



## Summary of the Design Requirements of OAC Chapter 3745-520 “Regulation of New Construction and Demolition Debris Facilities”

### Does Chapter 3745-520 “Regulation of New Construction and Demolition Debris Facilities” apply to me?

- OAC Chapter 3745-520 DOES NOT APPLY to an existing C&DD facility that will be filled up and closed without expanding the existing facility boundary or existing disposal limits.
- OAC Chapter 3745-520 DOES APPLY to an owner or operator of a “new C&DD facility”; the statutory term “new C&DD facility” includes a proposed C&DD facility that has never existed before and an existing C&DD facility where the owner or operator wants to expand the facility. Such expansion of an existing facility includes any expansion of the facility boundary or disposal limits beyond the approved limits of construction and demolition debris placement.

### Do the new rules apply to engineered components that have already been constructed?

The new design rules do not apply to engineered components or systems of engineered components that have already been constructed, except for:

- a vegetated earthen berm or barrier if the C&DD facility is located or proposed to be located in an area which allows residential construction;
- a leachate management system below a vertical expansion;
- a leachate recirculation system.

### Where are the design requirements for new a C&DD facility found?

The design requirements are found in nine rules in OAC rules 3745-520-200 to 3745-520-280.

### What are the basic design requirements for a new C&DD facility?

A new C&DD facility must have the following components that meet the design requirements listed in OAC rules 3745-520-225 to 3745-520-280:

- at least one permanent survey mark,
- access roads,
- ground water control structures,
- an in situ foundation,
- an added geologic material layer if necessary,
- a vegetated earthen berm or barrier if the facility is located in an area which allows residential construction,
- a liner system,
- a leachate management system,
- a cap system,
- a gas management system, and
- a surface water management system.

When a vertical expansion is proposed, a leachate barrier and collection system between already disposed C&DD and C&DD that will be disposed in the expansion is required when there is no liner under the already disposed C&DD.

The following engineered components may also be included as part of a C&DD facility for permitting purposes:

- ground water control structures
- an added geologic material layer
- structural fill underlying a liner system or cap system
- added geologic material layer, liner system, and leachate collection system drainage layer run-out
- transitional cover
- cap system and gas collection layer run-out
- a leachate recirculation system
- georeinforcements

Several components of the facility have additional design standards:

- *Vegetated earthen berms and equivalent barriers* have design criteria regarding separation of the facility from adjoining property, height, composition, slopes and slope length between ditches, surface water restrictions, and stability.
- *Liner systems* have design criteria regarding drinking water source protection, thickness, material, and slope stability.
- *Leachate management systems* must have a drainage layer, filter layer, sumps, and pumps (if leachate does not drain by gravity) which meet applicable rules.
- *Leachate recirculation systems* must be located in a phase of the facility that has a liner system, a leachate management system, and a gas management system. They must meet requirements regarding location of recirculation in the disposed material, prevention of leachate release to surface water control structures, demonstration that the system has the capacity to handle the additional leachate, and stability relating to increased pore water pressure during and after leachate recirculation.
- *Separatory leachate barrier and collection systems* must include a gas management system, a liner system, and a leachate management system and meet requirements regarding its major functions, length of time it will function, location requirements, and stability, slope, and grade standards.
- *Cap systems* must contain the following layers: a gas collection layer, a filter layer above the gas collection layer, a recompacted soil layer, a flexible membrane liner, a drainage layer, a filter layer above the drainage layer, and a protection layer. The cap systems must be placed above all disposed material, minimize infiltration, prevent leachate outbreaks, and meet slope criteria.
- *Gas management systems* must relieve gas pressure under a cap system; control hydrogen sulfide and other gases that pose a nuisance, cause an offensive odor, or pose a threat to public health or safety or the environment, or contribute to air pollution; and control landfill gas generated as a result of leachate recirculation.
- *Surface water management systems* must be designed to prevent runoff of surface water from the facility limits from discharging to adjacent property or waters of the state except through a permitted discharge point. Surface water management systems must meet requirements regarding best management practices, control of surface water from outside boundaries of disposed material, means of conveying surface water, basin system design and operation, proper diversion and drainage of surface water, and erosion minimization.