15 Years of Water Quality Monitoring in Southcentral Alaska

Presentation at the 7th National Water Quality Monitoring Conference

Rachel Lord
April 29, 2010
Where we monitor: Alaska
Alaska

- 2,393 miles from Denver as the crow flies or 3,220 miles by car
- ~40% of all surface water outflow for the USA
- 714,000 miles of rivers and streams, with over 15,000 anadromous streams
- Over 3 million lakes and ponds
- Home to 686,000 people; ~60% of these people live in southcentral Alaska
“The majority of Alaska’s waters are not subject to man-caused stressors and are considered unimpaired. DEC expects that 99.9% of Alaska’s waters can be classified as Category 1; however, no specific waters are identified in this category.”

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Waterbodies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Majority of Alaskan waters</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>303</td>
</tr>
<tr>
<td>4a</td>
<td>32</td>
</tr>
<tr>
<td>4b</td>
<td>4</td>
</tr>
<tr>
<td>4c</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>31</td>
</tr>
</tbody>
</table>
Cook Inletkeeper

To protect Alaska’s Cook Inlet watershed and the life it sustains
Cook Inlet Watershed

Drains 39,000 square miles – larger than the state of Maine!

92% of the watershed is public land, including 7 state Critical Habitat Areas

1996: established the 1st citizen-based water quality monitoring program in Alaska
Citizens’ Environmental Monitoring Program Partnership

- Inventory baseline water quality status in the Cook Inlet basin

- Detect and report significant changes and track water quality trends

- Raise public awareness of the importance of water quality through hands on involvement
CEMP Partnership

CEMP Monitoring Partners:
Resurrection Bay Conservation Alliance, Anchorage Waterways Council, Mat-Su Lake Monitoring, Wasilla SWCD, Upper Susitna SWCD

CEMP Outreach Partners:
Homer SWCD, Kenai Watershed Forum

CEMP Technical Partners:
UAA Environment and Natural Resources Institute (ENRI)
Monitoring with the Partnership

Regionally consistent:

- Goals and objectives
- Data quality objectives
- Quality control & assurance
- Opportunities for networking & support
Monitoring with the Partnership

Volunteers:
820 monitors trained since 1997
19,193 hours donated by volunteers – an average of 1,600 hours/year!
$345,474 of in-kind support

Monitoring sites:
6,909 site visits
211 lake, estuarine, and stream sites
15+ sites ready for baseline analysis in the next 5 years
Monitoring with the Partnership
15 Years Experience…

Lessons Learned:

- The benefits of a Partnership in tough financial times
- Refined monitoring strategies
- Importance of data integrity for long-term sustainability
- Region-wide support for CEMP
- Pitfalls to avoid, new ways to avoid old mistakes
Baseline Water Quality Library

Baseline water quality criteria:
> 80 site visits within 5 years
At least 40 during the summer
At least 5 per month year-round

Bioassessment
Continuous temperature
Habitat assessment
Invasive plant assessment
GIS Analysis
Future monitoring strategy
GIS Analysis
In the works…

• Continue to work together for funding opportunities
• Develop a complete regional monitoring strategy
• Further develop analysis & baseline library templates
• Independent technical audit
• Create training and education modules for regional use
Thank You!

Rachel Lord

www.inletkeeper.org