



Clark County Environmental Services

2013-2018 NPDES Stormwater Permit TECHINCAL ADVISORY COMMITTEE

August 14, 2013
2:30 – 4:30 p.m.
Public Service Center, 6th Floor, Training Room

Attendees:	Don Benton , Ron Wierenga, Rod Swanson, Jane Tesner Kleiner, Fereidoon Safdari, Travis Goddard	Clark County - DES
	Ali Safayi, John Davis	Clark County – Public Works
	Gordy Euler	Clark County - Planning
	Jan Bazala, Jim Muir, Bryan Mattson	Clark County – Comm. Dev.
	Eric Golemo	SGA Engineering
	Andrew Gunther	PLS Engineering
	Nancy Olmsted	Clean Water Comm.
	John Meier	AKS Engineering
	Peter Tuck	Olson Engineering
	Jon Girod	Quail Homes
	Troy Johns	Urban NW Homes
	Lance Lehto	Columbia West
	Alex Zimmerman	Creative Courses
	Robin Krause	CRWD
	Annette Griffy	City of Vancouver
Tim Kraft (consultant for Barrier Review Analysis) Read Stapleton	OTAK / Berger Abam	

Agenda Topics:

2:30	1. Welcome and Introductions	Clark County staff
2:35	2. Feedback on issue matrix – any additional thoughts?	All
2:50	3. LID Barrier Review – code language update	Read Stapleton and all
3:05	4. Permitting Process	Ron and all
4:20	5. LID in Clark County – tour booklets	Jane Tesner Kleiner
4:25	6. Next steps	Jane Tesner Kleiner

NOTES: See attached (v. 8.15.13)



MEETING SUMMARY

General overview and introductions - Jane Tesner Kleiner – welcome, review issues matrix, LID booklet and public outreach process (hand out LID tour booklets and public outreach overview)

LID Code Barrier Analysis - Read Stapleton (OTAK/Berger Abam team)

- **Incentives review** – Reviewing other communities work with incentives to install LID retrofits (programs, grants, recognition, etc.). Memo issued to County staff for review and consideration.
- **Code Review for LID Barriers** – Review of memo/handout – what types of conflicts could exist (i.e. imposes/encourages impervious surfaces, incompatible design standards, procedural obstacle, and encourages removal of native vegetation).
- **Parking, street standards, definitions** are several of the key sections that pose challenges for incorporating LID. For example, street standard for cul-de-sacs does not allow for rain gardens interior to feature. There is no current definition of LID in the code. Minimal and maximum for parking standards (how best to meet need while minimizing impervious surfacing). Walkway widths are also challenging and may require more surfacing than needed. Landscaping has many areas of challenges such as the requirement for 3' tall perimeter berm in certain land uses.
- **Next steps** – Finalize a complete matrix of issues identified as barriers and provide to county. Otak/Berger Abam will provide recommended language for the code. They will also provide three projects to be applied into the code to identify challenges (small redevelopment commercial, SF residential subdivision, and industrial / commercial development). Final product will be a report to the County to eventually submit to Department of Ecology. If the group has any projects that they would recommend for Otak to utilize as an example, let us know.
- **Notes from group** –
 - One change may have implications in other sections of the code. Could create a domino effect of impacts (i.e. transit impacts).
 - The road standards were recently updated so they will not propose any significant changes to the standards.
 - Neighborhood circulators should/should not be pervious, etc.
 - Feasibility criteria – when will these discussed as barriers?
 - Technical issues of what works or not (i.e. pervious trail on top of a retaining wall or rain gardens near the top of a slope).
 - Competing uses may drive decisions. Land use and lot size....in order to do it now may also require it to be a PUD.
 - **What is the mood of the audience on this topic**.....we can't move forward without an analysis as this becomes a development issue. It also could be a safety issue (i.e. narrower driveways for ingress/egress makes it difficult for vehicles to access a site without collisions). Look at the upper limits of features as well.

Permit Application Processing - Ron W. and all

Overview of Clark County's development application process and what we need to consider as we add LID into development projects. Some of the areas that we see could be challenging will be Minimum Requirements #1 (retain native vegetation and reduce impervious surfaces) and #5 (on-site stormwater management). Currently the concepts could be vague and cause confusion as to what extent is required to retain native vegetation. There is a need to clarify the intent and direction (native vegetation (i.e. forest vs. pasture)).

Summary of process exercise:

- **Customers that use the development application process vary in type, goals and needs**, as well as how much of the process they use. Typical customers include: home builders (individual lots & rural); developers (multi-family subdivisions); commercial/industrial (multi-lot & individual lots); one-time builders/applicants (various types); buyers; and, end-users.

1. **Project Ideas by Owner** (feasibility stage) –
 - Need better information on web;
 - Use of educational videos (how to use the process);
 - Clarify information needed at each step in the process;
 - Market demand will drive needs but could be conflict with requirements (see comment below);
 - Avoidance, minimize & mitigate impacts;
 - Review the predetermination process;
 - Road and other standards have room for utilities;
 - Outreach, design services & details need to be available to all;
 - GIS infiltration layer (there is various forms of this information available);
 - Changing expectations of customers up front; and,
 - County map out infiltration zones.

2. **Pre-application Conference-**
 - The pre-app step tends to be helpful for smaller projects, first time customers or customers who are not as familiar with our process.
 - The repeat customers who apply for multiple projects through the system may not find this step as helpful as they are familiar with the requirements to complete an application.
 - Balance the costs required versus the amount of information/data upfront;
 - Identify impacts to utilities such as sewer, water, etc. and coordinate with utilities.
 - There will need to be more testing and analysis upfront (thus increased costs) and this will most likely increase;
 - Simplify flow charts where possible to clarify steps including LID requirements;
 - Comprehensive bullets of stormwater requirements and milestones;
 - Develop “canned” plans for each lot and allow for them to be modified later at building review;
 - Create a Subdivision team with representing agent, engineer & agencies to review & prevent problems;
 - Can we develop a map for peak flow rainfall events (i.e. small projects)? We have information but not necessarily in GIS.
 - Can septic and surface facilities occupy the same space (with damaging impacts to either)? Infiltrating water works its way into the utility line trenches and starts to create sag in the utility line;
 - Is there sufficient expertise on staff to guide customers? Need to increase training opportunities.
 - Provide parameters for regulations to clarify extent to be applied to each site (e.g. “retain” native vegetation.....define retain, native, etc.....does disturbing forest land equal the same as converting pasture).

3. **Preliminary Site Plan / Land Division** – (* approximately 50% of customers get to this point and then sell)
 - TIR is due at this point....will there be a need to update what information is required in the TIR?
 - Would it be efficient to provide a concurrent review of Preliminary and Final reviews?
 - Update checklists to ensure a “fully complete” application prior to review;
 - Clarify goal for review and then develop checklists;
 - TIR at preliminary submittal may be revised during Final Review if needed;
 - The amount of information required front loads design. For example, preliminary storm report is close to Final in level of detail;
 - Erosion control plan? Front load?
 - Density transfer?

4. **Final Site Plan / Engineering -**
 - Need to have applications complete prior to review (minimize extra steps)
 - Vesting?
 - Present data in form that is easily found and used;
 - Eliminate the Final review? Redundant?
 - How to approach the phased developments?
 - Individual lot drainage system plan should be part of construction plan;

- Special design to keep stormwater out of sewers at manholes and along trenches
 - What happens when plans change?
 - Make stormwater review a larger part of the revision process;
 - Individual lot storm designs that will follow and marry-up with building permit issuance;
 - Keep it simple! i.e. rain gardens - don't make it more than it needs to be;
 - Clarify if and when groundwater mounding analysis will be required;
 - If just needing to meet MR 1-5, what level of engineering (stamped) is needed / required? What rate of infiltration is assumed?
 - Allow less geotech work for small projects. Example: single family residential on acreage in Lgb or SVA soil
 - Want every lot's stormwater design at this stage. Don't want to pass the buck to permit services.
 - When you look at all of the setbacks necessary for a site, there may be insufficient space to place the necessary stormwater management. Need to relook at setback language.
5. **Construction / Site Improvements -**
- Ensure proper construction techniques are used for LID features (i.e. permeable pavers)
 - Erosion control during construction (inspect to ensure proper installation and on-going maintenance to minimize damage to built LID features)
 - Clarify / Itemize clearly the testing and inspection requirements of LID facilities during construction
 - More involvement during the design engineer for preparation of as-builts
 - Coordinate inspection with utilities if needed (i.e. roadside rain gardens)
 - GPS work as it progresses
 - Have developer's engineer (who designed the facility) inspect the built facility (potentially require them to sign off on the proper construction of the feature)
 - Certified inspection or installed feature (i.e. permeable pavement)
 - When to require construction of ROW bio-infiltration facilities (too early and they can get destroyed during home construction).
 - Will driveway locations have to be nailed down early if ROW infiltration proposed?
 - Grading permit/inspection pre- & post- construction approval on site with: engineer, site contractor, DES stormwater staff, public works engineer and community development building staff. * Currently grading focused on public infrastructure.
6. **Plat / Occupancy**
- Specific consequences / requirements if changes required or desired during process that affect stormwater
 - Plat / site plan should clearly define rain event and infiltration rates. Building permit review could then rely on plat map!
 - Layman ready stormwater notes on site plans
 - Lot specific table for calculating on-site infiltration
 - Plat clearly ID which lots need facilities or are covered by stormwater plan already
7. **Building / Inspections / Approvals**
- Specific do's and don'ts for each lot (e.g. grading, spreading slough, etc.)
 - Developer / builder to submit specific drainage plan for each lot at the time of building permits
 - Designated stormwater system inspector and inspection to approve systems
 - Clarify how to inspect / test infiltration facility
 - Inspections may not be done properly by County staff
 - How to ensure no infiltration into sewer / utility trenches or pipes
 - Timing of sewer / utilities versus other improvements (landscaping)
 - Allow flexibility so size of home can vary (location, shape, setbacks, common type, etc.)
 - Cross train inspectors for erosion control as well as eliminate EC fees
 - Signage for facilities (i.e. trench, etc.)

- Better tools to educate the public on infiltration rates / rainfall
- How to keep builder from messing up an approved on-site stormwater plan (for subdivision lots)

8. **Maintenance / Operations**

- Clearly ID stormwater facilities with signage (like critical areas)
- Better understanding on SW / CAO interactions
- Clear maintenance instructions
- Owner’s manuals with specific lot design and maintenance information
- Clear locations on site plans for future additions
- Restoration standards for utility work in pervious – MINIMIZE
- Better legacy information for lot owners (how to make regulations tie to the property)
- Verify financial guarantees are adequate for features and who is responsible for which phase of restoration / maintenance.

General discussion

- There is a conflict with the market demand – i.e. “need” for three car garage requires impervious pavement. With a yard, customers want a lawn area versus the brushy/native plantings. There could be ways to mitigate for those changes. Don’t direct someone to clear a site at the start of a project.
- County staff started to discuss and lay out the high level discussion of each step in the process. When adding the new code and LID, it may push more work required up front (i.e. geotechnical, soil analysis, site analysis, etc.).

Next steps

County staff will assemble the notes and use in reference in future discussions about what processes need to be updated with the county staff versus what language should be put into code or design manual to help clarify the process.

The next meeting will be in late September and will most likely focus on feasibility criteria.

Attachments:

Clark County NPDES Stormwater – Public Outreach overview
 Otak/Berger Abam – LID Barrier Review handout