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# Acceptable Vegetation and Cap System Maintenance

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## Applicable Rules

MSW: OAC 3745-27-08(D)(26)  
OAC 3745-27-14(A)(2)

ISW: OAC 3745-29-08(D)(26)  
OAC 3745-29-14(A)(2)

RSW: OAC 3745-30-09(F)(3)(b)  
OAC 3745-30-10(C)(2)

Tires: OAC 3745-27-72(C)(9)(g)  
OAC 3745-27-74(A)(2)

C&DD: OAC 3745-400-07(G)(2)(a)(iii), (b)(ii)  
OAC 3745-400-12(E)(5)

## Purpose

This document provides suggestions regarding selection and maintenance of vegetation on landfills.

## Applicability

This document applies to owners and operators of municipal (MSW), industrial (ISW), and residual (RSW) solid waste landfills, scrap tire monofills, and construction and demolition debris (C&DD) facilities undergoing closure or in post-closure care.

## Detailed Discussion

The various landfill programs have different final cap design standards. However, all the programs have the same standard for establishing a complete and dense vegetative cover, with some rules requiring healthy grasses or other vegetation, sometimes also described as perennial. In addition, the owner or operator is required to maintain the integrity and effectiveness of the cap system.

### Deep Root Systems

Although the rules do not address root type or depth, DMWM has discouraged the selection of plants with deep root systems because they may be detrimental to the function of the cap system. For caps without a drainage layer and flexible membrane liner, they create infiltration pathways when the plant dies which results in the promotion of leachate generation. For caps with a geocomposite drainage layer, the deep root systems can fill and clog the geocomposite drainage layer and disrupt its function. Thus, DMWM has discouraged the presence of trees, brush, and some forbs and grasses from being introduced and established on landfill caps.

If the owner or operator desires to establish deep rooted plants (e.g. to establish a wildlife biodiverse area), the cap system will need to be designed to accommodate the deep roots. A thicker (>60 inches) vegetative layer can be established, or planters can be incorporated to contain the deep rooted plants.

### Removing Vegetation Prior to Cap Construction

Sometimes trees and brush become established on the landfill before the final cap is constructed. Typically, the area is cleared and grubbed prior to cap construction. The trees and brush can also be cut flush to the ground or removed completely and the hole filled.

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<sup>1</sup> Note: This document was originally published on the date noted above. DMWM re-issued the document to make it consistent with current formatting and publication standards after evaluating the content and determining it is still relevant and appropriate. No substantive changes were made to the document.

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## Mowing

Natural succession of vegetation is from grass to brush to trees. Thus, if efforts are not taken to maintain a healthy grass cover, brush and trees will grow on the cap. Trees, in particular, are subject to uprooting which leads to soil erosion and leaves depressions in the cap; and the shade from trees results in poor growth of the grasses which also leads to soil erosion. Therefore, it is necessary to plan for mowing of the cap system during the post-closure care period. Although the rules do not specify a frequency for mowing, DMWM recommends mowing at least once a year. If mowed in the spring, it provides the owner or operator the opportunity to identify and perform needed repairs and to reestablish vegetation during the growing season. If mowed in the summer, weeds are cut down before they seed.

If trees and brush become established on the cap, and the owner or operator needs to remove them, DMWM recommends either removing the offending vegetation and filling the hole or the cutting of the trunk flush to the ground (low enough to be mowed over).

## Contact

If you have questions regarding this document or would like additional information, please contact:

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Central Office Land Management/Closer Program Unit (614) 644-2621

## Disclaimer

This document is intended for guidance purposes only. Completion of the activities and procedures outlined in this document shall not release an owner or operator from any requirement or obligation for complying with Ohio Revised Code (ORC) Chapter 3734 or 3714 if appropriate, the OAC rules adopted thereunder, or any authorizing documents or orders issued thereunder, nor shall it prevent Ohio EPA from pursuing enforcement actions to require compliance with ORC Chapter 3734 or 3714, the OAC rules or any authorizing documents or orders issued thereunder.