

## Shark River Slough Draft Proposal to Incorporate S-333N

### Concept:

- Add S-333N to inflows from WCAs to L-29 Canal (for delivery to Northeast Shark River Slough)
- Apply TP measurement from S333N station (upstream platform) to S-333N flow
- Integrate to proportional methodology currently applied to S-333, S-355A, S-355B, and S-356, which discounts the S-334 flow volume proportionally from each structure for TP FWMC calculation
- Entire S-333N flow volume counts toward annual flow total for Long-Term Limit calculation

### Application:

- Long-term Limit – Total flow volume (all days) for Federal Water Year (FWY, October-September) estimated to SRS from the WCAs, including portion of S-356 flow through S-335 estimated daily
  - Total of daily flow volume at S-12A, S-12B, S-12C, S-12D, S-333, S-355A, S-355B (Method 1) ...
  - Plus minimum of daily flow volume at S335 and S356 (added in Method 1.5) ...
  - Plus total of daily flow volume at S333N (proposed herein)
- TP flow-weighted mean concentration (FWMC) - integrate the estimated sampling event flow and TP to the WY TP FWMC (bi-weekly compliance sampling)
  - Sampling event flows as determined above and TP at S-356 (S356-S334 water quality station)

### **Proposed Method (adopted Method 1.5 plus S333N)**

- Annual Long-term Limit (sum of all FWY days)
  - Flow applied to Limit equation =  $S_{12s} + S_{333} + \mathbf{S333N} + S_{355A} + S_{355B} + \text{MIN}(S_{356}, S_{335})$
- TP FWMC calculation (bi-weekly compliance sampling events):  
Volume for FWMC (sample event) =  $S_{12s} + S_{333} + \mathbf{S333N} + S_{355A} + S_{355B} + \text{MIN}(S_{356}, S_{335}) - S_{334}$   
Sampling event TP FWMC = sum of the following divided by "Volume for FWMC"
  - $S_{12A} \text{ TP} * S_{12A} \text{ flow}$
  - $S_{12B} \text{ TP} * S_{12B} \text{ flow}$
  - $S_{12C} \text{ TP} * S_{12C} \text{ flow}$
  - $S_{12D} \text{ TP} * S_{12D} \text{ flow}$
  - $S_{333} \text{ TP} * S_{333} \text{ flow} * \text{fraction of L-29E inflows to SRS}$
  - ⇒  **$S_{333N} \text{ TP} * S_{333N} \text{ flow} * \text{fraction of L-29E inflows to SRS}$**
  - $S_{355A} \text{ TP} * S_{355A} \text{ flow} * \text{fraction of L-29E inflows to SRS}$
  - $S_{355B} \text{ TP} * S_{355B} \text{ flow} * \text{fraction of L-29E inflows to SRS}$
  - $S_{356} \text{ TP} * \text{MIN}(S_{356}, S_{335}) * \text{fraction of L-29E inflows to SRS}$
  - ⇒ Fraction of L – 29E to SRS = 
$$\frac{(S_{333} + \mathbf{S333N} + S_{355A} + S_{355B} + \text{MIN}(S_{356}, S_{335}) - S_{334})}{(S_{333} + \mathbf{S333N} + S_{355A} + S_{355B} + \text{MIN}(S_{356}, S_{335}))}$$