Quality of drinking water supplied to Aboriginal communities - Western Australia: causes, implications and protection measures.


Aboriginal communities

Some 300 communities are home to about 17 000 people. Of these:

• about 45 are Aboriginal town-based communities (ATBC)
• about 20 Remote Area Essential Services Program (RAESP) communities have a population over 200, with Broome being the largest with 800
• about 91 are remote communities with populations exceeding 50, and serviced through the Remote Area Essential Services Program (RAESP)
• the remaining discrete communities have a population less than 50, and are generally located remote areas of the state

The poster describes the current and proposed models for the provision of drinking water to this diverse range of Aboriginal communities.

Remote Area Essential Services Program (RAESP)

A joint federal/state program managed by the Department of Housing and Works has delivered and maintained water, power and wastewater services since 1997, through contracted state program managers (CSPM).

RAESP measures currently include:

• hydrogeological investigations and dril ling
• development of water source protection and management plans (20 to 500 ha)

Advisory Committee for the Purify of Water (ACPOW) measures include:

• review of monthly water analyses from the CSPM in line with the Australian Drinking Water Guidelines

Concerns for remote communities:

• risk of water source protection for many small, and the more remote, non-ATBC communities
• variation between the modes of water service delivery

Variations:

• Communities close to a town usually receive town-supplied services to the community boundary, but the communities are responsible for infrastructure within the community.

Water quality issues

• Some communities experience water quality problems associated with regional groundwater quality issues - nitrate, uranium, arsenic and heavy metals have been detected at levels that require treatment to meet the ADWG.

• In larger RAESP communities, health-related issues are being resolved by treatment, but for some smaller communities drinking water is being carted in.

• Contamination of water sources can be caused by community infrastructure (e.g. location of wastewater disposal and power stations adjacent to water bores). When community development occurs upstream of the water source, bore contamination risk is increased.

The way forward

• Water sources for town-based communities are protected through the existing Drinking Water Source Protection Plans (DWSP) for each town’s Public Drinking Water Source Area (PDWSA).

• Proclamation of PDWSA under the Country Area Water Supply Act (PAWS) enables by-laws to be applied to prevent contamination.

• Priority areas, protection zones and land-use planning ensure source protection is achieved.

Essential services delivery model

• The Department of Water is working with other government agencies to improve water services to Aboriginal communities through a single service delivery model, appropriate for the nature and remoteness of the various communities.

• This proposal will improve essential service provisions to Aboriginal communities in the state, and bring them up to the same standard as for comparable ‘mainstream’ towns.

Conclusion

The delivery of a good quality water supply and its protection for most Aboriginal communities in Western Australia is currently under review. A new model is being developed to improve water source protection and water service delivery for Aboriginal communities.