

Appendix A Hazard Tree Assessment Matrix

Hazard Tree Assessment Matrix

Inspector _____
 Date _____
 Levee _____
 Location _____

Yes = 1
No = 0

Item	Tree Hazard - Risk Factor	Description	Yes / No	Rating*	Field Notes
1	Is the tree unhealthy or an undesirable species?	Signs of rot, fungus, dying limbs, structural defects, deformations, limb breaks, etc. Undesirable species are Big Leaf Maple or Paper Birch.			
2	Does the tree show signs of instability?	Signs of instability may include tree tilting, leaning, pistol butt, slumping or sliding down slope.			
3	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.			
4	Is there potential for wind loads on the tree?	Single, exposed trees are less protected that stands of trees.			
5	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 the outside of a meander bend.			
6	Does the levee geometry indicate a minimum levee prism only (no overbuild, silt bench, etc)?	Answer yes if any of the following are true: 1 - Height of levee is greater than 10ft 2 - Top width is less than 15ft 3 - Riverward sideslope, no silt bench and steeper than 2H:1V 4 - Landward slope is steeper than 2H:1V			
7	Tree is located above landward toe?	Tree located above landward toe is more likely in levee prism.			
8	Are there signs of seepage or slope instability?	Evidence of surface or deep-seated sliding, tension cracks, slumping, bulging, seepage pathways and faces, etc.			
9	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.			
10	Does the levee provide protection to infrastructure, homes, utilities?	Protects populated residential, commercial, or industrial areas, or public infrastructure, roads, utilities, as opposed to farm crop or natural areas.			
Damage Factors			Total Score	Recommendation: Keep / Monitor / Remove	

*All yes answers are scored with 1, all no answers are scored with 0. If it is not clear, 0.5 scores can be used.

If score is 0 - 3, retain tree
 If score is 4 - 5, monitor tree
 If score is 6 - 10, cut tree