Resilient Valley, Resilient Communities
Hawkesbury-Nepean Valley
Flood Risk Management Strategy

Frequently asked questions

Land use in the floodplain

Is the Warragamba Dam Raising proposal about increasing development in the floodplain?

No. There is a very substantial flood risk now facing the current population, homes and businesses in the Hawkesbury-Nepean floodplain. For example, if a flood similar to the valley's worst since European settlement happened again now, hundreds of lives would be in danger, around 90,000 people would need to be evacuated, and around 12,000 homes would be impacted.

This existing risk needs to be addressed and raising Warragamba Dam to provide flood mitigation is the most effective infrastructure option to achieve that.

What are the current flood-related planning controls for residential development?

The 'flood planning level' for residential development is based on 1 in 100 (or 1%) chance per year flood. Below this level, new residential development in high flood risk areas is typically prohibited. Special building controls are applied to residential developments located below the flood planning level. The controls relate to life and property safety and include minimum floor levels and building standards to reduce flood risk.

The Sydney Region Growth Centres State Environmental Planning Policy 2006 also contains development controls for developments on flood prone land.

Are current planning controls adequate for the Hawkesbury-Nepean floodplain?

The 1 in 100 (or 1%) chance per year flood planning level is suitable for many NSW floodplains, where the difference in flood depth between the 1 in 100 chance per year flood and the largest possible flood (known as the probable maximum flood or PMF) is relatively small, typically less than two metres.

However, the Hawkesbury-Nepean Valley has a unique flood risk. For example, in the Richmond-Windsor region, the largest possible flood is up to nine metres above the 1 in 100 (or 1%) chance per year flood level. As a result, the valley's land use planning controls do not adequately address the risks posed by the deep flood levels experienced in parts of the floodplain.

A more risk-based approach is being implemented under the Flood Strategy. This doesn't mean development is automatically prohibited in the area of the PMF, but it does mean that the flood height, evacuation capacity and ability to recover from a flood event will be taken into account when setting development controls.

What is being done to manage development in the floodplain?

Development in the floodplain needs to be carefully managed, now and into the future.

The NSW Department of Planning and Environment is leading development of a new Regional Land Use Planning Framework to take account of the cumulative impacts of growth across the floodplain.

While this work is under way, new approaches are being implemented to ensure flood risk is not increased, for example:

- new growth is being limited to those areas where people can be safely evacuated in a severe flood event
- hard decisions are being made on development, eg, the decision not to allow future residential development in area of high flood risk with no evacuation capacity like Penrith Lakes
- protocols and principles have been developed to guide rezoning decisions.

These approaches are documented in the new Western City District Plan, which sets out a series of principles and guidelines for land use planning in the floodplain.

By getting a better understanding of the flood risk, development in the valley can continue while not increasing the risk to life or property damage.

How is land use planning being integrated with road and emergency planning?

The Regional Planning Framework will take into account new region-wide flood and evacuation modelling and analysis. A new purpose-built model is being developed by Roads and Maritime Services with support from the NSW State Emergency Service, Infrastructure NSW and an international team of experts led by the CSIRO's Data61. Work on this model is due for completion in 2019.

A companion document to the land use planning framework – the new Regional Evacuation Road Masterplan – is also being developed. It will help ensure land use, road and evacuation planning are properly integrated, now and into the future.

Will flood planning controls be lowered if Warragamba Dam is raised for flood mitigation?

No. Should the Warragamba Dam raising be approved and built, areas within the Hawkesbury-Nepean Valley currently subject to flood-related development controls (based on the 1 in 100 chance per year flood level) would remain subject to these controls.

In other words, the flood planning level would not be lowered. This would help ensure the benefits of the dam raising would be maintained over time.

Would raising Warragamba Dam mean residential development in Penrith Lakes can go ahead?

In January 2017, an amendment to the State Environmental Planning Policy (SEPP) (Penrith Lakes Scheme) created new zonings for the precinct.

The amended SEPP reflects the outcomes from investigations into the risk of flooding in the Hawkesbury-Nepean floodplains. It allows for a precinct where the community can work and play, with a waterway zone, parklands, environmental area, tourist accommodation, employment area, and a very limited number of homes.

The Government continues to talk to Penrith Lakes Development Corporation about the opportunities of the site for development. It has been made clear these opportunities do not include residential development.

Does the Penrith Lakes Scheme provide flood mitigation?

It has been suggested Penrith Lakes Scheme will provide significant regional flood mitigation benefits.

The ability of the lakes to mitigate floods in the Hawkesbury-Nepean Valley is very limited. In a major flood, the lakes would have little effect on the rise and fall of the flood and almost no effect on the downstream flow. It's also important to note that evacuation downstream of Penrith Lakes is likely to have begun before floodwaters start entering the lakes.