Objection to Dungowan Dam & Pipeline Project SSI – 10046

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We object to proposed dam in the Peel River catchment. The proposed dam is estimated to cost $1.3 billion to provide only an average of an additional 7,000 ML per year and will not secure Tamworth water supply into the future. It is a very expensive party political promise with no assessment of more beneficial, cost effective long-term solutions that will not damage the natural environment.

The Environmental Impact Statement (EIS) fails to comply with the Secretary of Planning assessment requirements (SEARS). The EIS does not:

- analyse and optimise alternatives,
- assess all threatened species including those listed under Federal law,
- provide all assumptions used in modelling

The project will not meet its objective to provide the most cost effective or efficient option for securing Tamworth water supply.

- There is no analysis of the benefits of the proposed Tamworth Regional Council industrial water recycling project. The EIS fails to identify industrial use of town water supply.
- An all options analysis was conducted in 2015 but limited options were analysed in the summary business case.

River health impacts:

- Loss of 192 km^2 of high quality native fish habitat and loss of migration opportunities for Federally listed threatened Murray Cod, Silver Perch and Eel-tailed Catfish.
- Dungowan Creek is within the threatened Lowland Darling River aquatic ecological community. Offset measures for impacts on threatened native fish are not adequate.
- Dungowan Creek and Peel River have a healthy Platypus population that will be genetically separated
- The loss of flows in the Peel River will cause a failure to meet the Environmental Water Requirements of the Murray-Darling Basin Plan and impact on environmental health of the Namoi River catchment.

Biodiversity impacts:

- A significant area of critically endangered ecosystem and Koala habitat will be cleared, including habitat for many other endangered mammal and bird species
- The EIS fails to assess 18 threatened species known or likely to be in the area of impact including 6 threatened species protected under Federal law such as the Greater Glider and 2 critically endangered plants.

The biodiversity impacts of the proposed new Dungowan Dam are sufficient alone to prevent the dam going ahead on environmental grounds. The Dungowan EIS faunal and floral lists have shown a large number of threatened species both listed in NSW and the Commonwealth EPBC Act. A number of important species and communities are acknowledged are being significantly affected by the proposed dam. Namely Box Gum Woodland, the Koala, Spotted-tail Quoll, Border Thick-tailed Gecko,Tall Velvet Seaberry, Regent Honey Eater, Swift Parrot and Platypus.

There are further endangered species known in the area that were not considered in the EIS. The Booroolong Frog, listed as endangered in NSW and under the EPBC act. Davies tree frog listed as vulnerable in NSW and known in Terrible Billy catchment. The powerful owl, listed as vulnerable in NSW is known in the catchment. The masked owl and Sooty Owl are vulnerable in NSW and are both known in the area. The Glossy Black Cockatoo, vulnerable in NSW, is known in the catchment. The Turquoise Parrot, Barking owl, Brown Tree Creeper, Black Chinned Honeyeater and Flame Robin are all vulnerable in NSW and likely found in the area. The Greater Glider endangered under EPBC are also known in the catchment. The Yellow Bellied Sheathtail Bat is listed as vulnerable in NSW and is known in the area, as is the Greater Broad Nosed Bat. The vulnerable blue billed duck is also a possibilityiIn the area The EIS also did not consider the endangered Brush tailed wallaby (endangered in NSW, vulnerable EPBC), the square tailed kite or the Hooded Robin (SE form) both vulnerable in NSW and are likely to occur around Dungowan. The yellow bellied glider (vulnerable in NSW and EPBC) is also likely to occur. Listed plants, *Euphrasia arguta* known from around Nundle (endangered in NSW, criticially endangered BPBC), *Dichanthium setosum* (bluegrass) vulnerable and *Asterolasia beckersii* (Dungowan starbush) endangered in NSW and criticially endangered BPBC) are all likely to be found in the area.

Relevant listed Key threatening processes which have been ignored in the EIS are: Alteration to the Natural Flow Regimes of Rivers and Streams and their Floodplains and Wetlands (NSW), Anthropogenic Climate Change (NSW and BPBC). Clearing of Native Vegetation (NSW and BPBC) and Removal of Dead Wood and Dead Trees (NSW).

The threats to these listed species and plant communities are habitat loss, habit clearing and global heating and to proceed with the dam would be environmental vandalism.

Wildlife Survey Detailed Comments

Platypus

The platypus deserves more consideration in the EIS. The platypus is an aquatic carnivorous monotreme, lives in rivers and riparian zones. It eats annelid worms, insect larvae and yabbies. The places that they like are in water 1-5 metres deep. Platypus make burrows in river bank. The platypus used to be quite common in river systems but is no longer found in the main parts of the Murray Darling basin.

While the Platypus is not currently listed, there are moves to list it as an endangered speies. There is currently a lack of knowledge regarding species abundance at a local catchment level. The species is subject to threats including waterway bank erosion, channel sedimentation, regulated waterways, barriers to water flow (eg dams and weirs), riparian zone degradation and loss of riparian vegetation. The Platypus was included on the provisional list of animal species identified as requiring immediate urgent management intervention in February 2020, following the 2019/2020 bushfire season in southern and eastern Australia in March 2020. The Platypus

has been observed within the Peel River and Dungowan Creek, and has been recorded as using waterways in the vicinity of the project, between Tamworth and Chaffey Dam.

The decline in platypus numbers is greatest in NSW. A recent UNSW report suggests that platypus are extinct in many places. One of the biggest threats to the is disruption platypus caused by dams. There is definite evidence of decline in regulated rivers, caused by building dams, clearing of riparian vegetation, sedimentation, bank erosion and alteration of flow temperature.

Dams placed on rivers impede platypus dispersion over water and land, important when it comes to breeding. Genetic diversity decreases and likelihood of extinction, divides the population. Cold water releases from the dams stop breeding down-stream. Dams prevent platypus physically from moving downstream.

Dungowan creek and the Peel River are platypus breeding areas. Potential impacts to the Platypus of a new dam at Dungowan are genetic separation, a reduction in feeding habitat or loss of breeding habitat due to lowered water levels, loss of food source (macroinvertebrates) due to temperature change from CWP and various construction impacts including prevention of fauna passage, direct impacts to burrows and entrapment in trenches or infrastructure. All of which would probably drive the platypus to local extinction and place further pressure on a near threatened species.

Reference
A National Assessment on the Conservation Status of the Platypus. University of NSW 2020.

Ecological Communities
Yellow box- Blakleys Red gum grassy woodland listed critically endangered in NSW and under the EPBC is due to be cleared for the new dam. Fifty-seven ha of critically endangered woodland which in its turn forms the habitat the other endangered species including the koala and regent honey eater. Where are you going to find an offset when the community is already critically endangered? If you pay money in lieu of offsets biodiversity credits really become extinction credits. Further endangering a critically endangered community to build a new dam is not justified.

Koalas
Found at site of proposed dam. Listed as endangered under BC and EPBC Acts. Threats are global warming, habitat clearing and disease. Every koala left is precious is we should not be clearing its habitat for an unnecessary dam.

Spotted Quoll
Found in proposed dam area Listed as vulnerable in NSW. They are seriously threatened in NSW. Threats are loss of habitat, effects of climate change (especially fire). Like forest woodland heath, not dams.

Squirrel glider
Listed as vulnerable to extinction in NSW. Threats are habit loss, fragmentation, loss of hollow bearing trees and climate change. Dam construction will impact the first three. The squirrel glider will be seriously impacted.

Corben's Long-eared Bat

This insectivorous bat is vulnerable. Dam construction will make the following threats the bats worse: loss of remnant semi-arid woodland habitat, loss of hollow-bearing tree, disturbance to winter roosting and breeding sites and loss or modification of habitat.

Eastern Coastal Free-tailed Bat
Mastif bats are vulnerable. They are insectivorous Threats are clearing.

Eastern False Pipistrelle
Listed as vulnerable. Threats are: disturbance to winter roosting and breeding sites, loss of roosting habitat, primarily hollow-bearing eucalypts, loss and fragmentation of foraging habitat, particularly extensive areas of continuous forest. All of these threats will be exacerbated by dam construction.

Border Thick-tailed Gecko
Vulnerable species. Poor knowledge of species' distribution and population dynamics.
Threats relevant to dam construction are: clearing and fragmentation of areas of rocky dry open forest and woodland for development, removal of bushrock, removal of fallen timber and infestation by weeds, particularly coolatai grass.

Diamond Firetail finch
Vulnerable in NSW. Loss of habitat is the main threat.

Dusky Woodswallow
Vulnerable in NSW. Threats are : (1) Historical and ongoing loss of woodlands and dry open sclerophyll forests because of development, (2) Reduction in area, and increased isolation of patches of remnant woodland and open forest (3) Ongoing degradation of habitat through the loss of dead timber, removal of coarse woody debris and other disturbances of the ground layer, (4) reduction in the availability of food resources (5) Lack of knowledge within the community regarding the species and its habitat requirements.(6) Habitat degradation from invasion by weeds including exotic grasses and woody weeds, and inappropriate land uses.

Little Eagle
Vulnerable in NSW. Major threats are due to clearing and degradation of foraging and breeding habitat. Construction of a dam is going to exacerbate thus.

Little Lorikeet
Vulnerable in NSW. Relevant threats are: (1) Given that large old *Eucalyptus* trees on fertile soils produce more nectar, the extensive clearing of woodlands has significantly decreased food for the lorikeet, thus reducing survival and reproduction, (2) Small scale clearing, continues to destroy habitat and it will be decades before revegetated areas supply adequate forage sites (4) the loss of old hollow bearing trees has reduced nest sites, and increased competition with other native and exotic species that need large hollows with small entrances to avoid predation,(5) felling of hollow trees for firewood collection or other human demands increases this competition, (6) infestation of habitat by invasive weeds (7) inappropriate fire regimes, (8) climate change impacts including reduction in resources due to drought.

Painted Honeyeater
Vulnerable NSW and EPBC.

Relevant threats are: (1) clearing of woodlands and open forest (2) degradation of open forest and woodland remnants (3) habitat infestation by weeds (4) inappropriate fire regimes and (5) degradation and simplification of habitat.

Regent Honeyeater
Listed in NSW and by EPBC as critically endangered. Relevant threats are:
(1) Historical loss, fragmentation and degradation of habitat from clearing for agricultural and residential development, particularly fertile Yellow Box-White Box-Blakely's Red Gum Woodlands. (2) Continuing loss of key habitat tree species and remnant woodlands from major developments, timber gathering and residential developments. (3) Key habitats continue to degrade from lack of recruitment of key forage species and loss of paddock trees and small remnants increasingly fragmenting the available habitat. (4) The small population size and restricted habitat availability make the species highly vulnerable to extinction via stochastic processes and loss of genetic diversity, and reduced ability to compete, increased predation and reduced fledging rates. (5) Inappropriate management practices that remove large mature resource-abundant trees. (6) Loss of key foraging resources as a result of inappropriate fire regimes.

Scarlet Robin
Vulnerable in NSW. Relevant threats are:
(1) Historical habitat clearing and degradation. (2) Reduction of size of remnant patches. (3) Reduction in the structural complexity of habitat, including reductions in canopy cover, shrub cover, ground cover, logs, fallen branches and leaf litter. (4) Reduction in native ground cover from invasion by weeds including exotic grasses and woody weeds. (5) Isolation of patches of habitat and in landscapes where clearing has been heavy. (6) Habitat for the scarlet robin may become unsuitable if dense regeneration occurs after bushfires or other disturbances.

Speckled Warbler
Vulnerable in NSW. Relevant threats are:
(1) Due to the fragmented nature of the populations and their small size the species is susceptible to catastrophic events and localised extinction. (2) Clearance of remnant grassy woodland habitat. (3) Poor regeneration of grassy woodland habitats. (4) Modification and destruction of ground habitat through removal of litter and fallen timber and frequent fire. (5) Habitat is lost and further fragmented as land is being cleared. (6) Infestation of habitat by invasive weeds. (7) Climate change impacts including reduction in resources due to drought.

Swift Parrot
Endangered in NSW**.** Relevant threats are:
(1) Habitat loss and fragmentation from forest due to industrial development, clearing, senescence and dieback. (2) Changes in spatial and temporal distribution of habitat due to climate change. (3) Reduced food availability due to drought conditions. (4) Collisions with human made structures resulting in death or injury. (5) Weed invasion impacting on habitat regeneration and health. (6). High fire frequency impacting on food resource availability.

Varied Sittella
Vulnerable in NSW. Relevant threats are:
(1) Apparent decline has been attributed to declining habitat. (2) The sedentary nature of the Varied Sittella makes cleared land a potential barrier to movement. (3) Threats include habitat degradation through small-scale clearing. (4). Infestation of habitat by invasive weeds. (5).

Inappropriate fire regimes. (6). Climate change impacts including reduction in resources due to drought.

White-bellied Sea-eagle

Vulnerable in NSW, found around inland water ways. Relevant threats are:

(1) Land clearing reduces the amount of suitable habitat available and this can force birds to nest in sub-optimal habitats where their breeding success is greatly reduced. (2) The White-bellied Sea-eagle is sensitive to disturbance when nesting, especially during the early stages of the breeding season, and may desert nests and young if confronted by humans or exposed to

(2) human activity. (3) Disturbance of riparian or shallow water vegetation resulting in loss of fish nursery habitats and food resources. (4) Climate change in inland areas increased drought frequency and duration may result in inland areas being increasingly unsuitable for nesting, compared with baseline levels.

The importance of habitat in a diminishing landscape

In each of the threated species or community, loss of habitat is absolutely critical. Yet Water Infrastructure NSW have not considered the loss of habitat to be important. It is all very well to talk about the possibility of revegetation of existing dam in the dim distant future. We also have a problem with the use of biodiversity offsets when there is insufficient suitable land. The plant community is critically endangered as it is. We end up with less habitat for all endangered species. The offsets could be more accurately described as extinction credits, as are purchases of credits from existing offset. Nothing will compensate for the effects of the dam on listed species and communities least of all the implementation of a biological offset scheme.

Viable alternatives to dam not even considered in EIS

Water Infrastructure NSW cannot justify the clearing and flooding that would occur with a new Dungowan dam when much cheaper solutions to Tamworth's water security exist. The alternatives to a dam, like using more of Tamworth's 16.4 gigalitre urban licence from Chaffy Dam was apparently rejected. Measures such as water recycling, saving rain water, saving storm water or purchasing redundant water licences were not even considered.

A review of the proposed dam in August by Infastructure Australia found that the costs (1.3 billion dollars) far outweighed the benefits. The proposals economic benefits were said to be very low and ensuring that Tamworth's full allocation of water from Chaffy Dam was a vastly lower cost solution.

The NSW Government must prioritise communities access to drinking water over demands of irrigators. Tamworth currently accesses only 70% of its urban water allocation from Chaffy Dam the remaining 30% goes to irrigators in the Peel Valley. It is unjust that the part of Tamworth urban allocation is being diverted to irrigators so that the town runs short. There needs to be an urgent revision of the water sharing plan to ensure that the city of Tamworth receives its full entitlement.

Infrastructure Australia has said "Based on our assessment, the Increased Urban Reserve option (Chaffey Dam), which is also considered in the business case, appears to be a feasible, lower cost solution that addresses the problem and warrants further detailed consideration. There is insufficient evidence that the New Dungowan Dam and Pipeline is the most appropriate

response to Tamworth's water security when compared to the Increased Urban Reserve to Chaffey Dam option."

"The problem identified is the need to address Tamworth's water security risk (i.e. access to water), rather than increasing the storage capacity in the region. Economic analysis of the three options presented in the business case demonstrates that the water security risk is more efficiently addressed by options that do not involve the development of new capacity. The Increased Urban Reserve outperforming the New Dungowan and Pipeline option in terms of the quantified benefit from improved water security."

Reference

Infrastructure Australia, *New Dungowan Dam and Pipeline, Business Case Evaluation Summary*.