## D-Analyze Data
### 2-Modeling

# D.2.b – Optimization / Prioritization

**Element Description**  Capabilities for development and application of prioritization and optimization techniques.

| Benchmark Level 0 | Benchmark Level 1 | Benchmark Level 2 | Benchmark Level 3 | Benchmark Level 4 |
|---|---|---|---|---|
| Asset investment prioritization is not conducted. | Investment prioritization / optimization methodology exists for individual assets. This methodology does not use information on work history and planned work. | Investment prioritization / optimization methodology exists for individual assets and uses information on work history and planned work. | Results from individual asset investment optimizations are used to discuss investment tradeoffs across assets, however there is no quantitative approach to cross-asset optimization. | A quantitative approach to cross-asset resource optimization is in use. |
| Current: ☐  Desired: ☐ | Current: ☐  Desired: ☐ | Current: ☐  Desired: ☐ | Current: ☐  Desired: ☐ | Current: ☐  Desired: ☐ |
| ☐ Develop treatment selection criteria, associated improvement benefit and cost models, and methodology for investment optimization and prioritization. | ☐ Improve treatment selection criteria, benefit and cost models, and prioritization through analysis of historical data and expert opinion. | ☐ Improve treatment selection, benefit and cost models, and prioritization with non-asset data (e.g. utilization / environmental data). | ☐ Develop method to tie asset investments to overarching "benefit" or "value" against agency objectives, supporting a quantitative cross-asset resource optimization approach. | |
| ☐ Document key factors input as constraints to optimization analysis (e.g. performance constraints, available funding). Identify values / data sources. | ☐ Identify data sources for planned work and define method for incorporating this data into existing investment analysis. | ☐ Produce asset specific investment optimization / prioritization analysis results in a format useful in an overarching investment optimization and prioritization decision process. | ☐ Develop analytical tools to identify where discrepancies are identified between actual and anticipated performance of asset investments and improvements. | |
| ☐ Other: | ☐ Other: | ☐ Other: | ☐ Other: | |

**Assessment Notes:**

**Improvement Notes:**