

REVISIONS TO CHAPTER 425 STORMWATER REGULATIONS

June 6, 2017

Please note that all comments reference the original section number, as much as possible.

FORMAT

[Commenter] Stormwater Committee and Staff Comments Prior to May 2017.

Corresponding Revisions to Regulation

GENERAL

[Carl Lumley] There is inconsistency between references to “MSD Rules and Regulations” and “MSD Regulations” – since this is used as shorthand for specific adopted regs, needs to be consistent – suggest a search and limit to just “MSD Regulations”, as rules and regulations are synonymous.

Revision incorporated as suggested.

[George Seifried] The reference throughout the ordinance for the Director of Public Works and/or City staff. Would it avoid confusion if the term “City staff” is used everywhere and eliminate the term “Director of Public Works,” or [use] “the Director of Public Works” and eliminate “City Staff?”

“City staff” has been replaced with “Director of Public Works,” and the definition of “Director of Public Works” has been updated to be the Director of Public Works or his/her designee.

SECTION 425.010: PURPOSE AND INTENT

425.010.A

[Carl Lumley] Revise "...the requirements of special measures through a development agreement to mitigate through detention..." to read "...the requirements of special measures set forth in Stormwater Management Plans to mitigate by means of detention..."

Revision incorporated as suggested.

[Jim Myers] Insert words in bold to first sentence as follows: *This chapter seeks to provide those standards, criteria, procedures, and controls necessary to **avoid adverse effects and minimize...***

Revision incorporated as suggested.

[Jason Jaggi] The term "development agreement" doesn't seem to be the correct term. "Development standards" would seem better.

The revisions proposed by Carl Lumley above remove this text from the regulation. The intent is similar: "development agreement" is replaced by "stormwater management plan."

[Jason Jaggi] Cite specific ordinance for Erosion Control (Chapter 420 Land Disturbance Code).

Chapter 420 (Land Disturbance Code) is now cited for erosion control standards.

425.010.B DESIGN STANDARD

[Carl Lumley] Text edit – replace "...by [MSD]..." with "...of [MSD]..."

Revision incorporated as suggested.

[Carl Lumley] Section 67.280 RSMO will require that a copy of the MSD rules be posted in the clerk's office for 90 days prior to adoption, with a notice of proposed adoption on the message board and probably elsewhere - and after adoption must be available to public - the adoption ordinance must state penalties for violations.

The period of notice is noted.

SECTION 425.020: APPLICABILITY

425.020.A

[Jim Myers]

How does this relate to the criteria listed on the PowerPoint slide for when permits are required?

A review of the stormwater impacts that a change to a site is expected to make will be triggered through the existing permitting process.

[Jason Jaggi]

This is an important section which I believe needs more clarity. There needs to be a distinction between permits and the various site plans referenced. The distinction is that a site plan, in and of itself, does not authorize construction. A site plan authorizes the filing of a building permit or site improvement permit application based upon specifications within the set of construction drawings. I think this section needs to say that a stormwater management plan needs to be submitted in conjunction with these applications for review. I also think there needs to be a specific trigger for when a stormwater management plan is required. In practice, I believe using zoning or building permits when they are required as the sole basis for looking at stormwater will create confusion for applicants and substantially increase the workload for staff. A clearer approach would be to set a min. standard (such as 500 square feet or more of additional impervious surface) requires a stormwater management plan.

Other than simplifying the regulation, the applicability of this chapter is the most significant clarification/revision that is proposed.

This discussion led to calls for specific areas of increased impervious surface as triggers (as suggested here) for the sake of simplicity and clarity. Unfortunately, what that area should be was debatable, as the City does not have a study that has determined this.

Staff initially suggested to require a stormwater management plan for any permit application (other than what was exempted) filed with the City. The Stormwater Committee's subcommittee for the regulation found that this would be burdensome on smaller projects and softened this approach by giving the Director of Public Works discretion to determine when stormwater management plans would be required.

Further staff review found this to be too ambiguous and stressed clarity for homeowners and designers. This led to the current recommendation that the regulation apply to those projects that would fall under the Residential Development Permit (e.g. new home, major additions, and swimming pools). Room additions were added to the "exceptions" to focus the regulation on larger projects.

425.020.B EXCEPTIONS

[Carl Lumley] Replace B.2 with the following:

Any undeveloped lot of record of less than one-quarter (1/4) acre existing as of January 1, 2017.

We have not had a recent subdivision so should be ok date.

Revision incorporated as suggested.

[Jim Myers] Use of the work “undeveloped” [in paragraph B.2]. Should this word be eliminated? Is the City’s intent to regulate lots less than ¼ acre?

The text was not changed. It is not the City’s intention that the owner of an undeveloped lot measuring ¼ acre or less should need to address the differential runoff for a new home on that lot, because that situation appears to require the most detention on the smallest lots.

[Carl Lumley] 425.020(B)(3) – What is the exempted activity? Any development?

The provision was revised to begin with “Permitted development of any...” to clarify the intent.

[Judy Campbell] Removal of trees, scrubs, plants for site development can result in an increase in stormwater runoff. If most of them are removed or not planted that could affect sw management. There should be a process to be met or criteria before vegetation is removed or not planted.

Changes to vegetation on a site, particularly the impacts to stormwater runoff, would be considered as part of the stormwater management plan.

[Jason Jaggi] This section could be re-worked if a min. threshold is established per comments [in 425.020.A] above.

A specific area threshold is not recommended.

Room additions and building permits that would not require a site improvement permit (i.e. that disturb less than 2,000 square feet) were added as exceptions.

425.020.C

[Carl Lumley] How would you know since no permit application required?

See comment response below.

[Richard Koch] last sentence – I don't understand how either the property owner or the PWD would know when or if "in the judgement of the Public Works Director, conditions in the receiving system are inadequate or harmful effects can be anticipated".

This paragraph has been revised to eliminate the apparently contradictory statement that refers to staff judgment for a project where no permit would be required.

[Jason Jaggi] See comment above. [This section could be re-worked if a min. threshold is established per comments [in 425.020.A] above.]

This comment was noted, but no changes appeared necessary.

SECTION 425.030: NO ADVERSE EFFECT

425.030.A DEFINITION

[Judy Campbell] Further definition of NAI [no adverse impact]: to not divert additional stormwater onto other properties; to not divert an increase of water velocities onto other properties.

Velocity was added to the definition of no adverse effect.

[Richard Koch] after the word "volume" add ", direction".

Direction was added to the definition of no adverse effect.

425.030.B DESIGN STORM

[Judy Campbell] Be aware that MSD Table 4-2 (2006) is outdated and that it only uses stationary climate data for its precipitation frequency (pf) estimates. It is no longer considered accurate due to climate change not being factored in which was common occurrence for that time period. Often design storms (see table with 15 year and 20 year rainfall frequency) are formulated through NOAA. NOAA most recent estimates are from Atlas 14 (2013-14) also has used stationary climate data. The old 15 year storm could be the new 5-10 year storm. They are updating their statistical models. MSD is also updating their information.

Of more concern is extreme pf estimates as the rainfall amounts are vastly underestimated if using stationary climate data which could drastically affects stormwater infrastructures. Climatologists (MO) and the National Weather Service are now researching recent past data to develop a new model and thus new design storms. (Yes, I have the links and recent emails.) Future dam repairs at the golf course and any new large development contractors (BJC West County Hospital expansion) should be questioned as to which type of data (stationary vs non-stationary) climate data they are using for design storms which would determine their stormwater management plan. The BJC West County Hospital and medical office building expansion will be using the city's Millennium Park's detention pond which is the city responsibility for maintaining per previous agreement. Also, the downstream conveyance system for that expansion would be the surrounding area of the detention pond and Fernridge creek. Again, this is only for extreme precipitation frequency estimates but those are becoming more frequent and very costly.

Section 425.010(B) states that this regulation may need to be revised in the event that MSD's regulations change. Staff recommends following the current standard and considering the changes to that standard as they are made.

425.030.C SITE GRADING

[Jason Jaggi] Should through the use of stormwater BMP's be inserted at the end? It seems as though some guidance would be helpful in terms of acceptable mitigation (rain gardens, cisterns, rain barrels, bio-swales, etc.). Also, how are these on-site private stormwater facilities going to be maintained?

There is no mention of a specific BMP listed here, because that might suggest that one type of BMP is preferred or recommended over another. The Stormwater Committee recommends providing references to MSD's design guide and offering instructional materials for those who apply for permits that would require stormwater mitigation.

On-site stormwater facilities would need to be maintained by the property owners.

SECTION 425.040: SUBMISSION, REVIEW, AND APPROVAL OF PLANS AND SPECIFICATIONS

425.040.A STORMWATER MANAGEMENT PLAN REQUIRED

[Carl Lumley] Text edit – “...submitted and approved...” to be replaced with “...submitted, approved, and recorded...”

Revision was made as suggested.

[Jason Jaggi] A specific list of the required contents of the stormwater management plan should be provided. Sec. A.2 leaves it too open and unpredictable for an applicant.

The minimum requirements for a stormwater management plan are included.

[Jim Myers] 425.040.A.2 Insert words in bold as follows: ...*depend on the **extent and nature of the project.***

Revision was made as suggested.

[Richard Koch] In 2007 I had a 12' x 18' (216 SF) gazebo kit fabricated in my back yard that required a Creve Coeur permit for its foundation only. Do we really want to require a Stormwater management plan by the owner as well as a City staff review on such a small project?

The revisions to the Section 425.020 (Applicability) should clarify the City's intent. A stormwater management plan would be necessary only for large-scale projects.

425.040.B REVIEW PROCESS

[Carl Lumley] Replace “development agreement” with “Stormwater Management Plan.”

Revision was made as suggested.

[Jason Jaggi] Not sure what the intent is behind the term “development agreement”.

The revision suggested by Carl Lumley (above) should answer this question.

[Carl Lumley] Etc not a workable concept in an ordinance, so need to complete list or say similar work as determined by the Director of Public Works.

“Etc.” has been replaced with “or similar work as determined by the Director of Public Works.”

[Richard Koch] the term “drainage works” probably needs to defined. Also, will MSD do this review for the City if it defines when it is required? If staff reviews all plans first it [may] require additional staff.

“Drainage works” has been replaced with “drainage facilities,” which is defined in Section 425.080.

MSD automatically reviews any improvements to or changes to the drainage system.

425.040.C PROCEDURE

425.040.C.1 Preliminary Conferences

[Matt Wohlberg] Review whether this section should be duplicated or expanded to clarify when submissions to MSD and the City are necessary.

The reference to MSD standards should be sufficient. It may become problematic in the future to continue to state and maintain MSD's process and requirements in our regulation.

[Carl Lumley] Revise to read "...a preliminary conference with City staff to obtain..."

Revision was made as suggested.

[Carl Lumley] Replace "etc." with "and other pertinent information as determined by City staff."

Revision was made as suggested.

[Jason Jaggi] Is a preliminary conference a necessary requirement for all submittals? The first sentence suggests that it is required. Second sentence states that it is recommended.

A preliminary conference is recommended, but not required. The first sentence has been revised to change "shall" to "may."

[Jason Jaggi] Application requirement states that a separate and distinct application submittal is required. This suggests that the stormwater management regulations needs to stand on its own as noted in the applicability section comments.

A separate application for the stormwater management plan was not the intent. The text has been revised to state that the stormwater management plan would be submitted with the permit application for the project.

425.040.C.4 Notification

[Carl Lumley] Why have automatic approval?

[Matt Wohlberg] Review 75-day review provision.

[Jim Myers] Discuss the 75 day notification requirement

[Judy Campbell] No approval by default if the city has not responded within 75 days. Notification must be made by accepted legal communication. Days to approve should be discussed in subcommittee with past performance history provided by Dir of Community Development and his recommendations.

[Richard Koch] “seventy-five (75) days is too long for small projects, depends upon how small a project requires a “permit”.

The subcommittee recommended 45 calendar days. Staff standards would provide review and comments much earlier, but this time frame would allow for extenuating circumstances.

Section 420.040(B) states that land disturbance permits will be reviewed “promptly.” The suggested revision references this section and removes the provision for automatic approval.

[Carl Lumley] 425.040(C)(4) – Not sure why we need to refer to [Section] 420.040.

The reference was not necessary, but defining what is a reasonable amount of time to “promptly notify” the applicant about the City’s review of the plan was problematic. Referencing Section 420.040 was meant to be more consistent and clear by using a defined standard rather than by coming up with a new one.

425.040.C.5 Site Development Plan Approval

[Jason Jaggi] Site Development Plan Submittal: as noted earlier a stormwater management plan can be submitted in conjunction but a separate permit to authorize construction under this Chapter will be needed.

The Applicability section was changed to reference permit applications only – it no longer references site plan submittals. This paragraph appears to give the City the option to require a stormwater management plan for the approval of a site development plan, if the City feels that this is necessary.

425.040.C.6 Recorded Plan [new]

[Carl Lumley] Add 425.040.C.6 Upon approval, the owner shall provide proof that the stormwater management plan has been recorded with the St. Louis County Recorder of Deeds.

Revision was made as suggested.

425.040.D DOWNSTREAM CONVEYANCE SYSTEM

[Judy Campbell] Should be further defined. All developers should provide detailed plans.

The calculations involved with a stormwater management plan should show whether the runoff cause a substantial increase to the downstream conveyance system. This provision may only rarely apply to single-lot residential development. It seems excessive to require a detailed study of the downstream stormwater system capacity for every project.

425.040.E CORRECTIVE ACTION

[Carl Lumley] Replace “development agreement” with “Stormwater Management Plan.”

Revision was made as suggested.

[Richard Koch] last sentence, delete the words “according to the development agreement”.

This text was changed to be “stormwater management plan” (see above).

[Jim Myers] What is the criteria for applicability for a “land disturbance activity” in current regulations?

Land disturbance activity involves 2,000 square feet or more of disturbance.

[Judy Campbell] All corrective action plans should be highly detailed and include time limits for when action needs to originate to prevent further damage for residential, commercial, or municipal property.

The corrective action will be based upon the issue, and any details, such as the restoration required or the time to remedy the problem, will be stated by staff in the violation notice.

425.040.F TIME OF VALIDITY

[Carl Lumley] Revise 425.040.F.1 to read:

Any approved stormwater management plan, unless construction has started and is continuing, shall become null and void one hundred eighty (180) days after the date of approval and no further work subject to this Chapter shall be allowed unless and until additional or updated plans have been submitted and approved in accordance with the provisions of this Chapter. If work is suspended after such 180 day period for more than 90 days, the plan shall likewise become null and void.

The suggested changes were initially accepted as stated, but “consecutive” was added to revise the statement to be “90 consecutive days” by the recommendation of the Subcommittee.

See the comment below for further revisions.

[George Seifried] I noticed that the [stormwater management plan] is only good for 6 months, but a Site Improvement Permit is good for a year. Would it not make sense to have both expire at the same time since they will likely be issued together?

This section has been revised to match the times stated on the Site Improvement Permit and Residential Development Permit forms, which are the ones to which the stormwater regulations would apply.

[Carl Lumley] Revise 425.040.F.2 to read:

An updated plan shall be approved in accordance with the provisions of this Chapter in effect at the time of resubmission. (R.O. 2008 §24-30.2; Ord. No. 2207 §1, 1-27-03; Ord. No. 5043 §2, 7-14-08)

The suggested changes were accepted as stated.

[Jim Myers] Insert words in bold as follows: *development agreement **or building permit** the stormwater...*

The revisions to the references to a development agreement seem to have addressed this suggestion.

SECTION 425.050: REQUIRED SUBMITTALS BY THE DESIGN ENGINEER

[Jason Jaggi] No list of required submittal information is provided.

[Carl Lumley] Delete statement referencing “the following list of information.”

[Jim Myers] second paragraph. Remove the word “following” since the list does not follow

The reference to the “following list” has been deleted. Reference is made to MSD’s Rules and Regulations for MSD permit submittals instead of listing each requirement in the City’s regulation..

SECTION 425.060: PERMIT FEES

[Carl Lumley] Shouldn't this be consolidated with subsequent section on fees?

This section has been incorporated into the other section for fees near the end of the regulation, as suggested. The new section number is 425.080.

[Jason Jaggi] There should be additional fees established as part of this permitting requirement.

Any recommended changes to the fee schedule should be part of the recommendation to the City Council for approval of the regulation.

This section was revised to remove several references to MSD and its fees and forms.

[Carl Lumley] Won't all City fees be in Appendix B? Delete items 1 and 2.

Provisions 425.080(C)(1) and 425.080(C)(2) have been deleted.
Provision 425.080(C)(3) has been revised to be 425.080(D).

SECTION 425.070: PRIVATE FACILITIES

[Judy Campbell] Provide further definition of what constitutes a private facility.

[Jim Myers] Need to define “Private Facilities” in the Definitions

425.070.A ADDITIONAL DESIGN CRITERIA

[Judy Campbell] Detention basin fencing. Should be provided by developer with a sign attached to fence. The CDC reports the number one cause of death for children between the ages of 1-14 is unintentional injuries including drowning.

[Richard Koch] Consider deleting fencing requirement all together. Or, at least specify a minimum total depth at which fencing would be required. Perhaps say 4.0' depth or so.

[Judy Campbell] Detention basin elevation...should utilize the latest design storms using non-stationary climate data.

425.070.B PRIVATELY OWNED PONDS

[Carl Lumley] This should all be deleted and replaced with direct assignment of responsibility

[Richard Koch] 425.070 B, 1, a – at the end of the sentence add “or property owner”.

[Jim Myers] 425.070.B.1.d. What is the meaning of “downstream facility”?

[Jim Myers] 425.070.B.1.d. Reference should be to (1)(a), not (4)(a).

[Richard Koch] 425.070, B, 1, d – this sentence refers “(4)(a) above”, which I don’t see the 425.

[Judy Campbell] Obtain information from the PW dept regarding how many subdivisions have asked for assistance the last 3-5 years? What is the average amount of financial assistance that was provided? Is this a common feature in other municipal stormwater management committees?

[Judy Campbell] The city should determine if there was a specific cause that resulted in the non-functioning retention/detention basin. The city should determine if MSD or other entities or at all responsible or have contributed to the problem.

[Judy Campbell] The city should continue to partially fund privately owned dry and wet ponds/lake retention/detention basin repairs.

This entire section was deleted. The subcommittee recommended against future funding for private facilities.

SECTION 425.070: DEFINITIONS

[Carl Lumley] Do we need any of these definitions anymore?

Most definitions were removed, but some relevant ones were left.

[Jim Myers] The definitions should be moved to the end of the regulation and only include terms used in the regulation. Assume the other definitions are already included in the MSD rules.

This section has been moved to the end of the regulation as suggested.

[Jim Myers] Include definition of the following: “impervious surface”, “land disturbance”, and “private facilities”.

These definitions have been added. A definition for “Residential Development Permit” was also added.

[Carl Lumley] There is a typo in the Land Disturbance definition.

This has been corrected.

[Carl Lumley] What is the rational formula referenced in the pre-developed runoff rate definition?

The Rational Formula is a standard means of calculating stormwater runoff volume.

[Carl Lumley] Add Code cross references for the Residential Development Permit definition.

The definition now references Section 500.040, Section 420.070, and Appendix B to Title IV.

SECTION 425.080: GENERAL

[Carl Lumley] Revise to include “and their successors in interest...”

The suggested changes were accepted as stated.

[Jim Myers] Need to bold the section title.

The suggested changes were accepted as stated.

[Carl Lumley] The facilities will not be public until accepted. Delete both references to “public.”

The references were deleted as suggested.

SECTION 425.090: ABANDONMENT OF WORK

[Carl Lumley] Revise to read [new text in italics for emphasis]:

Upon receipt of a written statement from the Owner that further work on the project has been abandoned, *or upon Owner's failure to promptly complete work after notice of apparent abandonment*, the City and MSD shall determine whether or not the uncompleted work is required to ensure the public health, safety and welfare. Should it be determined that completion of the work is necessary, the *Owner shall complete such work immediately. Otherwise*, the City *may* utilize the monies deposited in the construction escrow for the project to complete this work *or seek other applicable remedies*. (R.O. 2008 §24-30.9; Ord. No. 2207 §1, 1-27-03; Ord. No. 5043 §2, 7-14-08)

The suggested changes were accepted as stated.

[Richard Koch] Should escrow requirements be defined here?

Escrow is mentioned in the section "Enforcement, Violations, and Penalties" at the end of the Chapter.

SECTION 425.120: CONSTRUCTION AND MAINTENANCE OF STORMWATER FACILITIES

[Carl Lumley] Paragraph C. Revise to read [italics for emphasis on new text]:

Upon release of escrows the maintenance responsibility shall be vested *jointly and severally* in the trustees of the subdivision by virtue of the trust indenture *and the owners of the subdivision lots*.

The suggested changes were accepted as stated.

[Carl Lumley] [Paragraph C] Either delete the sentence about indentures or change "shall" to "should" and indicate that failure to do this does not excuse from liability.

The revision approach was used.

[Carl Lumley] Paragraph D. Revise to read [italics for emphasis on revised text]:

After legal occupancy of the project, the maintenance of detention/retention facilities shall be vested with the owner of the *lot and their successors* [~~project~~].

The suggested changes were accepted as stated.

SECTION 425.130: ENFORCEMENT, VIOLATIONS, AND PENALTIES

[Carl Lumley] Paragraph A. Need to specifically state all penalties. If we don't list violations here, we will have to list in the adoption ordinance.

Section 425.110 now includes revised versions of Section 405.1140 and Section 405.1150.

[Carl Lumley] Paragraph B. The reference to the additional penalty seems out of place.

This sentence has been deleted.

[Carl Lumley] Paragraph B. The bond/escrow provision should not be under enforcement/violations. Perhaps a section located in sequence by fee provisions.

The discussion about bonds and escrow has been moved to a new section (425.090), as suggested.