

Details of the SVF approach:

Baseflow Methodologies (ODFW and OWRD),

Division 33 (DEQ, ODFW, and OWRD),

And Reservations (DOA and OWRD-10/15 meeting)

Ecological Baseflow and SVF

- Ecological Baseflow = minimum flow needed for physical habitat
- SVFs above baseflow are flows for channel maintenance, migration, connectivity, sediment transport, etc.



Standard Baseflow

ODFW currently recommends baseflows for new storage projects, and looks first at:

- Instream water rights (ISWRs)
- Basin Investigation Report (BIR)
- Field studies



How to calculate baseflow for SVF projects



If ISWR exists for the reach

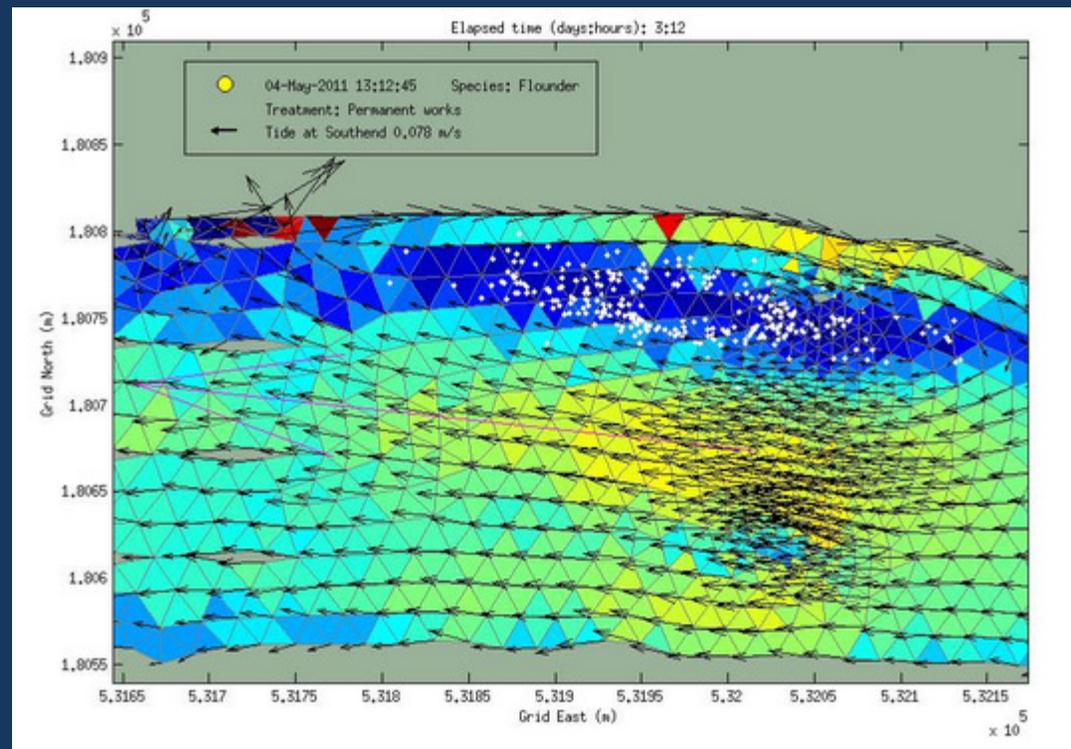
- Baseflow = ISWR value
- Except...
- If ISWR is a converted Minimum Flow (MF)
 - Compare to Basin Investigation Report (BIR)
 - If BIR recommended was higher, use BIR

If ISWR does not exist

- Use BIR flow
- If no BIR,....
 - If In-Depth process, need field methods for Baseflow
 - If 15%, Baseflow by desktop methods

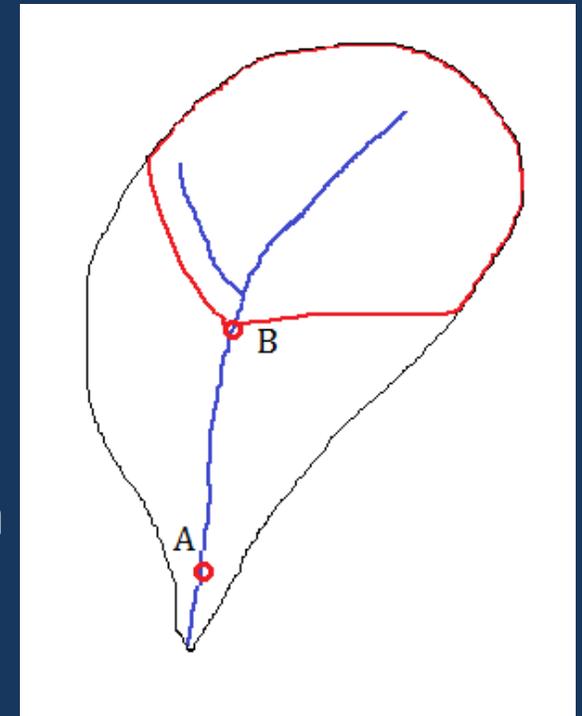
Field methods for baseflow

- Oregon Method
- Physical Habitat Simulation (PHABSIM)



Desktop methods for baseflow- 1

- ISWR in same river, different reach
 - Base on existing ISWR
 - Compare drainage areas
 - Example:
 - Downstream ISWR (A) is 60 cfs
 - Project reach (B) has $\frac{1}{2}$ the drainage area
 - Calculated baseflow = $60 * \frac{1}{2} = 30$ cfs



Desktop methods for baseflow-2

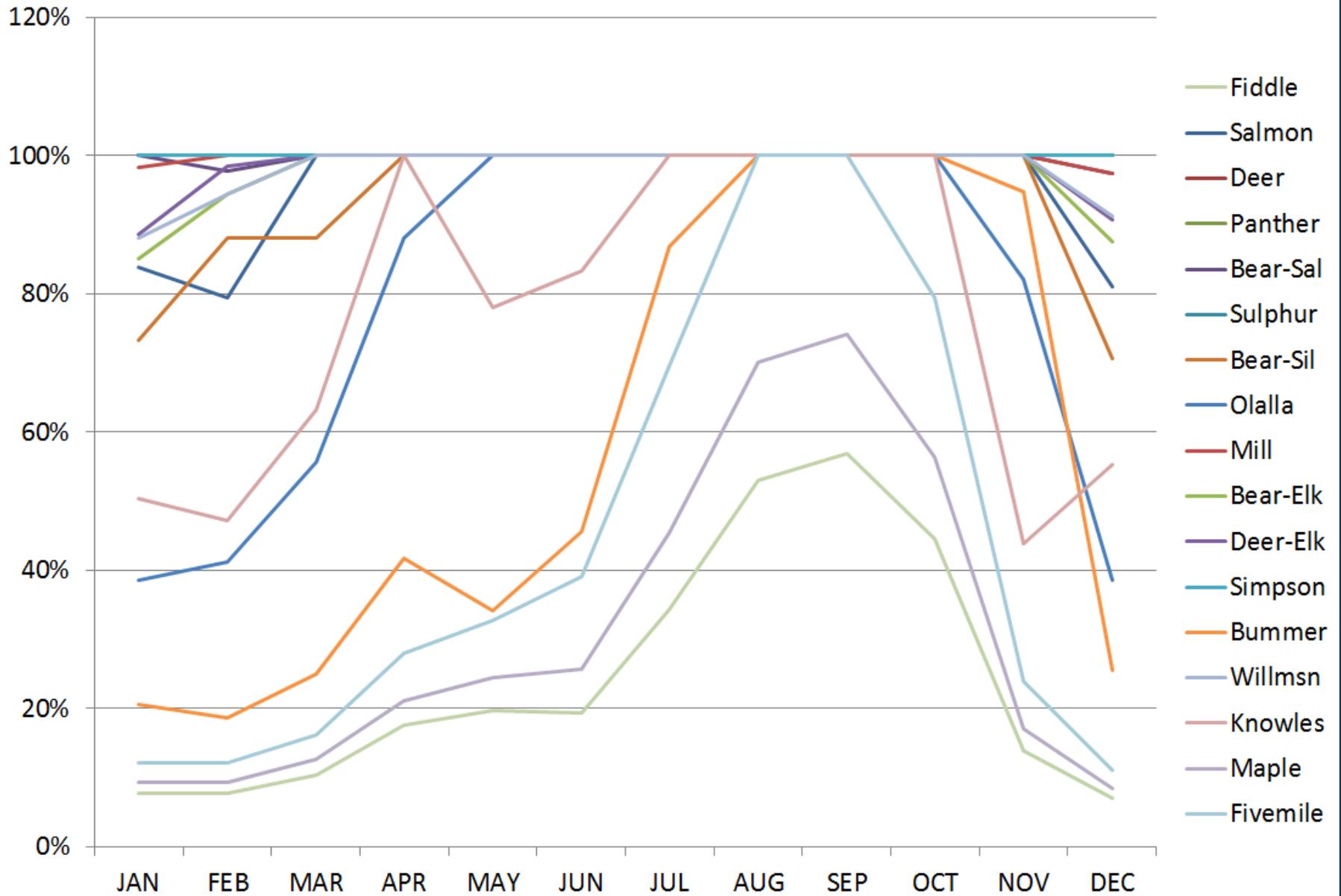
- ISWR in nearby basins
 - Site has OWRD monthly median flows (EANF)
 - Average ratio of ISWR/EANF for nearby basins
- Example...

Example: Site with EANF but no ISWR

- February EANF for proposed site is 80 cfs
- In nearby basins with ISWR, average ratio of ISWR/EANF = 0.65
- February baseflow = $80 * 0.65 = 52$ cfs

ISWR/EANF for nearby basins

Existing ISWR as a Percent of the EANF (50% exceedence)

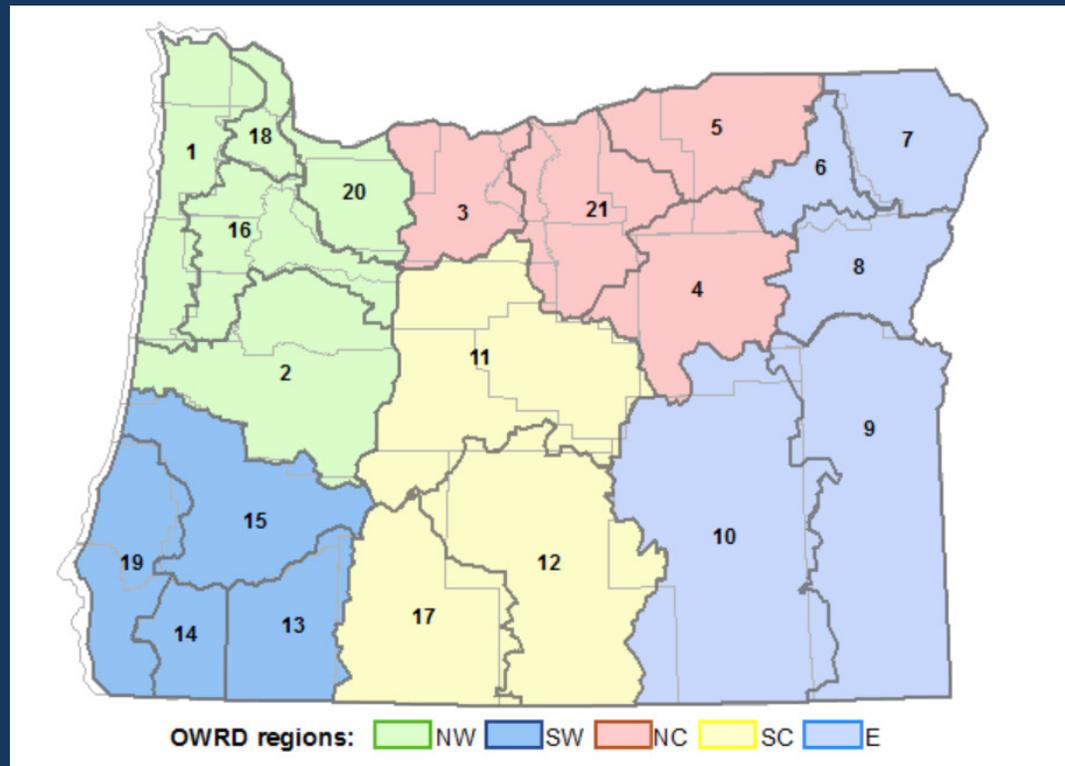


Site with no EANF

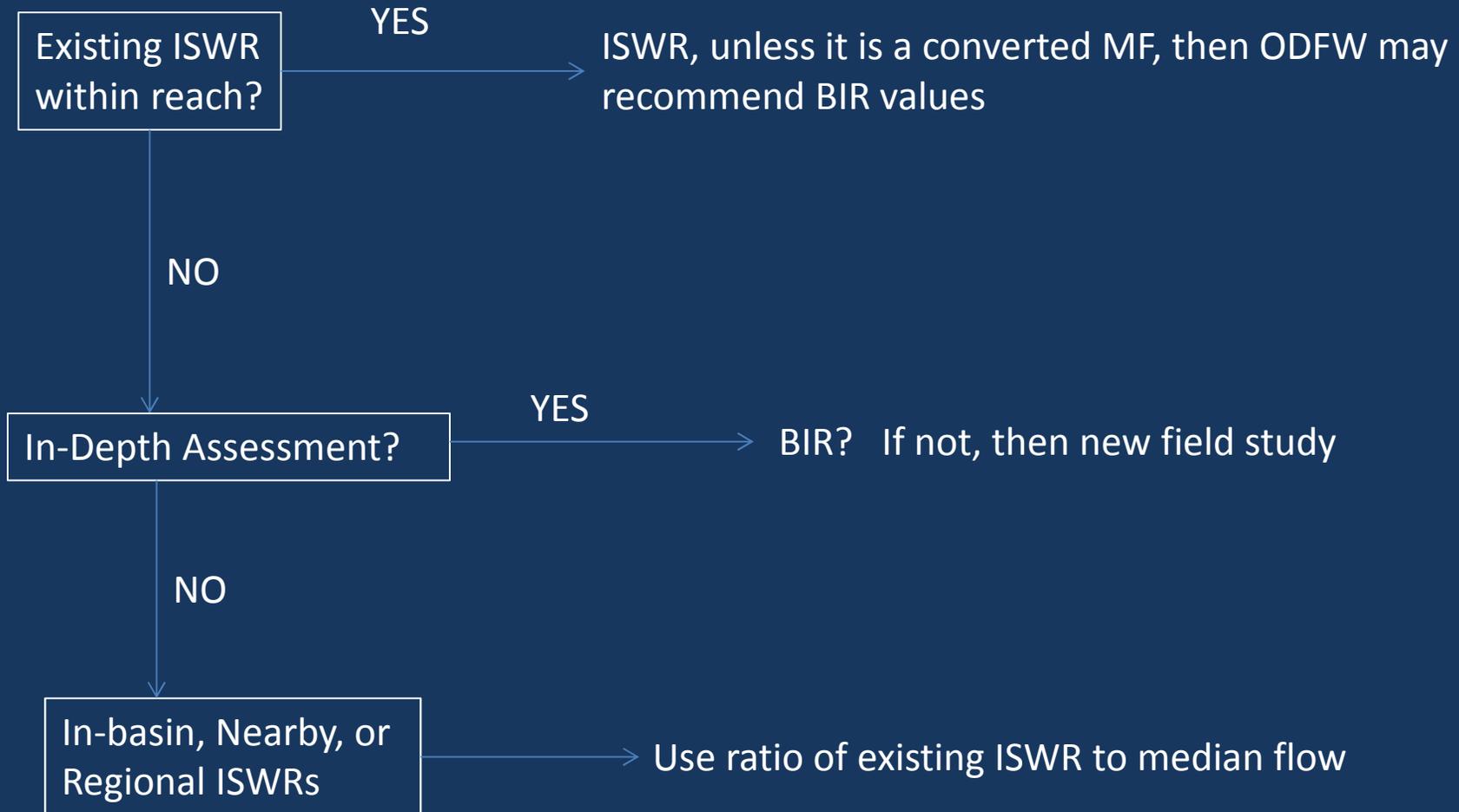
- Estimate median flows based on nearby basins with ISWR
- Or, OWRD will model median flows for the site
- Then same as previous calculation

No comparable basins

- Regional values of ISWR/EANF
- Developed by OWRD / ODFW



Approaches to Establishing Baseflow



Questions?



Division 33

- History: What is Division 33
- DEQ Current Division 33 Review
- ODFW Current Division 33 Review
- ODFW Review of SVF Applications



History of Division 33

- WRC directed WRD to develop rules in 1994 to determine whether a proposed use will impair or be detrimental to the public interest with regard to *sensitive*, threatened, or endangered fish species
 - Upper Columbia in 1994 (TE species)
 - Lower Columbia in 1995 (TE species)
 - Statewide in 1996 (STE species)
- Interagency team reviews applications which the Department determines may affect sensitive, threatened or endangered fish species and provides recommendations
 - ODA, DEQ, ODFW, WRD and other state natural resource agencies, as appropriate
 - Recommend Approval, Approval with Conditions, Denial

Division 33 Review: DEQ

Current Water Right Review:

- Connection to 303(d) listed water body (TMDL flows)
- Potential impact of use to water quality limited body
- Impact on habitat of sensitive, threatened or endangered species

Common permit conditions that can mitigate impact:

- Sediment
- Riparian habitat mitigation
- Water quality
- TMDL flow

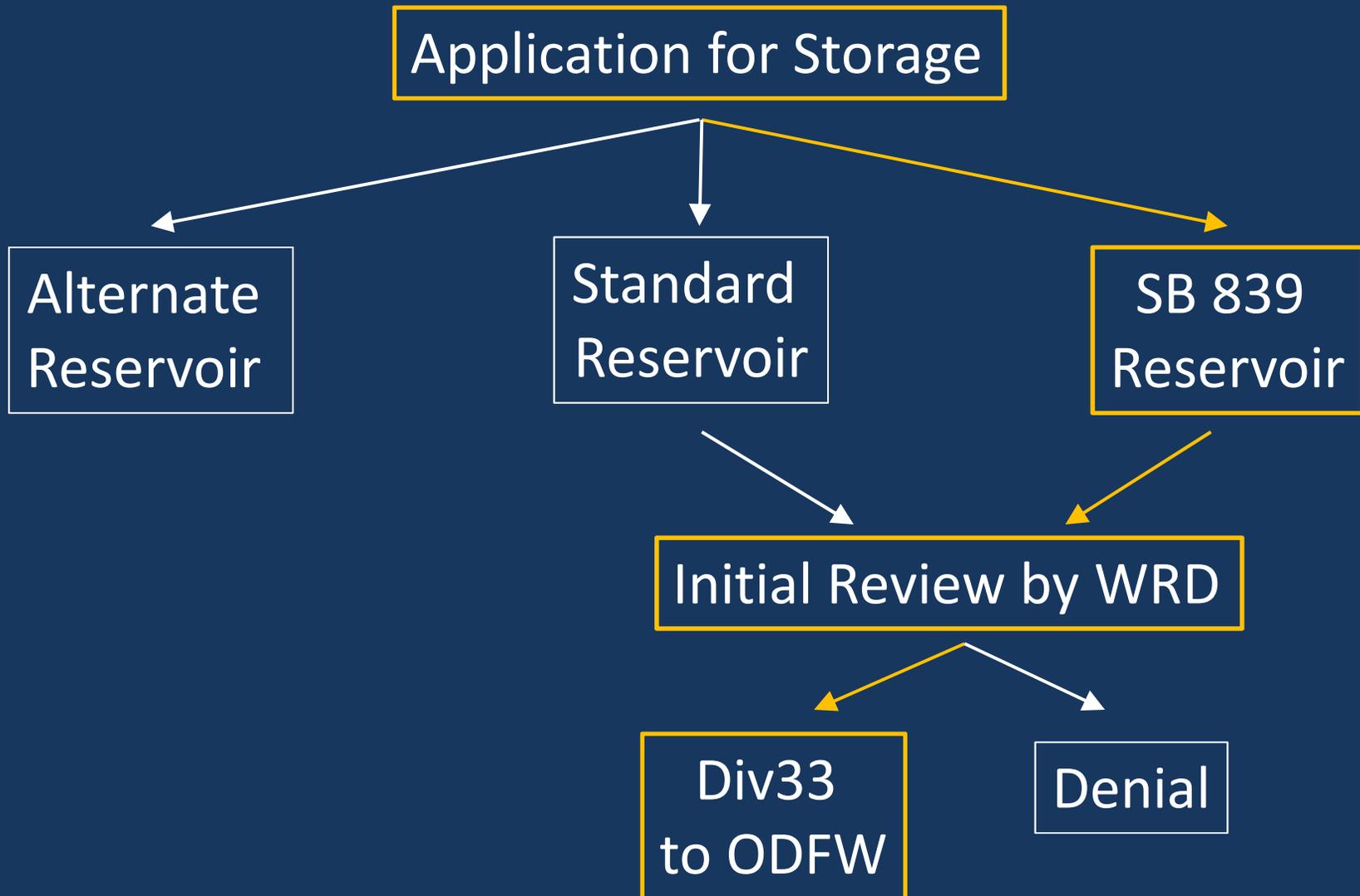
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Division 33 Review: ODFW



Div33 to ODFW FOR SB 839

Statewide

Lower Columbia

Upper Columbia

- Chum flows

- No storage April 15 – September 30 (without mitigation)
- Consistency with CRBFWP (2014)
- Chum flows

Additional ODFW recommendations:

- 15% or In Depth + baseflow (bypass)
 - Peak and ecological flows
 - Instream values
- Fish passage (law)
- Fish screening (law)
- Water Quality Standards (DEQ)
- Mitigation for Habitat Impacts
 - Mitigation Policy

Exemptions?

OAR 690-033-0140 (5)

Notwithstanding OAR 690-033-0120(2)(a) and (b), the Department may approve a water right permit for:

(5) Multipurpose storage projects or other projects with measurable public benefits.

OAR 690-033-0340 (2)(a)

(2) Consistent with 690-033-0340(1), the Department shall follow the recommendations of the interagency review team in determining whether the presumption is established pursuant to OAR 690-310-0110 or 690-310-0130. In completing the remainder of the public interest determination under 690-310-0120 or 690-310-0140, the Department shall follow the recommendations of the interagency review team unless it finds:

(a) The proposed use provides significant basin wide public benefits beyond the benefits to the applicant;



Questions?