|  |  |  |  |
| --- | --- | --- | --- |
| Field Activity: |  | Dates: |  |
| Coordinator: |  |  |  |
| Site Name: |  |  |  |

|  |  |  |
| --- | --- | --- |
| Potential Hazard | Probability of Occurrence | **Comments****Issues-Mitigators-Scenarios** |
| **H** | **M** | **L** | **NA** |
| **Natural Environment** |  |  |  |  |  |
| Temperature Extremes (Hot / Cold) |  |  |  |  |  |
| Uneven / Slippery Walking Surfaces |  |  |  |  |  |
| Sharp Objects – rocks, coral, vegetation |  |  |  |  |  |
| Heights / Drop-offs (inc. high elevation) |  |  |  |  |  |
| Falling Objects/Obstructions |  |  |  |  |  |
| Tight Spaces / Narrow Openings / Overhangs |  |  |  |  |  |
| Darkness / Low Light |  |  |  |  |  |
| Strong Sunlight (inc. sunburn) |  |  |  |  |  |
| Foul Weather – wind, rain, snow, lightning, flash flood |  |  |  |  |  |
| Fire Hazard |  |  |  |  |  |
| Smoke / Dust / Fog |  |  |  |  |  |
| Toxic / Allergic Sources (vegetation, pollen) |  |  |  |  |  |
| Animals – Insects, Reptiles, Mammals, Other |  |  |  |  |  |
| Water / Current – streams, waves, tides, depth |  |  |  |  |  |
| **Man-Made Environment (for Pedestrians)** |  |  |  |  |  |
| Vehicular Traffic – Roads, Railroads |  |  |  |  |  |
| Bridges |  |  |  |  |  |
| Fences |  |  |  |  |  |
| Utility Lines |  |  |  |  |  |
| Local Inhabitants (inc. hunters) |  |  |  |  |  |
| Crowds / Spectators |  |  |  |  |  |
| **Transportation (Auto, Boat, Air)** |  |  |  |  |  |
| Vehicle Condition *(safety equipment, mechanical, tires, etc.)* |  |  |  |  |  |
| Driver Qualification / Experience for location |  |  |  |  |  |
| Route Conditions – Rough (inc. flat tires) |  |  |  |  |  |
| Route Conditions – Congestion |  |  |  |  |  |
| Route Conditions – Winding, limited sight line |  |  |  |  |  |
| Pedestrians |  |  |  |  |  |
| Intersections / Railroad Crossings |  |  |  |  |  |
| **Human Factors / Participant Activities** |  |  |  |  |  |
| Hiking / Walking |  |  |  |  |  |
| Climbing |  |  |  |  |  |
| Lifting / Carrying |  |  |  |  |  |
| Swimming / Snorkeling / SCUBA / Boating |  |  |  |  |  |
| Digging / Trenching |  |  |  |  |  |
| Use of Tools (inc. chipping) |  |  |  |  |  |
| Extended Immobility (auto, boat, air) |  |  |  |  |  |
| Fatigue / Dehydration |  |  |  |  |  |
| Food Handling |  |  |  |  |  |
| Language / Culture Differences  |  |  |  |  |  |
| Pre-Existing Physical / Medical Needs |  |  |  |  |  |
| Separation of Individuals from Group |  |  |  |  |  |
| Lack of Rest Stops / Facilities |  |  |  |  |  |
| Individual Behaviors / Risk Acceptance |  |  |  |  |  |
| Equipment Failure |  |  |  |  |  |
| **Other Factors** |  |  |  |  |  |
| Limited / Remote Medical Services |  |  |  |  |  |
| Limited Communications |  |  |  |  |  |
| *Additional Hazards identified by team??* |  |  |  |  |  |

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| ***Include notes on local conditions:*** | *What is the probability of: 1. an occurrence with serious consequences (levels I, II, or III), or 2. many/frequent incidents with level IV consequences during a single session or site visit?* | ***Notes on local issues, important safeguards to use, and scenarios to be assessed*** |
| Potential Hazard | Probability of Occurrence | **Comments****Issues-Mitigators-Scenarios** |
| **H** | **M** | **L** | **NA** |
| **Natural Environment** | *Criteria, Limits, Critical Factors to consider:* |  |
| Temperature Extremes (Hot / Cold) *≅ Temperature (> 30ºC, < 5ºC), Wind, Humidity* | *Length of Exposure , Time of Year/Day* |
| Uneven / Slippery Walking Surfaces *≅ Slip, trip, or fall that results in injury*  | *Cumulative Fatigue, Weather* |
| Sharp Objects–rocks, coral, vegetation *≅ Contact or fall results in penetrating wound/scratched cornea* | *Visibility, Fatigue, Exact Route* |
| Heights / Drop-offs (inc. high elevation) *≅ Fall that results in free-fall drop of more than 2 m* | *Slope/softness of “landing” zone* |
| Falling Objects/Obstructions *≅ Spontaneous/Participant-caused, capable of causing serious injury* | *Time of year, freshness of outcrop* |
| Tight Spaces / Narrow Openings / Overhangs *≅ Results in impact or crushing injury, or panic/distress*  | *Visibility, crowding,*  |
| Darkness / Low Light *≅ Contributing factor to other hazards that result in injury* | *Visibility, Fatigue, Weather* |
| Strong Sunlight (inc. sunburn) *≅ Serious sunburn, “snow”blindness, contributing factor to fatigue* | *Exposure length, surface albedo* |
| Foul Weather Considerations– wind, rain, snow, lightning, flash flood *≅ Local, upstream* | *Before & During activity* |
| Fire Hazard *≅ Hot vehicle exhaust system/discarded cigarette causes fire, traps group, endangers ecosystem* | *Access to site during fire bans* |
| Smoke / Dust / Fog *≅ Causes eye/throat/nose injury, contributing factor to other hazards* | *Time of year/day* |
| Toxic /Allergic Sources(vegetation, pollen) *≅ Causes acute reaction, contributing factor to other hazards* | *Time of year, EMS access* |
| Animals– Insects, Reptiles, Mammals, Other *≅ Causes trauma, envenomation, allergic reaction* | *Time of year, local experience* |
| Water/Current *≅ Fall results in submersion, Strenuous exertion in water triggers pre-existing medical condition* | *Time of day/year, Hypothermia* |
| **Man-Made Environment (for Pedestrians)** |  |  |  |  |  |
| Vehicular Traffic– Roads, Railroads *≅ Vehicle impacts participant, Group activity causes traffic hazard* | *Time of day/year* |
| Bridges *≅ Vehicle impacts participant, Group activity causes traffic hazard* | *Sidewalk, width of shoulder* |
| Fences *≅ If gate not available, crossing results in fall, impact, lacerations, penetrating wound* | *Property owner interactions* |
| Utility Lines *≅ Approach route or portions of outcrop allow contact with power lines, resulting in injury* | *Alternate routes* |
| Local Inhabitants (inc. hunters) *≅ Group provokes hazardous reaction from locals; distraction factor* | *Time of year/day* |
| Crowds / Spectators *≅ Group provokes hazardous reaction from locals; distraction factor* | *Time of year/day* |
| **Transportation (Auto, Boat, Air)** |  |  |  |  |  |
| Vehicle Condition *≅ Primary or contributing factor to accident/collision* | *Rental company, local experience* |
| Driver Qualification / Experience for location *≅ Primary or contributing factor to accident/collision* | *Availability of local drivers* |
| Route Conditions – Rough (inc. flat tires) *≅ Rough enough to be contributing factor to accident/collision* | *Type of vehicle used, local drivers* |
| Route Conditions – Congestion *≅ Enough to be contributing factor to accident, esp. around airport and major cities* | *Time of day, Route selection* |
| Route Conditions – Winding, limited sight line *≅ Enough to be contributing factor to accident/collision* | *Time of day, Route selection* |
| Pedestrians *≅ Sufficiently numerous or common to be contributing factor to accident* | *Time of day, Route selection* |
| Intersections / Railroad Crossings *≅ Hazardous/Unguarded/Confusing location contributes to accident* | *Time of day, Route selection* |
| **Human Factors / Participant Activities** |  |  |  |  |  |
| Hiking / Walking *≅ Intensity, length, duration, cumulative exertion sufficient to trigger illness, contribute to injury* | *Time of day/year, Weather* |
| Climbing *≅ Requires use of both hands to ascend/descend more than 2 m vertical, exposure to fall & injury* | *Weather, outcrop condition* |
| Lifting / Carrying *≅ Improper technique/overloaded backpacks results in injury* | *Gear selection, individual fitness* |
| Swimming / Snorkeling / SCUBA / Boating *≅ Improper technique/conditioning/equipment causes injury* | *Pre-trip screening, PFD policy* |
| Digging / Trenching *≅ Digging causes injury to self or other participant, Trench collapse causes injury* | *OSHA rules for deep trenches* |
| Use of Tools (inc. chipping) *≅ Improper technique/equipment causes injury to self or other participant* | *Required PPE* |
| Extended Immobility *≅ Enough to be contributing factor to accident, trigger pre-existing medical condition* | *Agenda/Travel planning* |
| Fatigue / Dehydration *≅ Enough to be contributing factor to accident, trigger pre-existing medical condition* | *Agenda, Time of year/day* |
| Food Handling *≅ Improper technique/equipment contributes to food-borne illness* | *Training, Sanitation facilities* |
| Language / Culture Differences *≅ Contributing factor to accident* | *Pre-trip participant information* |
| Pre-Existing Physical / Medical Needs *≅ Contributing factor to accident, acute episode of illness* | *Pre-trip participant information* |
| Separation of Individuals from Group *≅ Contributing factor to accident* | *Safety briefings, Read backs* |
| Lack of Rest Stops / Facilities *≅ Contributing factor to fatigue, accident* | *Pre-trip planning* |
| Individual Behaviors / Risk Acceptance *≅ Contributing factor to accident* | *Management letter, briefings* |
| Equipment Failure *≅ Sufficiently critical and serious to be contributing factor to accident* | *Pre-trip planning, inspections* |
| **Other Factors** |  |  |  |  |  |
| Limited/Remote Medical Services *≅ Consequence of injury/illness escalates due to remoteness* | *Pre-trip plan, communications* |
| Limited Communications *≅ Consequence of injury/illness escalates due to delayed access to EMS assistance* | *Pre-trip planning, field checks* |
| *Additional Hazards identified by team?? ≅ Significantly different, likely to have serrious consequences*  | *Consult local experts, experience* |