About the Project

Lachlan Valley has been identified by the NSW Government as the first of four ‘priority catchments’ for the investment and delivery of critical water infrastructure projects in the next decade.

Phase Two of the Lachlan Valley Water Security Project is looking at the feasibility of a dam near Canowindra at a site called Cranky Rock, which was identified in Phase One, but is also investigating complementary and/or alternative options to increase the water security and flood management capabilities of the Lachlan region.

Phase Two requires WaterNSW to deliver a Preliminary Business Case to Infrastructure NSW by August 2017. This business case must explore the potential social, economic and environmental impacts of a dam storage and other complementary or alternative options. The preliminary business case will also include a cost-benefit analysis and provide a preferred option for water security for the Lachlan region.

Project update

Technical Studies:
The project team have been reviewing the technical studies undertaken by WaterNSW during Phase 1, which had looked at options for a new dam in the Upper Valleys.

Following this review, the focus by the project team has been on considering the various size dams at two Cranky Rock sites on the Belubula River, upstream of Canowindra. A substantial part of their work has been on understanding the potential environmental impact on the Cliefden Caves, which are located upstream of the proposed dam sites.

Field Studies:
The project requires site investigations in order to better understand the geology and environment of the Cranky Rock area to assess its suitability for a dam as well as to better understand potential impacts.

Over the past few months the project team have been liaising closely with landholders to carry out field investigations including a geophysical trial in the Cranky Rock area. This work included ground based investigations as well as the use of aerial drones to view and record ground conditions. This work is establishing a better understanding of the relationship between the storage of water at Cranky Rock and potential flooding of the Cliefden Caves.
Potential options for the Lachlan Valley

In addition to site investigations for a potential new dam at Cranky Rock, a suite of other alternative options are also being considered to ensure the valley gets maximum value for the least cost. These include pipelines, storages, system efficiencies and water saving options. These have been identified through a review of previous options, feedback from stakeholders and exploration by the project team.

With the addition of the consideration of an off-stream storage option at Panuara Rivulet, the Community Reference Group and stakeholder discussions to date have confirmed with the project team that the following options form a comprehensive long list for further assessment.

The full long list of options currently being considered to address the water security issues faced by the Lachlan Valley are provided on the following page.

Feasibility studies are being carried out to consider if these options meet the objectives of the project.

A short list of viable options will be completed in the coming months.

Lachlan Valley Water Security – Project Needs

As part of the submission to Infrastructure NSW of the Preliminary Business Case, the need for the project must be clearly identified. This becomes the case for change.

The project has confirmed that change is needed in order to future proof the social and economic success of the Lachlan Valley as an important agricultural district and to ensure the long term security of supply for communities.

The Lachlan Valley needs water security and flood management capability. These important project drivers and the case for change will form an important part of the project business case.
## The Lachlan Valley Water Security Project
### Long List of Options

<table>
<thead>
<tr>
<th>Option</th>
<th>Brief Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pride Of Oak (Cranky Rock Dam 1 upstream) Full Supply Level 375m</td>
<td>New dam with 100GL storage.</td>
</tr>
<tr>
<td>Pride Of Oak (Cranky Rock Dam 1 upstream) Full Supply Level 395m</td>
<td>New dam with 310GL storage.</td>
</tr>
<tr>
<td>Cranky Rock Dam 2 (downstream) Full Supply Level 375m</td>
<td>New dam with 270GL storage.</td>
</tr>
<tr>
<td>Cranky Rock Dam 2 (downstream) Full Supply Level 395m</td>
<td>New dam with 700GL storage.</td>
</tr>
<tr>
<td>Cranky Rock Dam 2 (downstream) Full Supply Level 401m</td>
<td>New dam with 1,000GL storage.</td>
</tr>
<tr>
<td>Upgrade Wyangala Dam</td>
<td>Raise existing dam for extra 780GL storage.</td>
</tr>
<tr>
<td>Lake Rowlands and pipeline to Carcoar Dam Possible Rowlands Dam Upgrade</td>
<td>Approximately 10km pipeline from Lake Rowlands to Carcoar Dam. Possible upgrade existing 4.5GL dam up to 26GL. (Possible additional pipeline from Carcoar Dam to Carcoar Water Treatment Plant or Blayney Water Treatment Plant for Town Water Supply).</td>
</tr>
<tr>
<td>Abercrombie Dam</td>
<td>New dam with 700GL storage.</td>
</tr>
<tr>
<td>Lake Cargelligo</td>
<td>More efficient storage for evaporation savings.</td>
</tr>
<tr>
<td>Lake Brewster – Non build option</td>
<td>Inefficient northern cell that could be abandoned and pass more environmental flows downstream and increase storage in Wyangala Dam by reducing translucency rules.</td>
</tr>
<tr>
<td>Lake Cowal – Install regulators and related infrastructure to change to an operational storage</td>
<td>Install regulators to change to an operational storage. Previous study (WRC 1978) considered efficient draining of Lake to allow more cropping.</td>
</tr>
<tr>
<td>Upgrade Weirs Hillston to Booligal</td>
<td>Total storage of about 2,000ML to re-regulate operational surpluses.</td>
</tr>
<tr>
<td>Targeted buyback or rationalisation of licenses</td>
<td>This type of option will allow for the existing resource to be shared amongst a reduced pool of users thereby allowing for improved water security.</td>
</tr>
<tr>
<td>Reduced surface water demand and piping in Lower Lachlan</td>
<td>Improved efficiencies in effluent systems and alternative drought water supply for Stock and Domestic (S&amp;D) supply in Muggabah, Merrimajeel, Merrowie and Willandra Creeks.</td>
</tr>
<tr>
<td>Alternative and more efficient water supply for basic landholder rights in Lower Lachlan</td>
<td>Improved efficiencies in effluent systems and alternative drought water supply for Stock and Domestic (S&amp;D) supply in Wallamundry, Nerrathong and Wallaroo Creeks.</td>
</tr>
<tr>
<td>Reduced surface water demand and piping in Mid-Lachlan</td>
<td></td>
</tr>
<tr>
<td>Alternative and more efficient water supply for basic landholder rights in Mid-Lachlan</td>
<td></td>
</tr>
<tr>
<td>Water sharing plan and Murray-Darling Basin Plan (both Lachlan and Belubula) changes to allow operational efficiencies to meet service level needs</td>
<td>There is scope for some changes within these instruments to allow for operational efficiencies, which result in improved water security.</td>
</tr>
<tr>
<td>Groundwater Alternative for surface water supply</td>
<td>Increased usage of groundwater in drier years for all valley users subject to potential within current water sharing plans.</td>
</tr>
</tbody>
</table>
Current focus:
WaterNSW is currently analysing the geotechnical information from the field studies in the Cranky Rock area to confirm suitability for a dam. The project team is also developing the long list of project options with recent inputs from valley stakeholders (the newly established Community Reference Group) and government. The options will be investigated and evaluated to produce a short list, which will be the subject of more detailed study.

These options can be stand-alone or combined into a scheme, which will then be included in the social and economic studies.

This is to develop the best combination of options to increase the water security and flood management capabilities of the Lachlan region for the least cost.

Project timeline

December 2016 - February 2017
- Commence stakeholder consultation process - including the establishment of a Community Reference Group (CRG)
- Review options and develop a long list for consideration
- Carry out preliminary site surveys and non-invasive investigations
- Begin development of preliminary business case

March 2017 - June 2017
- Carry out geotechnical and environmental site investigations
- Develop feasibility designs for build options
- Develop non build options such as operation and rule changes
- Continue stakeholder consultation process
- Willingness to Pay and Cost Benefit Analysis undertaken
- Select preferred options and begin concept design for inclusion in preliminary business case

July 2017
- Develop a shortlist of options

August 2017
- Submit preliminary business case

October 2017 - February 2018
- Review and further refinement of preferred option(s)
- Continue stakeholder consultation process
- Develop final business case

Mid 2018
- Submit final business case

Next steps
Over the coming months we will complete our technical investigations and cost benefit analysis and then seek feedback on a short list of options. Feedback from the community and stakeholders will help inform WaterNSW’s thinking on the preferred options for inclusion in the preliminary business case.
Willingness to pay study

WaterNSW has engaged a specialist consultant, the Balmoral Group, to identify stakeholders’ willingness to pay for improvements to water security.

The Balmoral Group will test potential funding models with water access licence holders and other project stakeholders. The findings will be used in the cost benefit analysis. Projects that meet the needs criteria and maximise benefit under three categories (small, medium and large) will be selected for the willingness to pay study.

Initial focus group workshops were held in Orange on 27 March and in Forbes on 28 March. These focus groups were to test the survey instruments and are not the survey itself.

The survey itself, which took place in April and May, included randomly selected people from three groupings:

1. people across NSW (from a representative survey panel of NSW tax payers).
2. people within the study area.
3. people who are water access licence holders in the Lachlan Valley catchment.

Community feedback

Our first Community Reference Group (CRG) meeting was held on Thursday 16 March in Orange.

The CRG membership was decided following a thorough nomination and selection process that was completed in February. We thank these stakeholder groups and community representatives who are helping the exchange of information between WaterNSW and the wider community.

- Centroc - Bill West, representing Upper Lachlan councils and water utilities for townships.
- RamRoc - Peter Laird, representing Lower Lachlan Shire councils.
- Central Tablelands Water - Cr David Somervaille.
- Save Cleftden Caves Association - Armstrong Osbourne.
- Orange Speleological Society - Denis Marsh.
- Belubula Landholders Association - Michael Payten.
- Lachlan Valley Water - Tom Green.
- Environmental Water Advisory Group (Lachlan Riverine Working Group) - Fin Martin.
- Lachlan Customer Service Committee - Mary Ewing.
- Wallamundry Narrothong Creek Water users - Wally Dawson.
- Booboroi Creek Water users - Mark Kearine.
- Wiradjuri Local Aboriginal Land Council (Cowra) - Les Coe.
- Libby Skipworth - Lake Cargelligo representative
- Cyril Smith (independent community rep).
- Mark Brown (independent community rep).
Key outcomes from the recent CRG meeting include:

- Agreement on the charter and terms of reference.
- Shared understanding of each group’s or individual’s interests and views on the project.
- Review of the current long list of options and discussion of benefits and impacts.
- Agreement that WaterNSW should investigate an additional off-stream storage option in the long list of options.
- Suggestion that the short list of options should include a suite of options as the range of issues faced across the Lachlan Valley will require multiple responses.
- Suggestion to refer to local geographical names where possible, for example Pride of Oak Site rather than Cranky Rock site no.1.
- Request to rotate the location of future CRG meetings to acknowledge the distances across the Lachlan Valley.
- Suggestion to consider adding a Lake Cargelligo representative to the CRG membership.

WaterNSW also met recently with its Customer Reference Group (CusRG) for the project to provide an update on the project and seek feedback on the long list of options.

Notes from the CRG meetings will be made available on the project website soon. We encourage you to review the notes and get in touch with a CRG member to pass on your views ahead of the next meeting.

The reference groups are one way that WaterNSW will use to engage with the community on the options development and assessment. Over the coming months the project team will hold local community information sessions. This is to provide the community with an opportunity to meet the members of the project team and to ask questions and provide feedback on the project. These sessions will be advertised in local newspapers, and on the WaterNSW website.