DRAFT--Pierce County Levee Vegetation Management Plan

Hazard Tree Assessment Matrix

Tree Assessor[1] _____

Date _____

Levee _____

Address/ Tree _____

Location _____

Tree Species _____

Tree DBH _____

Multiple Stems _____

Tree Height _____

Tree Crown Spread (Dia) _____

	Target Type (Select one/multiple)	Target Description	Target Zone (Y/N)			Target Occupancy Rate (High, Medium, Low)	Risk to Citizen Health and Safety (High, Medium, Low)	Practical to move target (Y/N)
			Target within drip line	Target with 1 x Ht	Target within 1.5 x Ht			
Target Assessment	Levee							
	Recreational Trail							
	Access Road							
	Powerline							
	Roadway							
	Fence							
	Private House							
	Private Asset/Property							
	Other							

	Site Risk Factors	Description	Rating (Y/N)	Field Notes
Site Factors	Site history	Is the site have a history of failures?		
	Recent site changes	Have there been recent site changes (grades, site clearing, soil, hydrology, root cuts)?		
	Soil conditions	Are there poor soil conditions (limited volume, saturated, shallow, compacted, pavement over roots)?		
	Wind exposure	Is there wind exposure (protected, partial wind exposure, full wind exposure, wind funneling)? Is the tree exposed (single tree versus stand of trees)?		
	Evidence of lightning			

	Risk Factor	Description	Rating[2] (A/M/U)	Field Notes
Tree Risk Factors	Tree crown health	Is the crown affected, increasing a likelihood of failure? Is the crown unbalanced?		
	Tree branches health	Are the branches affected, increasing a likelihood of failure? Dead branches, broken branches, over-extended branches? Is there missing bark, cracks?		
	Trunk health	Is the trunk affected, increasing a likelihood of failure? Dead/missing bark, abnormal bark texture, Signs of damage, decay		
	Root and root collar health	Is the collar visible? Signs of stem girdling, decay, dead roots?		

	Tree instability	Is there tree tilting/leaning/slumping? Is there uneven crown size/density? Are there vines/mistletoe/moss growth?		
Tree Risk Factors, along River/Waterways	Scour/erosion	Are there signs of scour or erosion at the tree base? Erosion signs include exposed soil and roots, pockets, or depressions that were formed by water or debris flowing around the tree. Erosion or scour should be affecting levee prism.		
	River force load potential	Is there potential for river force loads on the tree? River force loading would be trees located in flood flow areas on slopes having higher river velocity areas, such as outside of a meander bend.		
Target Risk Factors	Levee geometry	Does the levee geometry indicate a minimum levee prism only (no overbuild, silt bench, etc.)? Is the levee height greather than 10-ft? Is the top width less than 5-ft? Are the sideslopes steeper than 2H:1V?		
	Levee prism	Is the tree located above landward toe (more likely in levee prism)?		
	Seepage or slope instability	Are there signs of seepage or slope instability? Evidence of surface or deep-seated sliding, tension cracks, slumping, bulging, seepage pathways and faces, etc.		
	Erosion protection	Is there a lack of erosion protection? Slope is exposed and does not have engineered (rock) or well established and stable bio-erosion protection measures (such as an established willow thicket) that would protect slope from erosion if tree were to fail.		
Damage Factors	**Site Risk Factors**	**Description**	**Rating (Y/N)**	**Field Notes**
	Access	Does potential damage reduce access (block driveway, roadway, access road)?		
	Protection	Does potential damage pose a risk to infrastructure, homes, or utilities? Protects populated residential, commercial, or industrial areas, or public infrastructure, roads, utilities, as opposed to farm crop or natural areas.		
	Public use	Does the potential damage impact recreation and public access, and use?		

Recommendation (Keep / Remove)	

[1]This tree assessment form assumes the assessor has the following certifications: ISA Certified Arborist, and a ISA Tree Risk Assessment Qualified (TRAQ)

[2]Ratings: A = Acceptable; M = Minimally Acceptable, Maintenance is Required; U = Unacceptable