

| Alternative | 1 - Do Nothing | 2 - Causeway and Natural Channel Evolution | 3 - Channel Re-establishment and Sediment Management | 4 - Floodplain Reconnection and Sediment Management |
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| Description | Allow the channel to evolve without intervention | Construct a new elevated road profile between Cemetery Curve and the bridge | Remove sediment to restore channel capacity over 0.5-mile reach centered on the bridge | Remove portion of west bank levee to activate bypass and construct driveway bridge for landowner access |
| | | Include sufficient openings to allow flow to the east and beneath the road | Re-align main channel farther from the road | Upgrade existing Green Valley Road culvert west of bridge to facilitate bypass outflows |
| | | Construct channel to convey flow and provide fish passage back to Atascadero Creek | Re-activate historic side channel | Enlarge floodway and construct a new high flow channel on west bank and remove levee on east bank below bridge |
| | | Construct new in-stream and off-channel habitat features in existing vineyard | Construct grade-control structure at upstream end of reach | Construct a new channel and remove sediment to increase channel capacity adjacent to the road |
| | | | Construct new in-stream habitat features in restored channel alignment | Construct new in-stream and off-channel habitat features in restored channel alignment |
| | | | Establish sediment management program above Cemetery Curve | Establish sediment management program at bypass head |
| Frequency and Stream Flow When Road Flooding Begins | Many times per year @ 290 cfs or less | ~20% chance each year @ ~1,450 cfs | 20% chance each year @ 1,450 cfs | ~40% chance each year @ 1,175 cfs |
| Habitat Benefits/Impacts | Potential for fish stranding in the vineyard | Reduced stranding potential | Reduced stranding potential | Reduced stranding potential |
| | Continued loss of summer stream flow due to depth of sand and gravel and dispersion of flow to multiple channels | Continued loss of summer stream flow due to depth of sand and gravel and dispersion of flow to multiple channels | Short-term negative impacts during construction and vegetation re-establishment over large area | Continued loss of summer stream flow due to depth of sand and gravel and dispersion of flow to multiple channels |
| | Poor in-stream habitat in the vineyard channels during periods of flow into the vineyard | Increased off-channel habitat and improved in-stream habitat (assumes habitat restoration in existing vineyard) | Increased off-channel habitat and improved in-stream habitat (assumes habitat restoration in existing vineyard) | Short-term negative impacts during construction and vegetation re-establishment over smaller area |
| | Potential development of fish passage problems | Potential development of fish passage problems | Likely increase in summer stream flow | Increased off-channel habitat |
| Landowner & Public Safety Benefits/Impacts | Increasing frequency and duration of road closures | Major reduction in frequency and duration of road closures | Major reduction in frequency and duration of road closures | Major reduction in frequency and duration of road closures |
| | Increasing frequency and severity of vineyard impacts | Loss of farming potential for a large portion of vineyard | Major reduction in frequency and severity of vineyard impacts | Likely ongoing vineyard impacts |
| | Increasing risk to public safety | Major reduction in public safety risk | Major reduction in public safety risk | Major reduction in public safety risk |
| Feasibility/Permitting | | Requires cooperation from vineyard landowner | Requires landowner cooperation from multiple landowners | Requires landowner cooperation from multiple landowners |
| | | EIR probably required and significant permitting. | Requires annual permit for sediment removal | Requires annual permit for sediment removal |
| | | | EIR probably required and significant permitting. | EIR probably required and significant permitting. |
| Costs | Increasing road maintenance costs | Acquisition of a large portion of the vineyard | Ongoing costs associated with sediment removal | Ongoing costs associated with sediment removal |
| | Increasing vineyard clean-up costs | Large road and causeway construction costs approx. \$1.2 to \$1.9 million including \$0.25 million for design and permitting | Large sediment removal costs, grade control structure approx. \$1.0 million including \$0.25 million for design and permitting | Bypass, culvert upgrade, levee removal and terrace construction costs \$0.9 to \$1.1 million including \$0.25 million for design and permitting |
| | Increased future costs for mitigation | Channel and off-channel habitat feature construction costs for 1900 feet of channel and 2.6 acres of riparian habitat | Channel and off-channel habitat feature construction costs for 2750 feet of channel and 4.7 acres of riparian habitat | Conservation easement for bypass on private land and possibly compensation for loss of vineyard farming potential |
| | Potential cost of "take" and/or species rescue costs | | | |
| Uncertainty | Long-term uncertainty regarding fish passage to and from Upper Green Valley Creek | Long-term uncertainty regarding fish passage to and from Upper Green Valley Creek | Uncertainty regarding sediment management program cost and effectiveness | Uncertainty regarding sediment management program cost and effectiveness |
| | Long-term uncertainty regarding continuity of baseflows | Long-term uncertainty regarding channel behavior and flooding due to sedimentation processes | | Long term uncertainty regarding channel behavior and flooding due to sedimentation processes |
| | | | | Long-term uncertainty regarding fish passage to and from Upper Green Valley Creek |