Innovative Methods to Improve Instream Flows

Morgan Case

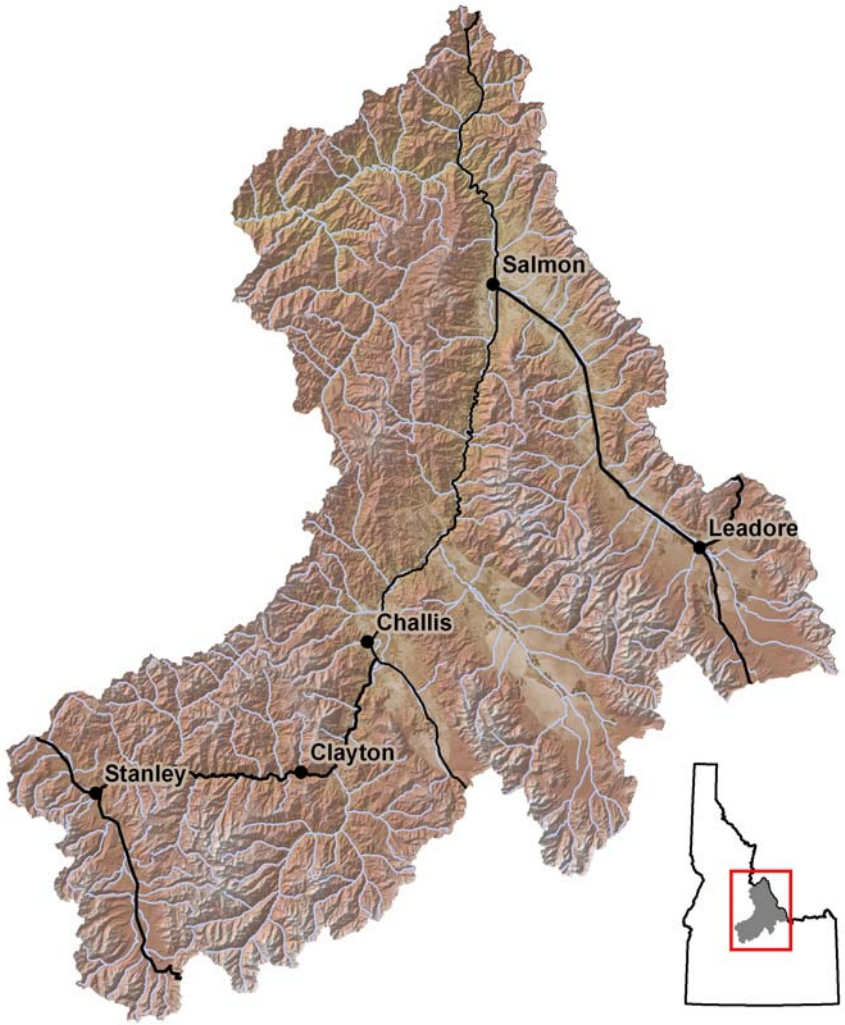
Presentation for ESPA Demand Reduction Group

September 29, 2009

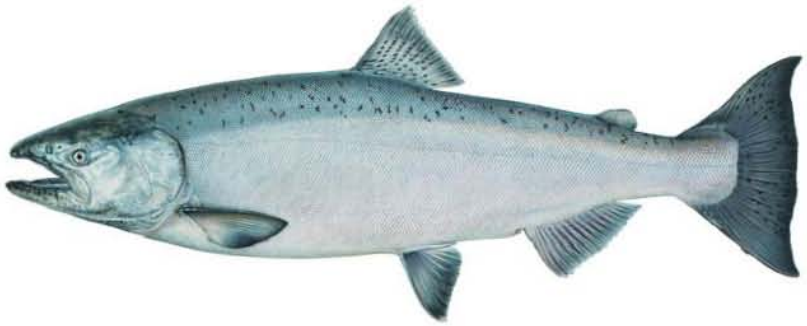
Upper Salmon Basin

Issue: Local economies depend on the diversion of tributary water, but diversions can dewater streams and lead to migration barriers and habitat degradation for Endangered Species Act listed fish.

Solution: Implement a voluntary program that compensates water right owners for changes in irrigation practices that protect the local economy while providing the flows required for recovery of ESA-listed species.



ESA – Listed Species



Chinook Salmon

Steelhead

Sockeye Salmon

Bull Trout

Images from www.dfw.state.or.us and www.flickford.com

Columbia Basin Water Transaction Program

- Bonneville Power Administration and Northwest Power and Conservation Council Funded
- Established in 2002 to support efforts to improve instream flows in the Columbia Basin
- IDWR/IWRB became a Qualified Local Entity in 2003

Funding

- Bonneville Power Administration
  - CBWTP
  - Idaho Fish Accord
- NOAA-NMFS Pacific Coast Salmon Recovery Fund
- SRBA Habitat Fund
- USFWS – Aquatic Species Conservation Fund

Benefits for State of Idaho

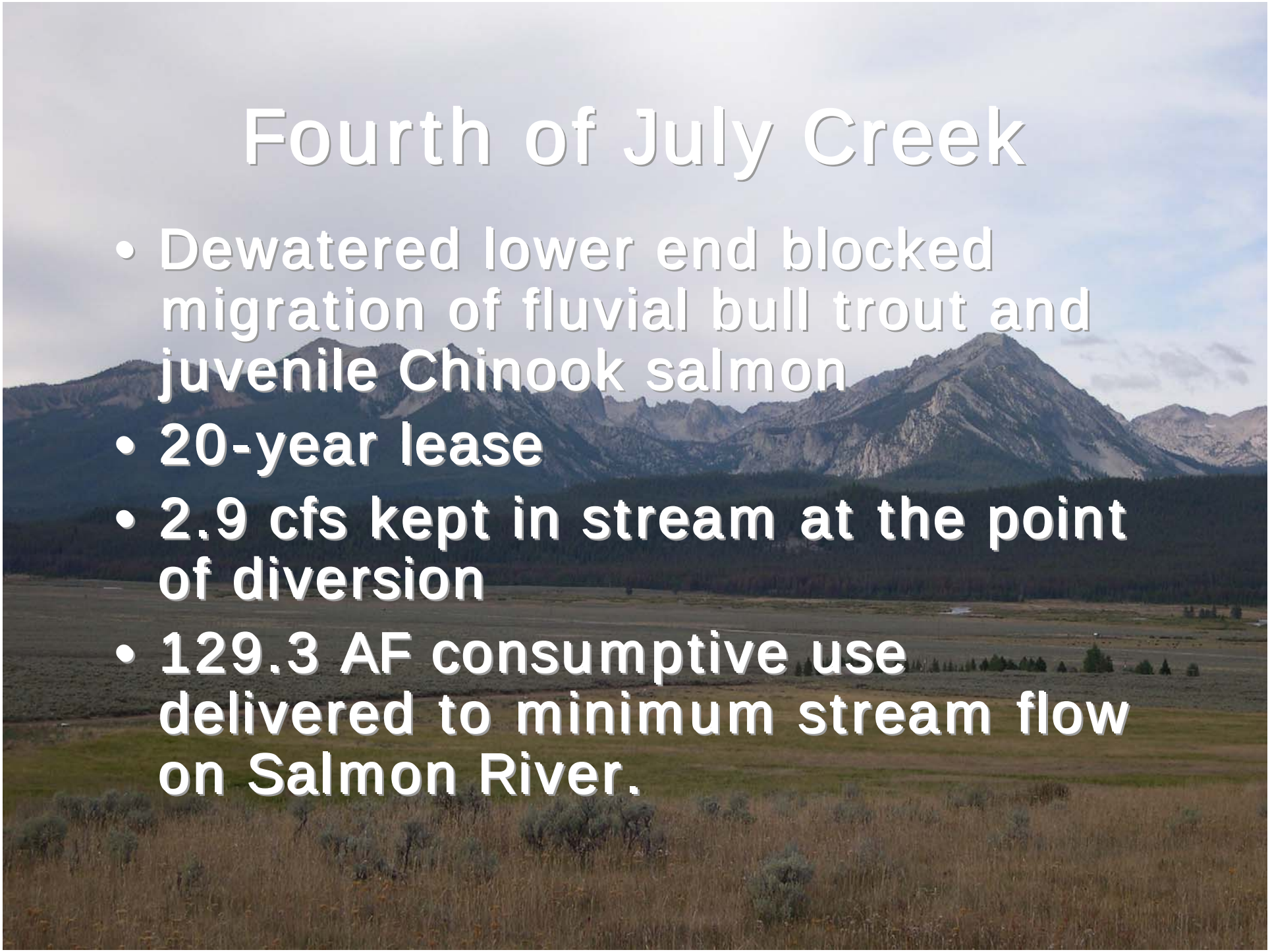
- Maintain local economies
- Protect individuals from third party ESA “takings” lawsuits
- Recovery of ESA-listed species
- Improved recreation opportunities
- Improved natural resources for the State
- Warm fuzzies/cold slimies

Methods

- Leases
  - Annual
  - Partial Season
- Agreements not to Divert
  - Changes in Point of Diversion
  - Exercised only when flow is needed

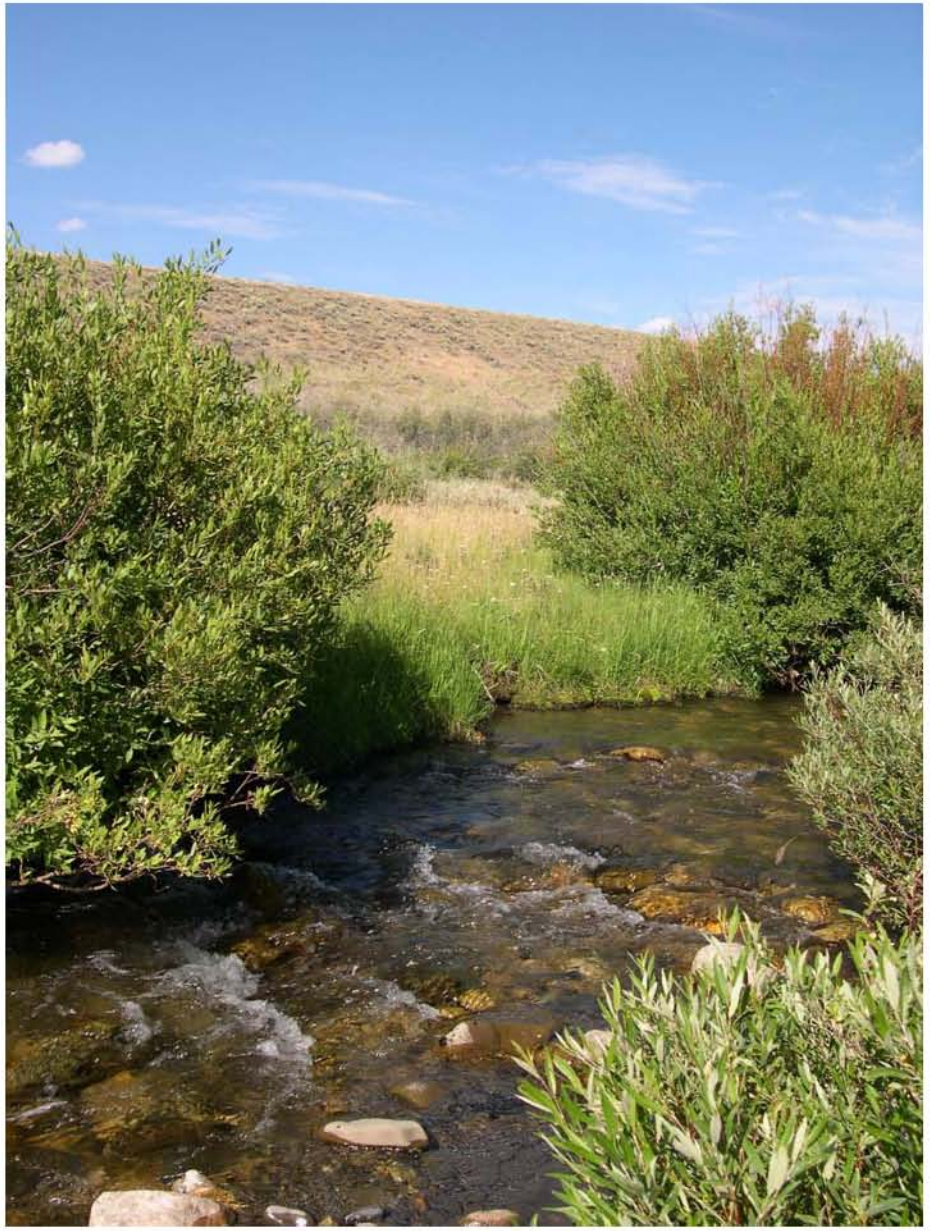
Leases

- Must dry up land
- Water leased into the Idaho Water Supply Bank
- Water rented out of Bank by IWRB for delivery to a Minimum Stream Flow Water Right
- Only consumptive use portion of water right can be delivered.
- Water delivered according to priority date of leased water
- Cannot injure junior users (carriage)
- Can be for portion of irrigation season

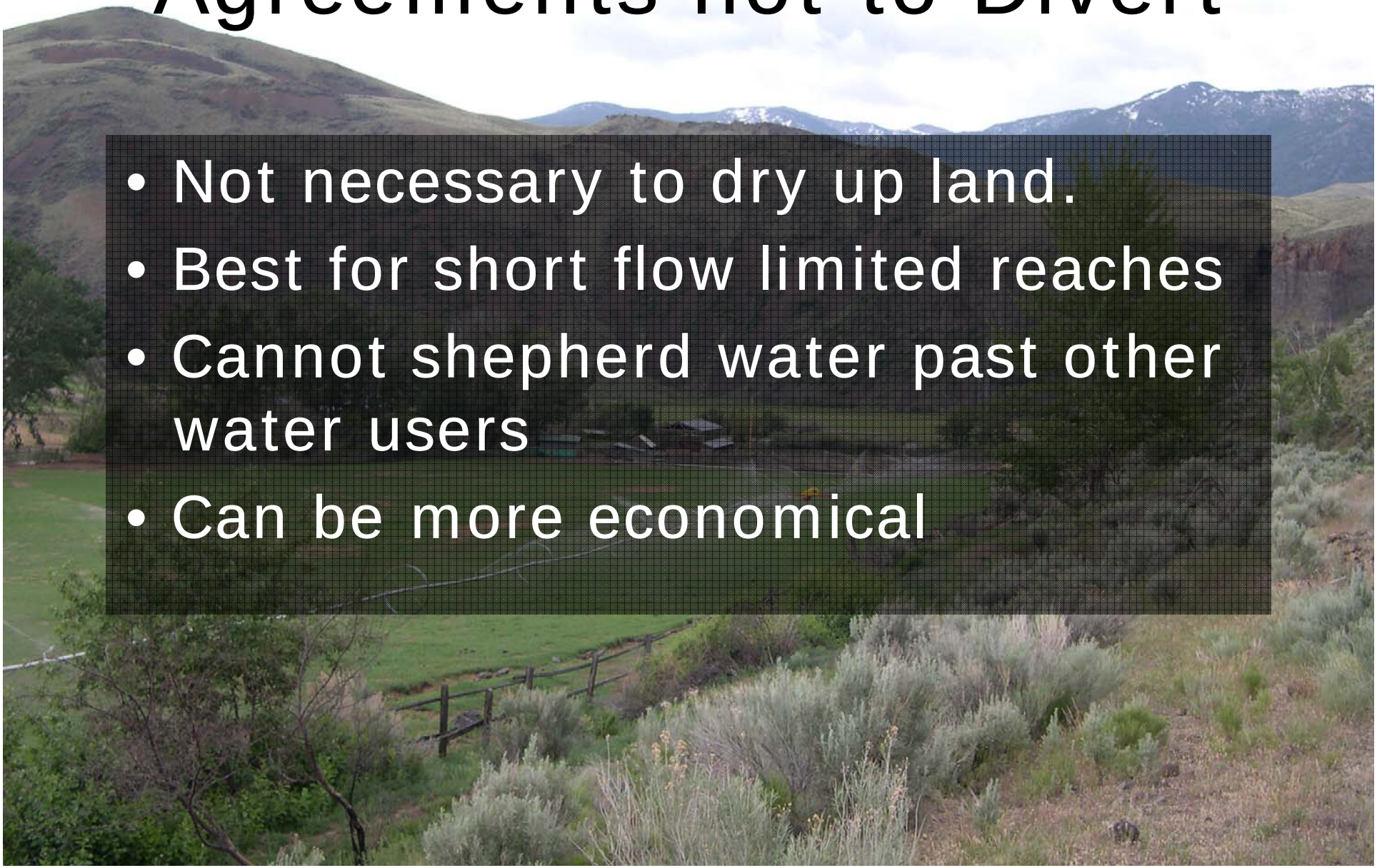


Fourth of July Creek

- Dewatered lower end blocked migration of fluvial bull trout and juvenile Chinook salmon
- 20-year lease
- 2.9 cfs kept in stream at the point of diversion
- 129.3 AF consumptive use delivered to minimum stream flow on Salmon River.



Agreements not to Divert

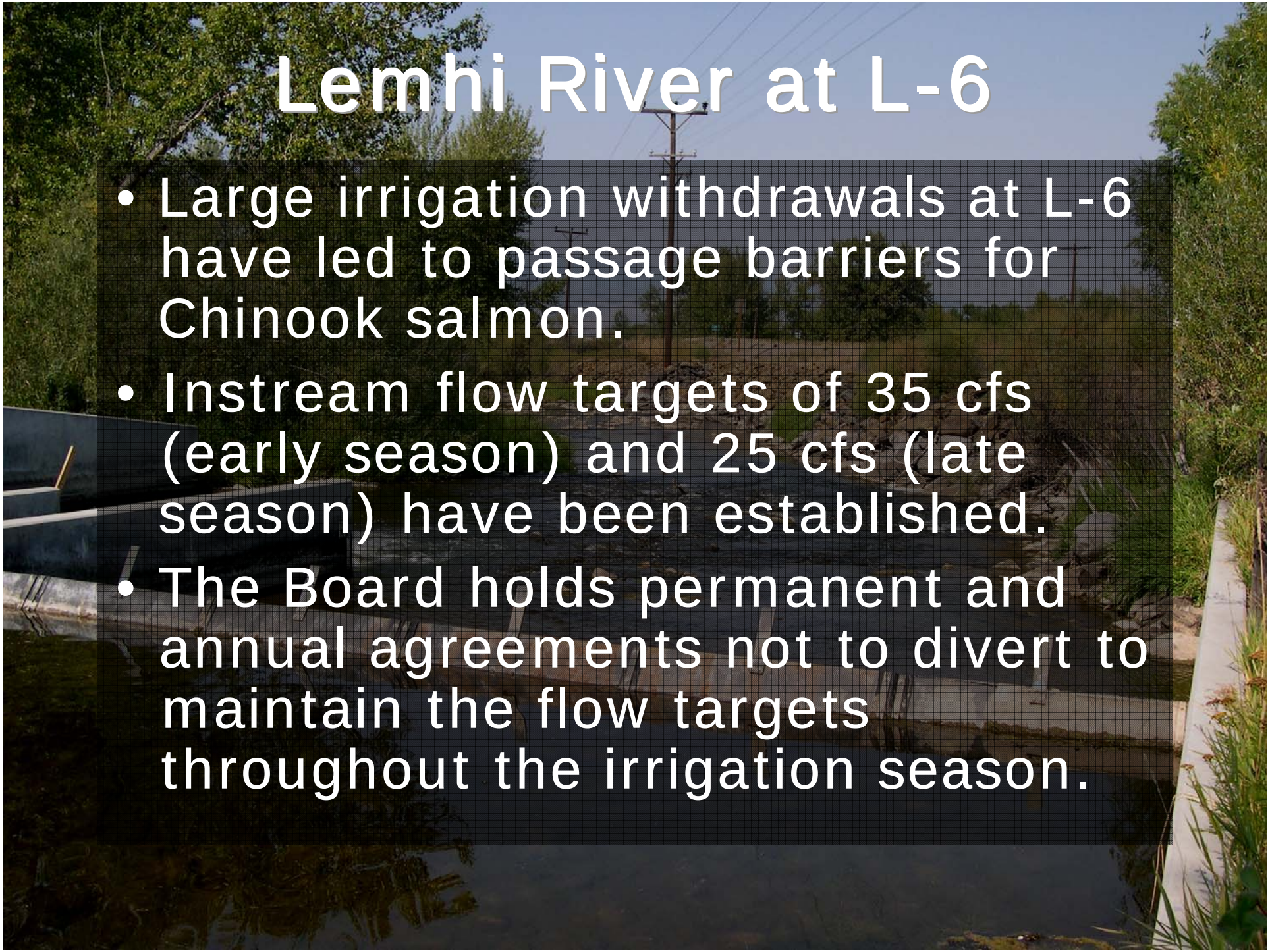


- Not necessary to dry up land.
- Best for short flow limited reaches
- Cannot shepherd water past other water users
- Can be more economical

Iron Creek

- One irrigator diverted all or almost all of the flow from the lower end of Iron Creek.
- Chinook salmon could not access the high quality spawning and rearing habitat.
- 20-year agreement not to divert 7.1 cfs from Iron Creek
- Point of diversion added to Salmon River
- WTP covers increased diversion costs

2004

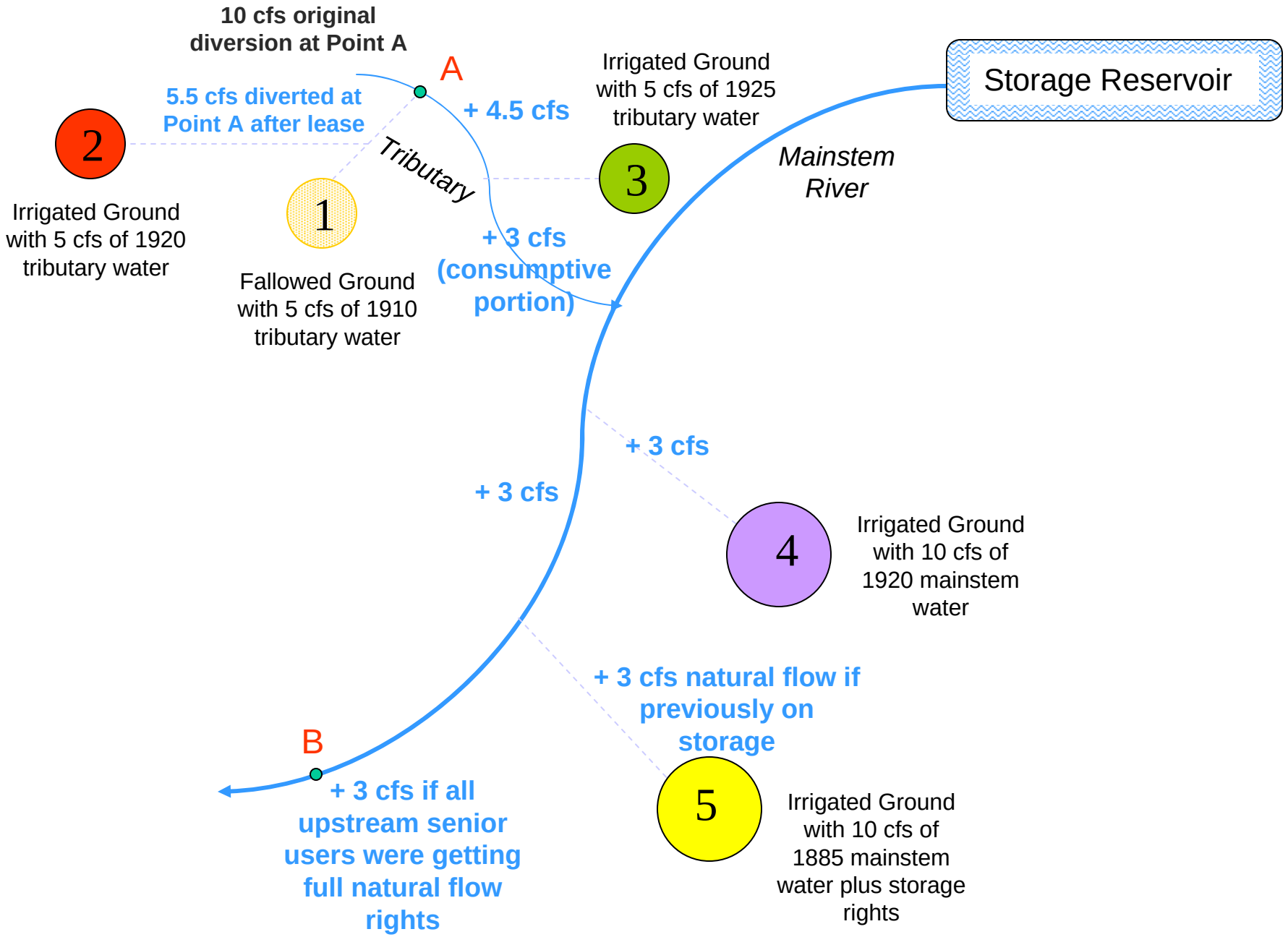


Lemhi River at L-6

- Large irrigation withdrawals at L-6 have led to passage barriers for Chinook salmon.
- Instream flow targets of 35 cfs (early season) and 25 cfs (late season) have been established.
- The Board holds permanent and annual agreements not to divert to maintain the flow targets throughout the irrigation season.

Implications for ESPA

- Agreements not to divert from tributaries cannot be delivered past any unfilled rights
- Lease/Rentals appear to be only option for moving rights long distances
- Cannot deliver any rented water past senior unfilled water rights
- Hard to administer small amounts of water when added to large volume systems
- May result in increased storage carryover


10 cfs original diversion at Point A
A
5.5 cfs diverted at Point A after lease
+ 4.5 cfs
Irrigated Ground with 5 cfs of 1925 tributary water
Storage Reservoir
2
Irrigated Ground with 5 cfs of 1920 tributary water
Tributary
1
Fallowed Ground with 5 cfs of 1910 tributary water
3
Mainstem River
+ 3 cfs (consumptive portion)
+ 3 cfs
+ 3 cfs
4
Irrigated Ground with 10 cfs of 1920 mainstem water
+ 3 cfs natural flow if previously on storage
B
+ 3 cfs if all upstream senior users were getting full natural flow rights
5
Irrigated Ground with 10 cfs of 1885 mainstem water plus storage rights