

Table 2a- Criteria for Siting, Investigation, & Design of Liquid Waste Storage Facilities with a water depth greater than 2 feet.

<p>Risk →</p> <p>Vulnerability ↓</p>	<p>Very High</p> <p>Less than 500' upgradient from a public drinking water supply well; OR < 200' upgradient from a domestic well or Class I designated use surface water, OR 1st ground water is a Class IB aquifer.</p>	<p>High</p> <p>Doesn't meet Very High Risk criteria; AND In a recharge area for Sole Source aquifers; OR 500' - 1,000' upgradient from a public drinking water supply well, OR 200' - 600' upgradient from an domestic water supply well or Class I designated use surface water, OR 1st ground water is a Class IA or Class II aquifer.</p>	<p>Moderate</p> <p>Doesn't meet High Risk criteria; AND 600' - 1,000' upgradient from an domestic well or Class I surface water; OR < 600' upgradient from a non-domestic water supply well or Class 2-5 designated use surface water, OR 1st ground water is a Class III aquifer.</p>	<p>Slight</p> <p>Doesn't meet Moderate Risk criteria; AND > 1,000' upgradient from an domestic well or Class 1 surface water; OR > 600' upgradient from a non-domestic water supply well or Class 2-5 designated use surface water, OR 1st ground water is a Class IV aquifer.</p>
<p>Very High</p> <p>Large voids (e.g. karst limestones, lava tubes, improperly abandoned well); OR Highest anticipated groundwater elevation within 2' of pond bottom;</p>	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Relocate to another site or ~ Install steel or concrete tank with no discharge 	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Consider relocation to another site ~ Synthetic liner with specific discharge less than 1×10^{-11} cm³/cm²/sec ~ Testing required on synthetic liner by a third party testing firm. 	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Specific discharge less than 1×10^{-7} cm³/cm²/sec ~ No manure sealing credit ~ Design includes sampling and testing of earthen liner or in-place material including classification, standard Proctor compaction, in-place density, and sample permeability by a licensed testing firm. 	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Specific discharge less than 1×10^{-7} cm³/cm²/sec ~ No manure sealing credit ~ Design includes sampling and testing of earthen liner or in-place material including classification, standard Proctor compaction, in-place density, and sample permeability by a licensed testing firm.
<p>High</p> <p>Doesn't meet Very High Vulnerability criteria; AND Bedrock (assumed fractured) within 2' of pond bottom; OR Coarse soils/parent material (Permeability Group I soils as defined in AWMFH, always including GP, GW, SP, SW); OR Highest anticipated groundwater elevation is between 2' - 15' below pond bottom;</p>	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Consider relocation to another site ~ Synthetic liner with specific discharge less than 1×10^{-11} cm³/cm²/sec ~ Testing required on synthetic liner by a third party testing firm. 	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Consider relocation to another site ~ Synthetic liner with specific discharge less than 1×10^{-11} cm³/cm²/sec ~ Testing required on synthetic liner by a third party testing firm. 	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Specific discharge less than 1×10^{-7} cm³/cm²/sec ~ No manure sealing credit ~ Design includes sampling and testing of earthen liner or in-place material including classification, standard Proctor compaction, in-place density, and sample permeability by a licensed testing firm. 	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Specific discharge less than 1×10^{-7} cm³/cm²/sec ~ No manure sealing credit ~ Design includes sampling and testing of earthen liner or in-place material including classification, standard Proctor compaction, in-place density, and sample permeability by a licensed testing firm.
<p>Moderate</p> <p>Doesn't meet High Vulnerability criteria; AND Medium soils/parent material (Permeability Group II soils as defined in AWMFH, usually including CL-ML, GM, SM, ML); OR Flocculated or blocky clays (typically associated with high Ca); OR Highest anticipated groundwater elevation is between 15' - 50' below pond bottom</p>	<p>Liner Requirements*</p> <ul style="list-style-type: none"> ~ Specific discharge less than 1×10^{-7} cm³/cm²/sec ~ No manure sealing credit ~ Design includes sampling and testing of earthen liner or in-place material including classification, standard Proctor compaction, in-place density, and sample permeability by a licensed testing firm. *The risk in some situations may warrant a synthetic liner. 	<p>Liner Requirements*</p> <ul style="list-style-type: none"> ~ Specific discharge less than 1×10^{-7} cm³/cm²/sec ~ No manure sealing credit ~ Design includes sampling and testing of earthen liner or in-place material including classification, standard Proctor compaction, in-place density, and sample permeability by a licensed testing firm. *The risk in some situations may warrant a synthetic liner. 	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Specific discharge less than 1×10^{-7} cm³/cm²/sec ~ No manure sealing credit ~ Design includes sampling and testing of earthen liner or in-place material including classification, standard Proctor compaction, in-place density, and sample permeability by a licensed testing firm. 	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Specific discharge less than 1×10^{-6} cm³/cm²/sec ~ No manure sealing credit ~ Design includes sampling and testing of earthen liner or in-place material including classification, standard Proctor compaction, in-place density, and sample permeability by a licensed testing firm.
<p>Low</p> <p>Doesn't meet Moderate Vulnerability criteria; AND Fine soils/parent material (Permeability Group III and IV soils as defined in AWMFH, usually including GC, SC, MH, CL, CH); AND Highest anticipated groundwater elevation is > 50' below pond bottom</p>	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Specific discharge less than 1×10^{-7} cm³/cm²/sec ~ No manure sealing credit ~ Design includes sampling and testing of earthen liner or in-place material including classification, standard Proctor compaction, in-place density, and sample permeability by a licensed testing firm. 	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Specific discharge less than 1×10^{-7} cm³/cm²/sec ~ No manure sealing credit ~ Design includes sampling and testing of earthen liner or in-place material including classification, standard Proctor compaction, in-place density, and sample permeability by a licensed testing firm. 	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Specific discharge less than 1×10^{-6} cm³/cm²/sec ~ No manure sealing credit ~ Design includes sampling and testing of earthen liner or in-place material including classification, standard Proctor compaction, in-place density, and sample permeability by a licensed testing firm. 	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Specific discharge less than 1×10^{-6} cm³/cm²/sec ~ No manure sealing credit ~ Design includes sampling and testing of earthen liner or in-place material including classification, standard Proctor compaction, in-place density, and sample permeability by a licensed testing firm.

Table 2b- Criteria for Siting, Investigation, & Design of Liquid Waste Storage Facilities with a water depth of 2 feet or less.

<p>Risk →</p> <p>Vulnerability</p> <p>↓</p>	<p>Very High</p> <p>Less than 500' upgradient from a public drinking water supply well; OR <200' upgradient from a domestic well or Class I designated use surface water, OR 1st ground water is a Class IB aquifer.</p>	<p>High</p> <p>Doesn't meet Very High Risk criteria; AND In a recharge area for Sole Source aquifers; OR 500' - 1,000' upgradient from a public drinking water supply well, OR 200' - 600' upgradient from an domestic water supply well or Class I designated use surface water, OR 1st ground water is a Class IA or Class II aquifer.</p>	<p>Moderate</p> <p>Doesn't meet High Risk criteria; AND 600' - 1,000' upgradient from an domestic well or Class I surface water; OR < 600' upgradient from a non-domestic water supply well or Class 2-5 designated use surface water, OR 1st ground water is a Class III aquifer.</p>	<p>Slight</p> <p>Doesn't meet Moderate Risk criteria; AND > 1,000' upgradient from an domestic well or Class I surface water; OR > 600' upgradient from a non-domestic water supply well or Class 2-5 designated use surface water, OR 1st ground water is a Class IV aquifer.</p>
<p>Very High</p> <p>Large voids (e.g. karst limestones, lava tubes, improperly abandoned well); OR Highest anticipated groundwater elevation within 2' of pond bottom;</p>	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Strongly consider relocation to another site. ~ Synthetic liner with specific discharge less than 1×10^{-11} cm³/cm²/sec ~ Testing required on synthetic liner by a third party testing firm. 	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Specific discharge less than 1×10^{-7} cm³/cm²/sec ~ No manure sealing credit ~ Design includes sampling and testing of earthen liner or in-place material including classification, standard Proctor compaction, in-place density, and sample permeability by a licensed testing firm. 	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Specific discharge less than 1×10^{-6} cm³/cm²/sec ~ No manure sealing credit ~ Design includes sampling and testing of earthen liner or in-place material including classification, standard Proctor compaction, in-place density, and sample permeability by a licensed testing firm. 	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Specific discharge less than 1×10^{-6} cm³/cm²/sec ~ No manure sealing credit ~ Design includes sampling and testing of earthen liner or in-place material including classification, standard Proctor compaction, in-place density, and sample permeability by a licensed testing firm.
<p>High</p> <p>Doesn't meet Very High Vulnerability criteria; AND Bedrock (assumed fractured) within 2' of pond bottom; OR Coarse soils/parent material (Permeability Group I soils as defined in AWMFH, always including GP, GW, SP, SW); OR Highest anticipated groundwater elevation is between 2' - 15' below pond bottom;</p>	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Specific discharge less than 1×10^{-7} cm³/cm²/sec ~ No manure sealing credit ~ Design includes sampling and testing of earthen liner or in-place material including classification, standard Proctor compaction, in-place density, and sample permeability by a licensed testing firm. 	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Specific discharge less than 1×10^{-7} cm³/cm²/sec ~ No manure sealing credit ~ Design includes sampling and testing of earthen liner or in-place material including classification, standard Proctor compaction, in-place density, and sample permeability by a licensed testing firm. 	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Specific discharge less than 1×10^{-6} cm³/cm²/sec ~ No manure sealing credit ~ Design includes sampling and testing of earthen liner or in-place material including classification, standard Proctor compaction, in-place density, and sample permeability by a licensed testing firm. 	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Specific discharge less than 1×10^{-6} cm³/cm²/sec ~ No manure sealing credit ~ Design includes sampling and testing of earthen liner or in-place material including classification, standard Proctor compaction, in-place density, and sample permeability by a licensed testing firm.
<p>Moderate</p> <p>Doesn't meet High Vulnerability criteria; AND Medium soils/parent material (Permeability Group II soils as defined in AWMFH, usually including CL-ML, GM, SM, ML); OR Flocculated or blocky clays (typically associated with high Ca); OR Highest anticipated groundwater elevation is between 15' - 50' below pond bottom</p>	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Specific discharge less than 1×10^{-6} cm³/cm²/sec ~ No manure sealing credit ~ Design includes sampling and testing of earthen liner or in-place material including classification, standard Proctor compaction, in-place density, and sample permeability by a licensed testing firm. 	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Specific discharge less than 1×10^{-6} cm³/cm²/sec ~ No manure sealing credit ~ Design includes sampling and testing of earthen liner or in-place material including classification, standard Proctor compaction, in-place density, and sample permeability by a licensed testing firm. 	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Specific discharge less than 1×10^{-6} cm³/cm²/sec ~ No manure sealing credit ~ Design includes sampling and testing of earthen liner or in-place material including classification, standard Proctor compaction, in-place density, and sample permeability by a licensed testing firm. 	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Specific discharge less than 1×10^{-6} cm³/cm²/sec ~ No manure sealing credit ~ Design includes sampling and testing of earthen liner or in-place material including classification, standard Proctor compaction, in-place density, and sample permeability by a licensed testing firm.
<p>Low</p> <p>Doesn't meet Moderate Vulnerability criteria; AND Fine soils/parent material (Permeability Group III and IV soils as defined in AWMFH, usually including GC, SC, MH, CL, CH); AND Highest anticipated groundwater elevation is > 50' below pond bottom</p>	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Specific discharge less than 1×10^{-6} cm³/cm²/sec ~ No manure sealing credit ~ Design includes sampling and testing of earthen liner or in-place material including classification, standard Proctor compaction, in-place density, and sample permeability by a licensed testing firm. 	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Specific discharge less than 1×10^{-6} cm³/cm²/sec ~ No manure sealing credit ~ Design includes sampling and testing of earthen liner or in-place material including classification, standard Proctor compaction, in-place density, and sample permeability by a licensed testing firm. 	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Specific discharge less than 1×10^{-6} cm³/cm²/sec ~ No manure sealing credit ~ Design includes sampling and testing of earthen liner or in-place material including classification, standard Proctor compaction, in-place density, and sample permeability by a licensed testing firm. 	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Specific discharge less than 1×10^{-6} cm³/cm²/sec ~ No manure sealing credit ~ Design includes sampling and testing of earthen liner or in-place material including classification, standard Proctor compaction, in-place density, and sample permeability by a licensed testing firm.

Table 2c- Criteria for runoff ponds with a water depth of 2 feet or less and a storage period less than 90 days annually.

<p>Risk →</p> <p>Vulnerability</p> <p>↓</p>	<p>Very High</p> <p>Less than 500' upgradient from a public drinking water supply well; OR <200' upgradient from a domestic well or Class I designated use surface water, OR 1st ground water is a Class IB aquifer.</p>	<p>High</p> <p>Doesn't meet Very High Risk criteria; AND In a recharge area for Sole Source aquifers; OR 500'-1,000' upgradient from a public drinking water supply well, OR 200' - 600' upgradient from an domestic water supply well or Class I designated use surface water, OR 1st ground water is a Class IA or Class II aquifer.</p>	<p>Moderate</p> <p>Doesn't meet High Risk criteria; AND 600' - 1,000' upgradient from an domestic well or Class I surface water, OR < 600' upgradient from a non-domestic water supply well or Class 2-5 designated use surface water, OR 1st ground water is a Class III aquifer.</p>	<p>Slight</p> <p>Doesn't meet Moderate Risk criteria; AND >1,000' upgradient from an domestic well or Class I surface water; OR > 600' upgradient from a non-domestic water supply well or Class 2-5 designated use surface water, OR 1st ground water is a Class IV aquifer.</p>
<p>Very High</p> <p>Large voids (e.g. karst limestones, lava tubes, improperly abandoned well); OR Highest anticipated groundwater elevation within 2' of pond bottom;</p>	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Consider relocation to another site ~ Specific discharge less than 1×10^{-7} cm³/cm²/sec ~ Design includes sampling and testing of earthen liner or in-place material including classification, standard Proctor compaction, in-place density, and sample permeability by a licensed testing firm. 	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Specific discharge less than 1×10^{-6} cm³/cm²/sec ~ No manure sealing credit ~ Published permeability data and construction method specifications may be used. 	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Specific discharge less than 1×10^{-5} cm³/cm²/sec ~ No manure sealing credit ~ Published permeability data and construction method specifications may be used. 	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Specific discharge less than 1×10^{-5} cm³/cm²/sec ~ No manure sealing credit ~ Published permeability data and construction method specifications may be used.
<p>High</p> <p>Doesn't meet Very High Vulnerability criteria; AND Bedrock (assumed fractured) within 2' of pond bottom; OR Coarse soils/parent material (Permeability Group I soils as defined in AWMFH, always including GP, GW, SP, SW); OR Highest anticipated groundwater elevation is between 2' - 15' below pond bottom;</p>	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Specific discharge less than 1×10^{-6} cm³/cm²/sec ~ No manure sealing credit ~ Published permeability data and construction method specifications may be used. 	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Specific discharge less than 1×10^{-6} cm³/cm²/sec ~ No manure sealing credit ~ Published permeability data and construction method specifications may be used. 	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Specific discharge less than 1×10^{-5} cm³/cm²/sec ~ No manure sealing credit ~ Published permeability data and construction method specifications may be used. 	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Specific discharge less than 1×10^{-5} cm³/cm²/sec ~ No manure sealing credit ~ Published permeability data and construction method specifications may be used.
<p>Moderate</p> <p>Doesn't meet High Vulnerability criteria;</p>	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Specific discharge less than 1×10^{-5} cm³/cm²/sec ~ No manure sealing credit ~ Published permeability data and construction method specifications may be used. 	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ No liner required. 	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ No liner required. 	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ No liner required.
<p>Low</p> <p>Doesn't meet Moderate Vulnerability criteria; AND Fine soils/parent material (Permeability Group III and IV soils as defined in AWMFH, usually including GC, SC, MH, CL, CH); AND Highest anticipated groundwater elevation is > 50' below pond bottom</p>	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ Specific discharge less than 1×10^{-5} cm³/cm²/sec ~ No manure sealing credit ~ Published permeability data and construction method specifications may be used. 	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ No liner required. 	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ No liner required. 	<p>Liner Requirements</p> <ul style="list-style-type: none"> ~ No liner required.