

A good conceptual model:

- Presents a picture of the situation at the project site.
- Shows major pressures and root causes.
- Shows assumed relationships between factors (indirect threats, opportunities, pressures, and stressors) affecting your components.
- Presents only relevant factors.
- Is based on sound data and information.
- Results from a team effort.

## ILIO Very High Pressures

The Island Local Integrating Organization (ILIO) Technical Committee will develop conceptual models for the two very high pressures for Island watershed:

**Runoff from the built environment (Runoff from Residential & Commercial Lands)**  
**Marine shoreline infrastructure**

## ILIO Ecosystem Components (what we trying to preserve or recover)

The FFY 2016-2018 ecosystem components were selected to narrow our focus for the upcoming biennium to be most effective at addressing our top priorities in this two- year period and to reflect Island watershed priorities and PSP targets and strategic initiatives (shellfish, habitat, and stormwater).

Pocket Estuaries & Estuarine Wetlands (ESTUARIES)  
Freshwater Quality  
Subaquatic Vegetation (EELGRASS)  
Marine Water Quality  
Forage Fish (HERRING)  
Shellfish (LOCAL FOODS & SHELLFISH)  
Salmon (CHINOOK)  
Shoreline Armoring

## Key stressors and the associated source (i.e. pressure) to the ecosystem components.

The Puget Sound Pressure Assessment (2014) scored stressors using intrinsic vulnerability criteria to identified very high and high stressors for Island watershed. PSPA is a model-based, criteria-driven evaluation of the vulnerability of endpoints to stressors. For the Island watershed, the following stressors were identified through this assessment:

Very high stressors included:

- Conversion of land cover for residential, commercial, and industrial use
- Large spills
- Non-point source, persistent toxic chemicals in aquatic systems
- Conversion of land cover for transportation and utilities

High stressors included:

- Non-point source conventional water pollutants
- Non-point source, non-persistent toxic chemicals in aquatic systems
- Conversion of land cover for natural resource production
- Point source, persistent toxic chemicals in aquatic systems



**Strategy** – A strategy is a bundle of actions that, when combined, are intended to achieve a common goal. Strategies are intended to mitigate pressures or their underlying conditions and root causes, restore ecosystems or species populations (components and Vital Signs), or provide capacity to achieve goals. Strategies include one or more actions (capital projects, programs, etc.) and are designed to achieve specific outcomes, objectives, and goals. They are usually developed on a long-term time horizon such as 5-50 years, with associated actions (see more below) addressing nearer-term objectives.

**Action**– A specific action focused on delivery of a specific outcome or output associated with a desired result. Actions include capital projects (e.g. restoration and acquisition), program development or implementation, education, research, etc.

## Step 1-list threats

List the major factors (indirect threats and opportunities) that are reasons why the pressure continues to persist. These factors may be economic, political, cultural, institutional or technical.

- Why is this pressure source occurring?
- Who is involved directly or indirectly?
- Why are they doing it?
- What authorities are in place?
- What information is available or missing?
- What are the motivations?
- Who is positively or adversely affected?

## Step 2 – develop potential strategies by pressure

Describe the intervention points and the strategy that has been identified. These may be existing or new intervention points and strategies. Highlight intervention points that need to be addressed outside of the LIO, including at the regional level.

## Step 3-prioritize strategies

Identify which strategies (not actions) would be most effective in achieving recovery. Assign the following scores to each rating within the impact, feasibility and readiness for implementation criteria: low-1, medium-2, high-3, very high-4.

### Strategy Prioritization Criteria:

1. **Potential Impact** – Degree to which the strategy (if implemented) will lead to desired changes in your LIO, via pressure reduction and/or component and Vital Sign improvement
  - **Very High** – The strategy is likely to completely or significantly mitigate the pressure or restore the components and Vital Signs
  - **High** – The strategy is likely to completely or significantly mitigate the pressure over the long-term, and/or restore the components and Vital Signs
  - **Medium** – The strategy could possibly help mitigate the pressure and/or restore the components and Vital Signs but there is uncertainty about the potential impact.
  - **Low** – The strategy will probably not contribute to meaningful mitigation of the pressure and/or restoration of the components and Vital Signs
2. **Feasibility** – Degree to which a project team could implement the strategy within likely time, financial, technical and other constraints
  - **Very High** – The strategy is both technically and financially feasible at this time
  - **High** – The strategy is technically feasible, but may require some additional financial resources.
  - **Medium** – The strategy is either technically OR financially difficult without substantial additional resources.
  - **Low** – The strategy is not technically, OR financially feasible at this time
3. **Readiness for Implementation** – Degree to which the social and/or political context is ripe for successful implementation of the strategy
  - **Very High** – There is sufficient social and political support to ensure successful implementation of the strategy in the next 2-6 years
  - **High** – There is substantial social and political support for the strategy but some investment of resources would be needed to ensure increased social OR political support and successful implementation of the strategy in the next 2-6 years

## ILIO Conceptual Model Development

- **Medium** – There is currently limited social and/or political support for the strategy and increased support would require substantial investment of resources
- **Low** – Building social and/or political support for the strategy would be very difficult, even with substantial resources.