

Index Watersheds: Tracking Change Within and Across the Mat-Su Basin

**MAT-SU BASIN SALMON HABITAT PARTNERSHIP:
SCIENCE AND DATA COMMITTEE**

OBJECTIVE 1.5 INDEX WATERSHEDS

By 2016, a minimum of three index watersheds are locations for long-term, interdisciplinary monitoring needed to **understand the relationships between salmon, habitat health, and changes induced by human activities and climate change.**

STRATEGIC ACTION 1.5.1 SELECT INDEX WATERSHED

The Science and Data Committee will work with partner organizations to identify index watersheds based on multiple criteria:

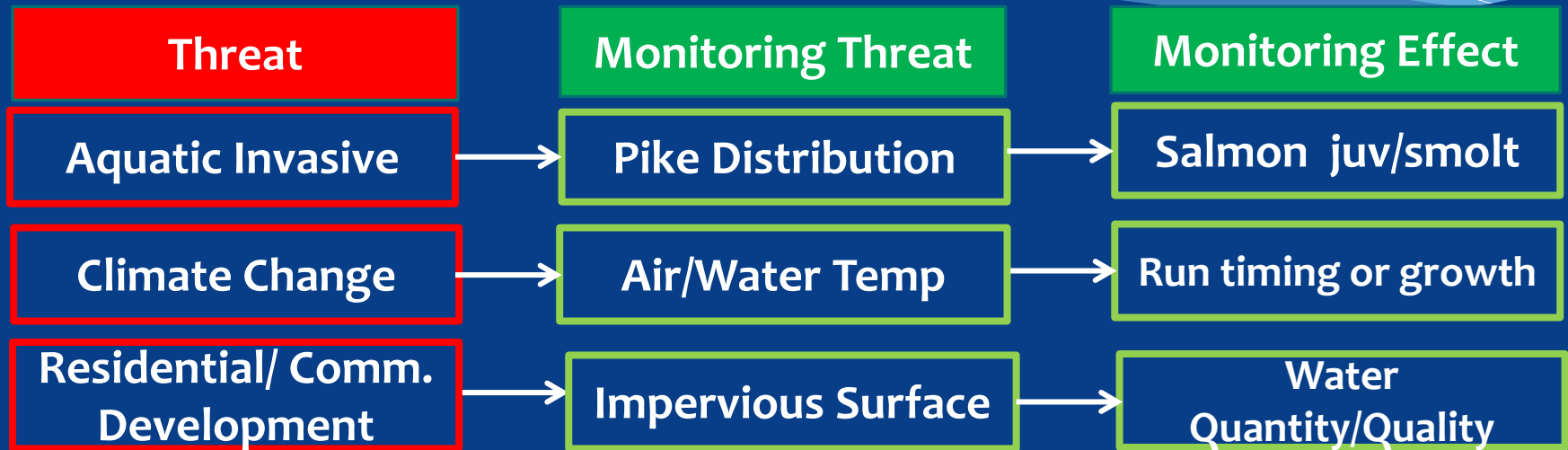
- ❖ relative importance of the watershed to salmon;
- ❖ how representative the watershed is to other Mat-Su Basin streams;
- ❖ how vulnerable the watershed is to human activities and climate change;
- ❖ and the type and amount of scientific data previously collected within the watershed.

STRATEGIC ACTION 1.5.2 STUDIES IN INDEX WATERSHEDS

The Science and Data Committee will work with partner organizations to

- ❖ develop and implement a study plan for each index watershed.

MONITORING THREATS AND EFFECTS



POTENTIAL WATERSHEDS

Threat

Monitoring Threat

Monitoring Effect

**Residential/ Comm.
Development**

Impervious Surface

**Water
Quantity/Quality**

Cottonwood Creek
Wasilla Creek
Bodenberg Creek
Meadow/Fish Creek

Monitoring Approach

- ❖ Change in Threat or Effect Over Time
 - ❖ Type and Amount of Previous Data
- ❖ Change in Threat or Effect Over Space
 - ❖ Comparisons with Reference Site
 - ❖ Similar Physical Classification
 - ❖ Similar Stream Size
 - ❖ Minimize Differences in Water Quality
- ❖ Change in Treat or Effect Over Time and Space

NEXT STEPS

- ❖ IDENTIFY POTENTIAL WATERSHEDS
- ❖ EVALUATE BY STRATEGIC ACTION PLAN CRITERIA
 - ❖ IMPORTANCE
 - ❖ RERESPRESENTATIVENESS
 - ❖ VULNERABILITY
 - ❖ AMOUNT AND TYPE OF PREVIOUS DATA
- ❖ MAKE RECOMMENDATIONS TO THE STEERING COMMITTEE