



*Before the Board of Directors of the Monterey County Water Resources Agency
County of Monterey, State of California*

RESOLUTION No. **16-R03**

**RESOLUTION OF THE MONTEREY COUNTY WATER RESOURCES)
AGENCY IDENTIFYING PRELIMINARY MITIGATION MEASURES)
FOR POSSIBLE IMPACTS TO PRIVATE WELLS CAUSED BY)
CONSTRUCTION OF THE INTERLAKE TUNNEL AND SPILLWAY)
MODIFICATION PROJECT)**

WHEREAS, the Agency is actively considering the Interlake Tunnel and Spillway Modification Project, which entails the construction of a tunnel conveying water from the Nacimiento Reservoir to the San Antonio Reservoir for the purposes of consumption, groundwater recharge, flood management, prevention of seawater intrusion, and recreation in the Salinas Valley.

WHEREAS, during the preliminary design and initial phases of the environmental work for the environmental impact report (EIR) for the Project, the Agency has received concerns regarding the potential for the proposed tunnel to interfere with the operation of private water wells in the vicinity of the tunnel. The Agency is actively soliciting information on private wells from property owners within an area encompassing 3000 ft. on both sides of the proposed tunnel alignment.

WHEREAS, the Agency desires to proactively address any potential impacts to water supply from wells resulting from the construction of the tunnel project. The Agency wishes to direct that Staff and Agency consultants incorporate the following techniques, which have been proven to minimize the impacts on ground water and water wells in other similar tunnel projects. Special attention will be given to minimize the potential for short term impacts to wells during tunnel excavation, which poses the highest risk. Although long term impacts to wells resultant from the tunnel have a low risk due to the water tight nature of the finished tunnel, the Agency directs that measures to be taken to address the potential for impacts to ground water supply resultant from infiltration into the tunnel after construction.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE MONTEREY COUNTY WATER RESOURCES AGENCY:

1. The Agency is committed to mitigating the potential impacts to private wells as a result of the construction and operation of the tunnel. The mitigation measures will include the implementation of construction techniques to avoid impacts to ground water during

construction and operation of the tunnel to the extent feasible and provisions for other mitigation measures to fully address impacts to wells that can be proven to result from construction or operation of the tunnel project.

2. The anticipated construction techniques will include the following:
 - a. Excavation will be performed by either tunnel boring machine or road header with the requirement to probe ahead of the excavation to investigate for ground water and also to drill grout holes and inject grout ahead of and above the tunnel to “cut off” or block the water from flowing through the formation into the tunnel.
 - b. In either excavation case, the excavation will be supported by a lining system, pre-cast concrete segments or a reinforced shotcrete lining respectively. Both of these lining techniques will include water barriers and performance specification requirements to prevent water from entering the tunnel at no more than 1 GPM per 1000’ of tunnel or less which is essential dry.
 - c. The combination of grouting (pre and post excavation) and water proof performance specifications for the tunnel lining will prevent any long term impacts to ground water.
 - d. A final tunnel lining will be added for further protection. A one-pass pre-cast segmental lining system may be constructed as the final lining system consisting of bolted and gasketed segments to provide a water and gas proof final lining. In the case of road header excavation and shotcrete lining, a permanent final lining will be installed consisting of either a welded steel pipe grouted in place or a cast in place concrete final lining with a waterproof membrane.
3. To ensure that project-related impacts are minimized, the EIR will undertake analysis to identify impacts and appropriate mitigation. This will include preparation and implementation of a groundwater management plan, including:
 - a. a baseline inventory of wells and their existing condition;
 - b. preconstruction monitoring of wells;
 - c. groundwater modeling to evaluate potential groundwater inflows into the tunnel and probable effects to well;
 - d. consideration of the placement of supplemental storage tanks on property where it is determined that wells may be impacted to make up for potential shortfalls during construction;
 - e. development of a notification system for property owners to report any changes in well conditions during and after construction; and,
 - f. a contingency plan for the provision of supplemental water for wells that are determined to be affected by the project; this water could be a combination of potable water for human consumption and non-potable water for landscaping and livestock.

4. The measures identified in this resolution will be reviewed during preliminary design, and in the EIR, to ensure their effectiveness and to comply with the California Environmental Quality Act.

Upon motion of Director _____, seconded by Director _____, and carried by those members present, the Board of Directors hereby resolves:

PASSED AND ADOPTED on this 27th day of **June 2016**, by the following vote, to-wit:

AYES:

NOES:

ABSENT:

BY: David Hart, Chair
Board of Directors

ATTEST: David E. Chardavoyne
General Manager