

Chapter 15.10
STORMWATER MANAGEMENT PROGRAM - STANDARDS AND PERMITTING

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15.10.100 Stormwater Management Standards.

A. Standards

All methods of stormwater management constructed or modified in the City, shall be in accordance with the requirements in this Chapter and the current requirements for stormwater conveyance facilities set forth in the Standards as defined and incorporated by reference in Chapter 13.10, on file in the office of the City Clerk. Stormwater management includes, but is not limited to, storm sewers, natural or engineered channels, stormwater detention facilities, and dams.

B. Adoption of and Amendment to Standards

The requirements for stormwater conveyance facilities contained within the Standards shall be adopted and amended by the City Engineer in accordance with Section 13.10.020.

(History: Ord. SWM-2853 §1, 2010; SWM-2668 §1, 2008; SWM-2505 §1, 2004; SDR-2379 §§1 through 4, 2002; SDR-2192 §§ 1, 3 through 8, §§10 through 14, §§16 through 20, §§22 through 36 & §44, 2000; SDR-2096 §1, 98; SDR-1820 §§2 through 4, 93; SDR-1736 §1 and §2, 92; SDR-1413 §1, 86; SDR-1340 §3, 85; SD-1276 §2 and §3,84; SDR-1275 §§1 through 6, §§8 through 14, §§17 through 22 & §§24 through 29, 84; SD-1234 §2, §§4 through 20 & §23, 83; SDR-1168 §§1 through 4, 82; SDR-703 §3-1 (part), §3-2 (part), §§3-3 through 3-7 & §§3-9 through 3-10, 72; SDR-349,B §1 (part), §§3-1 through 3-7 & §§3-9 through 3-10, 71; SDR-349,A §3-10, 68; SDR-349 §3 (part), §4 part, §§3-1 through 3-7, §3-9, §§4-1 through 4-9-7, §§4-10 through 4-10-2, §§4-11 through 4-11-2, §§4-12 through 4-17, §§5-1 through 5-3.2, §5-4, §5-6, §5-8 through 5-12, §§6-1 through 6-2, §§7-1 through 7-5.4, §§8-1.1 through 8-1.2 & §8-2, 65)

15.10.150 Approval of Construction.

Any person or entity proposing to construct or modify any stormwater management improvement or modify a natural channel within the City shall apply to the City Engineer for

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approval of the location, dimensions, design and construction methods and materials of such stormwater management facility. The application shall be in writing and shall contain such information including maps, plats, diagrams, detailed drawings and specifications as the City Engineer may require. If the City Engineer finds that the proposed work will conform to the Standards, the City Engineer shall issue approval in writing. If the City Engineer finds that the proposed work will not conform to the Standards, the City Engineer may grant a written variance to the Standards, but not to any other provisions of this Chapter. Any variance granted by the City Engineer shall follow the guidelines established in Section 15.10.800. The City Engineer shall issue a written notice of disapproval when such a determination has been made. Any interested party may appeal the action of the City Engineer to the Governing Body by filing written notice with the City Clerk within ten days of the date of the action of the City Engineer. In case of a timely filed appeal for an approval by the City Engineer, approval shall be suspended until final disposition of the matter by the Governing Body. No stormwater management facility or modification to a channel shall be commenced within the City until a Public Improvement, Site Development, or Building permit authorizing the approved work is issued by the City, unless said work is exempt from obtaining all City permits and will not negatively impact storm drainage.

(History: Ord. SWM-2853 §2, 2010; SWM-2668 §2, 2008; SWM-2505 §1, 2004; SDR-2192 §§2 & 42, 2000; SDR-1340 §1, 85; SDR-1275 §35, 84; SD-1234 §§1 & 25, 83; SDR-349 §§1 & 9, 65)

15.10.200 Methods of Conveying Stormwater.

As required by Section 13.10.020, the City Engineer will adopt, maintain and make available the Standards for methods of conveyance for stormwater, except for building roof drains which are regulated by the currently adopted version of the International Building Code. Additionally, Chapter 18.365 establishes City criterion for protecting natural streams and Section 18.365.030 provides specific exceptions which allow storm sewer improvements.

Methods of conveying stormwater vary, depending on the natural watershed size. Watersheds with tributary areas less than 40 acres may utilize the natural stream OR underground storm sewers combined with overland flow. Watersheds with tributary areas greater than 40 acres shall utilize the natural stream for stormwater conveyance. When the watershed's tributary area is greater than 40 acres, underground storm sewer systems may be authorized only when one of the following is met:

- A. Chapter 18.365 criterion provides relief from dedication of a stream corridor.
- B. The project qualifies for an exception in Section 18.365.030.
- C. A deviation is granted, as provided in Section 18.365.100.

Engineered channels and/or relocating natural streams are not approved methods of conveyance for stormwater; however, the City Engineer may adopt standards for these methods of conveyance for use under the following conditions:

- A. A deviation, as specified in Section 18.365.100, is granted.
- B. A variance may be granted by the Governing Body when the Section 18.365.100 deviation process does not apply.
- C. In an RE District, if the watershed is less than 40 acres and the channel is outside of street right-of-way, an engineered channel is allowed. In addition to the setback requirements established in Chapter 18.365, no building shall take place within 60 feet of the centerline of any channel in the RE District.
- D. A "bioswale" or similar facility is designed as an integral part of a stormwater treatment facility. Limitations for usage, locations and building setbacks for such facilities are provided in the Stormwater Treatment Standards as set forth under Chapter 16.210 of this Code.

(History: Ord. SWM-2853 §3, 2010; SWM-2668 §3, 2008; SWM-2505 §1, 2004; SDR-2390 §1, 2002; SDR-2192 §9, 2000; SDR-1820 §1, 93; SDR-1612 §1, 89; SDR-1558 §1, 88; SDR-1340 §2, 85; SDR-1275 §7, 84; SDR-703 §3-8, 72; SDR-349,B §3-8, 71; SDR-349 §3-8, 65)

15.10.300 Lakes and Ponds.

In addition to the Standards, private lakes and ponds in subdivisions shall conform to the following minimum standards, which have been established to limit routine maintenance expenses experienced by the private lake and pond owners.

- A. The minimum surface area is two acres per lake or pond, with the minimum maintained depth of four feet, or ten feet if intended to support fish, except that decorative water features not serially connected to the storm drainage system of the development are exempt from the minimum area requirement. Minimum depth requirements are not applicable to all or portions of such facilities designed as a stormwater treatment facility. Design requirements for stormwater treatment facilities are set forth under Chapter 16.210;
- B. Design priority must be given for ease of removing accumulations of silt, including access for equipment and trucks, drainage of the lake or pond and upstream tilling or silt basins if feasible;
- C. Provisions must be provided for aeration facilities;

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- D. Plans for lakes and ponds must be approved by the City Engineer and include emergency spillway design in accordance with state law and the Standards, and provisions for suitable soil testing for dam and lake or pond construction;
- E. Necessary state approvals and permits are to be obtained by the developer; and
- F. An agreement running with the land must be executed by the applicant and approved by the Law Department declaring that the City has no past, present or future obligation to expend any public funds or to take any other action to maintain or improve the lake, lakes, pond, or ponds, including any inlet or outlet structures, or any portion of the drainage facilities approved by private facilities. This agreement must require that funds be collected from property owners sufficient to pay for the maintenance of lake, pond and storm sewer facilities.

(History: Ord. SWM-2853 §4, 2010; SWM-2668 §4, 2008; SWM-2505 §1, 2004)

15.10.400 Stormwater Detention.

Stormwater detention facilities shall be constructed with all proposed developments that result in an increase in peak discharge from the site whenever downstream homes or habitable buildings are flooded in a 1% or more frequent storm, or when such homes and buildings would be flooded as a result of future development, either individually or cumulatively in the watershed, or whenever streets are subjected to flooding in excess of the Standards, except that detention is not required under any of the following circumstances:

- A. When such flooding occurs within the Special Flood Hazard Area, as defined in Chapter 18.360 and the watershed is greater than 5000 acres.
- B. If the project does not increase impervious area.
- C. When such development is a lot of one-half acre or less and not part of a larger development; or the cumulative additional impervious area in a significant watershed of the site is less than 8000 square feet and there is not an annually certified existing stormwater detention facility on the site in the same watershed. Cumulative impervious area shall be measured from September 1984, the effective date of the first detention ordinance.
- D. Problems are identified in a watershed that had not previously required a detention study, and if the remaining increase in flooding caused by the cumulative remaining development in the watershed is less than 0.05 feet for building flooding or 0.2 feet for roadway flooding, or if the increase in peak flow rate from the cumulative remaining development in a basin is less than 0.5%.
- E. If the City Engineer determines that detention would be ineffective to prevent flooding or would aggravate existing flooding conditions.

- F. When the City Engineer determines that reasonably anticipated future problems can be solved by alternate storm drainage improvements constructed through the use of escrowed funds in accordance with this Section or other funding methods, or when alternative storm drainage improvements are constructed by the developer or when such downstream problems are due to a unique characteristic of a downstream building or buildings that could be corrected at reasonable cost and effort by their owner or owners.
- G. Either a current or previous owner of a development site tributary to the Kingston Lake Regional Detention Facility has contributed funds to 151st Street Associates for the construction of that facility, and there is no flooding of homes and habitable structures or flooding of streets in excess of the Standards between the development site and Kingston Lake.
- H. "Flooding" of homes and habitable buildings, for the purposes of stormwater detention, shall be defined as when the structure's lowest adjacent grade is less than one foot above the energy grade line of the 1% storm for fully developed conditions upstream AND the property owner is unable to fill adjacent to the structure to meet this criteria.
(History: Ord. SWM-2853 §5, 2010; SWM-2668 §5, 2008; SWM-2505 §1, 2004; SD-1365 §1, 86; SD-1276 §1, 84; SD-1234 §3, 83)

15.10.450 Downstream Improvement Alternative to Storm Water Detention.

In cases where a downstream flooding problem may reasonably be anticipated due to future development in a watershed, the City Engineer may, at his discretion and with the developer's consent, approve a plan of downstream flood relief in lieu of on-site detention. In such instances, an escrow deposit in the form of cash or an irrevocable letter of credit in accord with City policy and in an amount sufficient to pay an area-based proportional share of the cost of constructing a downstream flood relief project shall be required. The amount of the escrow deposit shall be calculated by the City Engineer for each drainage basin based on sufficient funds being collected to correct the problem when undetained development in the basin is one-half of the watershed area.

The developer may deposit either cash or an irrevocable letter of credit on an acceptable financial institution payable to the City, collectible no later than one year from the date of recording of the plat. The cash or irrevocable letter of credit shall be deposited with the City's Director of Finance, Budget and Administration. The funds collected shall be placed in an escrow account and set aside for the construction of the downstream flood relief project. The improvements will be made within 20 years from the time cash is placed into escrow or within 19 years from the cashing of the irrevocable letter of credit. In the event that the improvements are not made within the respective times stated above, the funds from the escrow account together with the actual accrued interest shall be returned to the developer or his successors in interest. In the event the actual construction costs are less than that estimated by the City Engineer, a proportionate share of the surplus funds shall be returned to the developer or his successors in interest.

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(History: Ord. SWM-2505 §1, 2004; SD-1821 §1, 93; SD-1365 §2, 86)

15.10.500 Maintenance.

All public storm sewer systems constructed in conformance with the Standards and located within public drainage easements shall be maintained by the City upon final inspection and acceptance of the project. For a period of two years after the final inspection, the contractor shall be responsible for repair of all work he was authorized to perform by the Public Improvement Permit, as defined in Section 13.10.010, or other permit type requiring a maintenance bond. The contractor shall further be responsible, for two years from the final inspection, for the repair of streets, roadways, curbs, sidewalks or other surface facilities due to backfill settlement above the underground conduits.

Privately constructed stormwater treatment facilities as required under Chapter 16.210 shall be privately maintained even when they receive drainage from public storm drainage facilities. Generally, public maintenance shall include the public storm sewer pipe system, end section and any required energy dissipation from the pipe system. For stormwater treatment facilities that discharge to a public storm drainage facility, public maintenance shall begin at the public storm sewer inlet. Maintenance of such private stormwater treatment facilities is intended to include cleanup and removal of silt, trash, debris, spills and other pollutants conveyed into the private facility by the public facility.

Compliance with Chapter 7.26, providing for property maintenance, shall be required as applicable.

- A. **Swales** -- Engineered swales, as defined by the Standards, constructed in residential subdivisions are the responsibility of the property owner to preserve and maintain. It is the responsibility of the property owner to install and maintain the grades to convey stormwater in accordance with the approved grading and building site plans. Prior to issuance of a temporary certificate of occupancy, the grades shall be inspected by the City. If any form of certificate of occupancy is issued prior to the City's approval of the grading, the permit applicant shall complete the grading within 60 days.
- B. **Stormwater Detention Facilities** -- Stormwater detention facilities are most often private stormwater management facilities constructed to the Standards. Maintenance of detention facilities shall be the responsibility of the property owner and shall include: (1) debris removal and cleaning; (2) cutting of vegetation; (3) repair of erosion; (4) removal of silt; and (5) maintenance of structural facilities not located in a public drainage easement.

Upon completion of construction and after final stabilization, the owner of each detention basin shall furnish certification by a licensed professional engineer to the City Engineer that the detention basin has full storage capacity, all inlet and outlet structures are fully functional, all

inlet and outlet structures are fully functional, and the basin is vegetated in conformance with the approved detention plans. Subsequently, maintenance certifications by a licensed professional engineer shall be submitted on or before May 1 the first full year following initial certification and every two years thereafter.

(History: Ord. SWM-2853 §5, 2010; SWM-2668 §6, 2008; SWM-2505 §1, 2004; SDR-2192 §38, 2000; SDR-1275 §32, 84; SD-1234 §21, 83; SDR-349 §8-5, 65)

15.10.550 Private Improvements in Easements Containing Public Drainage Facilities.

Subject to the provisions of Section 18.140.270(A) (10) and (11), the City Engineer may allow private improvements to be constructed in easements containing public drainage facilities. The Governing Body has, by resolution, adopted administrative policies for installation of private improvements in easements containing public drainage facilities. Any private improvements constructed in easements containing public drainage facilities shall be removed at the direction of the City if the encroachment impairs the strength or interferes with the use and/or maintenance of the public drainage facilities. The removal shall be at the sole cost and expense of the property owner and the City will bear no cost associated therewith.

(History: Ord. SWM-2851 §1, 2010)

15.10.600 Insurance.

All contractors shall secure and maintain insurance coverage in accordance with provisions of Chapter 13.01.

(History: Ord. SWM-2505 §1, 2004; SDR-2192 §37, 2000; SDR-1275 §31, 84; REP-1061 §1, 80; SDR-349 §8-4, 65)

15.10.700 Surety Submission; Amount and Period.

All contractors shall submit a surety in the amount and for the period set out in accordance with the provisions of Chapter 13.01 except private storm water detention facilities are not required to post a maintenance bond. The City Engineer may also waive the requirement for a storm water detention facility surety when: 1) the work is authorized by a building permit to construct a building of greater value than the required storm water detention surety or 2) all building permits within a residential subdivision are withheld until the detention facility is completed.

(History: Ord. SWM-2505 §1, 2004; SDR-2192 §39, 2000; SDR-1820 §5, 93; SDR-1397 §1, 86; SD-1394 §1, 86; SDR-1275 §33, 84; SD-1234 §22, 83; SDR-349 §8-6, 65)

15.10.800 Variances.

- A. Any variance of the provisions in this Chapter shall be submitted to and approved by the Governing Body.

- B. The City Engineer may grant a variance to the Standards which have been adopted by the City Engineer provided all of the following conditions are met:
 - 1. The variance complies with the general spirit and intent of the Standards.

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2. The granting of the variance will not adversely affect the rights of adjacent landowners.
3. The granting of the variance will not result in substantial public expense, create nuisances, cause fraud on or cause harm to the public or conflict with existing local, federal or state laws, rules or regulations.
4. The variance will not adversely affect the public health, safety, morals, order, convenience, prosperity or general welfare.

C. Appeals of decisions made by the City Engineer related to the Standards shall be made to the Governing Body.

(History: Ord. SWM-2853 §6, 2010; SWM-2668 §7, 2008; SWM-2505 §1, 2004; SDR-2192 §41, 2000; SD-1234 §24, 83; SDR-349 §8-8, 65)

15.10.900 Violation – Penalty.

Any person or entity violating any provision of this chapter is guilty of a public offense and upon conviction thereof shall be fined in a sum of not less than two hundred dollars (\$200.00) nor more than five hundred dollars (\$500.00). Every day this Chapter is violated shall constitute a separate offense.

(History: Ord. SWM-2505 §1, 2004; SDR-2192 §43, 2000; SDR-1275 §36, 84; SD-1234 §26, 83; SDR-349 §10, 65)

15.10.950 Enjoinment.

Notwithstanding the foregoing penalty section the City may institute civil actions to enjoin violations of this ordinance.

(History: Ord. SWM-2505 §1, 2004; SDR-1275 §37, 84; SD-1234 §27, 83; SDR-349 §11, 65)

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