

LOSS PROJECT REVIEW CHECKLIST

Project Name:			
Owner Name:		Telephone: ()	
Owner Address:		City:	State: Zip:
Engineer:		County:	

ENGINEERING REPORT

LOSS Stds.	WAC 246-272	Item	Yes	No	N/A	Comments
X	08001(2)(a)	Engineer's Seal				
X		General Information outlining scope of project, and;				
X	08001(2)(a)(iii)	Analysis of the disposal area's capability to adequately treat and dispose of the proposed quality and quantities of sewage.				

X		General Information				
X		Owner				
X		Engineer				
X	08001(2)(i)	Project Description				
X		Project Location				
X		Description of Existing System(s)				
X	20501(2)(d)(ii)(A)(V)	Source of Domestic Water				
X	20501(2)(d)(ii)(A)(IX)	Activity or Land Use of Area-Present and Anticipated				
	20501(2)(d)(ii)(A)(XII)	Anticipated Sewage Volume				
	20501(2)(d)(ii)(A)(VIII)	Availability of Public Sewers				
	20501(2)(d)(ii)(A)(X)	Growth Patterns				
	20501(2)(d)(ii)(A)(XIV)	Possible Use of Alternative Systems and Designs				

		Soils				
X		Type 1A Soils and Areas of Special Concern-(Designs shall meet land area requirements in WAC 246-272 and any more stringent local regulations)				
X	08001(2)(a)(v)&11001&09001(1)(b)	Site evaluation and soils analyzed by qualified PE or soil scientist to include soil type and depth, hydraulic loading rate, topography, drainage characteristics, designated flood plains, structurally deficient soils, existing encumbrances				
X	08001(2)(a)(v)	Site inspection completed by DOH				
X		Slope Acceptable - (Maximum 30%)				
X	08001(2)(b)(i)	Three Feet Vertical Separation				

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X		Maps				
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LOSS Stds.	WAC 246-272	Item	Yes	No	N/A	Comments
X		Detailed Area Map-Include entire proposed development, adjacent areas and all acreage under development				
X		Development Plan Map-(To scale-include total development, not just disposal area) Include:				
X	20501(2)(d)(ii)(A)(XI)	Primary, Reserve Areas and Other Components				
X		Surface Waters and/or Wells Within 1,000 Feet of Disposal Area				
X		Classified (Jurisdictional) Wetland Within 1,000 Feet of Disposal Area				
X		Structures, Roads, Parking Areas Adjacent to Disposal Area				
X		Any On-Site Stormwater Systems, Retention Basins, or Drainage Areas for Project				
X		All Water and Sewer Lines Within 1,000 Feet of Disposal Area				
X		Location of 10, 25, and 100 Year Flood Boundaries				
X		Location of Scouring Channel of Stream or River				
X	20501(2)(d)(ii)(A)(II)	Drainage Basins and Drainage Patterns Throughout the Development Site				
X		Geology and Groundwater				
X		Discussion of geology and its relationship to existing groundwater and soil conditions				
	20501(2)(d)(ii)(A)(VI)	Topography, geology and ground cover				
X		Depth to Groundwater				
X		If an unconfined aquifer exists that is usable for potable purposes, then water quality information on aquifer should be obtained, if not already available				
X		Direction of flow of the aquifer, if known				
X		Locations, capacities and well logs, if available, of all wells and springs within 1,000 feet of disposal area				
	20501(2)(d)(ii)(A)(III)	Public health impact on ground and surface water quality				
X		If the location of the drainfield is within an area of special concern as outlined in WAC 246-272, a statement of compliance with any special design or site requirements				

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LOSS Stds.	WAC 246-272	Item	Yes	No	N/A	Comments
X		Input Balance-(generally required for areas with high rainfall and shallow and/or slowly permeable soils but may be required at any time by the reviewing agency)				
X		Nitrate Balance-(may be required in areas where the quantities, qualities, and directions of ground water flow are known)				
	20501(2)(d)(ii)(A)(VII)	Climatic Conditions				
		Inspections				
X	08001(2)(c)	Schedule of inspections to confirm installation conforms to the plans and specifications				
		Minimum Land Area				
X		Minimum Land Area (If the disposal field is located in a different area with variable soil conditions, the minimum land area shall be based on the predominant soil texture in the drainfield area.)				
		CALCULATION AREA:				
X		Compliance with Other Local and State Regulations				
X		SEPA Compliance (need one of the following):				
X		Signed Declaration of Non-Significance				
X		Letter from Lead Agency stating Final EIS is Acceptable				
X		Letter from Lead Agency stating Total Development is Exempt from SEPA				
X		Shorelines Area-If all or part of a project is in a shorelines area, a statement that the total project is in conformance with shoreline master plans, coastal zone management plans, and flood control zone requirements				
X	08001(2)(ii)& 20501(2)(d)(ii)(A)(XIII)	Compliance with local zoning, platting, and building requirements as they relate to sewer utilities				
		Construction Schedule				
X	08001(2)(i)	Schedule of Construction and for Phase Development				

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LOSS Std.	WAC 246-272	Item	Yes	No	N/A	Comments
X		Operation and Maintenance/Management				
X		Discuss options available for management of the system. Explain the preferred option				
	08001(2)(vi)	Management Plan discussing the following:				
	08001(2)(vi)(A)(I)	Public Entity (required for subdivisions or systems where parcels/lots are individually owned)				
	08001(2)(vi)(A)(II)	Private Entity				
	08001(2)(vi)(B)	Duties of the management entity				
	08001(2)(vi)(C)	Controls to ensure continuity and permanency of proper operation and maintenance				
	08001(2)(vi)(D)	Methods and frequency of monitoring, recordkeeping, and reporting to the department				
	08001(2)(vi)(E)	Rights and responsibilities of management				
	08001(2)(vi)(F)	Rights and responsibilities of persons purchasing connections to the LOSS				
	08001(2)(d)	Draft Operation and Maintenance Manual				

PLANS AND SPECIFICATIONS

X	08001(2)(b)(iii)	Engineer's Seal				
X		Three Copies				

		General Layout				
X		Water Source Shown				
X		Setbacks Met				
X		Test Holes Shown				
X		Trench Separation Adequate (min. 4.5' edg-edg)				
		(Need more due to soils?)				
X		20' Separation between drainfield beds				
X		15' Separation between drainfield trench areas				
X		Replacement Area Shown				
X		3-50% Drainfield Areas				
X		Drainage Checked				
X		Monitor Ports				
X		Slope Acceptable				
		Flow Control Devices Needed				
		(If "yes", orifice sizes checked)				
X		Lateral Elevation vs. Contours				
X		Beds/Trenches level				
X	11501(2)(g)	Trench/Bed Width (3' Trench/10' Bed Max)				
X	11501(2)(k)(iii)	Lateral Invert in Native Soil				

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LOSS Stds.	WAC 246-272	Item	Yes	No	N/A	Comments
X	11501(2)(k)(ii)&(v)	6-24" Cover/36" Max to trench bottom				
X		Wtr/Swr crossings & details				
X		Cleanouts on Laterals Extended to Grade				
X	08001(2)(b)(i)	Pressure Distribution				
X		Loading Rate Verified				
X		Soils Data				
X		Sand Specification				
X		High Strength Waste				
		3' Vertical Separation Maintained				
Tank(s)						
X		Septic Tank-Outlet at 40% Depth				
X		Septic Tank-Effluent Filter(s)				
X		PVC Sanitary Tees				
X		Verified Septic Tank Volume				
X		6' Max Credited Liquid Depth				
X		20% Scum Storage				
X		Verified Volume in Dosing Tank				
X		Access Risers to Grade w/Gas Tight Lids				
X		Tanks need to be traffic rated?				
X	11501(2)(d)&(e)	Tanks on "Approved List"				
Dosing/Pumping Equipment & Controls						
X		Explosion Proof Pumps				
X		Check Valve @ Pumps				
X		Quick Disconnects for pump removal				
X		Non-Corrosive Slide Rails				
X		Programmable Timers				
X		Audible/Visual Alarms				
X		Dose Counters & Hour Meters				
X		Pump Curve(s)				
X		Siphon Data				
Calculations						
X		Friction Loss Verified				
X		Manifold Size Verified				
X		Void Volume Verified				
X		Elevations Checked				

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LOSS Stds.	WAC 246-272	Item	Yes	No	N/A	Comments
Specifications						
X		Pipe Material Specified				
X	11501(2)(k)(iv)	Drainrock Specified				
X	08001(5)	Certified Installer				
X	11501(2)(k)(iv)	Filter Fabric Specified				
X		Testing Specification				
X		Tanks leak tested				
X		Pressure testing sewer lines				
X	08001(7)(b)	Provisions for DOH Final Inspection				
Collection System						
X		Gravity Sewer				
X		Meet DOE Criteria				
X		Gravity Effluent Sewers				
X		Comprehensive Sewer Planning Area (If "yes", meet DOE criteria)				
X		Cleanouts/Manholes				
X		STEP Sewer				
X		Calculations Submitted				
X		Pump Curves				
X		Typical Details				
X		Air Relief Valves				
X		Provisions for cleaning lines				
Other						
X		Sent copies to Local Health Department				
X		LHD Permits needed				
X		Waivers				
X		Easements				
Reviewed By:						Date:
Comments:						