



Queensland waterways for waterway barrier works mapping

Version 3 update

Background

Waterways are important fish habitats and unimpeded movement of fish within Queensland waterways is vital to sustain healthy fish stocks, biodiversity and functioning wetlands. Waterways provide many benefits to our community and are part of what makes Queensland a desirable place to live.

Development in waterways that may limit fish movement is known as 'waterway barrier works' and may require approval to proceed.

The *Queensland waterways for waterway barrier works* mapping was developed to provide guidance on the likely location of waterways as defined in the *Fisheries Act 1994*.

The mapping allocates colours to waterways to identify certain works that maybe carried out without development approval, if it can be conducted under Fisheries Queensland's [accepted development requirements](#). Approximately 80% of development that is waterway barrier works is undertaken as accepted development (no development approval required), providing certainty and reducing costs. For waterway barrier works that require a development application, the mapping helps locate these features but does not determine their presence or absence.

The updated mapping displays waterway features more accurately – there are no new waterways and the assessment process for assessable waterway barrier works development has not changed.

The previous version 2 mapping had been in place since 2016 and was outdated. It was updated in November 2023 using recent and more accurate watercourse and wetland area input datasets and similar Geographic Information System processing that was used in previous versions. This update provides many benefits for users, including:

- a better reflection of the actual on-ground location of waterways in Queensland
- better planning for development early in the approvals process to avoid missed triggers at operational works stages
- mapping that more closely reflects other government mapping sources (including watercourse and wetland mapping from the Department of Resources and the Department of Environment and Science).

Frequently asked questions

Works are underway or about to commence

1. If works have commenced under the accepted development requirements, and the changes to the mapping would make those works assessable, do I need to submit a development application?

If you have already notified of or undertaken accepted development in accordance with the previous version 2 mapping and the requirements that applied at that time, then your development is authorised. Updated mapping does not change this.

2. Has a transitional period been considered for the use of Accepted Development Requirements?

Yes. If you have already planned, designed and are about to undertake waterway barrier works under the [accepted development requirements](#), a transitional period of 3 months was put in place to allow these works to continue under the previous version 2 mapping. After receiving feedback from industry, this period will be extended until 5 pm, 30 June 2024.

The works do not need to be completed; however, the required notification must be submitted by this date and works commence within 20 business days after submission.

This transitional period only applies to accepted development – not assessable development applications.

I've already received pre-lodgement advice

3. What if I have already received pre-lodgement advice about my development and how it relates to waterways and waterway barrier works?

If pre-lodgement advice has been provided by the State Government that clearly identifies the extent of waterways relating to your development and/or requirements for waterway barrier works, that advice still stands. For example, if advice has been provided that development in a certain feature in the landscape does not require waterway barrier works approval, this advice stands regardless of what is shown on the updated mapping.

This advice relates only to the information submitted on which the advice was based. If certain details of a development were not provided or the development has changed, further pre-lodgement advice should be obtained.

Fisheries Queensland provides technical advice on developments proposed in locations where waterways are likely to be present – via pre-lodgement advice coordinated by the State Assessment and Referral Agency. This is a free service. If a development plan is provided that shows the location of works, advice can be given on the location of waterways and approval requirements.

4. I have questions about waterway advice provided before the mapping update was released. Who do I contact?

If your question relates to an accepted development requirement notification or advice provided by Fisheries Queensland about waterways, email planningassessment@daf.qld.gov.au.

If your question is about pre-lodgement advice provided by SARA, contact your [regional SARA office](#).

I don't agree with the mapping

5. If I don't agree with what is mapped. What is the process for getting advice on waterways and waterway barrier works for my project?

The mapping should be used in conjunction with the [user guide](#). This document contains information about common mapping anomalies and what to do if you find one.

If you still need help, seek advice early in the planning process – prior to undertaking detailed onsite investigations. Advice based on a desktop assessment of the best available Geographic Information System resources may negate the need to undertake onsite investigations or narrow down the areas of interest.

For advice regarding **accepted development** requirements, email Fisheries Queensland at planningassessment@daf.qld.gov.au.

For advice regarding **assessable development**, Fisheries Queensland provides technical advice on developments proposed in locations where waterways are likely to be present – via pre-lodgement advice coordinated by SARA. This is a free service. If a development plan is provided that shows the location of works, advice can be given on the location of waterways and approval requirements. Contact your [regional SARA office](#).

6. The mapping is showing a waterway under/over existing built housing, which could discourage a homebuyer from purchase or affect works on the home site. What can I do?

Due to development, some waterways on the mapping layer are no longer present on ground or may have been diverted away from their mapped location. This is a by-product of the point-in-time capture of the input data layers.

The result of deliberate filling to remove on-ground features of a waterway without relevant approvals is not considered a mapping anomaly. A review of historic aerial imagery can be undertaken to identify when filling of a waterway occurred.

If the filling was undertaken after 18 December 2009, approval for waterway barrier works should have been obtained and if not there may be a compliance issue.

7. Will it take longer to ground truth sites looking for waterways?

No. The process for this hasn't changed as a result of this mapping update. The version 3 mapping is more accurate and makes it easier to identify waterways. The [user guide](#) provides information on how to interpret the mapping and common anomalies. Generally, desktop analysis is sufficient to determine the presence or absence of a waterway. There is also up-to-date aerial imagery that can be viewed in conjunction with mapping products, which show the course through which water flows and elevations in the landscape.

Obtain pre-lodgement advice via SARA early in the planning process for development proposed in locations where waterways might be present. Contact your [regional SARA office](#).

Frequently asked questions

I've already submitted a development application

8. I submitted an application based on mapping that showed my development was assessable, but the mapping update doesn't show a waterway. Does this mean I no longer need a development approval?

Possibly. It depends on whether the feature on ground is a waterway as defined in the *Fisheries Act 1994*. Contact your [regional SARA office](#) for advice.

9. I submitted an application based on mapping that showed my development was assessable, but the mapping update reduces the category from red to green. Does this mean I can use the accepted development requirements?

Possibly. There are various work types in the [accepted development requirements](#) that can be conducted on each coloured waterway on the mapping layer. If your works meet the requirements, you can undertake them as accepted development.

10. How does this affect applications already submitted to SARA that include changes to the colour of waterways?

Changes to the mapping will not affect development applications already submitted, unless the applicant wants to change their application. Assessable development is triggered based on waterway barrier works being proposed within waterways located in the landscape – not by the mapping. The mapping provides guidance and does not change where waterways are actually located.

For some time, the technical assessment of applications has included consideration of updated versions of input datasets where available and applicable.

11. I submitted an application based on an amber waterway and paid the relevant SARA fee but the updated mapping changes the waterway to red. Do I need to pay more fees?

Fees relevant to development applications for waterway barrier works are legislated through the Planning Regulation 2017 and administered by the Department of State Development, Infrastructure, Local Government and Planning, which provides advice on development application fees through the SARA pre-lodgement and development assessment process.

Variation requests, preliminary approvals and consequential development applications

12. A preliminary approval is given based on one set of waterway circumstances, but the subsequent development approvals to allow works to take place are considered with a more extensive set of mapped waterways. How will variation requests and preliminary approvals deal with the waterway mapping update?

Waterway barrier works that were pre-planned under accepted development requirements can be conducted under transitional arrangements until 5 pm, 30 June 2024.

If works are planned in an area where waterways may be present, further pre-lodgement advice should be requested through your [regional SARA office](#). Information should be provided on any proposed works and existing preliminary approvals that apply.

Assessable development is triggered based on waterway barrier works being proposed within waterways located in the landscape – not by the mapping. Waterways mapping helps locate these features but does not determine their presence or absence. Any waterways that exist on site would have been there prior to the updated mapping being released and should have been considered early in the planning process.

13. Is there consideration that decisions (including financial/investment, design, timing etc.) are made based on the variation approval?

Fisheries Queensland will consider all information provided in development applications or pre-lodgement requests and assess it against the relevant State Development Assessment Provisions. Fisheries Queensland provides technical advice through the SARA process when providing pre-lodgement advice or assessing development applications for waterway barrier works. Fisheries Queensland base this advice on the best available data and science, and in accordance with relevant legislation, including the *Fisheries Act 1994* and State Development Assessment Provisions. This advice is provided to ensure impacts to waterways are avoided or minimised where it is demonstrated the impacts are acceptable and unavoidable.

DSDILGP undertake the decision maker role of SARA and will have regard to DAF's technical advice and recommendations as well as other relevant matters.

14. If I have local government approvals, which version of the mapping should be used for operational works applications?

The version 3 mapping is more accurate than the previous version. Assessable development is triggered based on waterway barrier works being proposed within waterways located in the landscape – not by the mapping. Waterways mapping helps locate these features but does not determine their presence or absence.

All care has been taken to ensure the data analysis and interpretation for the version 3 mapping is the highest quality. However, as the mapping has been derived from specified versions of pre-existing products, there may be inconsistencies with on-ground features as a result of these base layers. The mapping should be used in conjunction with the [user guide](#).

I haven't considered waterway barrier works

15. I intend doing work in a mapped area. What should I do first?

Consider the [accepted development requirements](#) to determine whether your works can be completed through that process.

If your proposed works do not satisfy the accepted development requirements and you have specific details of a development proposal located in an area where waterways may be present, you should request pre-lodgement advice through your [regional SARA office](#). This will help identify any state development triggers that may apply to your proposal.

The level and detail of advice will depend on the quality and detail of information provided as part of the pre-lodgement request. Refer to section 4 of the [SDAP guideline 18 - Waterway barrier works](#) for standard information to include in your request.

16. I have a development that has been in planning for a long time and the updated mapping identifies waterways in the development area. What should I do?

Fisheries Queensland provides technical advice on developments proposed in locations where waterways are likely to be present through pre-lodgement advice coordinated by SARA. This is a free service. If a development plan is provided that shows the location of works, advice can be given on the location of waterways and approval requirements.

Any prior planning will be considered and reflected when advice is provided on the requirements of waterway barrier works, particularly if pre-lodgement advice has already been obtained from SARA on requirements for waterway barrier works or from Fisheries Queensland in other planning stages.

Assessable development is triggered based on waterway barrier works being proposed within waterways located in the landscape – not by the mapping. Waterways mapping helps locate these features but does not determine their presence or absence. Any waterways that exist on site would have been there prior to the updated mapping being released and should have been considered early in the planning process

17. Do I need to re-do my accepted development requirements if a mapped waterway has changed colour?

If you have already submitted a notification of, or undertaken, accepted development in accordance with the previous version 2 mapping and the requirements that applied at that time, then your development is authorised. Updated mapping does not change this.

18. Are more environmental offsets going to be required with the updated mapping?

No. Offsets are calculated from impacts to waterways that are present within the landscape, not only those shown on the mapping.

Frequently asked questions

Mapping update and advice about waterways

19. Why does the updated mapping show waterways in new locations?

There are no new waterways. Waterways previously not shown in versions 1 and 2 of the published mapping will now appear in the version 3 mapping, and the mapping will also better align to on-ground waterways. While the previous version of Queensland waterways mapping was based on the best available wetlands and watercourse mapping at the time, the updated input datasets more accurately identify the physical location of on-ground waterway features.

20. Why doesn't Fisheries Queensland have a mapping amendment process like Property Map of Assessable Vegetation or koala habitat?

The waterways mapping is for guidance only and is not legislated like vegetation or koala habitat mapping. Therefore, there is no formal legislative process to amend the waterways mapping.

21. How does Fisheries Queensland decide what is a waterway and what category it falls into?

Waterways are defined in the *Fisheries Act 1994*. More information on the features of a waterway is available on the [Fisheries Queensland website](#). Desktop analysis of whether an on-ground feature meets this definition or has the features of a waterway includes consideration of imagery and the use of various up-to-date mapping products such as waterways, watercourse, hill shade, digital elevation and wetland mapping (see information in Appendix 3 of [SDAP guideline 18 - Waterway barrier works](#)). Waterways are categorised via the analysis of existing input datasets using processing developed by fish passage experts. It uses stream orders of watercourses, slopes of waterways and tidal influence to categorise them into colours that relate to accepted development categories.

22. If the mapping is only for guidance, what role does it play?

It helps identify waterways that should be considered when planning any development. This can reduce the costs and time associated with investigating a site for which development is being planned.

Consultation on mapping updates

23. Was consultation undertaken on the waterway mapping updates?

Yes. Stakeholders had the opportunity to provide feedback from 19 July to 16 August 2023. Stakeholders were provided with a discussion paper explaining the proposed mapping updates, secure access to view the updated mapping, information sessions and a link to an online engagement hub site. Stakeholders included utility providers, GIS experts, agriculture industry bodies, fish passage experts, development industry bodies and local and state government. The majority of stakeholders agreed that the proposed update was an improvement on the previous version. All stakeholders that provided feedback were sent detailed responses specific to their comments and Fisheries Queensland offered to meet with them to discuss their feedback. No objections to proceeding with the update were received.

24. Will there be an opportunity to learn more about the mapping update and provide feedback for future mapping updates?

Fisheries Queensland and the Department of State Development, Infrastructure, Local Government and Planning will undertake further engagement with industry in 2024 to explain how the mapping is created and updated, and obtain feedback to inform future updates.

Mapping methodology

25. How is the updated mapping intended to improve efficiency in development planning?

Due to updated input datasets, the mapping more accurately identifies where waterways are located. The improvements are expected to allow proponents to better plan waterway barrier works in accordance with the accepted development requirements. In western braided waterway networks, there will be more accepted development options available due to the reduction of waterways mapped purple.

If proposed construction or raising of waterway barrier works does not satisfy the accepted development requirements and the development is assessable, the improved mapping will help proponents more efficiently identify where assessable waterway barrier works are required. It is expected this is likely to reduce the need for ground truthing investigations to prepare a development application. It will help developers plan better to avoid or minimise impacts on waterways and, if necessary, help them prepare development applications that are more likely to be successful.

26. What is the effect of the mapping update?

Waterways are defined in Schedule 1 of the *Fisheries Act 1994*. **The mapping provides guidance only and does not change where waterways are actually located.**

Fisheries Queensland provides technical advice on developments proposed in locations where waterways are likely to be present through pre-lodgement advice coordinated through SARA. This is a free service. If a development plan is provided that shows the location of works, advice can be given on the location of waterways and approval requirements.

The updated mapping displays waterway features more accurately – there are no new waterways and requirements for assessable waterway barrier works development have not changed.

The input datasets used in the version 3 (November 2023) update have been publicly available for some time and their recommended use for helping locate waterways is well documented in Appendix 3 of [SDAP guideline 18 - Waterway barrier works](#) and the [user guide](#), and through pre-lodgement and planning advice provided by the SARA

27. How does the waterways layer use science from the vegetation management maps?

The waterways mapping does not use science from the vegetation management maps. However, both use the point-of-truth watercourse mapping as a key input. The watercourse mapping shows the way, or course, through which water flows in Queensland.

28. Why doesn't the mapping reflect previous waterway determinations established on a site-by-site basis? Are those previous decisions void?

To enable the automation of the GIS processing and to keep the mapping consistent with other point-of-truth input government mapping, manual alterations were not included in the updated mapping.

If pre-lodgement advice has been provided by SARA that clearly identifies the extent of waterways relating to a development and/or requirements for waterway barrier works, that advice still stands. For example, if advice has been provided that development in a certain feature in the landscape does not require waterway barrier works approval, this advice stands regardless of what is shown on the updated mapping.

Frequently asked questions

This advice relates only to the information submitted on which the advice was based. If certain details of a development were not provided or the development has changed, further pre-lodgement advice should be obtained.

29. There is no water on the site. Why is it mapped as a waterway for fish passage?

Many of Queensland's waterways are dry at times and subject to ephemeral flows, usually during the wet season from November to April. If conditions are dry, fish have limited opportunities to move. Freshwater fish species need to move between waterways during flood times, particularly in the period after the peak of the flood.

This movement helps the fish repopulate areas after drought, return upstream after being washed downstream during floods, create genetic variability between streams to prevent inbreeding, complete spawning migrations and access opportune food sources.

30. Why are drains sometimes considered a waterway?

Waterways can be natural but can also include those that have been modified. For example, the landscape may have been modified through the construction of drains, floodways or canals. These features can provide pathways along which fish move. The drainage function of a waterway may be of value to land users; however, other functions or services such as fisheries productivity, aquatic bio passage, habitat and biodiversity are also of value to other stakeholders, industry and the community. Further, restoration of these sites is possible to return natural fish habitat features and green spaces that the community can enjoy.

31. How accurate is the waterway mapping?

All care has been taken to ensure the data analysis and interpretation for the version 3 mapping is the highest quality. However, as the mapping has been derived from specified versions of pre-existing products, there may be inconsistencies with on-ground features as a result of these base layers. The mapping should be used in conjunction with the [user guide](#). This guide provides information on common mapping anomalies and what to do if you find one.

32. Do waterways change through flood/drought/development changing the profile of the land? How is this reflected in the mapping?

Yes. Waterways are not static and will change alignment after floods, weather events or approved waterway realignments. The [user guide](#) provides advice on waterways that are misaligned with the mapping. Generally, if the on-ground features of the mapped waterway are obvious, such as nearby defined bed and banks, then the colour of that mapped waterway applies to any proposed waterway barrier works.

33. Does Fisheries Queensland ground truth mapping updates?

Fisheries Queensland does ground truth some areas; however, the mapping is statewide and it's not possible to ground truth the whole state. Fisheries Queensland undertook a detailed internal review and desktop analysis of the mapping over a 12-month period.

34. How do I access the previous version of the mapping?

The previous map versions are no longer available to the public to avoid confusion about which mapping is most up to date. If development had been planned prior to the mapping update, you would know what colour the waterway was. If you did not make a copy of what the mapping looked like at the location of proposed works, you can email planningassessment@daf.qld.gov to confirm.

Frequently asked questions

35. When is the next waterway mapping update?

A date for the next waterway mapping update has not been determined at this time.