What is a Water Bank?

Water banking is an institutionalized process specifically designed to facilitate the transfer of developed water to new uses.

A water bank is an intermediary. It:

- Seeks to bring together buyers and sellers
- Is an institutionalized process with known procedures and with some kind of public sanction for its activities
Banking is facilitated by an institution that operates in the role of broker, clearinghouse, or market-maker

- A clearinghouse serves mainly as a repository for bid and offer information
- Brokers connect or solicit buyers and sellers to create sales
- A market-maker attempts to ensure there are equal buyers to sellers in a market

The choice of the water banking institution is an important determinant of the water banking structure

- Ecology (Yakima Water Exchange, Columbia River Water Supply Development)
- Local Government (none yet)
- NGO non-profit (Walla Walla, Dungeness)
- Private party (Kittitas mitigation banks)
Each bank or exchange includes and serves at least one “cap and trade” area within its service area

- WRIA 18 – Dungeness River Basin water management rule
- WRIA 32 – Walla Walla Gravel Aquifer –rule closure
- WRIA 37, 38, and 39 – Upper Kittitas and Yakima River Basin
- WRIA 63 – Columbia River mainstem rule
## Most Water Banks Serve Residential Uses

<table>
<thead>
<tr>
<th></th>
<th>Walla Walla</th>
<th>Yakima/Kittitas</th>
<th>Dungeness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ac-ft in TWRP</td>
<td>15</td>
<td>&gt;1000</td>
<td>12 in first 7 months</td>
</tr>
<tr>
<td>Transactions</td>
<td>3</td>
<td>285 in 4 years</td>
<td>13</td>
</tr>
<tr>
<td># Homes</td>
<td>3</td>
<td>1731</td>
<td>13</td>
</tr>
<tr>
<td># Banks</td>
<td>1</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>Cost/home</td>
<td>$2000</td>
<td>$500* - $14,000</td>
<td>$1000-3000</td>
</tr>
</tbody>
</table>
Why mitigation banks for residential use?

- Predictable demand
- Domestic use requires high reliability only delivered through the most senior rights
- Amenable to a buy big, sell small strategy
# Water Banking and Agriculture: Yakima Baseline

<table>
<thead>
<tr>
<th></th>
<th>Water Traded (acre-feet)</th>
<th>Annual Net Farm Earnings ($mil)</th>
<th>Loss from Drought</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Inter-District</td>
<td>Intra-District</td>
<td>Total</td>
</tr>
<tr>
<td>Avg. Non-Drought</td>
<td>Zero</td>
<td>Zero</td>
<td>$280</td>
</tr>
<tr>
<td>Severe Drought</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Trading</td>
<td>Zero</td>
<td>Zero</td>
<td>$200</td>
</tr>
<tr>
<td>Baseline Trading</td>
<td>30,000</td>
<td>Zero</td>
<td>$220</td>
</tr>
<tr>
<td>Scenario</td>
<td>Water Traded (acre-feet)</td>
<td>Annual Net Farm Earnings ($mil)</td>
<td>Loss from Drought</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------------</td>
<td>---------------------------------</td>
<td>------------------</td>
</tr>
<tr>
<td></td>
<td>Inter-District</td>
<td>Intra-District</td>
<td>Total</td>
</tr>
<tr>
<td>Core Scenario&lt;sup&gt;a&lt;/sup&gt;</td>
<td>50,000</td>
<td>130,000</td>
<td>$260</td>
</tr>
<tr>
<td>Alternative Scenarios&lt;sup&gt;b&lt;/sup&gt;</td>
<td>50,000 – 110,000</td>
<td>90,000 – 230,000</td>
<td>$260 – $270</td>
</tr>
</tbody>
</table>

<sup>a</sup> Buyers lease water only for crops with net farm earnings at least $150/AF; out-of-district sales no more than 10% of each district’s water supply for Roza, Kittitas, and Sunnyside.

<sup>b</sup> Tighter constraints: at least $300/AF; looser constraints: all crops can trade.
Case 1: Walla Walla

- WWT started and initially ran the bank under a 2-yr agreement with Ecology
- WWT purchased two groundwater rights and placed them in Ecology’s trust water rights program
- The bank sells mitigation credits to offset new (post WAC 173-532) groundwater uses for irrigating a residential lawn or garden ($2000/credit)
- Operation was transferred to the Walla Walla Partnership
- Accounting is managed by WWWMP and Ecology
- Each $2000 payment accepted by the WWWMP is held and will be applied to future acquisitions
- The target buyer is a permit-exempt groundwater use – a water right permit is not needed – the structure of the bank is quite simple
Case 2: Dungeness Water Exchange

- WWT started operations in Jan 2013
- DWE sells mitigation certificates based on
  - The domestic reserve in WAC 173-518
  - Acquired water rights
  - Other flow improvement projects
- Ecology approved a mitigation plan in December 2012 for WWT’s operation of the DWE
- Impacts (debits) and credits are based on GW model
- Monitoring, accounting, and tracking is provided by WWT with coordination and reporting by Clallam County and Ecology
- The target buyer is typically, but not exclusively, permit-exempt groundwater uses
WWT pursues funding and partners to complete projects that generate credits added to mainstem and tributary accounts.

WWT coordinates with Ecology and Clallam County.

Clallam County has integrated the mitigation certificate application process into its subdivision and building permit processes.

The rule specifies the primary tool we’ll use to determine the distribution of credits and debits of projects is an impact calculator.
Under Ecology's lease with the Port of Walla Walla, all or a portion of the leased water can be discontinued, with notice, for subsequent years.

To be eligible to receive water, an applicant must:

- File a water right application or a letter of interest (if an application is already on file)
- Accept a term permit with a maximum term of ten years, subject to annual review
- Propose to divert water from the Columbia River or adjacent ground water to lands within WRIA 32
- Agree to an annual cost-recovery fee of $105 per ac-ft (the amount OCR pays for the water it is leasing from the Port of Walla Walla)
- Propose a use that can be interrupted when the lease expires (e.g. not for houses)
Case 4: Yakima Water Exchange

- Started in 2001 as part of emergency drought response
- Water rights have been leased by Ecology when funds are available (2001 and 2005) or purchased when authorized (2007 “cabin-owner” program)
- Mitigation banks have also been established by water right owners and can be either “closed” or “open” to 3rd party sales
Drought response mitigation
  ✓ Periodic water shortages result in curtailment of post-1905 water rights and pro-rationing of 1905 water rights
  ✓ Emergency groundwater permits

Groundwater management for new uses:
  ✓ Upper Kittitas Water Budget Neutral projects since 2009 adoption of WAC 173-539A
    • Mitigated permits and permit-exempt uses

Surface water or groundwater permit mitigation for any new use
“Cabin Owner” and Upper Kittitas Domestic Mitigation Banks

Senior Water Rights
Pre-1905 priority date:
receives full water right

Proratable Water Rights
1905 priority date:
Receives ~ 1/3 to full water right depending on supply

Junior Water Rights
Post-1905 priority date:
Receives no water once prorationing occurs
<table>
<thead>
<tr>
<th>Kittitas-Yakima Mitigation Banks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Open to 3rd Party Sales</strong></td>
</tr>
<tr>
<td>WSDOT</td>
</tr>
<tr>
<td>Northland Resources</td>
</tr>
<tr>
<td>Ecology post-1905 Cabin Owners</td>
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Form and Function

Water Exchange

- Water right purchases, water right leases and conservation projects can put water "savings" into the exchange.
- New homes and subdivisions can get water from the exchange. So can business, industry and farms.
- Restoration for Rivers and Streams

- Agriculture
- Industry and Irrigation Efficiencies
- Water Reclamation Facility

Yards and gardens
New stand-alone homes
New subdivisions
Exchanges and banks tend to be built around and use available assets, tools, and institutions.

Funding and its “delivery” method matters.

Kittitas and Dungeness residential water banks are different than the Yakima and OCR agricultural water banks.

To understand structure, follow:

- Money
- Permission to use water
The Private Mitigation Bank Model

Conceptual Model - Yakima Mitigation Bank

- Seller
  - Financial Consideration
  - "Designation"
  - Water Right conveyed to TWRP for instream flow & mitigation for designated uses
  - Agreement relating to TWR management

- Buyer
  - Permit
  - Reservoir Secondary Permit
  - Out-of-Priority Use Consent
  - Storage Contract
  - TWR Management Agreement

- Ecology
  - TWRP

- WTWG
- USBR

TWRP = Trust Water Right Program
WTWG = Water Transfer Work Group
USBR = U.S. Bureau of Reclamation
The Public Mitigation Bank Model

Conceptual Model - Yakima Mitigation Bank

- Seller
- Permittee
- Lease
- Emergency Drought Permit
- Ecology
- TWRP
- WTWG
- USBR

Definitions:
- TWRP = Trust Water Right Program
- WTWG = Water Transfer Work Group
- USBR = U.S. Bureau of Reclamation
Dungeness Water Exchange
Flow Restoration and Groundwater Mitigation

**Restoration Funds**
- Watershed Implementation
- State Appropriation
- Salmon Recovery Board
- Federal Grants
- Puget Sound Partnership

**Public Sources**
- Watershed Implementation
- State Appropriation
- Salmon Recovery Board
- Federal Grants
- Puget Sound Partnership

**Private Sources**
- Individual Donations
- Corporate Sponsorships
- Tribal Donations

**Mitigation Funds**
- Builders/Homeowners
- Property Developers
- Other new GW Users

**Public Sources**
- City Payments
- PUD Payments
- County subsidies (?)

**Exchange Water Transactions**
- Minimum Diversion/Flow Agreements
- New Surface Storage (replace SW diversion)
- Reclaimed Water (replace SW diversion)
- Conserved Ag Water
- S/T & L/T Instream Leasing
- Instream SW Transfers
- GW Recharge
- Exempt Well Retirement
- GW Right Retirement

**Environmental Restoration**
(Dungeness River flows)

**Environmental Sustainability**

**Economic Development**
(new groundwater uses)
All four banks/exchanges rely on different mixes of local & state authority and non-profit participation.

Dungeness exchange incorporates private management of the domestic water reserve. Currently, the domestic water use mitigation certificates are subsidized.

Yakima banks include publicly managed and privately managed models.

OCR is a publicly capitalized water supply development program incorporating water banking as a means of developing area-wide water supply.
Questions