



CITY OF NATIONAL CITY - DEVELOPMENT SERVICES DEPARTMENT
1243 NATIONAL CITY BLVD., NATIONAL CITY, CA 91950

March 23, 2010

Mr. Simon Eching
California Department of Water Resource
Water Use and Efficiency Branch
Post Office Box 942836
Sacramento, CA 94236-001

Dear Mr. Eching:

Attached is a copy of Ordinance No. 2010-2331 Establishing Water Efficient Landscape Regulations for the City of National City. This Ordinance was adopted on March 2, 2010 and becomes effective April 1, 2010.

Sincerely,

A handwritten signature in black ink, appearing to be 'Maryam Babaki', is written over a horizontal line.

Maryam Babaki
Director of Development Services

Enclosure: Ordinance No. 2010-2331

ORDINANCE NO. 2010 – 2331

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF NATIONAL CITY
AMENDING TITLE 18 OF THE MUNICIPAL CODE BY AMENDING CHAPTER
18.54 ESTABLISHING WATER EFFICIENT LANDSCAPE REGULATIONS

WHEREAS, Assembly Bill AB-1881 required the State Department of Water Resources update the State of California model landscape ordinance to promote water conservation; and

WHEREAS, cities were required to adopt the State model water efficient landscape ordinance or an ordinance that is at least as effective by January 1, 2010; and

WHEREAS, the purpose of this ordinance is to establish specific requirements, rules, and standards for landscape and irrigation installations and incidental matters relating to water conservation measures; and

WHEREAS, landscapes are essential to the quality of life by providing areas for active and passive recreation and enhance the environment by cleaning air and water, preventing erosion, offering fire protection, and replacing ecosystems; and

WHEREAS, water supplies are limited and subject to increasing demand; and

WHEREAS, it is the policy of the City of National City to promote the conservation and efficient use of water and to prevent the waste of this valuable resource; and

WHEREAS, it is the policy of the City of National City to work cooperatively with water purveyors; and

WHEREAS, adoption of the Water Efficient Landscape Regulations is exempt under the California Environmental Quality Act (CEQA), Section 15307, Class 7; and

WHEREAS, the Planning Commission considered the proposed amendment on January 11, 2010, and recommended approval with minor changes as recommended by the Sweetwater Authority, which have been incorporated into this ordinance; and

WHEREAS, the City Council hereby finds that the requirements set forth in this Ordinance are reasonably necessary because of local climatic conditions, including low annual precipitation and extensive periods of drought, which have made it necessary to import the majority of the water used in this area; and

WHEREAS, the City Council hereby also finds that this Ordinance implements the Water Conservation in Landscaping Act. The requirements in this Ordinance reduce water use associated with irrigation of outdoor landscaping by setting a maximum amount of water to be applied to landscaping, and by designing, installing, and maintaining water efficient landscapes consistent with the water allowance. The provisions of this Ordinance are equivalent to and at least as effective as the provisions of the Sate Model Landscape Ordinance because the calculation of maximum applied water allowance and the resulting restrictions on irrigation and process are similar, though tailored to the City of National City's existing regulatory procedures; and

WHEREAS, pursuant to Government Code section 65595, the City of National City finds that the Ordinance is at least as effective in conserving water as the State model ordinance based upon evidence in the legislative record.

NOW, BE IT ORDAINED by the City Council of the City of National City that Title 18 of the National City Municipal Code is amended as follows:

SECTION 1: Chapter 18.54 of the National City Municipal Code, which is applicable city wide, is hereby amended to read as follows:

Chapter 18.54

WATER EFFICIENT LANDSCAPE REGULATIONS

Sections:

- 18.54.010 Purpose.
- 18.54.020 Definitions.
- 18.54.030 Applicability.
- 18.54.040 Administration and enforcement.
- 18.54.050 Landscape Documentation Package.
- 18.54.060 Soil management report.
- 18.54.070 Planting and irrigation plans.
- 18.54.080 Water efficient landscape worksheet.
- 18.54.090 Grading design plan.
- 18.54.100 Irrigation schedule.
- 18.54.110 Maximum applied water use.
- 18.54.120 Estimated total water use.
- 18.54.130 Adjustment to landscaped area for non-vegetated area.
- 18.54.140 Regulations applicable to use of turf on landscaped areas.
- 18.54.150 Projects with model homes.
- 18.54.160 Recycled water.
- 18.54.170 Landscaping and irrigation installation.
- 18.54.180 Landscaping and irrigation maintenance.
- 18.54.190 Certificate of completion.
- 18.54.200 Waste water prevention.

18.54.010 Purpose. The State Legislature determined in the Water Conservation in Landscaping Act (the "Act"), Government Code sections 65591 et seq., that the State's water resources are in limited supply. The Legislature also recognized that while landscaping is essential to the quality of life in California, landscape design, installation, maintenance, and management must be water efficient. The general purpose of this Chapter is to establish water use standards for landscaping in the City of National City that implement the 2006 development landscape design requirements established by the Act. Consistent with the Legislature's findings, the purpose of this Ordinance is to:

- A. Promote the values and benefits of landscapes while recognizing the need to utilize water and other resources as efficiently as possible.
- B. Establish a structure for planning, designing, installing, maintaining, and managing water efficient landscapes.
- C. Promote the use, when available, of tertiary treated recycled water, for irrigating landscaping.

- D. Use water efficiently without waste by setting a Maximum Applied Water Allowance (MAWA) as an upper limit for water use and reduce water use to the lowest practical amount.
- E. Encourage water users of existing landscapes to use water efficiently and without waste.

18.54.020 Definitions. The following definitions shall apply to this Chapter:

- A. "Automatic irrigation controller" means an automatic timing device used to remotely control valves that operate an irrigation system. Automatic irrigation controllers shall schedule irrigation events using either evapotranspiration (ET_o) (weather-based) or moisture sensor data.
- B. "Building permit" means a permit to engage in a certain type of construction at a specific location.
- C. "Certified landscape irrigation auditor" means a person certified to perform landscape irrigation audits by an accredited academic institution, a professional trade organization, or other accredited certification program.
- D. "Developer" means a person who seeks or receives permits for or who undertakes land development activities who is not a single-family homeowner. Developer includes a developer's partner, associate, employee, consultant, trustee, or agent.
- E. "Director" means the development services director or anyone to whom the director has designated or hired to administer or enforce this Chapter.
- F. "Discretionary permit" means any permit requiring a decision-making body to exercise judgment prior to its approval, conditional approval, or denial.
- G. "Estimated total water use" (ETWU) means the estimated total water use in gallons per year for a landscaped area.
- H. "ET adjustment factor" (ETAF) means a factor that when applied to reference ET_o, adjusts for plant water requirements and irrigation efficiency, two major influences on the amount of water that is required for a healthy landscape.
- I. "Evapotranspiration" (ET_o) means the quantity of water evaporated from adjacent soil and other surfaces, and transpired by plants during a specified time period.
- J. "Reference evapotranspiration" means a standard measurement of environmental parameters which affect the water use of plants. ET_o is given in inches per day, month, or year and is an estimate of the ET_o of a large field of four-inches to seven-inch tall, cool season turf that is well watered. Reference ET_o is used as the basis of determining the MAWA so that regional differences in climate can be accommodated.
- K. "Grading" means any importation, excavation, movement, loosening, or compaction of soil or rock.
- L. "Hardscape" means any durable surface material, pervious, or non-pervious.
- M. "Homeowner-provided landscaping" means landscaping installed either by a private individual for a single-family residence or installed by a California licensed contractor hired by a homeowner.
- N. "Hydrozone" means a portion of the landscape area having plants with similar water needs. A hydrozone may be irrigated or non-irrigated.
- O. "Invasive plant species" means species of plants not historically found in California that spread outside cultivated areas and may damage environmental or economic resources.
- P. "Irrigation audit" includes an in depth evaluation of the performance of an irrigation system conducted by a certified landscape irrigation auditor. An irrigation audit may include, but is not limited to, inspection, system tune up, system test with distribution uniformity or emission uniformity, reporting overspray or runoff that causes overland flow, and preparation of an irrigation schedule.

Q. "Irrigation efficiency" means the measurement of the amount of water beneficially used divided by the water applied. Irrigation efficiency is derived from measurements and estimates of irrigation system characteristics and management practices.

R. "Landscaped area" means an area with outdoor plants, turf, and other vegetation. A landscaped area may include a water feature either in an area with vegetation or that stands alone. A landscaped area may also include design features adjacent to an area with vegetation. A landscaped area does not include the footprint of a building, decks, patio, sidewalk, driveway, parking lot, or other hardscape. A landscaped area also does not include an area without irrigation designated for non-development such as designated open space or area with existing native vegetation and areas dedicated for food production.

S. "Landscape Manual" means the Water Efficient Landscape Design Manual, approved by the City of National City that establishes specific design criteria and guidance to implement the requirements of this Chapter.

T. "Low head drainage" means a sprinkler head or other irrigation device that continues to emit water after the water to the zone in which the device is located has shut off.

U. "Low volume irrigation" means the application of irrigation water at low pressure through a system of tubing or lateral lines and low volume emitters such as drip lines or bubblers.

V. "Maximum Applied Water Allowance" (MAWA) means the maximum allowed annual water use for a specific landscaped area based on the square footage of the area, the ETAF, and the reference ETo.

W. "Mulch" means an organic material such as leaves, bark, straw, or inorganic mineral materials such as rocks, gravel, or decomposed granite left loose and applied to the soil surface to reduce evaporation, suppress weeds, moderate soil temperature, or prevent soil erosion.

X. "Overspray" means the water from irrigation that is delivered outside an area targeted for the irrigation and makes contact with a surface not intended to be irrigated.

Y. "Pervious" means any surface or material that allows the passage of water through the material and into underlying soil.

Z. "Plant factor" means a factor when multiplied by the ETo, estimates the amount of water a plant needs.

AA. "Recycled water" means waste water that has been treated at the highest level required by the California Department of Public Health for water not intended for human consumption.

BB. "Recreational areas" means areas of active play or recreation, such as parks, playgrounds, sports fields, golf courses, school yards, picnic grounds, or other areas where turf provides a playing surface or serves other recreational purposes.

CC. "Runoff" means water that is not absorbed by the soil or landscape to which it is applied and flows from the landscaped area.

DD. "Special landscaped area" means an area of the landscape dedicated to edible plants, an area irrigated with recycled water, or an area dedicated as turf area within a park, sports field, or golf course where turf provides a passive or active recreational surface.

EE. "Standard Urban Storm Water Mitigation Plan" (SUSMP) means a plan designed to reduce pollutants and runoff flows from new development and significant redevelopment.

FF. "SUSMP Manual" means the manual prepared for implementation of SUSMP requirements, and available for reference at the City's Development Services Department and on the City's website.

GG. "Storm Water Management and Discharge Control" means regulations contained in Chapter 14.22 of the Municipal Code enacted to reduce the effects of polluted discharge on water of the state, to secure benefits from the use of storm water as a resource, to ensure

compliance with the San Diego Regional Water Quality Control Board (RWQCB) and applicable state and federal law.

HH. "Subsurface irrigation" means an irrigation device with a delivery line and water emitters installed below the soil surface that slowly and frequently emit small amounts of water into the soil to irrigate plant roots.

II. "Tertiary treated recycled water," means water that has been through three levels of wastewater treatment including filtration and disinfection, but not intended for human consumption.

JJ. "Transitional area" means a portion of a landscaped area that is adjacent to a natural or undisturbed area and is designated to ensure that the natural area remains unaffected by plantings and irrigation installed on the property.

KK. "Turf" means a groundcover surface of mowed grass.

LL. "Water feature" means a design element where open water performs an aesthetic or recreational function. A water feature includes a pond, lake, waterfall, fountain, artificial streams, spa, and swimming pool. Constructed wetlands used for onsite wastewater treatment or storm water best management practices are not water features.

MM. "WUCOLS III" means Water Use Classification of Landscape Species and refers to the Department of Water Resources 1999 publication or the most current version.

18.54.030 Applicability.

A. All new industrial, commercial, institutional, or multi-family residential development with a total landscaped area less than 2,500 square feet shall provide the following:

1. Install on-site landscaping and below grade automatic irrigation system in accordance with the landscape manual.
2. Landscaping shall be installed in all areas not utilized for structures, parking, drainage, and hardscape.
3. Drought tolerant landscaping and water efficiency in accordance with this Chapter and the landscape manual is encouraged.
4. Parkways, between the curb and the sidewalk, bordering the development shall be provided with ground cover, shrubs, and at a minimum one 15-gallon street tree every 40 linear feet.

B. All new single-family and two-family residences with a total landscaped area less than 5,000 square feet shall provide the following:

1. Install on-site landscaping and below grade automatic irrigation systems in accordance with the landscape manual.
2. Landscaping shall be installed on all areas not used for structures, driveways, drainage, and hardscape.
3. Drought tolerant landscaping and water efficiency for all new landscaping consistent with this Chapter is encouraged.
4. Parkways, between the curb and the sidewalk, bordering the development shall be provided with ground cover, shrubs, and at a minimum one 15-gallon street tree every 40 linear feet.

C. For all other projects that exceed the landscape area identified in 18.54.030(A) and (B) of this Chapter shall apply to the following projects when a building permit or a discretionary permit is required:

1. A project for an industrial, commercial, institutional, or multi-family residential use with a total landscaped area equal to or greater than 2,500 square feet.
2. Developer installed residential and common area landscapes where the total landscaped area for the development is equal to or greater than 2,500 square feet.

- 3. A new single-family residence with homeowner provided landscaping, where the landscaped area is equal to or greater than 5,000 square feet.
- 4. A model home that includes a landscaped area.
- 5. A public agency project that contains a landscaped area equal to or greater than 2,500 square feet.
- 6. A rehabilitated landscape for an existing industrial, commercial, institutional, public agency, or multi-family use where a building permit or discretionary permit is being issued, and the applicant is installing or modifying 2,500 square feet or more of landscaping.

B. This Chapter shall not apply to the following:

- 1. A registered local, State, or federal historical site.
- 2. An ecological restoration project that does not require a permanent irrigation system.
- 3. A mined land reclamation project that does not require a permanent irrigation system.
- 4. A botanical garden or arboretum, open to the public.
- 5. Any single-family residence that is being rebuilt after it was destroyed due to a natural disaster, such as a fire, earthquake, or hurricane.

18.54.040 Administration and enforcement.

A. The director shall administer and enforce this Chapter.

B. The director shall provide guidance to applicants on how to comply with the requirements of this Chapter.

18.54.050 Landscape Documentation Package.

A. Building permit applications for projects subject to section 18.54.030 shall submit and have approved a Landscape Documentation Package to the development services Department prior to issuance of a building permit. A minimum of three percent (3%) of the construction cost to install the landscaping and irrigation improvements shall be submitted as a deposit to review the Landscape Documentation Package. The developer shall be billed for actual costs incurred by the city, including actual labor charges and consultant fees, less the amount of the deposit. In addition to the fee, the Landscape Documentation Package shall contain the following.

- 1. A soils management report and plan that complies with section
- 2. Planting and irrigation plans that comply with section 18.54.070.
- 3. A water efficient landscape worksheet that complies with section

18.54.060.

18.54.080.

4. A grading plan that complies with section 18.54.090, and Chapters 14.22 (Storm Water Management and Discharge Control) and 15.70 (Grading) of the Municipal Code.

18.54.060 Soils management report.

A. The soils management report required by section 18.54.050 shall be prepared by a licensed landscape architect, licensed civil engineer, licensed architect, or other landscape professional appropriately licensed by the State, and shall contain the following information:

- 1. An analysis of the soil for the proposed landscaped areas of the project that includes information about the soil texture, soil infiltration rate, pH, total soluble salts, sodium, and percent organic matter.
- 2. Recommendations about soil amendments that may be necessary to foster plant growth and plant survival in the landscaped area using efficient irrigation techniques.

3. Proposed soil amendments and mulch as follows:

- a. The report shall identify the type and amount of mulch for each area where mulch is applied. Mulch shall be used as follows:
 - i. A minimum two-inch layer of mulch shall be applied on all exposed soil surfaces in each landscaped area except in turf areas, creeping or rooting ground covers or direct seeding applications where mulch is contraindicated.
 - ii. Stabilizing mulch shall be applied on slopes.
 - iii. The mulching portion of seed/mulch slurry in hydro-seeded applications shall comply with subsection A above.
 - e. Highly flammable mulch material shall not be used.
 - iv. The report shall identify any soil amendments and their

type and quantity

B. When a project involves mass grading of a site, the soils report that complies with subsection A shall be submitted with the certificate of completion required by section 18.54.190.

18.54.070 Planting and irrigation plans.

A. The planting and irrigation plans required by section 18.54.050 shall be prepared by a licensed landscape architect, licensed civil engineer, licensed architect, or other landscape professional appropriately licensed by the State. The plans shall:

- 1. Include the MAWA for the plans, including the calculations used to determine the MAWA. The calculations shall be based on the formula in section 18.54.110.
- 2. Include the ETWU for the plans, including the calculations used to determine the ETWU. The calculations shall be based on the formula in section 18.54.120.
- 3. Include a statement signed under penalty of perjury by the person who prepared the plan that provides, "I am familiar with the requirements for landscape and irrigation plans contained in the City of National City Water Efficient Landscape Regulations (LUC Chapter 18.54). I have prepared this plan in compliance with those regulations. I certify that the plan implements those regulations to provide efficient use of water."
- 4. Demonstrate compliance with best management practices identified in Municipal Code Chapter 14.22, including the Storm Water Management, Discharge Control Ordinance and Standard Urban Stormwater Mitigation Plan (SUSMP).
- 5. Demonstrate compliance with State and city requirements for defensible space around buildings and structures, and avoid the use of fire prone vegetation.

B. The planting plan shall meet the following requirements:

- 1. The plan shall include a list of all vegetation by common and botanical plant name, which exists in the proposed landscaped area. The plan shall state what vegetation will be retained and what will be removed.
- 2. The plan shall include a list of all vegetation by common and botanical plant name which will be added to each landscaped area. Invasive plant species shall not be added to a landscaped area. The plan shall include the total quantities by container size and species. If the applicant intends to plant seeds, the plan shall describe the seed mixes and applicable purity and germination specifications.
- 3. The plan shall include a detailed description of each water feature, including the type and surface area of all water features that will be included in the landscaped area. The water feature shall utilize a recirculating water system.
- 4. The plan shall be accompanied by a drawing showing the specific location of all vegetation, retained or planted, the plant spacing and plant size, natural features, water features, and hardscape areas. The drawing shall include a legend listing the common and botanical plant name of each plant shown on the drawing.

5. All plants shall be grouped in hydrozones, and the irrigation shall be designed to deliver water to hydrozones based on the moisture requirements of the plant grouping. A hydrozone may mix plants of moderate and low water use or mix plants of high water use with plants of moderate water use. No high water use plants shall be allowed in a low water use hydrozone. The plan shall also demonstrate how the plant groupings accomplish the most efficient use of water.

6. The plan shall identify areas permanently and solely dedicated to edible plants.

7. The plan shall demonstrate that landscaping when installed and at maturity will be positioned to avoid obstructing motorists' views of pedestrian crossings, driveways, roadways, and other vehicular travel ways. If the landscaping will require maintenance to avoid obstructing motorist's views, the plan shall describe the maintenance and the frequency of the proposed maintenance.

8. The plan shall avoid the use of landscaping with known surface root problems adjacent to a paved area, unless the plan provides for installation of root control barriers or other appropriate devices to control surface roots.

9. Plants in a transitional area shall consist of a combination of site adaptive and compatible native and/or non-native species. Invasive species shall not be introduced or tolerated in a transitional area. The irrigation in a transitional area shall be designed so that no overspray or runoff shall enter an adjacent area that is not irrigated.

10. Where applicable, the plan shall identify passive and active recreational areas.

11. Parkways, between the curb and the sidewalk, bordering the development shall be provided with ground cover, shrubs, and at a minimum one 15-gallon street tree every 40 linear feet.

C. The irrigation plan shall meet the following requirements:

1. The plan shall show the location, type, and size of all components of the irrigation system that will provide water to the landscaped area, including the controller, water lines, valves, sprinkler heads, moisture sensing devices, rain switches, quick couplers, pressure regulators, and backflow prevention devices.

2. The plan shall show the static water pressure at the point of connection to the public water supply and the flow rate in gallons, the application rate in inches per hour, and the design operating pressure in pressure per square inch for each station.

3. The irrigation system shall be designed to prevent runoff, overspray, low-head drainage and other similar conditions where irrigation water flows or sprays onto areas not intended for irrigation. The plan shall also demonstrate how grading and drainage techniques promote healthy plant growth and prevent erosion and runoff.

4. The plan shall identify each area irrigated with recycled water.

5. The plan shall provide that any slope greater than 25 percent will be irrigated with an irrigation system with a precipitation rate of .75 inches per hour or less to prevent runoff and erosion. As used in this Chapter, 25 percent grade means one foot of vertical elevation change for every four feet of horizontal length. An applicant may employ an alternative design if the plan demonstrates that no runoff or erosion will occur.

6. The plan shall provide that all wiring and piping under a paved area that a vehicle may use, such as a parking area, driveway or roadway, will be installed inside a PVC conduit.

7. The plan shall provide that irrigation piping and irrigation devices that deliver water, such as sprinkler heads, shall be installed below grade if they are within 24 inches of a vehicle or pedestrian use area. The director may allow on-grade piping where landform constraints make below grade piping infeasible.

8. The plan shall provide that only low volume irrigation shall be used to irrigate any vegetation within 24 inches of an impermeable surface unless the adjacent impermeable surfaces are designed and constructed to cause water to drain entirely into a landscaped area.

9. The irrigation system shall provide for the installation of a manual shutoff valve as close as possible to the water supply. Additional manual shutoff valves shall be installed between each zone of the irrigation system and the water supply.

10. The irrigation system shall provide that irrigation for any landscaped area will be regulated by an automatic irrigation controller using either evapotranspiration or soil moisture sensor data.

11. The irrigation system shall be designed with a landscape irrigation efficiency necessary to meet the MAWA.

12. The plan shall describe each automatic irrigation controller the system uses to regulate the irrigation schedule, and whether it is a weather-based system or moisture detection system. The plan shall depict the location of electrical service for the automatic irrigation controller or describe the use of batteries or solar power that will power valves or an irrigation controller.

13. Parkways, between the curb and the sidewalk, bordering the development shall be provided below grade irrigation.

18.54.080 Water efficient landscape worksheet. The water efficient landscape worksheet required by section 18.54.050 shall be prepared by a licensed landscape architect, licensed civil engineer, licensed architect, or other landscape professional appropriately licensed by the State, and shall contain the following:

A. A hydrozone information table that contains a list of each hydrozone in the landscaped area of the project and complies with the following requirements:

1. For each hydrozone listed, the table shall identify the plant types and water features in the hydrozone, the irrigation methods used, the square footage, and the percentage of the total landscaped area of the project that the hydrozone represents.

2. The plant types shall be categorized as turf, high water use, moderate water use, or low water use.

B. Water budget calculations, which shall meet the following requirements:

1. The plant factor used shall be from WUCOLS III. A plan that mixes plants in a hydrozone that requires a different amount of water shall use the plant factor for the highest water using plant in the hydrozone.

2. Temporarily irrigated areas shall be included in the low water use hydrozone. Temporarily irrigated as used in this Chapter means the period of time when plantings only receive water until they become established.

3. The surface area of a water feature, including swimming pools, shall be included in a high water use hydrozone.

4. The calculations shall use the formula for the MAWA in section 18.54.110 and for the ETWU in section 18.54.120.

5. Each special landscaped area shall be identified on the worksheet and the area's water use calculated using an ETAF of 1.0.

18.54.090 Grading plan. The grading plan required by section 18.54.050 shall comply with the Municipal Code Chapters 14.22 (Storm Water Management and Discharge Control) and 15.70 (Grading). See the SUSMP Manual for implementation guidelines for Chapter 14.22 to reduce runoff and the discharge of pollutants. The grading plan shall be prepared by a California licensed civil engineer, and shall comply with following requirements:

A. The grading on the project site shall be designed for the efficient use of water by minimizing soil erosion, runoff, and water waste, resulting from precipitation and irrigation.

B. The plan shall show the finished configurations and elevations of each landscaped area including the height of graded slopes, the drainage pattern, pad elevations, finish grade, and any storm water retention improvements.

18.54.100 Irrigation schedule. The irrigation schedule shall be prepared by a licensed landscape architect, licensed civil engineer, licensed architect or other landscape professional appropriately licensed by the State, and shall provide the following information:

A. A description of the automatic irrigation system that will be used for the project.

B. The irrigation schedule shall consider irrigation run times, emission device, flow rate, and current reference evapotranspiration so that applied water meets the Estimated Total Water Use. Total annual applied water shall be less than or equal to Maximum Applied Water Allowance (MAWA). Actual irrigation schedules shall be regulated by automatic irrigation controllers using current reference evapotranspiration data or soil moisture sensor data.

C. Overhead irrigation will be scheduled between 4:00 p.m. and 9:00 a.m., unless weather conditions prevent it. Operation of the irrigation system outside the normal watering window is allowed for auditing and system maintenance.

D. The parameters used for setting the irrigation system controller for watering times for:

1. The plant establishment period.
2. Different seasons during the year.
3. Established landscaping and temporarily irrigated areas.
4. Irrigation uniformity or efficiency setting.

E. The consideration used for each station based on the following factors:

1. The days between irrigation.
2. Station run time in minutes for each irrigation event, designed to avoid runoff.
3. Number of cycle starts required for each irrigation event, designed to avoid runoff.
4. Amount of water to be applied on a monthly basis.
5. The root depth setting.
6. The plant type setting.
7. The soil type.
8. The slope factor.
9. The shade factor.
10. Application rate setting.
11. Irrigation uniformity or efficiency setting.

18.54.110 Maximum applied water use.

A. A landscape project subject to this Chapter shall not exceed the MAWA. The MAWA for a landscape project shall be determined by the following calculation: $MAWA = (ET_o)(0.62)[0.7 \times LA + 0.3 \times SLA]$.

B. The abbreviations used in the equation have the following meanings:

1. MAWA = Maximum Applied Water Allowance in gallons per year.
2. ET_o = Evapotranspiration in inches per year.
3. 0.62 = Conversion factor to gallons per square foot.
4. 0.7 = ET adjustment factor for plant factors and irrigation efficiency.
5. LA = Landscaped area includes special landscaped area in square feet.
6. 0.3 = the additional ET adjustment factor for a special landscaped area

(1.0 - 0.7 = 0.3).

7. SLA = Portion of the landscaped area identified as a special landscaped area in square feet.

18.54.120 Estimated total water use.

- A. An applicant for a project subject to this Chapter shall calculate the ETWU for each landscaped area and the entire project using the following equation:
 - 1. $ETWU = (ET_o)(0.62)(PF \times HA / IE + SLA)$.
- B. The abbreviations used in the equation have the following meanings:
 - 1. ETWU = Estimated total water use in gallons per year.
 - 2. ET_o = Evapotranspiration in inches per year.
 - 3. 0.62 = Conversion factor to gallons per square foot.
 - 4. PF = Plant factor from WUCOLS.
 - 5. HA = Hydrozone Area in square feet. Each HA shall be classified based upon the data included in the landscape and irrigation plan as high, medium, or low water use.
 - 6. IE = Irrigation Efficiency of the irrigation method used in the hydrozone.
 - 7. SLA = Special landscaped area in square feet.
- C. The ETWU for a proposed project shall not exceed the MAWA.

18.54.130 Adjustment to landscaped area for non-vegetated area. Rock and stone or pervious design features, such as decomposed granite ground cover that are adjacent to a vegetated area may be included in the calculation of the MAWA and ETWU provided the features are integrated into the design of the landscape area and the primary purpose of the feature is decorative.

18.54.140 Regulations applicable to use of turf on landscaped areas. The following regulations shall apply to the use of turf on a project subject to this Chapter:

- A. Only low volume or subsurface irrigation shall be used for turf in a landscaped area when either of the following occurs:
 - 1. On a slope greater than 25 percent grade where the toe of the slope is adjacent to an impermeable hardscape.
 - 2. Where any dimension of the landscaped area is less than eight feet wide.
- B. On a roadway improvement project, commercial, industrial, institutional, or multi-family project, no turf shall be allowed on a center island median strip or on a parking lot island.
- C. A ball field, park, golf course, cemetery, and other similar use shall be designed to limit turf in any portion of a landscaped area not essential for the operation of the facility.
- D. No turf shall be allowed in a landscaped area that cannot be efficiently irrigated to avoid runoff or overspray.

18.54.150 Projects with model homes. A person who obtains a permit to construct a single family residential development that contains a model home or homes shall provide a summary of this Chapter to each adult visitor that visits a model home. If an adult visitor is accompanied by one or more adults during the visit only one set of written materials is required to be provided. Each model home shall provide an educational sign in the front yard of the model home visible and readable from the roadway that the home faces that states in capital black lettering at least two inches high on a white sign, "THIS MODEL HOME USES WATER EFFICIENT LANDSCAPING AND IRRIGATION."

18.54.160 Recycled water.

- A. A person who obtains a permit for a project that is subject to this Chapter shall use recycled water for irrigation and decorative water features when tertiary treated recycled water is available from the water purveyor who supplies water to the property.

B. A person using recycled water shall install a dual distribution system for water received from the water purveyor. Pipes carrying recycled water shall be purple.

C. A person who uses recycled water under this Section shall be entitled to an ETAF of 1.0.

D. This Section does not excuse a person using recycled water from complying with all State and local laws and regulations related to recycled water use.

18.54.170 Landscaping and Irrigation Installation. A person issued a landscape approval for a project shall install the approved landscaping and irrigation system before final inspection of the project.

18.54.180 Landscaping and irrigation maintenance.

A. A property owner using water on property subject to a landscape approval shall prepare a maintenance schedule for the landscaping and irrigation system on the project. The schedule shall provide for (1) routine inspection to guard against runoff and erosion and detect plant or irrigation system failure; (2) replacement of dead, dying and diseased vegetation; (3) eradication of invasive species; (4) repairing the irrigation system and its components; (5) replenishing mulch; (6) soil amendment when necessary to support and maintain healthy plant growth; (7) fertilizing, pruning, and weeding and maintaining turf areas; and (8) maintenance to avoid obstruction of motorists' view. The schedule shall also identify who will be responsible for maintenance.

B. After approval of a landscape plan, the owner is required to:

1. Maintain and operate the landscaping and irrigation system on the property consistent with the MAWA.
2. Maintain the irrigation system to achieve efficiency that meets or exceeds the MAWA.
3. Replace broken or malfunctioning irrigation system components with components of the same materials and specifications, their equivalent or better.
4. Ensure that when vegetation is replaced, replacement plantings are representative of the hydrozone in which the plants were removed, and are typical of the water use requirements of the plants removed, provided that the replaced vegetation does not result in mixing high-water use plants with low-water use plants in the same hydrozone.

18.54.190 Certificate of completion. Each person issued a landscape approval shall submit:

A. A signed certificate of completion, under penalty of perjury, on a form provided by the City of National City within 10 days after installation, that includes the following:

1. A statement verifying that the landscaping and irrigation were installed as allowed in the approved landscape and irrigation plan, all recommended approved soil amendments identified in the soil management report were implemented, the installed irrigation system is functioning as designed and approved, the irrigation control system was properly programmed in accordance with the irrigation schedule, and the person operating the system has received all required maintenance and irrigation plans.

2. "As-built" plans submitted by the landscape design professional of record showing the changes when there have been significant changes to the landscape plan during the installation of landscaping or irrigation devices or irrigation system components.

3. Signature by the landscape design professional of record.

B. An irrigation schedule that complies with section 18.54.100, that describes the irrigation times and water usage for the project.

C. A landscaping and irrigation system maintenance schedule that complies with section 18.54.180.

D. A soil management report that complies with section 18.54.060, if the applicant did not submit the report with the landscape documentation package.

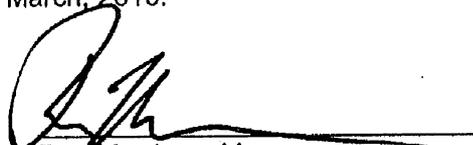
18.54.200 Waste water prevention.

A. No person shall use water for irrigation that results in runoff, low head drainage, overspray or other similar condition, water flows onto adjacent property, non-irrigated areas, structures, walkways, roadways, or other paved areas.

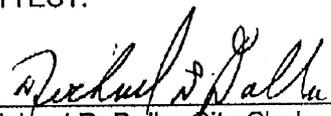
SECTION 2: The City Clerk is hereby directed to file a copy of this Ordinance with the State of California Department of Water Resources, pursuant to Government Code section 65593.

SECTION 3: This Ordinance shall be effective 30 days after its adoption and the City Clerk shall certify to the adoption of this Ordinance, and cause the same to be published at least once in the San Diego Union Tribune within 15 days of its adoption.

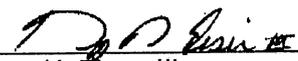
PASSED and ADOPTED this 2nd day of March, 2010.


Ron Morrison, Mayor

ATTEST:


Michael R. Dalla, City Clerk

APPROVED AS TO FORM:


George H. Eiser, III
City Attorney

Passed and adopted by the Council of the City of National City, California, on March 2, 2010 by the following vote, to-wit:

Ayes: Councilmembers Morrison, Parra, Sotelo-Solis, Van Deventer, Zarate.

Nays: None.

Absent: None.

Abstain: None.

AUTHENTICATED BY:

RON MORRISON

Mayor of the City of National City, California



Richard P. Salto

City Clerk of the City of National City, California

By: _____

Deputy

I HEREBY CERTIFY that the foregoing ordinance was not finally adopted until seven calendar days had elapsed between the day of its introduction and the day of its final passage, to wit, on February 16, 2010 and on March 2, 2010.

I FURTHER CERTIFY THAT said ordinance was read in full prior to its final passage or that the reading of said ordinance in full was dispensed with by a vote of not less than a majority of the members elected to the Council and that there was available for the consideration of each member of the Council and the public prior to the day of its passage a written or printed copy of said ordinance.

I FURTHER CERTIFY that the above and foregoing is a full, true and correct copy of ORDINANCE NO. 2010-2331 of the City Council of the City of National City, passed and adopted by the Council of said City on March 2, 2010.

City Clerk of the City of National City, California

By: _____

Deputy