WASHINGTON STATE DEPARTMENT OF ECOLOGY

SURFACE IMPOUNDMENTS AND TANKS

Checklist for Review of Solid Waste Permit Application
per WAC 173-350-330

Name of Applicant:	Name of Facility:
Permit # assigned by Health Department:	Date Received:
Lead Agency Reviewer Name: Phone: Signature:	Determination of Compliance with: The Site or Facility: ☐ meets all solid waste, air and other applicable laws and regulations ☐ conforms with the approved comprehensive solid waste handling plan ☐ complies with zoning requirements (JHD only)

☐ **Location requirements** ***WAC 173-350-330(2)***	**Location of material**	**Complete**	**Meets Requirements**	**Date & Initials of Reviewer)**
Surface impoundments - shall not be located in unstable areas unless the owner or operator demonstrates that engineering measures have been incorporated in the facility's design to ensure that the integrity of the liners, monitoring system and structural components will not be disrupted.		☐	☐	
Tanks - there are no specific location standards for tanks subject to this chapter; however tanks must meet the requirements provided under WAC 173-350-040(5).		☐	☐	
Agency Comments:				

☐ **Design Standards** ***WAC 173-350-330(3)***	**Location of material**	**Complete**	**Meets Requirements**	**Date & Initials of Reviewer)**
Surface Impoundments (3)(a):				
• Pond capacity determined by volume calculations based on the facility design, monthly water balance and precipitation data.		☐	☐	
• Liner consists of a minimum 30-mil thickness geomembrane overlying a structurally stable foundation to support the liners and the contents of the impoundment. (HDPE geomembranes used as primary liners or leak detection liners shall be at least 60-mil thick to allow for proper welding.) Or the JHD has approved alternative (3)(a)(i)		☐	☐	

• Ground water monitoring system complies with the requirements of WAC 173-350-500 or a leak detection layer. If a leak detection layer is used, it shall consist of an appropriate drainage layer underlain by a geomembrane of at least 30-mil thickness (3)(a)(ii)		☐	☐	
• Embankments and slopes designed to maintain structural integrity under conditions of a leaking liner and capable of withstanding erosion from wave action, overfilling, or precipitation(3)(a)(iii)		☐	☐	
• Freeboard equal to or greater than eighteen inches to provide protection against wave action, overfilling, or precipitation. Or the JHD has reduced the freeboard requirement provided that other specified engineering controls are in place which prevent overtopping (3)(a)(iv)		☐	☐	
• If constructed with a single geomembrane liner, the liner shall be tested using an electrical leak location evaluation capable of detecting a hole 3 millimeters in its longest dimension or other equivalent postconstruction test method prior to being placed in service. (Part of construction record drawings) (3)(a)(v)		☐	☐	
• Include an analysis of the surface under the stresses expected during operations		☐	☐	
• Evidence that surface impoundments that have the potential to impound more than ten-acre feet (three million two hundred fifty-nine thousand gallons) of liquid measured from the top of the embankment and which would be released by a failure of the containment embankment have been reviewed and approved by the dam safety section of the department (3)(a)(vi) **NA ☐**		☐	☐	
Tanks (3)(b):				
• Evidence that tanks and ancillary equipment are tested for tightness using a method acceptable to the JHD prior to being covered, enclosed or placed in use. If a tank is found not to be tight, all repairs necessary to remedy the leak(s) in the system shall be performed and verified to the satisfaction of the JHD prior to the tank being covered or placed in use (3)(b)(i)		☐	☐	
• Below ground tanks shall be designed to resist buoyant forces in areas of high ground water and shall either be: (A) Retested for tightness at a minimum of once every two years; or (B) Equipped with a leak detection system capable of detecting a release from the tank (3)(b)(ii)		☐	☐	

• Evidence for tanks or components in which the external shell of a metal tank or any metal component will be in contact with the soil or water, that a determination was made by a corrosion expert of the type and degree of external corrosion protection that is needed to ensure the integrity of the tank during its operating life (3)(b)(iii)		☐	☐	
• Above ground tanks equipped with secondary containment constructed of, or lined with, materials compatible with the waste being stored and capable of containing the volume of the largest tank within its boundary plus the precipitation from the twenty-five-year storm event as defined in WAC 173-350-100 (3)(b)(iv)		☐	☐	
• Areas used to load or unload tanks shall be designed to contain spills, drippage and accidental releases during loading and unloading of vessels (3)(b)(v)		☐	☐	
• Tanks and piping shall be protected from impact by vehicles or equipment through use of curbing, grade separation, bollards or other appropriate means (3)(b)(vi)		☐	☐	
• Tanks shall be structurally suited for the proposed use (3)(b)(vii)		☐	☐	
• Tanks, valves, fittings and ancillary piping shall be protected from failure caused by freezing (3)(b)(viii)		☐	☐	
Agency Comments:				

☐ Plan of operations ***WAC 173-350-330(4)(e)***	**Location of material**	**Complete**	**Meets Requirements**	**Date & Initials of Reviewer)**
Describes the types of solid wastes to be handled at the facility (4)(e)(i)		☐	☐	
Describes how solid wastes are to be handled on-site during the facility's active life (4)(e)(ii)		☐	☐	
Describes how equipment, structures and other systems are to be inspected and maintained, including the frequency of inspection and inspection logs, including (4)(e)(iii)		☐	☐	
• The ground water monitoring system **NA ☐**		☐	☐	
• The overfilling prevention equipment, including details of filling and emptying techniques		☐	☐	
• The liners and embankments, tank piping and secondary containment		☐	☐	
Safety and emergency plans (4)(e)(iv)		☐	☐	
Forms used to record volumes or weights (4)(e)(v)		☐	☐	

Other such details to demonstrate that the facility will be operated in accordance with subsection 4 and as required by the JHD (4)(e)(vi)		☐	☐	
Agency Comments:				

☐ **Ground Water Monitoring Requirements *WAC 173-350-330(5)***	**Location of material**	**Complete**	**Meets Requirements**	**Date & Initials of Reviewer)**
Surface impoundments not equipped with a leak detection layer are subject to the ground water monitoring requirements of WAC 173-350-500		☐	☐	
Surface impoundments equipped with a leak detection layer and tanks are not subject to the ground water monitoring requirements of this chapter however, they must meet the requirements provided under WAC 173-350-040		☐	☐	
Agency Comments:				

☐ **Closure plan** ***WAC 173-350-330(6)(b)***	**Location of material**	**Complete**	**Meets Requirements**	**Date & Initials of Reviewer)**
Methods of removing wastes		☐	☐	
Steps taken for decontamination		☐	☐	
Agency Comments:				

☐ **Financial Assurance Requirements WAC 173-350-*330(7)***	**Location of material**	**Complete**	**Meets Requirements**	**Date & Initials of Reviewer)**
There are no specific financial assurance requirements for surface impoundments or tanks subject to this chapter; however, surface impoundments and tanks must meet the requirements provided under WAC 173-350-040(5)		☐	☐	
Agency Comments:				