Chris Corbin

how water marketing can benefit the Clark Fork
Differentiation

business acumen

water ingenuity
Lotic turns blue into green.
BLUE represents historic water rights
GREEN means opportunities
action

study
Every other year,
About 10% of the basin’s stream miles are assessed.
In those streams,
Use support is:

<table>
<thead>
<tr>
<th>USE SUPPORT</th>
<th>2000</th>
<th>2004</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMPAIRED</td>
<td>80%</td>
<td>55%</td>
<td>77%</td>
</tr>
<tr>
<td>FULL SUPPORT</td>
<td>7%</td>
<td>14%</td>
<td>22%</td>
</tr>
<tr>
<td>INSUF DATA/NA</td>
<td>13%</td>
<td>26%</td>
<td>1%</td>
</tr>
</tbody>
</table>

Most frequently Impaired uses:
Cold water fishery, aquatic life, drinking, swimming

‘Causes’:
habitat & flow alteration
silt, metals, nutrients

‘Sources’:
Res extraction
Ag, Silviculture
Hydromodification
Construction

data: MDEQ Water Quality Assessment Database CWAIC Compiled by many UM students
Clark Fork Basin Population
by county 1979-2008
Clark Fork Basin
Wells 2010
(n= 85,423)

Reported well use

- Water well
  (from GWIC)

MBMG – Ground-Water Assessment Program
water marketing
water rights
“He hit him a couple clips with the shovel and a scuffle ensued.”

-Green Fields of Montana
property of the state for the use of its people . . .
right to use water
quenching thirst
quenching thirst
Hydropower
Recreation
Fish and Wildlife
Sale or Marketing
water marketing
buying and selling in a market
Water runs with the land?
1895
supply and demand
“The West is the fastest growing part of the country. It is also the driest.”

- National Geographic Magazine
supply: montana
regulatory supply
over appropriated

more valid water right claims than water is available . . .
Basin closure
mitigation
An applicant who determines the net depletion created by a proposed ground water appropriation will result in an adverse affect must submit a combined application including a hydrogeologic assessment, a mitigation plan or aquifer recharge plan if required, a permit application, and an application for change if necessary.
Instream flow mitigation plan

100 AC-FT

20 AC-FT
Aquifer Recharge

100 AC-FT

20 AC-FT
challenges to new appropriations
3 of 45 applications approved
3. Find $x$.

Here it is.
Markets adjust

1. Permit

2. Exempt

Photo courtesy of Alan English
Future water demand will be met or mitigated by existing water rights.
demand
water market demand
In Montana and other states, competing demands for water are driving water marketing discussions.

-Water Policy Interim Committee
Agricultural

Environmental

Urban & Industrial
16,000+ irrigated acres

USDA, Economic Research Service (2009)
Environmental
115 miles of blue and red ribbon streams
59 miles of dewatered streams
http://www.census.gov/
water market benefits
protects private property rights.
Voluntary
efficient allocation of resources
Inexpensive
water market challenges
challenges

dynamic

defined rights

surface and groundwater

simultaneous

interdependencies

heavy
water market concerns
RUSSIA'S CAPITAL SPECULATES REGARDING THE NEXT WAR MOVE

It is probable that the Vladivostok Fleet will threaten Togo from the North and the Advocates of Peace argue that this will furnish a basis for Peace proposals—the War Party is also elated by the Eastern News.

NOT ALL THE BALTIC FLEET ENTERED THE CHINA SEA

Vessels which passed Singapore were the following:
- Battleships: Suworow and Oleg

Under the commercial flag were the volunteer steamers Verona, Klef, Varneia, Tambott, Vladimir and Orpel, the Russian Navigation company's steamers Meteor, Jupiter and Mercury, the Atlantic company's fast steamers Koran and Kaital, the North Baltic company's steamer Klaaz Gotrichkoff, one salvage ship and 14 colliers. A French steamer arrived here today with a sailor belonging to the Ad.
“The grandiose irrigation and land development scheme was fueled by speculators from the East and Midwest, who invested big money to build the Big Ditch irrigation system.”

- A Brief History of Hamilton
DEVELOPMENT OF ARID LANDS

(Written for the Sunday Standard.)

The once universal belief that all the lands between the one hundredth degree of longitude and the coast range were unfit for agriculture is being rapidly dispelled and the boundaries of the desert are steadily contracting. In this great country of various altitudes and diversified climate, known as the semi-arid and arid domain, settlers seeking homes are discovering year by year lands upon which profitable farming can be maintained that hitherto were considered wholly unfit for agriculture. Senator McCumber of North Dakota in a recent speech in the United States Senate stated as follows: "There was a time but a few years ago, when I went to the territory of Dakota, when it was asserted that the lands west of the Red River valley could not be used; that there was not sufficient rain-fall; that it was too arid and the soil was not of that character from which one could raise crops. Since that time 60,000 people have settled in that land west of the Red River valley and the crops of any place in the United States have been raised there for the five years. I have stated that unnew systems of agriculture we are using and rapidly increasing the story supposed at one time to be that no crops could be raised it, but which to-day is furnishing and supporting many thousand...

PARIS GIBSON

We shall be surprised at the extent and the achievements of the farming industry in Montana. For the information recently said: "There are no bad acres. We have no useless areas. It is the application and the development which are the only limit, and that is the only limit."

There will be a great army of people coming this year. There will be a great army of people coming this year. There will be a great army of people coming this year. There will be a great army of people coming this year.
Montana Water Code
price fixing
priced out of market
price is the first indicator of quality
success story
390 cfs
Grass Valley French Ditch Company
Missoula
Restructured Shares

- A Shares: 80%
- B Shares: 20%
20% reduction in revenue
Agricultural
Keeping the water on
“Water rights can be changed to water marketing. The key to water marketing as a beneficial use is the ability to show that contracts exist for at least some of the water to be marketed.”
water marketing is good
good for pocket books
good for calendars
good for transparency
good for aquifers
good for land use planning
good for people
Grass Valley French Ditch Company Roots
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