

Fish and Aquatics ORV – Fish

Enhance

- Additional native fish species, that are endemic to the area, are established
- Native fish species have stable populations and are self reproducing.
- The public understands the value and management of the native fisheries in the FC W/S/R.

Protect

- Fisheries abundance and diversity is maintained.
- There is no introduction or movement of non-native fish species.
- Non-native fish species are removed from stocktanks w/in the watershed.
- The public is informed about the native fisheries in the W/S/R/.
- Embeddedness is at a natural level.

Degrade

- Native fisheries are less abundant then current or are less diverse.
- Exotic aquatic species are introduced.
- Sedimentation rates and embeddedness is increased.

Fish and aquatics ORV – Macro Inverts

Enhance

- Spring snail is abundant.
- Index of Biological Intergrity (IBI) is all attaining.

Protect

- IBI is maintained.
- Springsnail sites are maintained.
- Surveys indicate the # and diversity of the genera is maintained.

Degrade

- IBI is non-attaining.
- Springsnail sites are lost.
- Genra groups are missing or

History and Traditional Uses ORV – Apache History

Enhance

- Eligible Archaeological sites are inventoried and protected.
- The public are stewards of Apache history because of their understanding and appreciation.

Protect

- Artifacts and cultural deposits, such as pollen and ash stains, stay in place w/in sites.
- Layers of deposition are in place.
- Suite of artifacts is there and stratographic (at the correct depth)
- Within known or unknown sites surface erosion and human use, such as trails, does not displace artifacts and cultural deposits.
- No collector piles are found within the W/S/R corridor.

Degrade

- Artifacts and cultural deposits are disturbed and moving.
- There is evidence of erosion and human use, such as social trails or informal parking, displacing artifacts and cultural deposits.

History and Traditional Uses ORV – Traditional and Contemporary Uses

Enhance

- Traditional practitioners have access to plants, water, resources and places and can complete necessary activities unhindered and with privacy.
- The Apache and Yavapai cultures are perpetuated.
- There is no evidence of modern human activity.
- Facilities are sparse and temporary.
- There is no overnight use and no visitation to the uplands.

Protect

- Traditional practitioners have access to resources and places and can complete necessary activities without conflicts.
- Evidence of modern human activities and facilities are limited and do not detract from the setting,
- Facilities are sparse and temporary.
- Visitors are restricted to system trails and developed sites.
- Overnight use is limited to the Wilderness Areas and is by permit only.
- Public with an overnight permit are informed about the Apache history.

Degrade

- Traditional practitioners cannot complete necessary activities without conflict.
- Evidence of modern human activities is widespread and detract from the setting.
- Facilities dominate the W/S/R corridor setting.
- Social trails exist in the uplands.
- Overnight camping in uncontrolled.

Recreation ORV - Wild and Scenic Act Values

Enhance

- Value of the W/S/R is internalized and the public displays stewardship, and advocacy for Fossil Creek W/S/R whether they are on or off site.
- Organizations and agencies demonstrate support by advocating, funding and lobbying for management actions .

Protect

- The public is informed, interested and supportative of Fossil Creek W/S/R management
- The public displays appropriate behavior and has appropriate expectations while visiting Fossil Creek W/S/R.
- Individuals participate in programs that support management of the W/S/R , such as education and volunteer programs.
- Communities, partners and SUP permit holders support management of the W/S/R through volunteerism and coordinating local efforts that support management actions.

Degrade

- The public is uninformed and disinterested in the values or management of Fossil Creek W/S/R.
- The public actions while at Fossil Creek W/S/R display a lack of land ethic and nature deficit disorder.
- Partnerships and funding for management actions is not supported or is less than necessary.

Recreation ORV - Education

Enhance

- Organizations and institutions financially sustain a living education and research center that supports the ORVs and natural resource values of Fossil Creek W/S/R.

Protect

- Programs that develop appreciation and understanding of the Fossil Creek W/S/R values inform the public.

Degrade

- Direction to comply with management of Fossil Creek W/S/R are evident.

Recreation ORV – Landscape Character related to ROS setting

Enhance

- The Landscape Character is expressed.
- Visitation is appropriate to the ROS/WOS class, and meets Wilderness Character class.
- Recreation activities are fully W/S/R dependant

Protect

- The Landscape Character is maintained but is slightly modified. but follows Built Environment Image Guide (BEIG).
- Visitation is kept at the ROS/WOS class and Wildernss Character.
- Recreation activities are mostly W/S/R dependant.

Degrade

- The Landscape Character is disturbed and modified.
- Visitation exceeds the ROW/WOS class and Wilderness Character for portions in designated Wilderness.
- Recreation activities are not W/S/R dependant.

Recreation ORV – Visitor Capacity and Satisfaction

Enhance

- Visitor capacity is self regulating. The public knows and values capacity management.
- Capacity management actions are common knowledge.
- Visitor satisfaction with availability and operation and maintenance of facilities and programs is high.

Protect

- Visitor capacity is maintained. The public is informed about capacity management.
- Active management to control capacity is infrequent.
- Visitor satisfaction with availability and operation and maintenance of facilities and programs is acceptable.

Degrade

- Visitor capacity is exceeded.
- Intensive management such as road blocks and Forest Closure orders is frequent and necessary.
- Visitor satisfaction with operation and maintenance of facilities and programs is lower.

Water ORV – Soil Stability

Enhance

- Vegetation groundcover is at natural vegetation groundcover levels.
- Visual signs of erosion are not evident on 0 to 120% slopes outside of the stream side management zone (SMZ).

Protect

- Vegetation groundcover is maintained at a tolerable ground cover level.
- Sheet erosion is below tolerable soil loss.
- Visual signs of accelerated erosion are not evident on slopes 0 - 15% adjacent to the SMZ .
- Best Management Practices (BMPs) are implemented in disturbed areas.

Degrade

- Vegetation groundcover is not maintained at a tolerable ground cover level.
- Visual signs of accelerated erosion are evident through out the W/S/R corridor.
- Best Management Practices (BMPs) are functioning in disturbed areas.

Water ORV – Soil Erosion

Enhance

- Soil stability function is Satisfactory throughout the entire W/S/R corridor.
- Current Soil Loss (CSL) is less than Tolerable Soil Loss (TSL).
- Current Vegetation Ground Cover (CVGC) approaches Natural VGC in the SMZ and 0 to 15% slopes.
- Visible signs of accelerated soil erosion is not evident throughout the entire corridor.
- Lowest sediment delivery (tons per year) from infrastructure, includes roads, trails and developed sites.

Protect

- Soil stability function is satisfactory in the SMZ and 0 to 15% slopes (connected terraces). CSL is less than TSL.
- CVGC is = to or greater than TVGC.
- Visible signs of accelerated erosion is not evident in either the SMZ, the 0 to 15% slopes or connected terraces.
- Sediment delivery tons per year is between highest and lowest.

Degrade

- Soil stability function is impaired or unsatisfactory in SMZ or areas outside SMZ (0 to 10% slopes and connected terraces).
- Highest sediment delivery in tons per year from infrastructure, includes roads, trails and developed sites.

Water ORV – quality/magnitude of discharge/clarity

Enhance

- E. coli monitoring meets State Water Quality Standards (SWQS)
- There is an absence of trash and human waste within the W/S/R corridor.
- Turbidity (TSS) monitoring meets SWQS.
- Procurement of Federal reserve water rights assures in situ flow.

Protect

- E. coli monitoring meets State Water Quality Standards (SWQS)
- There is an absence of trash and human waste within the W/S/R corridor.
- Turbidity (TSS) monitoring meets SWQS.
- Hydrowater rights are retained.
- Procurement of Federal reserve water rights assures in situ flow.

Degrade

- E. coli monitoring does not meet State Water Quality Standards (SWQS)
- There is a presence of trash and human waste within the W/S/R corridor.
- Turbidity (TSS) monitoring does not meet SWQS.
- Hydrowater rights are not retained.

Wildlife ORV – Upland Vegetation

Enhance

- Upland soils within the W/S/R corridor are in satisfactory condition.
- Each soil unit w/in the W/S/R corridor is in satisfactory condition.
- Site conditions at high use areas are in sat. condition - excluding inherently unstable soil.
- Also refer to Water ORV - Soil Stability and Soil Erosion.

Protect

- The majority of each soil unit meets satisfactory conditions but there are pockets of high use areas that are unsat/impaired.
- Also refer to Water ORV - Soil Stability and Soil Erosion.

Degrade

- The majority of upland soils within the W/S/R corridor are unsatisfactory/impaired.
- Also refer to Water ORV - Soil Stability and Soil Erosion.

Wildlife ORV – Blackhawks

Enhance

- Black-hawk (BH) nests are unhindered and unfettered by human disturbance.
- BH nest density is at least 1 nest every 2 miles along W/S/R corridor.
- Nest success is high.
- Native species prey is readily available as the food source.

Protect

- The number of BH nests is equal to the number of BH nests in 2005.
- Black-hawk nests are reoccupied at Waterfall and in the Dam vicinity.
- Nest success rates are equal to post 2005 (the period with native fish and frogs).

Degrade

- The number of BH nests is less than the number of BH nests in 2005.
- Nest success rates are lower than post 2005.

Wildlife ORV – Lowland Leopard Frog

Enhance

- The number of lowland leopard frogs is increased from 2009 populations.
- Lowland leopard frog populations are distributed throughout the W/S/R.

Protect

- The number and distribution of the lowland leopard frog is similar to before the de-construction of the dam in 2009 (when habitat was most restored and unaltered from the dam lowering and floods).

Degrade

- The number and distribution of the lowland leopard frog is less than in 2009.

Wildlife ORV – Riparian Vegetation –

Enhance

- The Fossil Creek W/S/R corridor has healthy riparian qualities.
- The stream reaches are determined to be in Properly Functioning Condition (PFC) including within the high use areas .

Protect

- The Fossil Creek W/S/R corridor has stable streambanks.
- Healthy stream reaches may have pockets with at risk/non-functional PFC determination.

Degrade

- There is evidence of streambank erosion, loss of species diversity and tree fall from exposed roots that is not related to flooding.
- Recruitment is hindered and there is a lack of age class distribution.
- Stream reaches have a function at risk/non-functional PFC determination.

Wildlife ORV – Mesquite Bosque

Enhance

- Acres of bosque within the Fossil Creek W/S/R corridor are unfragmented and expanding.
- Bosque acreage is greater than the acreage in 2004.
- Existing openings are recovering.

Protect

- Bosque acreage is maintained and stable.
- No new openings are created within bosque.

Degrade

- Bosque acreage is decreasing because of human disturbance.
- New openings within bosque are created.

Wildlife ORV – Wildlife populations

Enhance

- Populations are diverse and viable.
- Populations are expanding into suitable habitats.
- Refugia from humans is abundant and accessible.
- There is high species reproductive success
- Native species dominate, non-natives are controlled and declining
- Reintroduction of extirpated natives are successful.
- Roosting, nesting, and breeding is undisturbed.

Protect

- Species diversity is present but populations are affected by human activities.
- Habitat suitability is compromised in small areas.
- Native species dominate over non-natives but non natives are present, increasing and uncontrolled.
- Roosting, nesting and breeding is disrupted at times or locations but overall doesn't result in site abandonment or affect population levels.

Degrade

- Species diversity is reduced.
- Populations are not viable.
- Habitat suitability is degraded over enough area to affect population levels.
- Lack of refugia in certain areas decreases population numbers and reproductive success.
- Non-native species are present and compete with or stress natives.
- Roosting, nesting, and/or breeding is disrupted and results in decreased success and even site abandonment.

Geology ORV : Travertine Formations

Enhance

- Travertine dam formations build and grow.
- Travertine deposition is greater than erosion and changes are only readily apparent from natural flood events.
- Calcium carbonate production (CaCO_2) and spring discharge varies within a natural range.
- Stream turbulence is not disrupted except by natural flood events and provides for continued travertine deposition.
- Abiotic and biotic factors influencing travertine deposition are not noticeably or measurably disrupted from human disturbances resulting in continued growth of travertine dams. The stream is not channelized or diverted, and flow is maintained. The riparian and aquatic community including algae, bacteria, macroinvertebrates, leaves, organic material and plants are healthy and promote travertine dam formation.
- Research and education are fostered to provide for greater knowledge of the travertine system.

Protect

- Travertine dam formations build and grow.
- Travertine deposition is greater than erosion and changes are only readily apparent from natural flood events.
- Calcium carbonate production (CaCO_2) and spring discharge varies within a natural range.
- Stream turbulence is primarily altered by flood events and is minimally disrupted by human disturbance resulting in continued travertine deposition.
- Abiotic and biotic factors influencing travertine deposition are minimally disturbed from human disturbances in few locations but do not measurably affect the continued growth of travertine dams. The stream is not channelized or diverted, and flow is maintained. The riparian and aquatic community including algae, bacteria, macroinvertebrates, leaves, organic material and plants are healthy and promote travertine dam formation.

Degrade

- Travertine dam formation declines.
- Travertine erosion is greater than deposition, and declines in formation are attributable to human influence or disturbance and are measurable and observable.
- Calcium carbonate production (CaCO_2) and spring flow is disrupted, attributable to human influences.
- Stream turbulence is disrupted or reduced resulting in less travertine deposition.
- Abiotic and biotic factors influencing travertine deposition are disrupted from human disturbances resulting in a decrease in travertine dam formation. These factors may include stream channelization, diversion, reduction in stream flow, and declines or losses of the riparian and aquatic community such as algae, bacteria, macroinvertebrates, leaves and organic material and plants.