

<b>Name of wastewater treatment plant</b>	North Head Wastewater Treatment Plant
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System Summary	Projected				
	2026	2031	2036	2046	2056
North Head WWTP ADWF (ML/d)	413.3	409.6	424.6	422.2	426.9
North Head WWTP load (EP <sub>COB</sub> )	2,244,279	2,366,395	2,526,511	2,550,525	2,582,236

Treatment capacity constraints for 2022 – 2036	Estimated year of exceedance
Biosolids treatment capacity – thickening and dewatering reliability constraints, and digestion capacity limited for current and future loads.	Current
Total nitrogen removal capacity – risk of exceeding total nitrogen load limit.	2026

Summary of servicing strategy for 2022 – 2036
<p>The growth servicing plan for the plant involves a transfer of catchment flows to a new treatment asset at Camellia via SP0067. This is critical for the planning of the plant as without this transfer, significant hydraulic and treatment upgrades will be required at North Head WWTP and in the network to deal with growth.</p> <p>The Camellia WRP will comprise three investment stages: 2019, 2028, and 2031. The 2031 investment is the most significant as it involves the construction of the new treatment plant. There is a risk that this servicing strategy will not be feasible if a discharge licence cannot be obtained to the Parramatta River due to environmental or other risks.</p>

Anticipated augmentation and upgrades for 2022 – 2036- North Head			
Year commissioned	Description	Approximate capital cost (\$M)	Impact on servicing capacity
2027	Biosolids capacity upgrade: thickening upgrade, additional digesters, out loading. Phase 1 compliance/Growth upgrade	316	Biosolids treatment capacity increased and reliability issues resolved to allow growth servicing to 2046.

Anticipated augmentation and upgrades for 2022 – 2036- Camellia WRP(Sp0067)			
Year commissioned	Description	Approximate capital cost (\$M)	Impact on servicing capacity
2028	Stage 1 Camellia WRP-15ML/d	232	Relieves network, and later North Head WWTP, capacity constraints allowing growth servicing to 2040
2033	Stage 2 Camellia WRP- 25ML/d	460	Relieves network, and later North Head WWTP, capacity constraints allowing growth servicing beyond 2036

Further investigations
<p>North Head System planning underway to refine system augmentation options for growth. This includes comparative assessment of amplification of the network and North Head WWTP to continue the current mode of operation, as well as an inland flow diversion configuration. Continued refinement of the options and selection of preferred servicing scenario may lead to a significantly different asset investment response</p>

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Date published: 30 June 2023

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Date published: 30 June 2023