

Name of wastewater treatment plant	St Marys Water Reclamation Plant
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System Summary	Projected				
	2026	2031	2036	2046	2056
St Marys catchment ADWF (ML/d)	47.3	46.5	50.6	55.8	58.1
St Marys catchment load (EP _{COB})	279,470	258,160	275,480	311,850	328,520

Treatment capacity constraints for 2022 – 2036	Estimated year of exceedance
Reliability and capacity constraints at inlet works	2023

Summary of servicing strategy for 2022 – 2036
<p>Lower South Creek Upgrade will see Quakers Hill plant capacity capped with 10 ML/d of raw influent transfer from Quaker Hill WRP to St Marys WRP. Sludge will be transferred with partial influent transfer to St Marys for centralised biosolids processing. Upgrades will ensure capacity for the transferred flow from Quakers Hill and growth in St Marys. The AWTP will be feed by raw influent transfer (further treated at St Marys WRP), along with St Mary treated effluent and Penrith WRP treated effluent. Upgrades are underway for the above at St Marys WRP with completion expected to be in 2023 to treat the growth in the St Marys catchment the transferred flow from Quakers Hill as well as sludge transfer to St Marys to Quakers Hill. The inlet works and screens will require a reliability/capacity upgrade</p>

Anticipated augmentation and upgrades for 2022 – 2036			
Year commissioned	Description	Approximate capital cost (\$M)	Impact on servicing capacity
2026	Reliability/capacity improvement to inlet works and screens	69	Treatment reliability upgrade for screens for. Continued servicing of growth beyond 2030.

Further investigations
<p>The outcome of the Hawkesbury Nepean load limit work may require a higher rate of nitrogen and/or phosphorous removal. This would likely result in additional treatment units; a step change in treatment technology; and/or increased need to divert flows to the St Mary AWTP for further load removal.</p>
<p>Future growth servicing and impacts of EPL changes to be reviewed due to higher than anticipated growth in the catchment–studies may lead to additional infrastructure requirements needs being identified.</p>