Santa Fe Watershed Association - Arroyo Assessment

Arroyo name: ***Date:***

Approximate length of arroyo surveyed in feet:

Names of Surveyors:

Rate each of the parameters on a scale of 0 to 4 . Assign scores based on the characteristics described in the Poor, Fair, Good, Excellent columns. Use scores in the parenthesis as a range of possible results.

	Infrastructure risks	Optimal	Sub-optimal	Fair	Poor	Score	
		4 (3.1 - 4)	3 (2.1 - 3)	2 (1.1 - 2)	1 (0-1)		Notes
1	Trail Deterioration	Arroyo flows show no risk of damaging trail	Arroyo flows near trail but water doesn't appear to threaten trail	Arroyo flows near trail and could damage the trail in a typical flood	Trail is showing damage from arroyo flows or unstable banks		Look for formal, developed trails that run next to the arroyo. Has flowing water in the channel damaged or have the potential to damage trails?
2	Damaged / Restricted Culverts	Culverts are clear, show no damage or signs of clogging	Some damage or clogging (less than 1/4), but still functions	Culverts more than 1/4 full and or damaged to threaten function	Culverts are blocked or damaged so as to not function		Observe culverts to see if the metal/concrete is damaged or clogged. Look downstream of the culvert to see if excessive soil erosion is occuring. See if the culvert is collapsing.
3	Bridge threatened (any type)	No threat to abutment of bridge	Signs evident of some erosion at bridge abutments, but they are stable	Soil around abutments have eroded	Abutments of bridge and other parts of bridge have clear damage from flooding		Look at where the bridge ends or supporting piers rest on soil to see if soil erosion threatens the stability of the bridge.
4	Endangered Utilities	No utilities are exposed or found near the arroyo channel	Utilities are located within 10 feet of the arroyo channel and could be threatened	Utilities are exposed and in the next major flood could cause a hazard	Utilities are exposed and currently present hazards		Look for exposed sewer lines, cables, pipes, or phone lines.
	Arroyo channel risks						
5	Incised channel	The bed of the channel appears stable, no signs of degradation	The bed of the channel shows some degradation	The bed of the channel has exposed roots or fist to large-size rocks	Bed shows degradation and arroyo banks will fail and fall into stream like in the next flood		Look for evidence that the channel bottom (bed) is downcutting (or degrading) such as plant roots exposed in or on side of bed, abundant fist & basketball-sized rocks, or bedrock material exposed *plus* steep arroyo banks
6	Constricted floodplain	Flood water can spread without threatening utiities, bridges or homes & has a low-elevation terrace that can be flooded in typical floods	Floodplain has a terrace for water to spread but little signs of "racking" on bench and built structures keep water from spreading	Floodplain has very little access to spread water. Large unnatural debris clogs channel	Floodplain has no access to spread water, built structures or steep banks along entire length. Large unnatural debris clogs channel		Observe the shape of the floodplain and estimate the ability of typical, common floods to spread on to adjacent stream bank terraces and signs that flood debris is deposited or caught on vegetation ("racking"). Large debris = taking up 1/4 of the low (active) channel width
7	Bank Stability	Banks are stable and there is little to no erosion	Banks have some erosion and < than 30% steep	Banks are eroding in most places and or/ slopes are > than 30% steep	Banks are unstable, signs of erosion widespread		Look for plants hanging off the edge of the arroyo banks and fresh piles of fallen earth next to the banks. Estimate slope steepness of 30% where 1 foot rise has a 3 foot run.
8	Rip Rap (or gabion) stability	Rip Rap is stable, wire is not falling apart	Rip Rap shows evidence of instability such as soil washing away from the base but still provides some erosion prevention	Rip Rap shows sign of failing apart (wires rusted, sagging, or undercut) but hasn't completely failed	Rip Rap no longer functions to reduce erosion, has completely failed or is falling apart (rusted wire or collapsing rocks)		Rip rap and gabions are fist-sized rocks encased with wire to reduce erosion. The can be place in cages inside the active channel or to armor the banks of channels.
	Divide total score by number of parameters measured				Average Score:		

SFWA ARROYO ASSESSMENT BACKGROUND INFORMATION

General information:

Date: _____ Time:_____

Arroyo name: _____

Investigators conducting survey: _____

_____

Weather		
Now	Past 48 Hours	
		Clear/Sunny
		Overcast
		Showers
		Rain (steady rain)
		Storm (heavy rain)

Site & Vegetation type description: _____

_____

Arroyo corridor land uses: Place "D" for dominant and "X" if present - otherwise leave blank. Use blank spaces for land uses not listed.

Trail - unpaved		OHV activity		Golf course		Urban	
Wooded area w/ roads		Illegal dumping		Trail - paved		Commerical/Industrial	
Wooded area NO roads		Homeless encamps		Scattered residential		Heavy use recreational	
		Parking lot adjacent		Dense residential			

Sketch of site: Draw a "bird's eye" view of the segment of the arroyo that includes major infrastructure, recreation uses (trails, OHV, or other if appropriate), direction of water flow, major plant communities or trees