1. Identify key indicators or parameters necessary to report on the health of the Bay Delta System. These parameters can be organized according into the following groups:
   1. Human health
   2. Human well-being
   3. Species and food web
   4. Habitat
   5. Water quantity
   6. Water quality
2. Conduct comprehensive data inventory of monitoring programs following the below task list.

* Build a monitoring gaps database to determine where existing efforts are insufficient to fully describe the key indicators or parameters. Monitoring gaps are defined as gaps in data collection, gaps in geographic or temporal coverage, gaps in data management, analysis or reporting. The gaps can be grouped as follows:
  1. Key indicator for which data are currently reported
     1. Data are considered adequate or sufficient
     2. Potential improvements are still possible
  2. Key indicator for which data re current reported, but data are lacking or of poor quality for some individual indicators
  3. Key indicator for which data are currently NOT reported

1. From this database, consult with experts and stakeholders to build a priority list of monitoring gaps. Consult conceptual models of the system to understand where the largest or most important gaps.
2. Estimate the costs necessary to fill the priority monitoring gaps

**Data Inventory Task List:**

|  |  |
| --- | --- |
| **Inventory Fields** | **Explanation Description** |
| Lead Agency | Who conducts or oversees the monitoring? |
| Monitoring Program Name | What is the name given to the monitoring program? |
| Main Objective/ Questions | What is the monitoring designed to answer or provide? |
| Type of Monitoring or Science Support Study | What type of monitoring is it? |
| Media and Component Sampled | What media is sampled (air, marine water, freshwater) and what component of the media is sampled (water, birds, shellfish, fish, etc.) |
| Metric | What specifically is measured (pesticides in ospreys, toxics in mussels, PCBs in adult salmon, etc.)? |
| Short Description | Give a short description of the program |
| Legal Mandate / Requirement (Y/N) | Is there a legal mandate or other requirement for doing this monitoring? |
| Ecosystem Component | What ecosystem or ecosystems does this monitoring program address? |
| Sampling Frequency | How often are samples collected? |
| Number of years | How many years has the program been in existence and collecting data? |
| Start year | What year did the monitoring program start collecting data? |
| Approx # of sites | How many sites are monitored? Please note if there is a range of sites. |
| Action Area | Where does sampling occur? What is the geographic extent? |
| Estimated (direct, annual) costs | How much does this monitoring program cost to operate in terms of direct, annual costs? |
| Source/Type of Funds | What is the source and type of funds for the program? (eg, EPA general funds, state general funds, NOAA grants, permit fees, etc.) |
| Significant Program Gaps? | Are there signficant, known gaps in the monitoring program? If so, please describe. |
| Estimated Costs to Fill Gaps | What is the estimated cost to fill the gaps? |
| Contact Name | Monitoring program manager name |
| Contact Email |  |
| Contact Phone |  |
| Websites | If there is a website describing the program and/or providing results, please note here. |
| Partners | Are there partners who help to carry out the monitoring program? If so, please provide organization names. |

Resources

* Puget Sound Ecosystem Monitoring [Program](https://sites.google.com/a/psemp.org/psemp/monitoring-inventories-gap-analyses)
* [Monitoring Gaps Summary](https://docs.google.com/viewer?a=v&pid=sites&srcid=cHNlbXAub3JnfHBzZW1wfGd4OjEzYjY0ODY0MDQyZWEzYjU)