APPENDIX I—EVALUATION OF LMUN WATER QUALITY OBJECTIVE OPTIONS

Water Quality Objective options are evaluated based on their ability to meet the following selection criteria:

1. Maintain consistency with federal and state water quality laws and policies as applicable (e.g. Sources of Drinking Water Policy, Anti-degradation Policy)
2. Provide the appropriate protection of MUN in an Ag dominated surface water body with consideration given to the current and potential future uses
3. Allow constructed Ag dominated water bodies to be utilized for their intended design and purpose

Example: Irrigation Supply Channels
4. Make efficient (reasonable) use of Central Valley Water Board and stakeholder resources to develop and implement water quality standards
5. Provide flexibility to address naturally elevated background constituents

In addition, special consideration will be given to the implementation components of any WQO to ensure that downstream beneficial uses remain protected.

Commented [A1]: Comments are provided below from the Sacramento River Source Water Protection Program (SRSWPP).

Commented [A2]: It is unclear from the LMUN definition if the waterbodies will actually be allowed for MUN use. This would have a significant impact on which objective is appropriately protective of the use.

Commented [A3]: We request that this word be removed, as it is not consistent with the main staff report, and may lead to misinterpretation and change of meaning from the history and development of the process. Or please clarify why reasonable was added.

Commented [A4]: We are concerned that flexibility may lead to inconsistency in implementation. We recommend that there be a guidance document developed, and drinking water and applicable stakeholders be provided the opportunity for input.

Commented [A5]: Why is this not a criterion? This was provided as a criterion in earlier versions.
### Table I - 1 Water Quality Objective Options for a “LMUN” Category

<table>
<thead>
<tr>
<th>Water Quality Objective Options</th>
<th>Brief Description</th>
<th>Level of Consistency with Selection Criteria Ratings = Yes/No or High/Medium/Low</th>
<th>Notes</th>
</tr>
</thead>
</table>
| Add new NARRATIVE water quality objective | A narrative water quality objective is given in the Basin Plan for the LMUN beneficial use Proposed Options: 1. Accumulation of constituents in the water body must not unreasonably affect non-potable water use.                                               | 1 (Low)  2 (Potential)  3 (Unlikely)  4 (Reasonable use of resource)  5 (Background use)                      | - How is accumulation determined?  
- "Non-potable" is a very broad term; may be difficult know whether or not the water body is protected |
|                                 | 2. Accumulation of constituents in the water body must not unreasonably affect non-potable water use or degrade other in-stream or downstream beneficial uses.                                                                 | 1 (Low)  2 (Potential)  3 (Unlikely)  4 (Reasonable use of resource)  5 (Background use)                      | - "Non-potable" is a very broad term; may be difficult know whether or not the water body is protected  
- Considers in-stream and downstream beneficial uses |
|                                 | 3. Accumulation of constituents in the water body must not unreasonably affect non-potable water use and cannot preclude potable use with reasonable management and/or treatment.                                                  | 1 (Low)  2 (Potential)  3 (Unlikely)  4 (Reasonable use of resource)  5 (Background use)                      | "Non-potable" is a very broad term; may be difficult know whether or not the water body is protected  
- "potable use" may result in the use of primary and secondary MCLs as water quality objectives  
- "reasonable" may require examples |
|                                 | 4. Accumulation of constituents in the water body above natural background concentrations cannot preclude managed and/or treated use of the water for Municipal or Domestic Supply (MUN) use or degrade downstream beneficial uses | 1 (Low)  2 (Potential)  3 (Unlikely)  4 (Reasonable use of resource)  5 (Background use)                      | - Need to define "natural background concentrations"  
- Need examples of “managed and/or treated” and some concept of relative and acceptable economic cost. |

**Commented [A6]:** The use of allowing reasonable impacts in the narrative objectives provides no clarification or consistency on what impacts would be allowed.

**Commented [A7]:** How would the Regional Board propose to determine that reasonable treatment would be required to allow potable use?
<table>
<thead>
<tr>
<th>Water Quality Objective Options</th>
<th>Brief Description</th>
<th>Level of Consistency with Selection Criteria Ratings = Yes/No or High/Medium/Low</th>
<th>Notes</th>
</tr>
</thead>
</table>
| 5.                            | Accumulation of constituents in the water body must be found to provide maximum benefit to the people of the state and not unreasonably affect managed and/or treated use of the water for Municipal or Domestic Supply (MUN) use nor degrade downstream beneficial uses above natural background concentrations. | Yes Med High Med High                                                          | - Includes reference to maximum benefit of the people of the state - Antidegradation  
- Need to define “natural background concentrations”                                                                                                                                             |
| 6.                            | Discharge from these water bodies will not degrade downstream beneficial uses consistent with the state antidegradation policy (SWRCB Resolution No. 68-16). | Yes Low High Med Low                                                            | - Does not protect the water body itself  
- Already an existing legal requirement                                                                                                                                                              |
| 7.                            | Water quality will be protected as specified in the state antidegradation policy (SWRCB Resolution No. 68-16). | Yes Med Med Med Med                                                           | - Refers directly to Antidegradation policy  
- May be able to provide clarification in implementation section  
- Already an existing legal requirement                                                                                                                                                         |
| 8.                            | Water quality and downstream beneficial uses will be protected consistent with the state antidegradation policy. | Yes Med Med Med Med                                                           | - Refers to Antidegradation policy but without the policy number (in case it ever changes)  
- May be able to provide clarification in implementation section  
- Already an existing legal requirement                                                                                                                                                           |
| 9.                            | Water quality will be protected consistent with state and federal antidegradation policy and will not create a trend of degradation that impacts any downstream beneficial uses. | Yes Med Med Med Med                                                           | - Unnecessary to refer to federal antidegradation policy  
- Trend could be interpreted differently so would need clarification                                                                                                                                 |

Commented [A8]: Does this refer to within the re-designated water body?  
Commented [A9]: Why not include federal antidegradation policy and trends of degradation?
### Table I - 1 Water Quality Objective Options for a “LMUN” Category

<table>
<thead>
<tr>
<th>Water Quality Objective Options</th>
<th>Brief Description</th>
<th>Level of Consistency with Selection Criteria Ratings = Yes/No or High/Medium/Low</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1 (Low) 2 (Potential) 3 (Used) 4 (Removable) 5 (Background level)</td>
<td></td>
</tr>
</tbody>
</table>

10. Water quality of surface waters designated for use as LMUN shall be maintained to protect the other designated beneficial uses of water body and shall not cause degradation of water quality in downstream water bodies that impair their beneficial uses or is consistent with the State's antidegradation policy.

- Refers to Antidegradation policy but without the policy number
- Difficult to read and follow

### Add new NUMERIC water quality objective

A numeric water quality objective is given in the Basin Plan for LMUN

**Proposed Options:**

1. Must meet primary MCLs, but not secondary MCLs. (Narrative for nuisance objective will still apply)

   - Secondary MCLs are for taste, odor and appearance and provide public welfare, but do not reflect health criteria. Some secondary MCL constituents also have primary MCLs or other human health levels of concern.
   - Water purveyors are required to comply with secondary MCLs and would need to install treatment if necessary, as well as report exceedances of secondary MCLs in source water to the public.

2. Must meet primary and secondary MCLs with the exception of trihalomethanes (short half-life)

   - Trihalomethanes have a short half-life and are a low human health threat in waters that are not currently being used for the MUN use.
   - MCLs are based drinking water standards and these objectives are restrictive for agricultural practices.

3. Must meet primary and secondary MCLs, but dissolved fractions can be used in place of total fractions

   - Removing trihalomethanes or other constituents would require constituent by constituent scientific justification
   - Using dissolved fractions reflects the use of filtration in conventional water treatment
   - Water purveyors use total fractions for reporting and compliance with secondary MCL values

- May be over-restrictive for potential MUN use of the water body itself.