

# Technical Memorandum #8



700 Washington Street  
Suite 401  
Vancouver, WA 98660  
Phone (360) 737-9613  
Fax (360) 737-9651

To: Clark County  
From: Andrew Stoeckinger; Tim Kraft  
Copies:  
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Subject: Comparison of Industrial Activities from Clark County Code and Ecology Manual  
Project No.: 14505

The purpose of this memorandum is to compare stormwater requirements associated with the industrial activities in 40.380.040(B)(7)(a) and (B)(7)(b) of the Clark County Code with the requirements of the 2005 Stormwater Management Manual for Western Washington (Ecology manual). These industrial activities listed in the Clark County Code (CCC) are provided in Table 1.

Table 1: Industrial Activities List from CCC 40.380.040(B)(7)(a) and (B)(7)(b)

40.380.040(B)(7)(a)

1. Industrial machinery and equipment, trucks and trailer aircraft, parts and aerospace, railroad equipment;
2. Log storage and sorting yards;
3. Airfields and aircraft maintenance;
4. Fleet vehicle yards;
5. Railroads;
6. Gas stations;
7. Retail/wholesale vehicle and equipment dealers;
8. Vehicle maintenance and repair;
9. Construction businesses such as paving, heavy equipment storage and maintenance, storage of petroleum products (This does not include construction sites);
10. Other activities that exhibit a significant risk of high oil loading in runoff.

40.380.040(B)(7)(b)

1. Restaurants;
2. Duplex or multifamily residential development activities creating parking spaces for 25 or more vehicles;
3. Other activities where risk of oil spills or illegal dumping of oil or grease is significant.

### Current County Code Requirements:

According to the current Clark County Code, new developments and redevelopments associated with the industrial activities in 40.380.040(B)(7)(a) and (B)(7)(b) that create or replace more than 1,000 square feet of impervious surface (excluding building areas) are required to conform to all the provisions of CCC 40.380, including runoff treatment and flow control. In contrast, the Ecology Manual applies the same threshold to all land uses (i.e., 5,000 square feet of PGIS within a TDA).

The 1,000 square feet impervious surface area threshold for commercial and industrial parcels appeared for the first time in the applicability section of the 1994 version of CCC 13.25. This threshold was applicable to “additional” and “new” impervious surfaces, but not replaced impervious surfaces. Development activities meeting this threshold were required to comply with all drainage and erosion control requirements. In 1995, the language of CCC 13.25 was changed to only require oil/water separator for “addition” of more than 1,000 square feet of “new” impervious areas “other than buildings”.

In 1999, the code was revised to again require all aspects of the code, including runoff treatment and flow control for “development activities” listed in Sections 13.25A.310(a) and (b) that result in the “addition” of more than 1,000 square feet of impervious area. However, this version of stormwater code, entitled CCC 13.25A, did not mention “redevelopment” or “replacement” as part of the criteria for this threshold.

In the 2000 revision, entitled CCC 13.29, the code was revised to address “addition and replacement” of more than 1,000 square feet of impervious surface for any “development or redevelopment activities” listed under sections CCC 13.29.305(F)(1) and (2) of the code. This revision was a result of a challenge to the NPDES permit, which forced Clark County to meet the minimum DOE requirements. In 2003, the current stormwater code entitled CCC 40.380 was placed within Title 40 (the Development Code) and reformatted; however, the requirements remained identical to those in CCC 13.29.

### Ecology Manual Requirements:

The Ecology manual does not contain additional thresholds that address industrial activities. However, oil control and enhanced treatment are required for the uses listed in Table 1. Under Volume I, Chapter 4, Step 2 and Step 5 of the Ecology manual, once a project meets or exceeds 5,000 square feet of total effective, pollution-generating impervious surface (PGIS) in a threshold discharge area (TDA), as established under Ecology’s Minimum Requirement #6. Ecology’s approach appears to rely on source control BMPs for areas less than 5,000 square feet.

Application of source control BMPs is required by Ecology for certain industrial activities in order to prevent stormwater pollution. Section 2.2, Volume IV of the Ecology manual, titled Pollutant Source-Specific BMPs, provides a list of pollution-generating industrial activities along with a

description of associated pollutant sources, source control approaches, and applicable and recommended operational/structural BMPs. Ecology requires any operational or structural BMPs described as “applicable” to be implemented for that particular industrial activity. These BMPs are required by Ecology regardless of the minimum requirement thresholds for development and redevelopment activities.

### UIC Regulations:

It should be noted that Underground Injection Control (UIC) Regulations prohibit infiltration of stormwater runoff from the following types of areas subject to certain commercial and industrial uses (Guidance for UIC Wells that Manage Stormwater, December 2006):

- Vehicle maintenance, repair, and service;
- Commercial or fleet vehicle washing;
- Airport de-icing activities;
- Storage of treated lumber;
- Storage or handling of hazardous materials;
- Generation, storage, transfer, treatment, or disposal of hazardous wastes;
- Handling of radioactive materials
- Recycling facilities, except those that recycle only glass, paper, plastic, or cardboard;
- Industrial or commercial areas that have outdoor processing, handling, or storage of raw solid materials or finished products at the facility and are without management plans for proper storage and spill prevention, control, and containment appropriate to the types of materials handled at the facility (see the Ecology stormwater management manuals for information on stormwater pollution prevention plans and source control).
- UIC wells may not be used at contaminated sites when the stormwater would increase the mobility of the contaminants at the site.

### Conclusion

The existing industrial uses threshold serves to ensure that high pollutant-loading industrial activities take the responsibility of minimizing their impacts to local surface waters. However, there may be instances where enforcing this threshold will excessively overburden a developer who may be required to implement an expensive stormwater treatment facility to treat runoff from a relatively small area. Ecology’s source control requirements may be sufficient for achieving the water quality goals for smaller industrial projects. By eliminating this threshold and adopting Ecology’s source control methodology, an industrial development will still be responsible for mitigating potential stormwater quality impacts.

*Industrial Requirements*

When a proposed development activity triggers Minimum Requirements #1 through #5, the land use type does not affect the applicability of these minimum requirements. The important distinction regarding land use types are proposed development activities that trigger Minimum Requirements #1 through #10. In these cases, the applicability of Minimum Requirements #6, #7, and #8 vary depending on the type of land use, such as industrial uses.

Due to UIC regulations, Minimum Requirement #6—Runoff Treatment will apply to any development activity that proposes to utilize an infiltration system regardless of the area thresholds or land use type. Minimum Requirement #7 and #8 would not apply in these situations since infiltration addresses flow control and eliminates potential wetland impacts.

For sites that do not infiltrate, the challenge lies in the practicality of designing a detention system to mitigate runoff from 1,000 square feet to 9,999 square feet of PGIS. The 10,000 square feet threshold was chosen based on the feasibility of a 1/2-inch orifice to control flows from a system. And the threshold pertaining to a 0.1 CFS or greater increase in the 100-year flow frequency from a threshold discharge area would apply to all projects regardless of the project areas. Water quality can be achieved for small areas; however, the long-term cost to maintain several hundred such facilities that treat relatively minor surface areas may not be practical.