals	0.3 x SLA
	x		=	

Step 3: Add Adjusted LA and adjusted SLA Water Allowances

0.7 x LA	Plus	0.3 x SLA	Equals	0.7 x LA + 0.3 SLA
	+		=	

Step four: Multiple Reference Evapotranspiration by the conversion factor and Total Adjusted Water Allowance

ETo	Multiply	Conversion factor	Multiply	0.7 x LA + 0.3 x SLA	Equals	**MAWA**
	x	0.62	x		=	

Calculate the ETWU for the project using the below formula and Factors. A Hydrozone Table will need to be completed prior to completing the ETWU calculation, to determine the total area by hydrozone type.

$$ETWU = (ETo)(0.62)\left(\frac{PF\ x\ HA}{0.71} + SLA\right)$$

Where:

ETWU	=	Estimated Total Water Use per year (gallons)
ETo	=	Reference Evapotranspiration (inches)
PF	=	Plant Factor (see Definitions)
HA	=	Hydrozone Area [high, medium, low and very low water use areas] (square feet)
SLA	=	Special Landscape Area (square feet)
0.62	=	Conversion Factor
0.71	=	Irrigation Efficiency

Step one: Multiple the Plant Factor by the total area of that plant water need category

Plant Factor	Multiply	Total Hydrozone Area	Equals	PF x HA
High (0.8)	x		=	
Medium (0.5)	x		=	
Low (0.3)	x		=	
Very Low (0.1)	x		=	

Step two: Add up the Total Adjusted Hydrozone Allowances

High PF x HA	Plus	Medium PF x HA	Plus	Low PF x HA	Plus	Very Low PF x HA	Equals	Total PF x HA
	+		+		+		=	

Step three: Divide the Total Adjusted Hydrozone Allowance by 0.71, minimum Irrigation Efficiency

Total PF x HA	Divided by	Irrigation Efficiency	Equals	Total PF x HA / 0.71
	/	0.71	=	

Step four: Add the SLA Area to the total (PF x HA / 0.71)

Total PF x HA / 0.71	Plus	Total Special Landscape Area	Equals	Total PF x HA / 0.71 + SLA
	+		=	

Step five: Multiply the yearly ETo times the Conversion Factor times the total (PF x HA / 0.71 + SLA)

Yearly ETo	Multiple	Conversion Factor	Multiple	PF x HA / 0.71 + SLA	Equals	**ETWU** (must be equal to or lower than the MAWA)
	x	0.62	x		=	

Record Project's square footage, by station number, on the Hydrozone Table, under the correct category. Use WUCOLS to determine the correct hydrozone category for the plants watered by each irrigation valve. Use the highest water needing plant irrigated by a valve to set that valve's water need category.

Hydrozone Table

Station Number	High Water Needs (sq. Ft.)	Medium Water Needs (Sq. Ft.)	Low Water Needs (Sq. Ft.)	Very Low Water Needs (Sq. Ft.)	Special Landscape Area (Sq. Ft.)
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					

20					
21					
22					
23					
24					
Totals					