Journey of the Roza Sunnyside Board of Joint Control

Elaine S. Brouillard, WQ Specialist
Matt Morgan, WQ Technician
RSBOJC Water Quality Lab
Yakima River TMDL

RSBOJC Wasteway Results
1996 Yakima River placed on 303(d) list of impairments from:
  ◦ Suspended Sediment (Total Suspended Solids, TSS)
  ◦ Turbidity (Nephelometric units, NTU)
  ◦ DDT (dichlorodiphenyltrichloroethane, banned 1972)

1993 Fish in Yakima River contained the highest DDT concentrations in USA
[Rinella et al, 1993]
Ecology TMDL Goals

- 20 year span with 5 year target intervals.
- Desired Result: DDT reduction via sediment reduction for human and fish health
# TMDL Drain Goals

<table>
<thead>
<tr>
<th>Granger Drain, Sulphur &amp; Spring</th>
<th>90% Turbidity (NTU)</th>
<th>TSS Mg/L</th>
<th>Total DDT Ng/L</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>25</td>
<td>56</td>
<td><strong>7</strong> Based on a regression curve</td>
</tr>
<tr>
<td>2007</td>
<td>25</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>25</td>
<td>7</td>
<td><strong>1</strong></td>
</tr>
<tr>
<td>2017</td>
<td>25</td>
<td></td>
<td>human health criteria in fish &amp; water</td>
</tr>
</tbody>
</table>

Ecology Publication 97–321, July 1997
### 90% Irrigation Values

<table>
<thead>
<tr>
<th>Sample Site</th>
<th>1997</th>
<th>2002</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Granger Drain</td>
<td>228 NTU</td>
<td>60 NTU</td>
<td>48 NTU</td>
</tr>
<tr>
<td></td>
<td>562 TSS</td>
<td>101 TSS</td>
<td>23 TSS</td>
</tr>
<tr>
<td>Sulphur Creek Wasteway</td>
<td>81 NTU</td>
<td>22 NTU</td>
<td>20 NTU</td>
</tr>
<tr>
<td></td>
<td>209 TSS</td>
<td>35 TSS</td>
<td>19 TSS</td>
</tr>
<tr>
<td>Spring Creek Wasteway</td>
<td>49 NTU</td>
<td>26 NTU</td>
<td>16 NTU</td>
</tr>
<tr>
<td></td>
<td>114 TSS</td>
<td>33 TSS</td>
<td>9 TSS</td>
</tr>
<tr>
<td><strong>Reductions:</strong></td>
<td><strong>71% – 82%</strong></td>
<td><strong>91% – 96%</strong></td>
<td></td>
</tr>
</tbody>
</table>
2007 Surface Water Monitoring for Pesticides in Salmonid–Bearing Streams—Lower Yakima—

A cooperative study of the Washington Department of Agriculture and Washington Department of Ecology

Dan Dugger
Washington Department of Ecology
Yakima, WA
2009 WADOH removed 1993 Fish Consumption Advisory due to DDT
EPA Section 319 Nonpoint Source Success Stories

- http://www.epa.gov/owow/nps/Success319/state/wa_yakima.htm
Policy

Creation of the Roza Sunnyside Board of Joint Control
RSBOJC: 1996 Partnership

- Roza Sunnyside Board of Joint Control (RSBOJC) created to address Water Supply issues
  - Roza Irrigation District (72,000 Acres)
  - Sunnyside Division (99,244 Acres)
    - Sunnyside Valley Irrigation District
    - Grandview Irrigation District
    - Benton Irrigation District
    - Konowac Ditch Company
    - Piety Flats Ditch Company
RSBOJC Response to TMDL

- Yakima River TMDL: Voluntarily adopted the lead role in Water Quality issues

- RSBOJC Water Quality Goals:
  - high landowner buy-in
  - Increase grower profits
  - Involve Conservation Districts and Universities
  - Operate accredited WQ lab
  - Create and adopt a comprehensive WQ policy
Board invited landowners to meetings

Managers & Board went to vendor sponsored winter meetings

Board and Managers teamed with WSU for soil education programs

"Keep soil on the farm and not in the river"
RSBOJC Policies

- Satisfy TMDL goal of all drains and tributaries to Yakima River with 90% turbidity target of 25 NTU at their discharge points.

- On-Farm Run-Off Program, 1999

- On-Farm Loan Program, 2000

- Established cooperative programs with Conservation Districts to assist irrigators

More landowners began practicing BMPs.
On-Farm Run-Off Program

- Violation if the sum of samples exceeds 300 NTU from 3 or less WQ samples
- Notified to implement appropriate corrective measures
- Follow-up sample is above 150 NTU, required to submit Short and Long Term Plans
- Must implement in 10 days
## Start small, be consistent

<table>
<thead>
<tr>
<th>Date</th>
<th>NTU Violation Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>2000</td>
</tr>
<tr>
<td>2000</td>
<td>1000</td>
</tr>
<tr>
<td>2001</td>
<td>500</td>
</tr>
<tr>
<td>2002 – 2009</td>
<td>400</td>
</tr>
<tr>
<td>2010 – 2011</td>
<td>300</td>
</tr>
</tbody>
</table>
The Carrot & Stick

- Compliance after implementing BMPs, clean slate, honor their improvements

- Non-Compliance. Reduce water delivery from 268 to 166 gpm per 40 acres until compliance is obtained.

- If continued violation, water delivery is further reduced to 112 gpm per 40 acres.
On–Farm Loan Program

- District administers Ecology loan program to the landowner
- 1% loan for upgrade from rill irrigation to sprinkler or drip
Board sets Policies ≈ BMPs

- No livestock in waterways
- 20' No-till zone between crop & drain
- On-Farm Run-Off Policy, 300 NTU violation
- No illicit dumping or connections to waterways
Dairymen and farmers would support one another

Unknown regulation is an anxiety

Self Regulation will decrease litigation, fines, upcoming regulations

Develop personal contacts
WQ Policies & BMPs Work

1997 Sulphur Creek Wasteway

2000 Sulphur Creek Wasteway
Ecology awards Roza and Sunnyside Valley Districts the Environmental Excellence Award, 1998 & 2004

Mangers & Board members accept on behalf of the landowners
Elaine Brouillard

RSBOJC Water Quality Lab
Roza–Sunnyside Board of Joint Control

brouillarde@svid.org
509–837–6980