Peak and Ecological Flows and ASR Source Water

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May 12, 2010

Topics

- ASR source water
  - Legislative direction
  - OWRD rules and process
- Emerging directions in water allocation
  - peak and ecological flow protection
- Intersection of ASR development and peak and ecological flow protection

ASR Source Water

- Legislature has declared ASR “a beneficial use inherent in all water rights”
- But…you need to darken the door of OWRD to get a limited license for “testing” and a permit for “permanent” ASR
- Legislature required OWRD to establish rules for permitting of ASR projects

Peak and Ecological Flows

- ODFW Guidance…….why?
- Requests for storage of water that may rely on peak flow events
- A consistent science-based approach
- Which peak flows ODFW considers important to protect and why

Peak and Ecological Flows

- Rules of engagement……
- Instream water rights – public use includes habitat protection
- Instream Flow Rules – maintenance of habitat when developing instream requirements
- Division 33 Additional Public Interest Rules - ***maintaining habitat*** for listed species

HB 3369 (2009)

- Requires consideration of Peak and Ecological flows when applying for water development project grants and loans.
- Requires consultation with ODFW
- OWRD “may require that a project protect peak and ecological flows to the extent determined by the State Department of Fish and Wildlife to be necessary.”

Peak and Ecological Flows

Ecological Triggering Flows

Channel Maintenance Flows

Ecological Triggering Flows

**These flow needs are usually species, lifestage, site and/or stream specific*

- **Flushing Flows -** Elevated flows to flush young migrating fish downstream
- **Upstream Migration -** Elevated flows to initiate upstream migration of adults
- **Life Cycle Needs -** Elevated flows to complete life cycle dynamics of aquatic insects and other aquatic organisms.

Channel Maintenance Flows

- Moves Bedload
  - “cleans” gravels
  - improves spawning habitat
  - improves food source habitat providing higher quality macro invertebrate habitat
- Scours and fills against encroaching riparian vegetation;
- Retains formation of riffle and pool habitats
- Create conditions for the replenishment of streamside vegetation and riparian functions
- Connects stream to its flood plain

Peak and Ecological Flows

According to ODFW, Channel Maintenance Peak Flows do most of the work in shaping a stream

and

are the focus of

ODFW's

Peak Flow Guidance

Channel Maintenance Flow needs vary with stream bed type

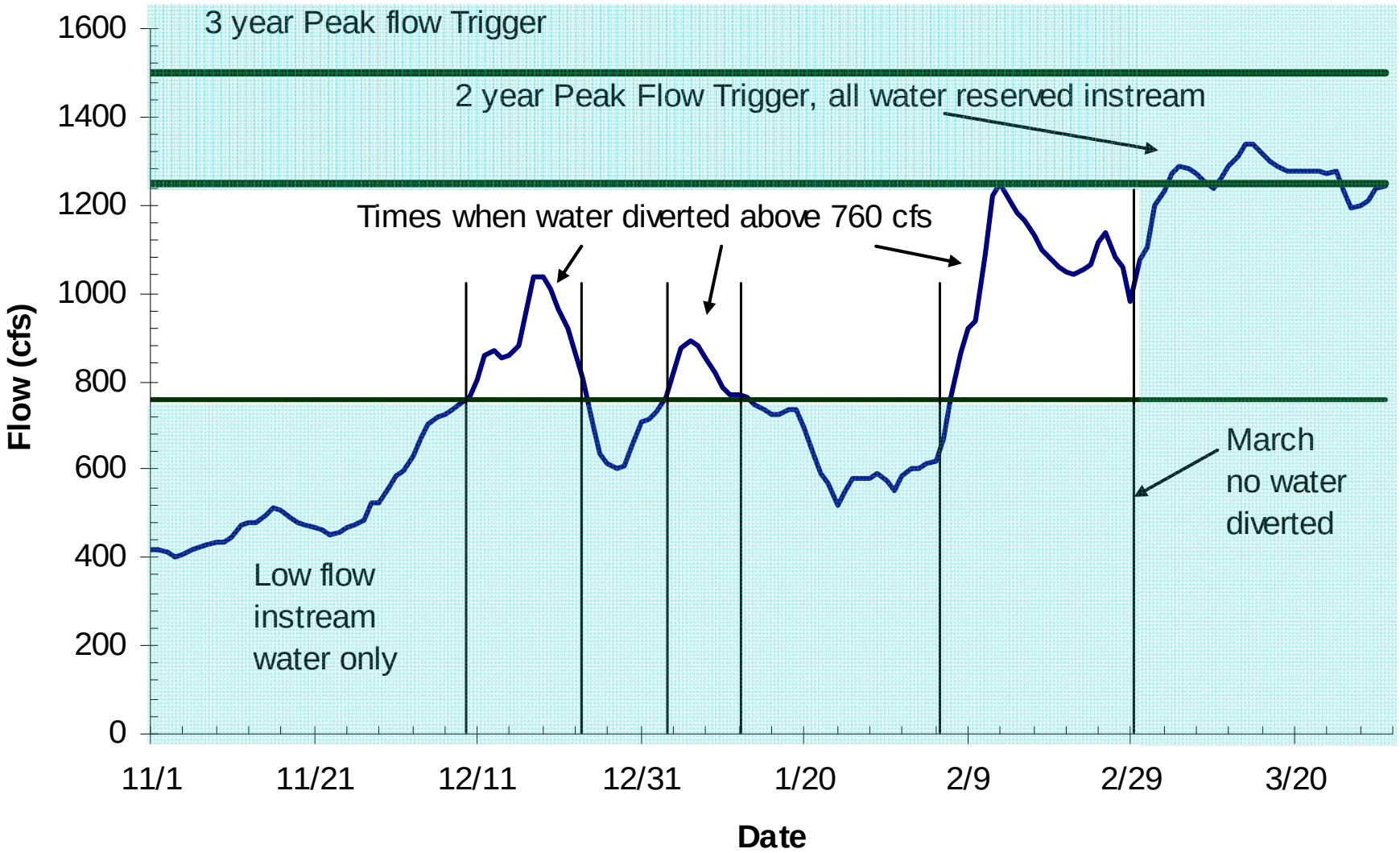
- Sand bed streams
- Gravel bed streams
- Coarse bed and bedrock controlled streams

ODFW applies Peak Flows

- Channel Maintenance Flows
  - when water is not available at the 50% exceedance flow level
  - Important flows have been greatly reduced or eliminated
- Ecological Flows
  - Species specific needs exist
- ASR Limited License or Permit?

Example - Gravel Bed Stream

(w/ Existing Storage)



ASR and Peak and Ecological Flows

- Can peak and ecological flow protection conditions be placed on an ASR limited license and permit?
- Has not happened yet, nor has ODFW expressed much interest in ASR limited licenses
- A confusing set of laws and rules….the on-ramp or result is not clear

ASR and Peak and Ecological Flows

- Legislative direction to OWRD seems clear and narrow

  -existing water right

  -inherent beneficial use

  -DEQ and ODHS may recommend conditions

  -protect existing groundwater rights

  -do not cause “injury” to existing water rights

  -withdrawal of water from storage can be conditioned

ASR and Peak and Ecological Flows

- OWRDs rules appear to give broad conditioning authority

- -OAR 690-350-0020(4)(d) Limited License
  -OAR 690-350-030(5)(d) ASR permit

Issue with proper conditions upon finding that the proposed ASR project/ testing will not impair or be detrimental to the public interest…..

ASR and Peak and Ecological Flows

- One last ambiguity……..

- Additional Public Interest Standards, Division 33 Statewide rules applies to "requests for limited licenses"

  -no loss of essential habitat (T) & (E)

  -no net loss of essential habitat (S)

- What about a permit – ask Baker City…

Peak and Ecological Flows and ASR Source Water

- Parting thoughts……

- Understand how peak and ecological flow conditions may impact your project
- Legal analysis is needed to understand whether such conditioning is a concern
- Watch legislative developments closely
- Revisit the ASR rules adopted in 1996

Conclusion

There is only one way to make “new” water and it is not very predictable