Principles to Govern Development of a Drought Policy within the SNMP

Background

1) In the Recycled Water Policy (Res. No. 2009-0011), the State Water Resources Control Board ("State Water Board") found that severe drought was *"challenging California's ability to provide the clean water needed to support a healthy population, a healthy environment and a healthy economy now and in the future."*

2) In adopting the Recycled Water Policy the State Water Board declared their *"independence from relying on the vagaries of annual precipitation and move towards sustainable management of surface water and groundwater, together with enhanced water conservation, water reuse and the use of stormwater."*

3) The Recycled Water Policy directs the State Board and the Regional Water Quality Control Boards ("Regional Board") to *"exercise the authority granted to them by the Legislature to the fullest extent possible to encourage the use of recycled water, consistent with state and federal water quality laws."*

4) *"When used in compliance with this [Recycled Water] Policy, Title 22 and all applicable state and federal water quality laws, the State Water Board finds that recycled water is safe for approved uses, and strongly supports recycled water as a safe alternative to potable water for such approved uses… The State Water Board [also] finds that the use of recycled water in accordance with this Policy, that is, which supports the sustainable use of groundwater and/or surface water, which is sufficiently treated so as not to adversely impact public health or the environment and which ideally substitutes for use of potable water, is presumed to have a beneficial impact." [RWP, §1 & §3, pgs. 2 & 3]*

5) The Recycled Water Policy requires the Regional Board to develop and implement regional and sub-regional salt and nutrient management plans to encourage greater use of recycled water while assuring compliance with applicable water quality standards. The degree of specificity within these plans will vary with a number of site-specific factors including stormwater recharge. *"It is also the intent of the State Water Board that because stormwater is typically lower in nutrients and salts and can augment local water supplies, inclusion of significant stormwater use and recharge component within the salt/nutrient management plans is critical to the long-term sustainable use of water in California." [RWP, §6(b)(2), pg. 5]*

Regulatory Issues

6) Permit limitations governing the discharge of treated municipal wastewater (aka "recycled water") may include restrictions on the salt concentration in the final effluent. The limits themselves may be derived based on the applicable narrative or numeric water quality objective, or based on high quality receiving water, or based on a maximum allowable increase in Total Dissolved Solids (TDS) compared to the average salinity concentration in the municipal water supply source, or based on the best demonstrated performance of the treatment plant using representative prior discharge data.

7) Historically, waste discharge requirements (WDRs) rarely included any special provision or consideration for variations in effluent quality that may be directly or indirectly related to recurrent drought conditions.

8) Extended periods of below normal precipitation (aka "droughts") can create conditions that may make it more difficult to comply with some WDRs governing salinity.

   a) First, during droughts, there is generally less high quality (low TDS) surface water available and water agencies commonly increase their reliance on lower quality (higher TDS) groundwater sources to augment their water supply. Most wastewater treatment plants are not designed to remove TDS. Consequently, higher salinity in the water supply tends to result in higher salinity in recycled water.

   b) Second, mandatory conservation measures undertaken in response to prolonged drought may significantly alter the behavior of residential and commercial water users. The cumulative effect of shorter showers, larger laundry loads, less frequent flushing, etc. combine to reduce water waste which previously helped dilute the average TDS concentration of raw sewage and, eventually, recycled water.

   c) These drought-related changes in water quality temporarily aggravate a long-term trend toward increasing TDS that is caused by widespread adoption of high efficiency, low-flow fixtures and appliances that reduce water waste and subsequent dilution, and by greater use of in-home water softening technologies that increase TDS discharged to the sewer system.

   d) The net result is that, even where wastewater treatment plants have been able to cope with the long-term trend of rising TDS in the sewage influent, drought-related conditions may temporarily eliminate the small but critical buffer needed to assure consistent compliance.

Regulatory Issues *(continued)*

e) Drought conditions create similar concerns for agricultural operators. Reduced availability of high quality (low TDS) surface water forces increased reliance on lower quality (high TDS) sources (e.g. groundwater and/or reuse of irrigation return flows) to maintain crop yields. The net result is often higher TDS concentrations recharging to groundwater below the root zone.

9) Inability to assure consistent compliance with WDRs governing salinity makes it more difficult to increase the use of recycled water for landscape or crop irrigation. In addition, these requirements may inadvertently disincentivize greater implementation of more efficient irrigation systems.

10) This problem is compounded by the fact that compliance with WDRs for TDS is often evaluated using relatively short-term averaging periods (e.g. daily, weekly, monthly means). Since droughts typically persist for several years, even WDRs expressed as an annual average may be practically impossible to meet given the elevated salinity concentrations in the best available water supplies during such times.

Recommendations

11) For discharges to groundwater, calculate compliance with the applicable narrative or numeric salinity objectives using a flow-weighted annual average while simultaneously taking into consideration the annual recharge from natural precipitation (median value of the last 100 years).

Such an approach would be consistent with the Recycled Water Policy in that it accounts for the influence of stormwater recharge over the long-term and is also consistent with the State Board's previous precedential orders deeming it appropriate to consider "system mixing." [SWRCB Order No. 81-5; Lompoc]

Many of the short-term averaging periods most commonly used originated in EPA regulations intended to protect surface waters [see, for example, 40 CFR 122.45(d)]. These averaging periods are unnecessarily restrictive where surface recharges routinely take several years to reach the groundwater after passing through the vadose zone.

Most important, this approach would continue to protect water quality by assuring that compliance with a receiving water limitation for salinity is evaluated, holistically, based on the cumulative net effects on the receiving water.

Recommendations *(continued)*

12) Authorize the use of "Offset Projects," particularly increased stormwater capture and recharge, to demonstrate compliance with WDRs governing salinity discharges. Allow offset credits to be created and banked by constructing and operating such projects. Recognize that the credits needed to achieve compliance during periods of drought must be acquired and accumulated during the years of above normal precipitation (esp. El Niño winters) and, as such, must remain valid for at least 10 years.

13) Where possible, consider expressing water quality objectives for salinity using a system of Tiers and Triggers similar to those recently developed by Larry Walker Associates, Inc. for the CV-SALTS Lower San Joaquin River Subcommittee [see Alternative #4 in excerpt, attached].

> *QUESTION:* Should the proposed procedures for developing POTW effluent limits that are described in Appendix D to LWA's report be considered as an archetype for more general and widespread implementation? [see pgs. D-7 thru D-10 in excerpt, attached]

14) Consider amending the Basin Plan to establish a temporary variance/exception from salinity-related standards when the Governor or State Water Board has declared a drought emergency. At such times, alternate interim WDRs or effluent limits would apply. In general, the purpose of this approach is to exempt dischargers from temporary non-compliance for exceedances/violations caused by the loss of high quality (lower TDS) water supplies and/or salinity increases directly related to mandatory conservation measures.

15) Consider amending the Basin Plan to establish a temporary variance/exception from salinity-related standards where the TDS concentration in the permitted discharge is significantly better (lower) than the TDS concentration in the receiving water and is expected to provide progress toward re-attaining said standards by improving receiving water quality while promoting maximum use/reuse of available water supplies.

Note: the above alternatives are not mutually-exclusive and may be implemented in combination. All will require considerably more detail before they can be included in the SNMP Basin Plan amendment package. The purpose of the CV-SALTS discussion on 1/15/16 is to determine whether any are worth developing further.

SEPTEMBER 2015

CENTRAL VALLEY SALINITY ALTERNATIVES FOR LONG TERM SUSTAINABILITY (CV-SALTS)

Development of a Basin Plan Amendment for Salt and Boron in the Lower San Joaquin River (LSJR)

Task #4- Implementation Planning for Proposed Salinity Objectives

Prepared for

SAN JOAQUIN VALLEY DRAINAGE AUTHORITY

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5.0 Selection of Proposed EC Objectives for Reach 83 of the Lower San Joaquin River

5.1. DEVELOPMENT AND EVALUATION OF POTENTIAL PROJECT ALTERNATIVES

The WARMF modeling of the implementation of the three management alternatives described above provided an indication of the range of ambient salinity levels estimated to be achievable in Reach 83 (from 1,010 to 1,550 µmhos). This information was used to assist in the development of five distinct project alternatives for EC WQOs in Reach 83. Also, a No Action Alternative as required by CEQA (i.e., establish no EC objective in Reach 83) and a year-round 700 µmhos/cm WQO (based on Ayers and Westcot, 1985) were added for a total of seven potential project alternatives for consideration by the LSJRC (see **Table 9** and **Table 10**).

5.1.1. Evaluation Criteria for Potential Project Alternatives

The seven potential project alternatives were evaluated using a set of criteria that were developed specially for this purpose (i.e., specific EC objectives for Reach 83). The evaluation criteria built upon the previous screening criteria (**Table 2**) and were used to examine the ability of a potential project alternative to satisfy the following attributes, which were determined to be necessary for any project alternative advanced for further consideration (for additional detail see **Appendix C**):

- Consistent with federal/state laws, plans and policies
- Consistent with other relevant WQOs (e.g., existing boron in Reach 83; seasonal EC objectives at Vernalis)
- Reduces dependency on New Melones Reservoir water quality releases
- Supports salt transport out of basin
- Scientifically Defensible (protects Beneficial Uses)
- Meets CV-SALTS Goals
- Feasible to Implement

The LSJRC utilized the evaluation criteria to identify in a “yes” or “no” fashion whether a given project alternative would be expected to reasonably meet a given criterion.

Table 9: LSJRC Basin Plan Amendment Project Alternative Matrix.

Project Alternatives **EC Water Quality Objective (as measured at Crow's Landing)**	**Technical Basis for the Water Quality Objective**	**Evaluation Criteria (Rating: Y=Criteria is fully met, N=Criteria is partially or not met)**						
		A. Consistent with federal/state laws, plans and policies	**B. Consistent with other relevant WQOs (e.g., Boron, Vernalis EC)**	**C. Reduced dependency on New Melones Water Quality Releases**	**D. Supports salt transport out of basin**	**E. Scientifically Defensible (protects Beneficial Uses)**	**F. Meets CV-SALTS Goals**	**G. Feasible to Implement**
1. No EC Objective	Continue to regulate dischargers pursuant to the Salt and Boron TMDL	N	N	N	Y	N	N	Y
2. 1,550 µmhos/cm Objective	Hoffman Model • 15% leaching fraction • Protection of 95% of common crop • 95% yield in all of the 5% driest years	Y	Y	Y	Y	Y	Y	Y
3. Tiered Objective for Water Year Considerations - 1,350 µmhos/cm & 1,550 µmhos/cm during critical years	Hoffman Model • 1,350 µmhos/cm - same technical basis as WQO option #5 • 1,550 µmhos/cm - same technical basis as WQO option #2	Y	Y	Y	N	Y	N	N
4. 1,550 µmhos/cm EC Objective and a 1,350 µmhos/cm EC Performance Goal for Seasonal and Water Year Considerations **(see Table 10)**	Hoffman Model • 1,350 µmhos/cm - same technical basis as WQO option #5 • 1,550 µmhos/cm - same technical basis as WQO option #2	Y	Y	Y	Y	Y	Y	Y
5. 1,350 µmhos/cm Objective	Hoffman Model • Leaching fraction between 10 – 15% • Protection of 95% of common crop • 95% yield in all of the 5% driest years	Y	Y	Y	N	Y	Y	N
6. 1,010 µmhos/cm Objective	Hoffman Model • 10% theoretical leaching fraction • Protection of 95% of common crop • 95% yield in all of the 5% driest years	N	Y	Y	N	Y	N	N
7. 700 µmhos/cm Objective	Ayers and Westcot	N	Y	Y	N	Y	N	N

Table 10: LSJR Reach 83 EC Objective and Performance Goal for Seasonal and Water Year Considerations (µmhos/cm)

Water Year Type	Irrigation Season		Non-irrigation Season
	March – June	July - October	November - February
Wet	1350 (Performance Goal[1])		1550 (WQO[1])
Above Normal	1350 (Performance Goal[1])		1550 (WQO[1])
Below Normal	1350 (Performance Goal[1])	1550 (WQO[1])	
Dry	1350 (Performance Goal[1])	1550 (WQO[1])	
Critical	1550 (WQO[1])		

1. The EC Performance Goal and EC WQO are subject to relaxation during an Extended Dry Period (see definition below).

Alternative #4 includes an EC WQO of 1,550 µmhos/cm and an EC Performance Goal[11] of 1,350 µmhos/cm that is recommended to be established throughout the irrigation season for specific water year types. Compliance with the WQO in Reach 83 shall be monitored as a 30-day running average at Crows Landing. The WQO would apply as indicated in **Table 10**, except during an "extended dry period". An Extended Dry Period is defined as follows:

An Extended Dry Period is defined using the State Water Resources Control Board's (SWRCB's) San Joaquin Valley "60-20-20" Water Year Hydrologic Classification[12] included in revised Water Right Decision 1641 to assign a numeric indicator to a water year type as follows (SWRCB 2000):

- Wet – 5
- Above Normal – 4
- Below Normal – 3
- Dry – 2
- Critically Dry – 1

The indicator values will be used to determine when an Extended Dry Period is in effect:

- An Extended Dry Period shall begin when the sum of the current year's 60-20-20 indicator value and the previous two year's 60-20-20 indicator values total six (6) or less.
- An Extended Dry Period shall be deemed to exist for one water year (12 months) following a period with an indicator value total of six (6) or less.

[11] The Performance Goal will be used to measure progress towards achievement of EC levels during certain water year types and times of the year that are of higher quality than the proposed EC WQO for Reach 83 of the LSJR.

[12] The method for determining the San Joaquin Valley Water Year Hydrologic Classifications (e.g., critical, dry, below normal, above normal, wet) is defined in the SWRCB Revised Decision 1641, March 2000, Figure 2, page 189. This method uses the best available estimate of the 60-20-20 San Joaquin Valley water year hydrologic classification at the 75% exceedance level using the best available data published in the California Department of Water Resources' ongoing Bulletin 120 series. .

5.2. SELECTION OF PROJECT ALTERNATIVES

During two meetings held on March 17 and March 26, 2015, the LSJRC considered the seven project alternatives, the evaluation criteria, and the WARMF modeling results for the baseline, Planned Alternative, Maximum Treatment Alternative, and Maximum Management Alternative. As a result, the LSJRC identified a Preferred Alternative and three other alternatives for a more detailed examination and consideration in the Basin Planning process (potential project alternatives #1, #2, #4 and #6; see **Table 9**).

The primary basis for the selection of the four proposed project alternatives was that each could meet most of the following criteria:

- Provide reasonable protection of the most sensitive AGR use (irrigation of almonds) in Reach 83;
- Less than the upper level of the EC Secondary Drinking Water Standard of 1,600 µmhos/cm;
- Reduce releases from New Melones Reservoir to meet the Vernalis EC Objective;
- Accommodate current and future Real-Time Management Program activities in Reach 83; and
- Can be achieved through reasonable implementation actions (i.e., implementation of planned actions for salinity and selenium control in Reach 83 and upstream tributary areas)

Likewise, the initial screening also resulted in three potential project alternatives being rejected for further consideration in the Basin Planning process for the following reasons:

- Potential project alternative #3 (Tiered Objective for Water Year Considerations - 1,350 µmhos/cm & 1,550 µmhos/cm during critical years) was rejected because its 1,550 µmhos/cm EC objective for critical water years only was thought to severely constrain the ability to export salts out of the basin when available assimilative capacity exists and because it was believed to be over-protective of the AGR (irrigation water supply) beneficial use in Reach 83.

- Potential project alternative # 5 (Year-round EC objective of 1,350 µmhos/cm) was rejected for the same reason as noted for #3 because it would even more severely constrain export of salts out of the basin and because it was believed to be over-protective of the AGR (irrigation water supply) beneficial use in Reach 83.

- Potential project alternative # 7 (Year-round EC objective of 700 µmhos/cm) was rejected for further consideration because it was believed to be over-protective of the AGR (irrigation water supply) beneficial use in Reach 83 and it would effectively eliminate the ability to export salts out of the basin.

5.3. SELECTION OF PREFERRED PROJECT ALTERNATIVE

Among the four potential project alternatives selected by the LSJRC for consideration in the Basin Planning process, project alternative # 4 (**Table 9** and **Table 10**) was selected as the Preferred Alternative because it was determined to best meet the seven evaluation criteria and provide the greatest operational flexibility to export salts out of the basin while protecting the AGR (irrigation supply water) beneficial use in Reach 83.

The three other potential project alternatives did not rank as high as alternative #4 on an aggregate basis for the following reasons:

- Project alternative # 1 (No Action Alternative) was not selected as the Preferred Alternative because it would be contrary to the directive of the LSJR Salt and Boron TMDL that requires establishment of a WQO for salinity in Reach 83.
- Project alternative #2 (Year-round EC objective of 1,550 µmhos/cm) was not selected as the Preferred Alternative because it could prevent the achievement of ambient water quality in Reach 83 lower than 1,550 µmhos/cm when such quality may otherwise be attained and can't work without a real-time river management plan in place.
- Project alternative #6 (Year-round EC objective of 1,010 µmhos/cm) was not selected as the Preferred Alternative because it would require the implementation of a significantly more costly management alternative (RO treatment included in the Maximum Treatment Alternative), as compared to the Preferred Alternative (implementation of the Planned Alternative), and its water quality benefits in terms of protection of the AGR irrigation water supply beneficial use were not considered to be commensurate with its costs.

For the calculations supporting the values shown in **Table D-1**, effluent EC concentrations were converted to equivalent TDS concentrations using an assumed TDS/EC ratio of 0.60 to allow for the development of the salinity loadings shown in the table and in **Figure D-6**.

Table D-1: Estimated TDS Loadings to the Lower San Joaquin River by the Cities of Modesto and Turlock with Assumed Effluent EC Quality of 1550 µmhos/cm at Permitted Flow.

	Flow (cfs)	TDS (tons per day)
Modesto 1,550 EC	29.6	74.1
Turlock 1,550 EC	31.0	77.6
POTW Totals	**60.6**	**152**

NPDES PERMITTING DETERMINATIONS

Three key decisions will be required in future NPDES permitting determinations for Modesto and Turlock related to the establishment of effluent limitations consistent with the proposed EC WQOs in Reach 83:

1. Whether effluent limits will be required
2. If limits are required, what the magnitude and averaging period of the effluent limits will be
3. The monitoring requirements for collecting compliance samples and the location of the compliance sampling points

Under U.S. EPA regulations governing the issuance of NPDES permits, effluent limitations are required for a specific constituent if a discharge is deemed to have a "reasonable potential to cause or contribute to a violation of a water quality objective". Because the cities of Modesto and Turlock are subject to the wasteload allocation requirements of the Salt and Boron TMDL for the Lower San Joaquin River established in 2006, reasonable potential to cause or contribute to existing EC objectives at Vernalis will likely be deemed to exist and effluent limits for EC will likely be required in the NPDES permits for these discharges.

Given that EC limits will likely be required, the determination of the magnitude and averaging period for the required EC effluent limits, and determination of the compliance sampling requirements (e.g. receiving water monitoring location) will be the next step.

The effluent limitations that will be developed must meet the following requirements:

- Must protect the AGR (irrigation water supply) beneficial use in the LSJR, with particular attention given to the segment between Crows Landing and the Tuolumne River
- Must not adversely impact the attainment of the EC objectives in the LSJR at Vernalis, and
- Must comply with State and federal anti-degradation policies, including consideration of best practicable treatment and control consistent with maximum benefit to the people of the State of California.

As has been discussed in the LSJR Committee meetings, NPDES permitting should consider the relative importance of salinity loadings from the Cities of Modesto and Turlock during different

seasons and water years. The relative importance of the salinity loads from the two cities and the benefit of salinity load reductions on beneficial use protection should be addressed in setting future effluent limitations. NPDES permitting determinations should also account for the continued impact of water conservation, water supply constraints and extended dry period conditions on effluent quality.

As an example of the type of water quality impact analysis that should be considered during future NPDES permitting, a mass balance analysis was performed to determine the minimum concentration at which the combined discharge from the Cities of Modesto and Turlock would be expected to contribute to an exceedance of the proposed 30-day average water quality objective of 1550 µmhos/cm in Reach 83 between Crows Landing and the Tuolumne River. The analysis was based on the following assumptions:

- Modesto and Turlock wastewater treatment plants - each discharging at current permitted ADWF (19.1 mgd and 20 mgd, respectively)
- Effluent EC converted to equivalent TDS using a factor of 0.60
- Historical flows in LSJR at Crows Landing for 1995 through 2013
- Predicted EC levels at Crows Landing based on Planned Bundle simulation
- EC levels in LSJR converted to TDS using a factor of 0.64
- A mass balance was performed and determinations were made with regard to the concentrations at which POTW discharges would cause the LSJR to exceed an EC level of 1550 µmhos/cm.

The following results were obtained (6,575 cases examined):

POTW concentrations that would cause exceedances of 30-day average 1,550 µmhos/cm EC in LSJR below Crows Landing	
Single exceedance of 1550 EC	1994 µmhos/cm
99th percentile not to exceed level	2672 µmhos/cm
97.5th percentile not to exceed level	3256 µmhos/cm

The calculations supporting the above results are included in an attached spreadsheet. This example is provided to demonstrate the type of mass balance analysis that should be considered in future NPDES permitting to support the consideration of future effluent limitations.

COMPLIANCE WITH DOWNSTREAM WATER QUALITY OBJECTIVES

Future effluent limitations for Modesto and Turlock must provide beneficial use protection in the LSJR and must not adversely affect compliance with downstream WQOs. To evaluate the specific impact of POTW salinity loadings resulting from a range of alternative effluent limitations on downstream compliance with the proposed EC WQOs at Maze Road Bridge and the EC WQOs at Vernalis, additional modeling would be required.

One option would be to follow the approach used in the LSJR Committee's approach to development of information supporting the proposed EC WQO for Reach 83. In that work, WARMF modeling results were developed based on specific management scenarios to provide

water quality output at Maze Road Bridge. That information was then communicated to Mr. Dan Steiner, who used his modeling tools to predict effects on WQO compliance at Vernalis as described in the Task 4 report.

For effluent limitation derivation purposes, different salinity loadings from Modesto and Turlock associated with a range of different effluent limitations could be input into the WARMF model. Output from those model runs could be provided as input to Dan Steiner's models. This would allow a specific evaluation of the water quality impact of different candidate effluent limitations and would help resolve uncertainty regarding these effects.

RECOMMENDATIONS REGARDING THE IMPLEMENTATION OF PROPOSED OBJECTIVES IN NPDES PERMITS

Based on the above considerations, and in conjunction with the salt and boron control program contained in the Basin Plan, the following recommendations are provided regarding the implementation of the proposed EC objectives in the NPDES permits for the cities of Modesto and Turlock. This information is intended to inform and assist Regional Water Board staff in the derivation of future EC effluent limits in these NPDES permits.

- As indicated in the control program for salt and boron discharges into LSJR as incorporated in the Basin Plan, POTW dischargers can comply with water quality objectives at Airport Way Bridge near Vernalis, or participate in a Board-approved Real Time Management Program. The Basin Plan encourages real-time water quality management and pollutant trading of wasteload allocations, load allocations, and supply water allocations as a means for attaining salt and boron water quality objectives, while maximizing the export of salts out of the LSJR watershed. The Basin Plan Amendment should make it clear that point source dischargers have this option for compliance.
- The proposed effluent limitations must protect the AGR (irrigation water supply) beneficial use in the LSJR, must not impact attainment of the Vernalis EC objectives, and must comply with State and federal anti-degradation policies.
- A range of possible effluent limitations and averaging periods, including longer averaging periods and/or limits than the proposed Reach 83 water quality objectives for EC, should be evaluated in the NPDES permitting process.
- Mass balance calculations and modeling should be performed to assess the impact of different POTW salinity discharges on conditions in the river. The relative importance of the salinity loads from the two cities and the benefit of load reductions on beneficial use protection should be addressed in the NPDES permitting process.
- Consistent with the Sacramento County Superior County ruling in the matter of the City of Tracy v. State Water Resources Control Board (Case No. 34-2009-8000-392-CU-WM-GDS), South Delta salinity objectives shall not apply to the City of Tracy and other municipal dischargers pending proper reconsideration in the Bay-Delta planning process.
- NPDES permitting determinations should account for the continued impact of water conservation, water supply constraints and extended dry period conditions on effluent quality.

- A re-opener should be provided in the NPDES permit to allow re-evaluation of effluent limitations based on the actual conditions that are observed to occur in the LSJR after full implementation of the Grassland Bypass Project and other planned projects. Also an evaluation should be performed to determine whether water conservation, water supply changes, or other factors caused an increase in effluent EC that would preclude attainment with proposed future effluent limitations.
- In addressing compliance with State and federal anti-degradation policies, a socio-economic analysis should be performed to address the water quality impacts, water management costs, treatment costs and beneficial use protection associated with the range of candidate effluent limitations.
- Modeling work should be performed using available modeling tools to assess the impact of the range of candidate effluent limitations on compliance with downstream water quality objectives at Maze Road Bridge and Vernalis. The extended dry period exception associated with the proposed EC WQOs for Reach 83 should be considered in this evaluation.
- Effluent limitations should be selected based on NPDES permitting requirements at the time of the renewal, results from the above analysis and other considerations (e.g. available dilution, actual and projected effluent quality, ambient conditions in the LSJR, etc.).