

STORMWATER ORDINANCE UPDATE
TECHNICAL ADVISORY COMMITTEE (TAC)
Meeting #9: Wednesday, November 28, 2007
Clark County Operations Conference Room B-1
4700 NE 78th St.
1:30 - 3:30 p.m.

N O T E S

Agenda / Introduction / Announcements

Members Attending

Gordon Euler, Patrick Harbison, Mike Misiak, Chad McMurry, John Milne (replacing Tom Grange), Jennifer McClure, Fereidoon Safdari, Mike Soliwoda, Ron Wierenga, Scott Wilson

Members Absent

Ali Safayi

Staff

Tim Kraft, Robin Krause, Sue Stepan,

Audience

Sean Darcy, Eric Golemo, Jim Keithley, Derek McCurdy, Andrew Stoeckinger

The November 14, 2007 notes were approved as submitted.

Mr. McMurry advised the committee that the Infiltration Standards Review Committee will tweak its recommended infiltration test method based on feedback. He will send it around when available.

Mr. Krause invited TAC members to the next SAC meeting, Tuesday, December 4th.

The first work session with the BOCC is next Wednesday, December 5 at 9 a.m.

Decisions from Last Meeting / Action Items

Mr. Kraft passed around Technical Memoranda #8 on industrial uses; #9 on detention volume comparison; #10 on Underground Injection Control; and #11 on HSPF INFILT parameter study. Members should review the memoranda and provide feedback to Mr. Krause.

#8

Mr. Kraft stated that In existing county code, the listed industrial activities trigger stormwater code at 1,000 sq. ft. rather than at 2,000 sq. ft. TAC and SAC have discussed not retaining this requirement in the new code. The memo recommends going with Ecology's thresholds and excluding the current code's more rigorous requirements.

#11

The HSPF INFILT Parameter Study is intended to discover how likely a model calibrated for Clark County would have an actual effect on detention volumes. Mr. Krause said that the INFILT parameter appears to make a difference. It justifies the effort to calibrate the model locally.

Mr. Milne asked if we could just change to B soils to see how much this will affect our projects. Mr. Krause: no, we were just testing the sensitivity of the model to changes in the INFILT parameter. The INFILT parameter is one of the 16 perInDs.

Please e-mail feedback on the memoranda to Mr. Krause.

40.380.050, Erosion Control

Mr. Kraft asked if anybody had comments on the Erosion Control section from last meeting. The group already discussed modifying the SWPP submittal requirements for developments under 1 acre.

Mr. Krause followed-up on the purpose of 050(E), financial liability. The intent is to cover the county against detention ponds flooding downstream property during the construction phase. Mr. Kraft asked if the requirement belongs in the erosion control section. Should it apply to the construction of single-family homes? Mr. Harbison recommended change it to a construction requirement. Mr. Golemo pointed out that the county already requires a certificate of insurance from contractor (not from owner) for general liability to about \$1 million. Ms. Stepan recommended further research. The group agreed that we probably can delete this if the need is being met through another mechanism.

Language Change Requests

Mr. Kraft stated that since submittal requirements are tied back to everything else, it is important to re-review some of the issues and requested changes from previous TAC discussions.

Reference the issues handout.

Fencing

Mr. Kraft asked if the fencing requirements should identify special circumstances in which fences are not required. If so, the group may brainstorm a list of circumstances.

Mr. McMurry: the question is what is the hazard we are fencing them away from. Shallow facilities and infiltration facilities that might occasionally get water accumulation should not need to be fenced.

Mr. Krause asked the group to brainstorm reasons for fencing facilities:

- Liability for standing water
- Protect facility from vandalism, bikers, 4x4 drivers
- Protect facility from wildlife
- Safety for kids
- Internal retaining walls drop offs
- Trapped into confined spaces
- Protect facility from dumping of grass clippings, Christmas trees, etc.
- "Amenity" style facilities may be fertilized and landscaped by homeowners or HOAs in ways that defeat water quality objectives
- Unfenced facilities may get filled in or planted with incompatible vegetation by homeowners or HOAs

Mr. Misiak asked the group to brainstorm reasons for not fencing:

- If facility is a centerpiece of a development (pond is like a lake), property values can rise
- LID techniques can't be fenced
- Parks & Recreation department does not like fences
- 6:1 walk in/walk out side slopes are safe
- HOAs are more likely to maintain it if they see it as theirs
- Big ugly chain link fence in the middle of a development is an eyesore
- Maintain continuity with adjacent wetland or open space

Mr. Krause: should the requirements differ for public and private facilities? Ms. McClure said that a privately-held facility can be unfenced if the private party holds liability insurance. Mr. Soliwoda: current county policy is for a Hold Harmless agreement for a private facility not to fence. Mr. Golemo and Mr. McMurry said the standard for not fencing a private facility depends on the reviewer.

Mr. McCurdy asked the group to consider fencing material. The *2005 Manual* talks about thorny hedges, etc. Mr. Euler: landscaping in lieu of fencing - this could tie back to 40.320.

The group discussed which animals could damage facilities: beavers, nutria, moles, deer.

Mr. Krause asked the group to come up with a recommendation for criteria that would allow no fence or a modified fence, such as shorter, different style, or a hedge.

Mr. Kraft read the fencing recommendations from Ecology, "a fence is needed at emergency overflow water surface elevation or higher where a pond interior side slope is steeper than 2:1 or where the impoundment is a wall greater than 2' in height. The fence need only be constructed for those slopes steeper than 3:1." Mr. Kraft stated that in his mind, considerations for safety are depth, side slope and existence of a permanent pool.

Ms. McClure noted that with low infiltration rates, it will be important to fence or place some barrier to prevent 4-wheelers. It will be easy to silt in those facilities. Mr. Harbison said a three-rail fence would work and is more aesthetically pleasing. Mr. Krause said a hedge, split rail or boulders might keep out 4-wheelers. Mr. Kraft asked how common 4-wheeling is.

Mr. Wilson said dumping is a true problem.

Ms. McClure said that deciduous hedges could gunk up a facility. A row of trees might serve.

Mr. Euler noted that a fence does not have to be right up on facility. Ms. McClure said that practicality of land yield would prevent that in most cases.

Ms. McClure asked for more commitment to allowing no fences - just saying the official *can* waive the fencing requirement may result in no waivers. Codifying criteria for waivers will avoid that problem. Mr. Krause agreed.

Mr. McMurry said that it is important to word the fencing requirements correctly, so LIDs like rain gardens do not end up being fenced. Mr. Misiak: traditional BMPs and LID BMPs will morph together. At what point do you use discretion for each unique site?

Mr. Golemo asked if private can always be unfenced. If it meets the criteria for a public unfenced facility, should it require the liability policy?

Mr. McMurry asked if a 6' chain link fence should always be required. Most issues would be deterred by a 3' or 4' fence. These are less visually imposing and are easier to screen. Mr. Krause said that shorter, less stout fencing are more easily destroyed.

Mr. Kraft read verbiage from the *2005 Manual* on safety standards for detention ponds on school sites. It includes a non-climbable fence: example is a chain link with tighter mesh. It can be 4' in height if total depth of impoundment is 5' or less. It references DOH Office of Environment Programs. Recommend 6' height.

Criteria brainstorm for unfenced (public?) facilities:

- Location is prominent in development, as community "amenity"
- No road access to it (not including maintenance road)
- Provides an alternate barrier against animals, kids, dumpers, and drivers
- Maximum depth of ?
- Maximum slope of 3:1 with 5' bench
- Maximum slope of 4:1 combined with maximum depth requirement
- Maximum slope of 6:1, like a constructed lake with no depth requirement
- Requirement for a bench
- Location is adjacent to natural area or wetland
- Outlet structure has bolt-down lid

Mr. Wilson countered that those adjacent to natural areas can get torn up by 4x4s. Mr. Krause asked if an alternate barrier might be acceptable? Mr. Wilson: concrete blocks or boulders might work. However, boulders can roll into road or be hit by a car going off the road and cause liability.

Mr. Wierenga suggested looking at the wetland ordinance for ideas. It allows for alternate barriers include trees, boulders to help protect and demarcate the buffer. Also signage. It does not work all the time, but it is effective. Mr. Wierenga added that fencing helps when facilities are near wild wetlands. Once it becomes a natural area - habitat - the Army Corps may take jurisdiction and require a HPA permit for maintenance or retrofits. Regular maintenance will help prevent that problem, too.

Mr. Harbison: the maintenance road will always be 5:1 (7:1 now).

Mr. Wilson recommended allowing the county to fence the facility later if problems occur.

Mr. Golemo recommended defining the variance process for special circumstances. Mr. Krause agreed that variances will be addressed later by TAC.

Mr. Milne pointed out that engineers more frequently choose steeper slopes to reduce pond sizes.

Mr. McMurry argued for giving a list of suggested criteria as examples, but not an all-inclusive list, that would allow fencing requirements to be waived by the responsible official. Mr. Krause argued for codifying criteria that allow an unfenced facility, at the discretion of the review engineer. A facility not meeting the requirements would be required to be fenced unless waived by the responsible official. Also, the responsible official should have flexibility to require fencing even if the site meets the criteria. Mr. McMurry disagreed; not all responsible officials have been reasonable.

Ms. Stepan discouraged use of discretion in code because it results in argument. She stated that all public facilities should be fenced, but allow discretion as to type.

Mr. Wilson said that if it were up to him, all public facilities should be fenced. Unfenced facilities are much more heavily used for dumping.

Ms. Stepan our current practice of allowing “amenity” style facilities to be unfenced if private conflicts with the Department of Public Work’s desire to have all residential facilities be public. Mr. Krause: this will ensure that all ponds are stuck in the back and that stormwater is not treated on a site level as an amenity.

Mr. Safdari stated that one reason Public Works wants more residential public facilities is that there currently are more private facilities than public. Keep in mind that Public Works is not requesting all LIDs be public - just ponds and swales.

Brainstorm of other barriers that may meet the intent of the fencing requirements:

- Split-rail fence
- Boulders
- Black coated chain link rather than galvanized
- 3’ or 4’ fence

Mr. Krause, Mr. Harbison, and Mr. Wilson discussed maintenance of alternate fencing types.

Mr. Krause: public vs. private is a big issue. Mr. McMurry: SAC said residential facilities have to be public; take back to them the idea that it might mean a 6’ chain link in the middle of the neighborhood.

Mr. Golemo argued that neighbors will self-police an amenity, but not a hidden one. Mr. Soliwoda: the plat should specify who maintains it. Mr. Krause: some SAC members want mandatory HOA fees for maintenance.

Side Slopes

Mr. McMurry requested to strike out the 75% rule from (G)(2)(a) in favor of allowing as much vertical sides as you can get and still get adequate maintenance access to bottom of the facility. Mr. Wilson: vertical slopes can shade out vegetation. Mr. Harbison supported taking out the 75% rule. Ms. McClure agreed that 72% is arbitrary; the facility just has to function. Mr. Krause: code already requires a 15’ wide access road to bottom. Mr. Kraft: maybe we can take out this 75% if access is provided for elsewhere.

The group discussed (G)(2)(b). Ms. McClure would like all fencing and railing to be addressed in the Fencing section. Mr. Kraft pointed out that (G)(2)(b) addresses a condition (fencing) for allowing vertical slopes; the fencing section addresses various conditions for requiring fencing.

Mr. Harbison recommended defining “vertical” in code.

Stormwater Easements

Mr. Krause: staff has heard complaints that 20’ easements are impossible to provide with new zoning and smaller lots. Would a narrower easement suffice for a pipe < 12”? From a maintenance standpoint, access may be an issue. Maintaining a 20’ easement requirement might encourage other alternatives before deciding to run pipes through backyards.

Mr. McMurry countered that backyard drains are almost always required because you have to catch the water before it goes to the neighbor’s place. Mr. Wilson: area drains are privately maintained, and do not require a 20’ easement. We need an inspection easement for those. Mr. McMurry: this has been unclear in current code.

Mr. McMurry replied that in high density developments, sometimes there are conveyance pipes through the lots. A 32’ lot cannot accommodate a 20’ easement.

Mr. Kraft pointed out that it is to the homeowners benefit to have a sufficient easement over a backyard drain to replace or repair it. If it fails, you have to dig.

Mr. Wilson recommended retaining a 20' easement for public pipes. Even for private, a 5' easement gives no place to put ditch spoils. Mr. Kraft agreed that 10' is a minimum.

Mr. McMurry: the shared private easement and the county easement may as well coincide.

Mr. Kraft: let's use a minimum 10' easement for private backyard storm pipe less than 7' deep.
Mr. Krause: for public pipes, stick with 20' easement.

Mr. Harbison asked where does the county responsibility for maintenance begin? Mr. Wilson: at the ROW, probably.

Mr. Golemo: the sewer allows easements less than 20' in some cases; then they'll require ductile iron, which is less likely to need replacement. Mr. Krause offered to come up with a couple of criteria that could potentially reduce the easement width, e.g. ductile iron, 150' or less, above ground, less than 4' deep... Mr. Krause asked Mr. Wilson if any of the mitigating circumstances mentioned would ease his mind about a < 20' easement.

Mr. Golemo argued that more shallow pipes will be built. Small, shallow pipes do not need a 20' easement. The proposed wording is more restrictive than current code. Many private easements were 5'; a lot of 2' deep systems have a 5' easement on the perimeter and 10' off the inside. SAC talked about adding flexibility elsewhere in the code, such as easements and locations of facilities, in order to help make up for the new restrictions.

Mr. McMurry: 5' makes sense if you can maintain it. Why tack on an extra 5'? Mr. Kraft: it is more than a matter of what will fit down 5'. You have equipment, pipe, people, and spoils to fit in. If you actually are in a situation where you have to rebuild and replace, you need that space. Mr. Harbison said that some neighbors can deter maintenance in a shared easement. Mr. Krause offered 10' or backyard setback.

Mr. Soliwoda said that a 5' backyard should not have a drain installed. How does review staff interpret this?

Mr. Golemo asked what other agencies are doing. Mr. Harbison: one agency requires 20' tract, which I don't recommend. The other is 20' unless it is deep, then 1:1 up from pipe.

Mr. Krause offered 10' or the building setback, if it is less. Mr. Golemo said you have to say "or what is necessary to maintain it." Mr. Harbison said to add the "minimum widths" verbiage to the private easement section, too.

Low Impact Development

Tabled until next meeting. Please review the rough draft manual prior to next meeting, and bring comments. Mr. Kraft noted differing definitions of LID - individual BMPs vs. alternative site planning, which is really LID. Mr. Krause mentioned the idea of incentives for LID and other less impacting development techniques.

Adjourn

The meeting adjourned at 3:40 p.m.

Respectfully Submitted,
Trista Kobluskie