

SOUTH-CENTRAL AND SOUTHERN CALIFORNIA STEELHEAD ESU RECOVERY PLAN

THREATS ASSESSMENT

Explanation for Workbook Sheet 2 - Rating Stresses and Identifying Sources of Stress

- Please specify the County, stream/river, and stream reach for which you are providing information. Be as specific as possible.
- This sheet is organized by steelhead life history stage.
- **Stresses** are altered indicators (and thus, degraded Key Attributes) that result directly from anthropogenic sources.
- Severity and Scope of the stressors should be rated as Low, Medium, High, and Very High. Scope refers to the geographical extent of the stressor in the watershed (or reach) that you are describing.

Severity: *Low* = The stressor is likely to only slightly impair the life history stage over some portion of the stage's occurrence in the watershed (or reach).

Medium = The stressor is likely to moderately degrade the life history stage over some portion of the stage's occurrence in the watershed (or reach).

High = The stressor is likely to significantly degrade the life history stage over some portion of the stage's occurrence in the watershed (or reach).

Very High = The stressor is likely to extirpate the life history stage over some portion of the stage's occurrence in the watershed (or reach).

Scope: *Low* = The stressor is likely to be very localized in its scope and affect the life history stage at a limited portion of the stage's location in the watershed (or reach).

Medium = The stressor is likely to be localized in its scope and affect the life history stage at some of the stage's location in the watershed (or reach).

High = The stressor is likely to be widespread in its scope and affect the life history stage at many of its locations in the watershed (or reach).

Very High = The stressor is likely to be widespread or pervasive in its scope and affect the life history stage throughout the stage's occurrences in the watershed (or reach).

- Please provide the reference or observation source upon which you are basing your rankings.
- **Sources of Stress** include the following categories. Please indicate which category you are identifying on the Sheet:

Residential and Commercial Development:

- Housing and urban development
- Commercial and industrial development
- Tourism and recreational facilities

Agricultural Development:

- Livestock farming and ranching
- Orchard and row crops

Energy Production and Mining:

- Oil and gas drilling
- Mining and quarrying

Transportation and Service Corridors:

- Roads and railroads (culverts, crossings, and bridges)
- Utility and service line corridors (gas pipelines, water pipelines, etc.)

Biological Resource Use:

- Illegal collecting
- Poaching
- Unauthorized angling
- Non-native species stocking/harvesting

Human Intrusions and Disturbance:

- Recreational activities (e.g., off-road recreational vehicles, campgrounds, etc.)
- Artificial lagoon breaching

Water Supply and Flood Control:

- Dams

- Diversions
- Groundwater extraction
- Levees and channelization
- Artificial channel/facilities maintenance (dredging, vegetation control)

Invasive and other problem species:

- Non-native species (plants, animals, etc.)
- Problematic native species (e.g., algae blooms)
- Introduced genetically modified species (e.g., hatchery fish)

Pollution:

- Domestic sewage and urban wastewater
- Industrial effluents
- Agricultural effluents
- Solid waste
- Urban non-point run-off (storm drain runoff, roadway pollution from oils, antifreeze, tire dust, etc.)

Forest Fires:

- Natural
- Anthropogenic (controlled burns, fire suppression, etc.)
- Fire frequency

Geologic Processes:

- Debris flows
- Landslides

Climate Change:

- Drought (anthropogenic)
- Temperature extremes
- Storms and flooding
- Habitat shifts and alteration
- Ocean conditions

- Sources of Stress are rated in terms of their Contribution and Irreversibility. *Contribution* is the expected contribution of the source, acting alone, to the full expression of a stress. *Irreversibility* refers to the degree to which the effects of a source of stress can be restored:

Contribution: *Low* = The source is a low contributor of the particular stress.

Medium = The source is a moderate contributor of the particular stress.

High = The source is a large contributor of the particular stress.

Very High = The source is a very large contributor of the particular stress.

Irreversibility:

Low = The source produces a stress that is easily reversible at relatively low cost (e.g., ORVs driving in stream).

Medium = The source produces a stress that is reversible with a reasonable commitment of resources (e.g., sediment controls in uplands converted to agriculture or restoration of riparian corridor width).

High = The source produces a stress that is reversible, but not practically affordable (e.g., conversion of uplands to agriculture).

Very High = The source produces a stress that is not reversible (e.g., residential/commercial development of uplands).

- Again, please provide the reference or observation source upon which you are basing your rankings.