

ARTICLE 22.05. WATER QUALITY PROTECTION¹

Sec. 22.05.001. Title.

This article shall be commonly cited as the water quality protection ordinance.

(Ordinance 3500.11, § 1.1, adopted 2/20/07)

Sec. 22.05.002. Authority.

Section 26.177 of the Texas Water Code provides an opportunity for municipalities to regulate water protection, water pollution, and pollution abatement.

(Ordinance 3500.11, § 1.2, adopted 2/20/07)

Sec. 22.05.003. Purpose.

- (a) This article provides standards and procedures for municipal determination of the nonpoint source pollution control management policies which govern the planning, design, construction, operation and maintenance of drainage, erosion, and water quality facilities within the city's jurisdiction.
- (b) This article sets forth the minimum requirements necessary to provide and maintain a safe, efficient and effective nonpoint source pollution control system and to establish the various public and private responsibilities for the provision thereof. Further, it is the purpose of this article to:
 - (1) Protect human life, health and property;
 - (2) Prevent losses of endangered species and habitat of endangered species;
 - (3) Protect the integrity of local ecological systems;
 - (4) Minimize the expenditure of public money for building and maintaining nonpoint source pollution control projects and cleaning sediments out of storm drains, streets, sidewalks and watercourses;
 - (5) Help maintain a stable tax base and preserve land values;
 - (6) Preserve the natural beauty and aesthetics of the community;
 - (7) Control and manage the quality of stormwater runoff, and the sediment load in that runoff, from points and surfaces within subdivisions;
 - (8) Establish a reasonable standard of design and performance for development which prevents erosion and sediment damage and which reduces the pollutant loading to streams, ponds and other watercourses; and

¹State law reference(s)—Water quality control, V.T.C.A., Water Code, § 26.001 et seq.; sanitary standards of drinking water and protection of public water supplies and bodies of water, V.T.C.A., Health and Safety Code, § 341.031 et seq.

- (9) Prevent degradation and pollution of groundwater resources.

(Ordinance 3500.11, § 1.3, adopted 2/20/07)

Sec. 22.05.004. Program description.

The city's water quality protection program is comprehensive and practical. The regulations enacted to implement the program are found throughout the city's development code, and include but are not limited to:

Element of Program	Document	Code Citation
Rural vision	Comprehensive plan	
Public education	Water quality	Article 22.05
Land use	Zoning	Chapter 30, exhibit A
Lot size in city limits	Zoning	Chapter 30, exhibit A
Lot size in ETJ	Subdivision	Chapter 28, exhibit A
Impervious cover	Zoning (city)	Chapter 30, exhibit A
	Water quality (ETJ)	Article 22.05
Drainage	TCSS	
	Flood damage prevention	
	Site development	Article 28.04
	Water quality	Article 22.05
	Subdivision	Chapter 28, exhibit A
Vegetation	Landscaping	Article 28.06
Open space	Parkland dedication	Article 28.03
	Conservation design	Article 28.05
Water supply	Subdivision	Chapter 28, exhibit A
Water pollution	Water quality protection	Article 22.05
Wastewater	Subdivision	Chapter 28, exhibit A
	OSSF	Article 20.03
Preferred growth areas	Zoning	Chapter 30, exhibit A
Buffer zones	TCSS	
Development agreements	Development agreements	Article 22.02

(Ordinance 3500.11, § 1.4, adopted 2/20/07)

Sec. 22.05.005. Scope.

- (a) This article applies to all property within the city limits and the ETJ.
- (b) This article applies to projects when considered as a whole, even if comprised of more than one lot. These regulations may not be circumvented by aggregating small lots, when in fact the lots share a common development scheme as part of a joint project.

(Ordinance 3500.11, § 1.5, adopted 2/20/07)

Sec. 22.05.006. Exemptions.

- (a) This article shall not apply to public school facilities.

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- (b) The city encourages all public school facilities.

(Ordinance 3500.11, § 1.6, adopted 2/20/07)

Sec. 22.05.007. TCSS manual.

The technical construction standards and specifications (TCSS) manual establishes uniform design practices; it neither replaces the need for engineering judgment nor precludes the use of any information relevant to the accomplishment of the purposes of this article. Other generally accepted or innovative and effective engineering procedures may be used in conjunction with, or instead of, those prescribed by the TCSS manual if approved by the city engineer. The TCSS manual is maintained and available for inspection at city hall.

(Ordinance 3500.11, § 1.7, adopted 2/20/07)

Sec. 22.05.008. Applicability; compliance.

- (a) Any person proposing to develop real property within the jurisdiction of the city is subject to the provisions of this article.
- (b) Requirements of this article shall be addressed in applications for subdivision plats, site development permits, rezoning, planned development districts (PDs), conditional use permits, development agreements, and construction permits.
- (c) It shall be an offense for any person to develop or improve real property in violation of this article.

(Ordinance 3500.11, § 1.8, adopted 2/20/07)

Sec. 22.05.009. Preferred growth areas.

- (a) Preferred growth areas (PGAs) are defined herein.
- (b) Through the designation of PGAs, the city council finds it reasonable and prudent to encourage growth within the mostly-developed urban core of the municipality, and discourage heavy development in the ETJ.
- (c) PGA status is attained by a tract of land upon the granting of zoning, not upon annexation.

(Ordinance 3500.11, § 1.9, adopted 2/20/07)

Sec. 22.05.010. Definitions.

- (a) Rules of interpretation. Words and phrases used in this article shall have the meanings set forth in this section. Terms that are not defined below, but are defined elsewhere in the Code of Ordinances, shall be given the meanings set forth in the code. Words and phrases not defined in the Code of Ordinances shall be given their common, ordinary meaning unless the context clearly requires otherwise. When not inconsistent with the context, words used in the present tense shall include the future tense, words in the plural number shall include the singular number (and vice versa), and words in the masculine gender shall include the feminine gender (and vice versa). The word "shall" is always mandatory, while the word "may" is merely directory. Headings and captions are for reference purposes only.

- (b) Specific definitions.

Agricultural activities : Pasturing of livestock or use of the land for planting, growing, cultivating, and harvesting crops for human or animal consumption.

Agricultural stormwater runoff : Any stormwater runoff from orchards, cultivated crops, pastures, range land, and other nonpoint source agricultural activities, but not discharges from concentrated animal feeding operations as defined in 40 CFR section 122.23 or discharges from concentrated aquatic animal production facilities as defined in 40 CFR section 122.24.

Applicant : A person who submits an application for approval required by this article. The applicant shall be the owner of the property subject to this article, acting in person or by and through the owner's authorized representative. Documentation, in a form acceptable to the city, evidencing ownership of the property or the authority of the authorized agent must be submitted along with the application. For example, written power of attorney or letter of agency will be sufficient to prove agency. A deed or tax letter will be adequate to establish ownership of the property.

Application : A written request for an approval required by this article.

Background pollutant load : The amount of pollution in stormwater runoff that is discharged from a site before development. The method used for calculating background pollutant load is to be found in the TCSS (or the technical standards section of this article).

Best management practices (BMP) : Schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the nonpoint source pollution of waters in the state. The two basic types of BMPs for purposes of this article are "structural BMPs" (which include engineered and constructed systems that are designed to provide for water quantity and/or water quality control of stormwater runoff) and "nonstructural BMPs" (which include institutional and pollution-prevention type practices designed to prevent pollutants from entering stormwater runoff or to reduce the volume of stormwater requiring management). This term expressly includes both structural and nonstructural BMPs.

Board of adjustment : This term is the same as defined and applied in the zoning ordinance for the city.

City limits : The incorporated municipal boundaries of the city.

Contributing zone : The area or watershed where runoff from precipitation flows downgradient to the recharge zone of the Edwards Aquifer.

Critical environmental features (CEFs) : Geologic or manmade features that are critically important to assure protection of water quality in:

- (1) The hydraulic interconnectedness between the ground surface and the Edwards Aquifer; and
- (2) The rapid infiltration to the subsurface.

Features of critical importance to protect may include, but are not limited to, bluffs, springs, caves, solution cavities, solution-enlarged fractures and sinkholes.

Developer : A person who owns a tract of land and who is engaged in clearing, grubbing, filling, mining, excavating, grading, installing streets and utilities or otherwise preparing that tract of land for the eventual division into one or more lots on which building(s) or other structure(s) will be constructed or placed.

Development : All land modification activity, including the construction of buildings, roads, paved storage areas, and parking lots. "Development" also includes any land-disturbing construction activities or human-made change of the land surface, including clearing of vegetative cover, excavating, filling and grading, mining, and dredging, and the deposit of refuse, waste or fill. The following activities are excluded from the definition: care and maintenance of lawns, gardens, and trees; minimal clearing (maximum ten feet (10') wide) for surveying and testing; and agricultural activities.

Discharge : Any addition or introduction of any pollutant, stormwater, or any other substance in a harmful quantity into a stormwater drainage system or into waters in the state.

Discharge (hydraulics) : The rate of fluid flow, expressed as the volume of fluid passing a point per unit time, commonly expressed as cubic feet per second.

Domestic sewage : Human excrement, gray water from home clothes washing, bathing, showers, dishwashing, and food preparation, other wastewater from household and residential drains, and waterborne waste normally discharged from the sanitary conveniences of apartment houses, hotels, office buildings, factories, institutions and other dwellings, but excluding industrial waste.

Drainage area : The horizontal projection of the area contributing runoff to a single control or design point.

EPA : The federal Environmental Protection Agency, or a successor agency.

ETJ : The extraterritorial jurisdiction of the city.

Erosion : The detachment and movement of soil, sediment, or rock fragments by wind, water, ice or gravity.

Facility : Any building, structure, installation, process, or activity from which there is or may be discharge of a pollutant.

Fertilizer : A solid or non-solid substance or compound that contains an essential plant nutrient element in a form available to plants that is used primarily for its essential plant nutrient element content in promoting or stimulating growth of a plant or improving the quality of a crop, or a mixture of one or more fertilizers. The term does not include the excreta of an animal, plant remains, or a mixture of those substances, for which no claim of essential plant nutrients is made.

Fill : The man-made deposition and compaction of material to effect a rise in elevation.

Flood : A general and temporary condition of partial or complete inundation of normally dry land areas from:

- (1) The overflow of inland or tidal waters; or
- (2) The unusual and rapid accumulation or runoff of surface waters from any source.

Floodplain : For the purposes of water quality buffer zones, this term shall mean either of one or the other following definitions:

- (1) A FEMA studied floodplain identified on the FIRM (flood insurance rate maps) as zone AE or equivalent; or
- (2) A studied floodplain as provided through engineering data prepared and certified by a professional engineer.

Grade : The vertical location or elevation of a surface, or the degree of rise or descent of a slope.

Harmful quantity : The amount of any substance that will cause pollution of water in the state.

Hazardous household waste (HHW) : Any material generated in a household (including single and multiple residences, hotels, motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day use recreational areas) by a consumer which, except for the exclusion provided in 40 CFR section 261.4(b)(1), would be classified as a hazardous waste under 40 CFR part 261.

Hazardous substance : Any substance listed in table 302.4 of 40 CFR part 302.

Hazardous waste : Any substance identified or listed as a hazardous waste by the EPA pursuant to 40 CFR part 261.

Herbicide : A substance or mixture of substances used to destroy a plant or to inhibit plant growth.

Impervious cover : Buildings, parking areas, roads, and other impermeable man-made improvements covering the natural land surface that prevent infiltration. For purposes of compliance with this article, the term

expressly excludes storage tanks for rainwater collection systems, or the structure covering specifically the rainwater collection tanks.

Industrial waste : Any waterborne liquid or solid substance that results from any process of industry, manufacturing, mining, production, trade, or business.

Infiltration : The passage or movement of water into the subsurface of the natural land.

Island annexation : Any annexation of land that is not contiguous to the city's corporate limits as defined by the most current official city limits map.

Licensed professional engineer : A person who possesses an active license and is registered by the state board of registration for professional engineers to engage in the practice of engineering in the state. The term also includes a professional engineer (PE).

Local governmental agencies : Any department or agency related to the subdivision of the state in the form of the county or municipality.

Natural state : The condition of the land existing prior to any development activities.

Nonpoint source (NPS) pollution : Pollution that is caused by or attributable to diffuse sources. Such pollution results in the human-made or human-induced alteration of the chemical, physical, biological, or radiological integrity of water. Typically, NPS pollution results from land runoff, precipitation, atmospheric disposition, or percolation.

Oil : Any kind of petroleum substance, including but not limited to petroleum, fuel oil, crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure, sludge, oil refuse, and oil mixed with waste.

Owner : The person who owns a facility or part of a facility subject to the requirements of this article.

Person : Any individual, association, firm, corporation, governmental agency, political subdivision, or legal entity of any kind.

Pesticide : A substance or mixture of substances intended to prevent, destroy, repel, or mitigate any pest, or any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant, as these terms are defined in Texas Agriculture Code section 76.001.

Petroleum storage tank (PST) : Any one or combination of aboveground or underground storage tanks that contain oil, petroleum products or petroleum substances, and any connecting underground pipes.

Pollutant : Eroded or displaced sediment, soil, silt or sand resulting from development activities; dredged spoil; solid waste; sewage; garbage; chemical waste; biological materials; radioactive materials; abandoned or discarded appliances or equipment; and industrial, municipal, and agricultural waste which is or may be discharged into waters in the state. This term shall be limited to those substances listed herein, or monitored or regulated by the TCEQ or EPA.

Pollution : The alteration of the physical, thermal, chemical, or biological quality of, or the contamination of, any water in the state that renders the water harmful, detrimental, or injurious to humans, animal life, vegetation, or property, or to the public health, safety, or welfare, or impairs the usefulness or the public enjoyment of the water for any lawful or reasonable purpose.

Preferred growth area (PGA) : That area as defined by the contiguous city limits as reflected in the most current official city limits map, and is affected by the current zoning ordinance defining areas of higher-density development (specifically zoning categories of MF, CS, LR, GR, I, O, and SF-5), as may be determined from time to time to be deemed as appropriate for higher-density development. This area allows for change through future contiguous annexations. This is not to reflect the areas of land annexed as "island annexations."

Recharge zone : That area where the stratigraphic units constituting the Edwards Aquifer crop out, including the outcrops of other geologic formations in proximity to the Edwards Aquifer where caves, sinkholes, faults, fractures or other permeable features create a potential for recharge of surface waters into the Edwards Aquifer.

Release : Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into a stormwater drainage system or into waters in the state.

Residence : Any building, or portion thereof, which is designed for or used as living quarters for one or more families.

Riparian corridor : The ecological areas within and adjacent to a floodplain that are or can be comprised of the following plant species: Pecan, American Elm, Arizona Walnut, Bald Cypress, Black Walnut, Bur Oak, Cedar Elm, Little Walnut, Green Ash, Texas Sugarberry, American Sycamore, Eastern Cottonwood, Black Willow, and Live Oak.

Rubbish : Nonputrescible solid waste, excluding ashes, that consists of:

- (1) Combustible waste materials, including paper, rags, cartons, wood, excelsior, furniture, rubber, plastics, yard trimmings, leaves, and similar materials; and
- (2) Noncombustible waste materials, including glass, crockery, tin cans, aluminum cans, metal furniture, and similar materials that do not burn at ordinary incinerator temperatures (1,600 to 1,800 degrees Fahrenheit).

Runoff : That portion of precipitation or precipitation drainage that flows by force of gravity across the ground surface as sheet flow or in a stormwater drainage system towards water in the state.

Septic tank waste : Any domestic sewage from holding tanks such as vessels, chemical toilets, campers, trailers, and septic tanks.

Sewage (or sanitary sewage) : The domestic sewage and/or industrial waste that is discharged into a sanitary sewer system and passes through the sanitary sewer system to a sewage treatment plant for treatment.

Site development permit : The permit required by the city's Code of Ordinances.

Solid waste : Any garbage, rubbish, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility, and other discarded material, including, solid, liquid, semi-solid, or contained gaseous material resulting from industrial, municipal, commercial, mining, and agricultural operations, and from community and institutional activities.

Spring : A point or zone of natural groundwater discharge having measurable flow, or a pool, and characterized by the presence of a mesic plant community adapted to the moist conditions of the site.

Steep slope : Defined as a 400 percent grade, as defined for the purposes of setbacks.

Stormwater drainage system : A conveyance or system of conveyances including roads with drainage systems, catchbasins, curbs, gutters, ditches, man-made channels, or storm drains designed or used for collecting or conveying stormwater.

Streams : Perennial and intermittent watercourses identified through site inspection and USGS maps. Perennial streams are those which are depicted on a USGS map with a solid blue line. Intermittent streams are those which are depicted on a USGS map with a dotted blue line.

Subdivision : A division, or redivision, of any tract of land situated within the city's jurisdiction into two or more parts, lots or sites, for the purpose, whether immediate or in the future, of sale, division of ownership or building development. "Subdivision" includes resubdivisions of land or lots which are part of previously recorded subdivisions.

TCEQ : The state commission on environmental quality or its predecessor or successor agencies as defined by law.

Transferable development right (TDR) : Authorization to exceed the uniform intensity levels otherwise imposed under this article on a less environmentally sensitive tract of land resulting from voluntary relinquishment of development rights otherwise allowed under this article on a more environmentally sensitive tract of land (e.g., through dedicated conservation easement). A TDR can also result from voluntary retrofitting of existing development with water quality protection measures not otherwise required by this article.

Waiver : A grant of relief to a person from the requirements of this article when specific enforcement would result in unjustifiable or unnecessary hardship due to out-of-the-ordinary or extenuating circumstances.

Water in the state (or water) : Any groundwater, percolating or otherwise, lakes, bays, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, marshes, inlets, or canals inside the territorial limits of the state, and all other bodies of surface water, natural or artificial, navigable or non-navigable, and including the beds and banks of all watercourses and bodies of surface water, that are inside the jurisdiction of the state.

Watershed : The total area contributing runoff to a stream or drainage system.

Wetland : An area that is inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions, and conforms to the U.S. Army Corps of Engineers' definition. Wetlands generally include swamps, marshes, bogs, and similar areas.

Yard waste : Leaves, grass clippings, yard and garden debris, and brush that results from landscaping maintenance and land-clearing operations.

(Ordinance 3500.11, § 2, adopted 2/20/07; Ordinance 3500.12, adopted 2/17/09)

Sec. 22.05.011. Enforcement; penalties.

- (a) Enforcement. The city shall have the power to administer and enforce the provisions of this article as may be required by governing law. Any person violating any provision of this article is subject to suit for injunctive relief as well as prosecution for criminal violations. Any violation of this article is hereby declared to be a nuisance.
- (b) Criminal penalty. Any person violating any provision of this article shall, upon conviction, be fined a sum not exceeding \$2,000.00. Each day that a provision of this article is violated shall constitute a separate offense. An offense under this article is a misdemeanor.
- (c) Civil remedies. Nothing in this article shall be construed as a waiver of the city's right to bring a civil action to enforce the provisions of this article and to seek remedies as allowed by law, including but not limited to the following:
 - (1) Injunctive relief to prevent specific conduct that violates this article or to require specific conduct that is necessary for compliance with this article;
 - (2) A civil penalty up to \$1,000.00 a day when it is shown that the defendant was actually notified of the provisions of this article and after receiving notice committed acts in violation of this article or failed to take action necessary for compliance with this article; and
 - (3) Other available relief.
- (d) Administrative actions.
 - (1) Stop work orders. When an appropriate authorized official of the city determines that there has been noncompliance with any material term, condition, requirement or agreement under this article, the person obtaining such approved plan shall be ordered by the city in writing to cease and desist from further development or construction material to the alleged noncompliance until corrected by compliance.

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- (2) Withholding authorizations. The city may refuse to grant development, construction, or occupancy approvals for improvements for a property that does not fully and completely comply with all terms and conditions of this article. Without limiting the type or number of approvals the city may withhold, the city is specifically authorized to refuse to grant site development permits, building permits, utility connections, and certificates of occupancy.

(Ordinance 3500.11, § 20, adopted 2/20/07)

Sec. 22.05.012. Waivers.

- (a) Presumption. There shall be a presumption against waivers. However, if the applicant requests a waiver in writing, the board of adjustment may authorize a waiver from these regulations when, in its opinion, undue hardship will result from requiring strict compliance.
- (b) Identification. All waivers requested for a project must be identified during the platting and/or site plan approval process (as may be applicable).
- (c) Conditions. In granting a waiver, the board of adjustment shall prescribe upon the applicant only conditions that it deems necessary to or desirable in the public interest.
- (d) Considerations. In making the findings required below, the board of adjustment shall take into account the nature of the proposed use of the land involved, existing uses of land in the vicinity, the number of persons who will reside or work in the proposed development, and the probable effect of such waiver on the public health, safety, convenience and welfare in the vicinity.
- (e) Findings. No waiver shall be granted unless the board of adjustment finds that all of the following provisions are met, and the burden shall be on the developer to show that these provisions are satisfied:
- (1) That there are special circumstances or conditions affecting the land involved, such that the strict application of the provisions of this article would deprive the applicant of the reasonable use of this land;
 - (2) That the waiver is necessary for the preservation and enjoyment of a substantial property right of the applicant;
 - (3) That the granting of the waiver will not be detrimental to the public health, safety or welfare, or injurious to other property in the area; and
 - (4) That the granting of the waiver will not have the effect of preventing the orderly development of other land in the area in accordance with the provisions of this article.
- (f) Pecuniary hardship. Pecuniary hardship to the applicant, property owner or developer, standing alone, shall not be deemed sufficient to constitute undue hardship.
- (g) Minimum departure. When the board of adjustment determines that a waiver is warranted, the waiver permitted shall be the minimum departure from the terms of this article necessary to avoid such deprivation of privileges enjoyed by such other property to facilitate a reasonable use, and which will not create significant probabilities of harmful environmental consequences.
- (h) Adequate basis option 1. It may be determined by the city to be an adequate basis for granting a waiver that doing so will enable the applicant to create additional open space, preserve trees, maintain critical environmental features, ensure more wildlife preservation, or bring nonconforming structures (including but not limited to signs) into compliance with current regulations. This section is designed to achieve a more favorable outcome for the general public than would be possible complying with the strict mandates of this article.

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- (i) Adequate basis option 2. It may be determined by the city to be an adequate basis for granting a waiver that the applicant provides the city with a proposal pursuant to which the applicant presents a site exceeding the standard impervious cover rates with a mitigation plan that compensates for the additional impervious cover. Examples of potential mitigation include, but are not limited to, the applicant's acquisition of transferable development rights (TDRs) to offset the additional impervious cover.

(Ordinance 3500.11, § 19, adopted 2/20/07)

Sec. 22.05.013. Prohibitions.

(a) General prohibitions.

- (1) Except as otherwise specifically authorized by this article, no person shall discharge, or cause, suffer or allow the discharge, of any wastes, substances or other materials into or adjacent to any water in the state which causes or will cause pollution of any water in the state, except where otherwise exempt or allowed through permit by the TCEQ.
- (2) Except as otherwise specifically authorized by this article, no person shall introduce or cause to be introduced into a stormwater drainage system any pollutants or other discharge that is not composed entirely of stormwater, except where otherwise exempt or allowed through permit by the TCEQ.

(b) Specific prohibitions.

- (1) No person shall introduce or cause to be introduced into a stormwater drainage system any discharge that causes or contributes to causing a violation of a water quality standard established by law.
- (2) No person shall introduce, discharge, or cause, suffer or allow a release of any harmful quantity of the following substances into a stormwater drainage system:
 - (A) Used motor oil, antifreeze, or any other motor vehicle fluid;
 - (B) Industrial waste;
 - (C) Hazardous waste, including hazardous household waste;
 - (D) Domestic sewage or septic tank waste, grease trap waste, or grit trap waste;
 - (E) Garbage, rubbish, or yard waste beyond that which typically washes off a yard during by rain event;
 - (F) Wastewater from a commercial carwash facility; from any vehicle washing, cleaning, or maintenance operation at any new or used automobile or other vehicle dealership, rental agency, body shop, repair shop, or maintenance facility; or from any washing, cleaning, or maintenance of any business or commercial or public service vehicle, including a truck, bus, or heavy equipment, by a business or public entity that operates more than two such vehicles;
 - (G) Wastewater from the washing, cleaning, de-icing, or other maintenance of aircraft;
 - (H) Wastewater from a commercial mobile power washer or from the washing or other cleaning of a building exterior that contains any soap, detergent, degreaser, solvent, or any other harmful cleaning substance;
 - (I) Wastewater from commercial floor, rug, or carpet cleaning;
 - (J) Wastewater from the washdown or other cleaning of pavement that contains any harmful quantity of soap, detergent, solvent, degreaser, emulsifier, dispersant, or any other harmful cleaning substance as defined by the EPA or TCEQ; or any wastewater from the washdown or other cleaning of any pavement where any spill, leak, or other release of oil, motor fuel, or other

petroleum or hazardous substance has occurred, unless all harmful quantities of such released material have been previously removed;

- (K) Effluent from a cooling tower, condenser, compressor, emissions scrubber, or emissions filter, or the blowdown from a boiler;
 - (L) Ready-mixed concrete, mortar, ceramic, or asphalt base material or hydromulch material, or from the cleaning of commercial vehicles or equipment containing, or used in transporting or applying, such material;
 - (M) Runoff or washdown water from any animal pen, kennel, or fowl or livestock containment area;
 - (N) Filter backwash from a swimming pool, or fountain, or spa;
 - (O) Swimming pool water containing any harmful quantity of chlorine, muriatic acid or other chemical used in the treatment or disinfection of the swimming pool water or in pool cleaning;
 - (P) Discharge from water line disinfection by superchlorination or other means if it contains any harmful quantity of chlorine or any other chemical used in line disinfection;
 - (Q) Fire protection water containing oil or hazardous substances or materials (except for discharges or flows from firefighting activities by a locally accredited fire department);
 - (R) Water from a water curtain in a spray room used for painting vehicles or equipment;
 - (S) Contaminated runoff from a vehicle wrecking yard;
 - (T) Substance or material that will damage, block, or clog the stormwater drainage system;
 - (U) Release from a petroleum storage tank (PST), or any leachate or runoff from soil contaminated by a leaking PST, or any discharge of pumped, confined, or treated wastewater from the remediation of any such PST release, unless the discharge satisfies all of the following criteria:
 - (i) The discharge complies with all state and federal standards and requirements;
 - (ii) The discharge does not contain a harmful quantity of any pollutant; and
 - (iii) The discharge does not contain more than 50 parts per billion of benzene; 500 parts per billion combined total quantities of benzene, toluene, ethylbenzene, and xylene (BTEX); or 15 mg/l of total petroleum hydrocarbons (TPH).
- (3) No person shall introduce or cause to be introduced into a stormwater drainage system any harmful quantity of sediment, silt, dirt, soil, sand or other material associated with clearing, grading, excavation or other construction activities, or associated with landfilling or other placement or disposal of soil, rock, sand or other earth materials, in excess of what could be retained on-site or captured by employing sediment and erosion control measures to the minimum extent required by this article.
- (4) No person shall connect a line conveying sanitary sewage, whether domestic or industrial, to a stormwater drainage system, nor allow such a connection to continue if discovered.
- (5) No person shall cause or allow any pavement washwater from a service station to be discharged into a stormwater drainage system unless such washwater has first passed through a grease, oil, and sand interceptor which is properly functioning and maintained.

(Ordinance 3500.11, § 3, adopted 2/20/07)

Sec. 22.05.014. Restricted activities.

- (a) Pesticides, herbicides and fertilizers.

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- (1) Any license, permit, registration, certification, or evidence of financial responsibility required by state or federal law for sale, distribution, application, manufacture, transportation, storage, or disposal of a pesticide, herbicide or fertilizer must be presented to an authorized city enforcement officer for examination upon request.
 - (2) No person shall use or cause to be used any pesticide or herbicide contrary to any directions for use on any labeling required by state or federal statute or regulation.
 - (3) No person shall use or cause to be used any pesticide, herbicide, or fertilizer in any manner that the person knows, or reasonably should know, is likely to cause, or does cause, a harmful quantity of the pesticide, herbicide, or fertilizer to enter a stormwater drainage system or waters of the United States.
 - (4) No person shall dispose of, discard, store, or transport a pesticide, herbicide, or fertilizer, or a pesticide, herbicide, or fertilizer container, in a manner that the person knows, or reasonably should know, is likely to cause, or does cause, a harmful quantity of the pesticide, herbicide, or fertilizer to enter a stormwater drainage system or waters in the state.

(b) Used oil.

- (1) No person shall:
 - (A) Discharge used oil into a stormwater drainage system or a sewer, drainage system, septic tank, surface water, groundwater, or watercourse;
 - (B) Knowingly mix or commingle used oil with solid waste that is to be disposed of in a landfill or knowingly directly dispose of used oil on land or in a landfill.

The application of used oil shall be allowed for the uses of used oil as defined in 40 CFR 279.1.

- (2) All businesses engaged in the changing of motor oil for the public, all municipal waste landfills, and all fire stations may serve as public used oil collection centers as provided by state law.
- (3) A retail establishment which sells motor oil in containers directly to the public for use off-premises shall post in a prominent place a sign informing the public that improper disposal of used oil is prohibited by law. The sign shall prominently display the toll-free telephone number of the state used oil information center.

(c) Hazardous material traps (HMT).

- (1) Roadways capable of conveying at least 5,000 vehicles a day must include a hazardous material trap (HMT).
 - (A) These HMTs must be designed to retain a spill of 10,000 gallons of liquid hazardous material.
 - (B) These may be of a variety of designs, including that used previously by TxDOT.
- (2) To eliminate the need for manual draining of a hazardous material trap after a rain event, the state department of transportation (TxDOT) has developed an automatic siphon system to drain the HMT when it fills with rainwater. See the city's TCSS for an illustration of a typical siphon detail from a set of TxDOT construction plans.
 - (A) The siphon device is designed to drain the trap after it becomes full from a rain event, but is installed at an elevation above the full capacity of the trap.
 - (B) Therefore, as long as a hazardous material spill does not occur during a rain event, the system should contain the spill.
 - (C) The siphon is provided with bypass and shutoff valves so that alert on-scene responders can shut off the automatic siphon and thereby maintain some containment even in the event of a concurrent rain/spill.

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- (D) Other options for spill containment are presented in the main section of TCEQ's Optional Enhanced Measures (OEM), RG-348.

(Ordinance 3500.11, § 4, adopted 2/20/07)

Sec. 22.05.015. Performance standards.

(a) Applicability.

- (1) All development shall achieve the following pollutant removal standards through the design and implementation of structural and nonstructural BMPs and water quality controls.
- (2) This article shall apply to an entire project for which a unified development scheme is intended by the applicant, without regard to whether the project is comprised of more than one lot. These regulations cannot be avoided by dividing a single project into several small lots.

(b) Performance standards within PGA. All development within the area defined as the PGA is subject to the following requirements:

- (1) Five acres or less: Technical demonstration of pollutant load removal is not required; however, the applicant shall employ a combination of structural and nonstructural BMPs to remove the net increase in pollutants due to development to a level of not less than 80 percent TSS pollutant load removal and shall address the remaining pollutant loading constituents through nonstructural measures, in accordance with the TCSS.
- (2) Greater than five acres: For each of the constituents below, the design shall demonstrate 85 percent removal of the net increase for the design storm event:
 - (A) Total suspended solids.
 - (B) Total phosphorus.
 - (C) Oil and grease.

(c) Performance standards outside PGA. All development that is not within the area defined as the PGA is subject to the following requirements:

- (1) It is the desire of these regulations that there be no net increase of pollutant load.
- (2) Plans shall be designed to achieve no net increase above base analysis.
- (3) For each of the constituents below, the design shall demonstrate 90 percent removal of the net increase for the design storm event:
 - (A) Total suspended solids.
 - (B) Total phosphorus.
 - (C) Oil and grease.
- (4) Background pollutant loads and pollution concentrations for developed sites:
 - (A) Background pollutant concentrations shall be as defined in the TCSS manual.
 - (B) Standard pollutant concentrations for developed sites shall be as defined in the TCSS manual.
 - (C) Calculation of annual pollutant loading shall comply with the criteria set forth in the TCSS manual.

(d) Incentive-based alternative standards. These standards shall apply throughout the city limits and the ETJ as they are to encourage the use of innovative strategies and opportunities for meeting water quality standards

and lessening demand on water for irrigation or other water uses that would otherwise use either surface water or groundwater resources.

- (1) The gross impervious cover is 15 percent or less.
 - (2) The street and drainage network is designed to include the use of open roadway sections, ribbon curb, maintenance of sheet flow and vegetative buffer zones.
 - (3) Impervious cover credit by use of porous pavement, rainwater harvesting, and other methods can be used to gain compliance as they are demonstrated to the satisfaction of the city engineer to provide long-term water quality viability, and the long-term maintenance is ensured by the developer and subsequent owners through an approved method prescribed by the city council.
- (e) Design storm event . The design storm event shall be the two-year, three-hour storm. The pollutant loadings for this storm event shall be calculated in accordance with the TCSS manual.

(Ordinance 3500.11, § 5, adopted 2/20/07)

Sec. 22.05.016. Impervious cover.

- (a) Maximum limitations . Maximum limitations on impervious cover are established as follows on developments for which a site development plan is first filed after the effective date of this article:
- (1) For areas within the Edwards Aquifer recharge zone: Ten percent.
 - (2) For areas within the Edwards Aquifer contributing zone in the ETJ: 35%.
 - (3) For areas within the city limits, refer to the zoning ordinance:
 - (A) Zoning . Impervious cover limits for tracts within PGAs are established in the city's zoning ordinance according to the particular zoning district the tract is designated.
 - (B) Reduction incentives . As an incentive to reduce impervious cover, all developments in the contributing zone with less than 15 fifteen percent impervious cover are not required to provide technical demonstration for removal of net increase in pollutants, but must still incorporate sufficient water quality control measures to comply with the other provisions of this section. Refer to section 22.05.015(b) and (c).
 - (C) Effective impervious cover . Through the incorporation of incentives (rainwater collection, pervious pavement, nonstructural BMPs), also known as "stormwater credits" for the purposes of water quality calculations, this allows for the reduction of impervious cover that is considered (taken into account) in the calculating of pollutant load removal for a specific site. (Refer to the LCRA or the city's TCSS manual for more explanation regarding the calculations and methods for attaining effective impervious cover.) There is a reduction in the impervious cover for purposes of calculation, and also a corresponding allowance for an increase in the physical impervious cover.
- (b) Impervious cover limit calculations . Impervious cover limits in this section are expressed as a percentage of the gross site area of the subject tract. For purposes of calculation of impervious cover limits, the gross site area includes water quality buffer zone areas and critical environmental features setback areas.
- (c) Items considered impervious cover . Impervious cover shall include all man-made improvements which prevent the infiltration of water into the natural soil, or prevent the migration of the infiltration as base flow. The following shall be considered as impervious cover, unless modified through the use of incentives (stormwater credit: rainwater collection, porous pavement, etc.):
- (1) Roads, pavements, and driveways, except as provided in subsection (d) of this section;
 - (2) Parking areas;

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- (3) Buildings;
 - (4) Pedestrian walkways and sidewalks;
 - (5) Concrete, asphalt, masonry surfaced areas, and paving stone surfaced areas;
 - (6) Swimming pool water surface area;
 - (7) Densely compacted natural soils or fills which result in a coefficient of permeability less than 1×10^{-6} cm/sec;
 - (8) All existing man-made impervious surfaces prior to development;
 - (9) Water quality and stormwater detention basins lined with impermeable materials;
 - (10) Stormwater drainage conveyance structures lined with impermeable materials;
 - (11) Fifty percent of the horizontal surface area of an uncovered deck that has drainage spaces between the deck boards that is located over a pervious surface;
 - (12) Up to fifty percent of the horizontal surface of materials whose design has been prepared by a Texas licensed professional engineer and approved by the city to accommodate the capture and/or infiltration of stormwater, provided the design incorporates maintenance provisions sufficient to maintain the pervious nature of the material for its full service life.
- (d) Items not considered impervious cover.
- (1) Existing roads adjacent to the development and not constructed as part of the development at an earlier phase;
 - (2) Rock outcrops;
 - (3) Landscaped areas and areas remaining in their natural state;
 - (4) Water quality controls and stormwater detention basins not lined with impermeable materials;
 - (5) Stormwater drainage conveyance structures not lined with impermeable materials; and
 - (6) Interlocking or "permeable" pavers.
- (e) Rainwater harvesting.
- (1) Rainwater harvesting collection and containment structures functioning as a rainwater harvesting system are not considered impervious cover. Structures and/or improvements (e.g., building roofs, patios, awnings, etc.) from which stormwater is harvested are considered impervious cover. Only that portion of a structure covering a rainwater harvesting collection system may be credited with not being impervious cover.
 - (2) In order to qualify to receive credit for a rainwater system, the system must be designed to exceed normal draw (i.e., no credit will be given if the tank routinely stays full). Credit is not just for the tank cover, but for structures collected from. The applicant must demonstrate where water is going to qualify (how he is going to draw it down, e.g., use as nonpotable source rainwater, or irrigation).
 - (3) Credits can zero-out impervious cover for purposes of calculating runoff treatment. Applicants may also get 50 percent credit toward additional cover.
- (f) Siting restrictions. Impervious cover shall not be constructed:
- (1) Downstream of water quality controls;
 - (2) Within critical environmental feature setback areas; or
 - (3) Within the areas designated for on-site irrigation for treated wastewater effluent disposal.

(Ordinance 3500.11, § 6, adopted 2/20/07)

Sec. 22.05.017. Water quality buffer zones.

- (a) Applicability. This section is applied at the time of platting (creation of newly subdivided lots). This section does not apply to legally platted lots that existed as of the effective date of this article.
- (b) Water quality buffer zones (WQBZ).
 - (1) Greater than 50 acres and up to 160 acres: The WQBZ shall extend a minimum of 50 feet from either side of the centerline of the stream (total of 100 feet of buffer zone).
 - (2) Greater than 160 acres and up to 320 acres: The WQBZ shall extend a minimum of 100 feet from either side of the centerline of the stream (total of 200 feet of buffer zone).
 - (3) Greater than 320 acres and up to 640 acres: The WQBZ shall extend a minimum of 200 feet from either side of the centerline of the stream (total of 400 feet of buffer zone).
 - (4) Greater than 640 acres and up to 1,280 acres: The WQBZ shall extend a minimum of 300 feet from either side of the centerline of the stream (total of 600 feet of buffer zone).
 - (5) Greater than 1,280 acres: The WQBZ shall extend a minimum of 400 feet from either side of the centerline of the stream (total of 800 feet of buffer zone).
- (c) Special instructions regarding WQBZs.
 - (1) At the sole discretion of the city and based on special circumstances, minimum distances from the stream centerline may be adjusted if there are equivalent protection measures proposed that are found acceptable by the city engineer.
 - (2) Along steep slopes, as defined, the width of the WQBZ shall be 25 feet beyond the edge of the defined steep slope.
 - (3) Except as specifically provided for in this section, all development activities, including temporary construction activities, and landscaping activities, are prohibited in the buffer zone of a stream without the express written approval of the city engineer, who must be provided evidence of equivalent protection.
- (d) Allowable development in WQBZ. The following development activities within a WQBZ may be allowed at the sole discretion of the city with the corresponding conditions:
 - (1) Critical utility crossings if the number of crossings of the WQBZ is limited to the maximum feasible extent;
 - (2) Critical roadway crossings if the number of crossings of the WQBZ is limited to the maximum feasible extent;
 - (3) Critical transportation crossings if the number of crossings of the WQBZ is limited to the maximum feasible extent;
 - (4) Hike-and-bike trails if provided for in an approved development plan;
 - (5) Maintenance and restoration of native, noninvasive vegetation;
 - (6) Water quality control monitoring devices;
 - (7) Removal of trash, debris, pollutants;
 - (8) Fences that do not obstruct flood flows;

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- (9) Public and private parks and open space, if human activities are limited to hiking, jogging, or walking trails, and excluding stables, corrals and other forms of animal housing;
 - (10) Typical private drives (acceptable to the city) to allow access to property not otherwise accessible; and/or
 - (11) The construction and use of BMPs for the express purpose of water quality and stormwater control provided that the natural drainage to the site is less than 128 acres.
- (e) Limitations on allowed activities. Any development within a WQBZ allowed under subsection (d) of this section shall be designed and/or conducted in a manner which limits the alteration and pollution of the natural riparian corridor to the maximum extent feasible. In no case shall any wastewater line be located less than 100 feet from the centerline of a stream unless the applicant has demonstrated that installation of the wastewater line outside of this zone is physically prohibitive or environmentally unsound. Any wastewater lines located in a WQBZ shall meet design standards and construction specifications to ensure zero leakage.
- (f) Requirements for discharges. All water quality control discharges and stormwater discharges into a WQBZ shall only be in the form of diffused, overland sheet flow and shall have peak velocities of less than five feet per second at the two-year, three-hour design rainfall event, unless demonstration is provided that this is not achievable with the proposed BMPs for managing stormwater runoff and quality, or that other means of diffusing the velocity of the runoff are provided that will protect the affected stream's morphology.

(Ordinance 3500.11, § 7, adopted 2/20/07)

Sec. 22.05.018. CEF setbacks.

- (a) Minimum setback. A minimum setback area of 150 feet is established around the outside periphery of all CEFs.
- (b) CEFs in Edwards Aquifer recharge zone. For a CEF which is in direct communication with the Edwards Aquifer, the upstream setback area shall extend out to the upper catchment divide of the CEF or 300 feet, whichever is less, but in no circumstances less than 150 feet.
- (c) Restrictions. No site development activities are allowed within the setback area.
- (d) Hilltop CEFs. For CEFs which are discovered to lie in an area which does not receive stormwater runoff (e.g., situated at the top of a hill), the setback area is 25 feet to prevent inadvertent pollution of the CEF.

(Ordinance 3500.11, § 8, adopted 2/20/07)

Sec. 22.05.019. Erosive flow control.

- (a) Prohibition. No untreated stormwater runoff from developed land shall be allowed to flow over critical environmental features.
- (b) Downspouts for certain roofs. All roof runoff from nonresidential buildings shall have downspouts disconnected from the site stormwater drainage system. Special circumstances may be reviewed and approved by the city without a waiver to this requirement.
- (c) Grass-lined swales or vegetated buffers. To the maximum extent practical, stormwater drainage shall be treated using overland flow methods to a grass-lined swale or other vegetated buffer. The vegetated buffer shall be designed in accordance with the TCSS manual. Special circumstances may be reviewed and approved by the city without a waiver to this requirement.

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- (d) Drainage patterns. Drainage patterns shall be designed to the maximum extent practical to prevent erosion, maintain the recharge of local seeps and springs, and attenuate the harm of contaminants collected and transported by stormwater. All discharge points from stormwater retention and detention ponds or other accumulation areas shall provide for energy dissipation prior to exiting the site. Overland sheet flow and natural drainage features and patterns shall be maintained, rather than concentrating flows in storm sewers and drainage ditches. Stormwater drainage structures shall be sized to maintain flood flow velocities below the velocity associated with the 25-year, three-hour rainfall event.
 - (e) Stormwater discharge into waterway. For site designs that provide for discharge of stormwater into a waterway, adequate retention and/or detention shall be incorporated into the site design to limit flows into the receiving waterway to the level consistent with the flow rate of the two-year, three-hour rainfall event evenly distributed over a 24-hour period.
 - (f) Enclosed storm sewers and impervious channel linings. Enclosed storm sewers and impervious channel linings may be considered and approved by the city if such storm sewers or impervious linings are considered to be protective of water quality.
 - (g) Overland flow facilities. Overland flow facilities for a stormwater drainage system shall be designed in accordance with criteria set forth in the TCSS manual.

(Ordinance 3500.11, § 9, adopted 2/20/07)

Sec. 22.05.020. Infiltration.

- (a) Restoration of infiltration capacity. To the maximum extent practical, water quality controls shall be designed to restore the infiltration capacity to pre-development conditions. Infiltration BMPs shall be designed in accordance with the TCSS manual.
- (b) Impact avoidance. Infiltration systems shall be designed and located to avoid impacts to existing springs and recharge structures.

(Ordinance 3500.11, § 10, adopted 2/20/07)

Sec. 22.05.021. Steep slopes.

- (a) Nonresidential construction. To the maximum extent practical, nonresidential construction shall be limited to those areas with pre-development natural grades of less than 25 percent.
- (b) BMP standards. Erosion control, terracing and water quality control BMPs shall be designed in accordance with the TCSS manual.
- (c) Cut and fill. A cut or fill with a finished gradient steeper than 33 percent shall be stabilized with a permanent structure.

(Ordinance 3500.11, § 11, adopted 2/20/07)

Sec. 22.05.022. Vegetation.

- (a) Construction plans. Construction plans must demonstrate the following:
 - (1) Landscape shall be restored to the maximum extent practical to its natural state after construction on the site is concluded (i.e., restoration of landscaping and vegetation is done at the time of post-construction final inspection).

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- (2) Xeriscape and low maintenance vegetation shall be included in all nonresidential development in accordance with specifications in the TCSS manual.
 - (3) Guidance shall be provided for the use of herbicides, pesticides and fertilizers.
 - (b) Pesticide and fertilizer management plan . An applicant for a site development permit shall submit a pesticide and fertilizer management plan providing information regarding proper use, storage, and disposal of pesticides and fertilizers. The plan shall indicate likely pesticides and fertilizers to be used. The plan shall include two lists of pesticides and fertilizers:
 - (1) Those which, due to their chemical characteristics, potentially contribute significantly to water quality degradation;
 - (2) Those which, due to the chemical characteristics, potentially would result in minimal water quality degradation.
 - (c) Integrated pest management plan . An applicant for a site development permit shall submit an integrated pest management (IPM) plan in accordance with criteria set forth in the TCSS manual.
 - (d) Nonstructural BMPs . For the purposes of achieving compliance with this article, integrated pest management, pesticide, fertilizer, and parking lot management plans are considered a valid nonstructural BMP.
 - (e) Vegetative BMPs . Vegetative BMPs, such as vegetative filter strips, shall be designed in accordance with the TCSS manual.

(Ordinance 3500.11, § 12, adopted 2/20/07)

Sec. 22.05.023. Structural controls.

- (a) Water quality control sizing . Structural water quality controls (WQCs) shall be sized for the entire contributing drainage area for the following types of developments:
 - (1) New multifamily residential development, new nonresidential development, and new subdivision development.
 - (2) Redeveloped multifamily residential development, redeveloped nonresidential development, and all redeveloped subdivision development that increases total impervious cover to a level greater than the impervious cover limits described in section 22.05.016.
 - (3) New single-family residential development which is not part of a subdivision development if such development has impervious cover greater than the impervious cover limits described in section 22.05.016.
- (b) Runoff volume . The volume of runoff required to be captured, isolated, and treated by each structural WQC, or series of WQCs operating in sequence as a treatment train, shall be as required in section 22.05.015(e) and based on the contributing drainage area for the WQC or series of WQCs.
- (c) Limited exclusions . Stormwater runoff from the following areas shall not require structural WQCs nor be included in the calculation of the volume of stormwater runoff required to be captured, isolated, and treated by a structural WQC:
 - (1) The full area of existing natural areas or restored natural areas from which stormwater runoff is routed around a WQC structure and which is restricted from development and from pesticide, herbicide, or fertilizer application through a plat note or restrictive covenant. The drainage areas from which stormwater is not routed around a WQC structure and which blends with runoff from developed areas shall be included in the water quality volume calculations.

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- (2) Fifty percent of the area using landscaping that requires no irrigation and no pesticide, herbicide, or fertilizer applications.
 - (3) The area on which a WQC structure is situated.
 - (4) Swimming pools that do not discharge the filter backwash into a stormwater drainage system.
 - (5) Impervious surface areas used for stormwater collection and on-site irrigation.
 - (6) Drainage from off-site areas which is routed around a WQC structure. The drainage areas from which stormwater is not routed around a WQC structure and which blends with runoff from developed areas shall be included in the water quality volume calculations.
- (d) Nature and volume of pollutant loads. In determining the required level of treatment, the nature and volume of pollutant loads from all developed areas shall be considered, including but not limited to the following:
- (1) Areas of impervious cover;
 - (2) The potential for pollutant impacts from industrial, commercial and other nonresidential types of development;
 - (3) Lawns, landscaping, and gardens using pesticides, herbicides or fertilizers;
 - (4) Golf courses, play fields and other recreational or greenspace areas using pesticides, herbicides or fertilizers; and
 - (5) Areas receiving wastewater effluent through surface spray irrigation or subsurface infiltration.
- (e) Engineer required. All WQCs utilized for any development or redevelopment project shall be designed by a licensed Texas professional engineer in accordance with the removal efficiencies and other technical criteria set forth in the TCSS manual. Alternative WQC technical criteria may be approved if it is determined in the sole discretion of the city that the alternative technical criteria will result in equal or greater water quality control performance as that required under this article.
- (f) Direct infiltration and recharge from WQC prohibited. All structural WQCs utilized in the recharge zone shall be modified or augmented to prevent direct infiltration and recharge from the WQC. To meet this requirement, such WQCs shall utilize artificial linings, evapotranspiration beds, or other methods designed and operated to prevent infiltration into the Edwards Aquifer even during periods of extended rainfall.
- (g) Erosion control. The erosion control requirements of this article shall apply to all related areas for a development project, including but not limited to off-site borrow areas, off-site spoil areas and off-site construction staging areas which are owned or controlled by the developer.
- (h) Peak runoff rate. The peak runoff rate for developed conditions shall not exceed the peak runoff rate for pre-development conditions for the two-year storm event. Peak runoff rate calculations shall comply with the criteria set forth in the TCSS manual.
- (i) Dedicatory instrument. To provide necessary access for maintenance and monitoring, water quality controls shall be located within an area dedicated to the public by easement, deed restriction, or recorded plat notation. The dedicatory instrument shall note that water quality restrictions exist on the property and that any alternative use or alteration of the property must be approved in writing by the city.

(Ordinance 3500.11, § 13, adopted 2/20/07)

Sec. 22.05.024. Roof runoff capture systems.

A roof rainfall runoff capture system or rainwater harvesting system approved under this article shall comply with the following minimum requirements:

- (1) The entire system, including rainwater collection, conveyance and storage, shall be isolated from the site stormwater system.
- (2) The collected rainwater shall be used for on-site irrigation or other purposes as approved by the city.
- (3) The system shall comply with the pollution control performance standards of section 22.05.015(b) and (c).
- (4) The on-site irrigation system shall be designed in accordance with standard irrigation practices considering such factors as soil type, slope, and vegetative uptake rates.

(Ordinance 3500.11, § 14, adopted 2/20/07)

Sec. 22.05.025. Erosion hazard setbacks.

- (a) Generally. The city may require preservation of an existing channel or waterway for use as a natural floodplain through the establishment of erosion hazard setbacks in accordance with the TCSS manual. No building, fence, wall, deck, swimming pool or other structure shall be located, constructed or maintained within the area encompassing the setback.
- (b) Alternative. As an alternative to the establishment of an erosion hazard setback, an existing channel or waterway may be preserved and protected through a bank stabilization and protection plan as approved by the city.

(Ordinance 3500.11, § 15, adopted 2/20/07)

Sec. 22.05.026. Operation and maintenance of water quality controls.

- (a) Maintenance plan required. An applicant for a site development permit shall submit a WQC maintenance plan describing the specific measures proposed for operating, monitoring, and maintaining each water quality control proposed for a development project as required by this article. The measures described in the WQC maintenance plan shall be consistent with the guidelines set forth in the TCSS manual and shall comply with the financial assurance requirements as may be defined by the TCSS and as required by the city council based upon design criteria and needs. City approval of the WQC maintenance plan is required prior to issuance of a site development permit.
- (b) Recording of plan; deed restriction. Upon city approval of the WQC maintenance plan, the project applicant shall record in the county deed records and on any recorded plat(s) for the development a notation stating that the property is subject to a water quality control maintenance plan on file at the city's administrative offices. Upon transferring title to the property, or any subdivided portion thereof, the applicant shall establish a deed restriction stating that the property is subject to a water quality control maintenance plan on file at the city's administrative offices.
- (c) Operation, monitoring and maintenance of controls. All applicants shall operate, monitor, and maintain each water quality control required by this article in accordance with the WQC maintenance plan and this article.
- (d) Transfer of responsibility.

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- (1) The WQC maintenance plan may provide for transfer of responsibility for WQC operation and maintenance activities to:
 - (A) A groundwater district, a municipal utility district, a public utility district, or any other special district created under state law;
 - (B) A homeowners' or property owners' association;
 - (C) A natural resources conservation or other environmental interest group; or
 - (D) Any similar third party entity.
 - (2) Transfer of responsibility to any such entity requires the advance written consent of the city. Any entity assuming responsibility for WQC operation and maintenance shall also assume responsibility for the financial assurance as may be required by the TCSS or the city council.

(Ordinance 3500.11, § 16, adopted 2/20/07)