

Underground water impact reports

What are underground water impact reports?

An underground water impact report (UWIR) is prepared to manage the impacts of underground water extraction by petroleum tenure holders (including coal seam gas tenure holders).

Who has to prepare an underground water impact report?

Under the *Water Act 2000*, responsible entities must prepare a UWIR. Petroleum tenure holders are responsible for preparing a UWIR for their petroleum tenure/s.

If a cumulative management area (CMA) has been declared, the Office of Groundwater Impact Assessment (OGIA) is responsible for preparing a UWIR for the CMA.

When to submit a UWIR

A UWIR must be submitted 14 months after:

- The day production testing or production started in the area (if the UWIR is being prepared by a tenure holder), or
- The day a renewal application for a tenure is granted (if the UWIR is being prepared by a tenure holder), or
- The day a CMA is declared (if the UWIR is being prepared by the OGIA).

A revised UWIR is required for the CMA or petroleum tenure every 3 years from the date the initial UWIR was approved.

What is included in a UWIR

A UWIR must assess the likely impacts of water extraction by a tenure holder and outline processes to monitor and manage these impacts. A UWIR must:

- Detail the amount of water to be taken by the tenure holder.
- Include information about the aquifers that are likely to be affected by the extraction of underground water.
- Provide a map of any 'immediately affected area' and any 'long-term affected area' where water levels are predicted to decline because of the tenure holder extracting water.
- Provide information on all water bores that are located in the predicted immediately affected area.

- Include a proposed water monitoring strategy.
- Include a spring impact management strategy.

For a CMA, the UWIR must also include a proposed responsible tenure holder for each obligation that is mentioned in the UWIR.

Bore trigger thresholds

A trigger threshold is the amount of decline in the water level of an aquifer or bore impacted by petroleum activities and which could pose a risk to water supply from the bore. This doesn't include seasonal or climatic water level fluctuations or those caused by non-petroleum and gas activities.

The purpose of setting trigger thresholds is to manage the risk posed by petroleum activities to water supplies that rely on water bores.

The trigger thresholds for different aquifers are:

- A 5 metre drop for consolidated aquifers, such as sandstone.
- A 2 metre drop for shallow alluvial aquifers, like sands
- A 0.2 metre drop for springs, including watercourses connected to springs.

Affected areas

An 'immediately affected area' is an area where the water level in an aquifer is predicted to decline by more than the bore trigger threshold, within 3 years of the UWIR being released for consultation, due to the extraction of water associated with petroleum activities.

A long-term affected area is an area where the water level in an aquifer is predicted to decline by more than the trigger threshold at any time (beyond 3 years), due to the extraction of water associated with petroleum activities.

Maps of an immediately affected area and a long-term affected area are included in a UWIR.

Water monitoring strategy

A water monitoring strategy monitors the extent of the impact on underground water resulting from petroleum activities. This must include a strategy for monitoring:

- the quantity of water taken or produced
- changes in the water level of aquifers
- changes in the water quality in aquifers resulting

from water level decline.

Spring impact management strategy

The spring impact management strategy ensures that petroleum tenure holders manage the predicted impacts on springs resulting from petroleum activities. The strategy must:

- Identify potentially affected springs.
- Assess the connectivity between the spring and the aquifer over which the spring is located.
- Assess the predicted risk to and impact on the ecosystem and cultural and spiritual values of the spring.
- Include options to prevent or mitigate any such impact and a timetable for implementing the strategy.
- Include a program for reporting to the OGIA about the implementation of the strategy.

Underground water impact report guideline

The Department of Environment and Heritage Protection (EHP) has developed a UWIR and final report guideline that provides guidance regarding the information (including the types of monitoring) that should be included in a UWIR or final report. The guideline is available on the EHP website www.ehp.qld.gov.au

More information

- Call the CSG/LNG Hotline 13 25 23
- Visit www.lng.industry.qld.gov.au