Stormwater Code Update

Planning Commission Hearing
July 13, 2021
Stormwater Code Overview

• PWSA and DCP have been conducting a stormwater code update project with broad agency and stakeholder involvement.

• Known as 'SCORU' - Stormwater Code & Ordinance Review and Update

• This update follows the Act 167-mandated code update adopted in 2019 for compliance with State and County Act 167 Model Ordinance.

• AKRF has been the prime consultant on this project. They have expertise working on SWM code updates in numerous municipalities in PA and elsewhere.
Stormwater Code Project Objectives

- Update City Stormwater Management Code (Title 13)
  - Consolidate stormwater related content scattered throughout City Code
  - Eliminate conflicts and overlap
  - Align development requirements with City/PWSA goals and objectives including regulatory compliance goals

- Develop New Technical Resources for Stormwater
  - Stormwater Design Manual
  - Updates to PWSA Developer Manual

- Provide Process Improvement Recommendations and Cost Evaluation
  - Stormwater Plan Review, Inspection, and Enforcement
  - Other stormwater-related roles and responsibilities between agencies
Timeline

• Planning Commission Briefing – June 29th
• Planning Commission Hearing – July 13th
• City Council Hearing – (TBD)
  • Aiming for timeline requirements in MS4 agreement with EPA
  • Timed to coincide with PWSA Stormwater Fee Implementation
• PWSA Rate Filing with PUC – March, PWSA Rate Approval by PUC – January 2022
SCORU: Work to Date

• Review of SWM-related code and technical guidance
• Review of regulatory requirements including new 2020 MS4 permit
• Mapping and analysis of current review/approval processes related to SWM and land development approvals
• Mapping and analysis of current SWM construction closeout, inspection, and enforcement processes
• Agency staff and stakeholder input:
  • Agency Workgroup meetings
  • Agency staff interviews
  • Stakeholder Group meeting, survey, and focus group
  • Public-facing project website with survey
• Technical analysis and development of policy recommendations
• Final policy recommendations incorporating feedback, and additional analysis
Stakeholder Engagement

• Agency Working Group
  • At least five formal meetings with lots of touch-bases in between meetings with specific agencies.
  • City (Law, PLI, Zoning, Planning, DPW, DOMI), PWSA, ACCD, ACHD

• Stakeholder Group
  • Three meetings with a total of 123 attendees along with a focus group on hardship waivers
  • Engineers, developers, architects, community organizations, watershed groups, institutions and other large land owners

• Consultants conducted numerous individual interviews with agency and stakeholder group members to assess existing code, processes, problems
Current Stormwater Regulations in Title Nine

• Act 167 Stormwater Management Overlay Districts
  • Monongahela River Watershed
  • Girty’s Run Watershed
  • Squaw Run Watershed

• Uptown and RIV Zoning Districts:
  • Performance Points
  • Small Project Stormwater Standards
Key Changes to Title 9

- Relocating Stormwater Management Overlay District (906.07) to Title Thirteen
- Eliminating Small Project Stormwater Standards (915.03)
- Adjusting Rainfall Performance Points (915.07)
  - From 1.5 inches to 2 inches
- Adding references to Title Thirteen and Stormwater Design Manual
- Clarifying RIV Riparian Buffer Zone requirements
- Ensuring proper coordination and referencing between Title 4, Title 9, Title 13, Title 10, and other County and State requirements (plumbing, erosion & sediment control, etc.)
Proposed Title Thirteen Structure

• Stormwater Management Requirements Applicability
  • Threshold: 10,000 ft.$^2$ of land disturbance or 5,000 ft.$^2$ of new impervious area
  • Exemptions

• Volume Controls

• Rate Controls
  • Public Health and Safety Release Rate Areas + Act 167 Release Rate Maps

• Stormwater Plan Submissions Requirements + Procedural Steps
  • Proposed Incentives, Waivers, etc.
  • Demonstration of Technical Infeasibility

• Operation and Maintenance, Inspection, Enforcement
  • Appeals, Penalties, etc.
Stormwater Design Manual Outline

• Overview of Regulations and Requirements
• Site Design Integration with Stormwater Management
  • Site-Specific Factors
  • Design Strategies
• Stormwater Best Management Practice Design Standards
  • Non-structural BMPs
  • Structural BMPs
• Overview of Process and Guidance for Submission
  • Integration of City process with external agency permitting
  • Demonstration of Technical Infeasibility standards
• Construction Guidance
• Operation and Maintenance
Title Thirteen Recommended Improvements

- Two-Step Review Process
- Better Coordination with Allegheny County Plumbing Permits
- Clarification of Filtration Requirements in Separate Sewer Areas
- Requirements to Reduce Sanitary Sewer Inflow
- Public Health and Safety Release Rates
- Addressing Climate Change
- Strengthening Pretreatment Requirements
- Limiting Right-of-Way Discharges
- Limiting Groundwater Discharge
- Addressing Non-Sewered Areas
- Controlling Discharges to Landslide Prone Areas
- Infiltration Testing Requirements
- Stronger Technical Infeasibility Criteria
- Consistent In-Lieu Fees
- Hardship Waivers for M/W/VBEs and Affordable Housing Developments
- Same Owner Banking and Trading
- Innovation Track for Approving New Technologies
- Incentives for Preferred Technologies and Additional Stormwater Management
Summary: Process Improvements

Recommendations

• Two-step stormwater plan review/approval process.

• Improve SW Plan review coordination with ACHD plumbing code/permit requirements.

• Clarify Land Operations Permit requirements with stormwater code.

• Eliminate Small Project Stormwater standards.

• Perform additional analysis on the need for lower earth disturbance thresholds in targeted areas with flooding and basement backup issues.
Two-Step Approval Process

Recommendation

Two-step stormwater plan review/approval process:

1. Conceptual review
2. Final technical review

Why?

• Early identification of opportunities and deficiencies associated with current one-step process.
• Better integration into other processes, such as presenting to Planning Commission.
Small Project Stormwater Review (Title 9)

Recommendation
Eliminate small project stormwater standards.

Perform additional analysis on the need for lower earth disturbance thresholds in targeted areas with flooding and basement backup issues.

Why?
• Smaller BMPs are more expensive to build and maintain per area managed than larger BMPs.
• Reduce risks of long-term performance and O&M issues and related burden on city inspection and enforcement resources for limited benefit.
Climate Change

**Recommendation**

Require use of future climate rainfall projections for SWM BMP design.
- 8% to 23% increase in rainfall depth depending on storm frequency (CMU).
- 13% increase of 95\textsuperscript{th} percentile rainfall depth.

Consider developer incentives to meet longer term climate projections.

**Why?**

Reduce flooding and basement backups.

**Changes to Recommendation**

Performed marginal cost analysis between existing rainfall estimates and future climate change rainfall estimates.
Ranked combined sewer watersheds with flood susceptibility score that used:

- PWSA flooding complaint database
- Existing hydraulic model capacity analysis

Highest scoring watersheds subject to Public Health and Safety Release Rate requirements.

- Approx. 25% of the City

Overlap with Act 167 watersheds.
**Waivers: Expedited SWM and Technical Review**

**Recommendation**

Provide 5-day technical review for affordable housing developers, small-businesses, and M/W/BE businesses.

**Why?**

Target applicant classes are less well resourced than larger or market rate developers. Expedited reviews help with cash flow and allow target applicants to get to construction sooner.

Small percentage of applicants in target classes means expedited reviews will not require additional staffing.
Preferred Technology Incentives

Recommendation
Expedited 5-day SWM technical review for projects that use a combination of preferred vegetated practices, active control systems, and water reuse systems to meet the majority of the volume requirement.

- % IA Managed Using Vegetated Practices
- % IA Managed Using Active Controls
- % of Water Quality Volume Reused

Why?
Developers tend to build underground systems that have limited co-benefits that come with preferred technologies. Active controls tend to over-perform passive systems.
Technical Infeasibility Criteria

**Recommendation**
Define measurable infeasibility criteria in the Stormwater Design Manual for specific conditions including slopes, groundwater, contaminated soils, undermined areas, utilities, and trees.

**Why?**
Provide clear guidance on technical infeasibility and pathway to use of in-lieu fee.
**In-lieu Fee Compliance**

**Recommendation**
Set in-lieu fee at $600,000 per acre-in of volume managed to reflect full life cycle cost of design, building, and maintaining offset projects.

- Construction: $285,000
- Operations and Maintenance: $145,000
- Construction Management and Inspection: $48,000
- Design: $45,000

*Proposed code language includes:* “The fee in-lieu payment amount may be adjusted annually after January 1, 2022 based on the percentage change in the United States Bureau of Labor Statistics Consumer Price Index for All Urban Consumers for all items for the Pittsburgh area.”

**Why?**
New in-lieu fee reflects real lifecycle costs of implementing projects, but still provides alternative compliance for truly constrained sites.
Summary:
Alternative Compliance, Trading, Equity, and Incentives

Recommendations

• Set In-lieu fee at $600,000 per acre-in of volume managed to reflect full life cycle cost.
• Reduce tap-in fees by at least 10% for affordable housing developers, M/WBE applicants, and small businesses.

• Provide 5-day technical review for affordable housing developers, small-businesses, and M/W/BE businesses.

• Same-owner rate control offsets to allow developers to meet rate requirements at the downstream sewer connection point rather than the project boundary.

• Same-owner trading for volume requirement to allow developers with constrained projects to manage equivalent volume elsewhere within property holdings in the same sewershed.

• Create three innovation tracks to encourage the use of innovative technology but also require rigorous proof of performance.

• Fixed reimbursement grant program (per additional unit storage volume).

• Expedited 5-day SWM technical review for projects that use a combination of preferred vegetated practices, active control systems, and water reuse systems to meet the majority of the volume requirement.
905.04.F. Stormwater Management

- Add reference to Title Thirteen. Remove reference to Small Project Stormwater Standards.


- Remove all content and reserve 906.07. Content to be edited and incorporated into Title Thirteen. Include in editor’s note reference to Title Thirteen.

915.07.D Bonus Goals and Points, 5. Rainwater

- Remove all references to payment-in-lieu as an option to achieve rainwater points.
- Replace references to 95th percentile storm with “the first two (2) inches of runoff from impervious surfaces” to better align with Title Thirteen Volume Control requirements using the Simplified Method per 1303.03(b) and DEP 2022 Model Stormwater Management Ordinance.
- Replace bonus point requirements to use “Green Infrastructure installations” with requirements to use “Preferred Stormwater Management Technology installations.”
Next Steps

• **July 13**– Planning Commission Public Hearing for Title 9 (Zoning Code) amendments

• **July / August** – Submission of amended code to City Council with public notice 21 days in advance of City Council public hearings
  • Title Nine
  • Title Thirteen
  • Title Four (private laterals)