

**OXFORDSHIRE COUNTY COUNCIL RESPONSE
ON WATER RESOURCES CONSULTATION
DRAFT REGIONAL PLAN FOR THE WEST
Consultation closing date: 20th February 2023**

Introduction

1. Oxfordshire County Council is responding to the following consultations:
 - Water Resources West (WRW) draft regional plan consultation¹ (this response)
 - Water Resources South East (WRSE) draft regional plan consultation
 - Water Resources East (WRE) draft regional plan consultation
 - Affinity Water's draft Water Resource Management Plan 24 (WRMP24) consultation
 - Thames Water's draft Water Resource Management Plan 24 (WRMP24) consultation
2. This response on the draft Water Resources West regional plan follows the Oxfordshire County Council response on the emerging West regional plan which was sent in February 2022. We responded in March 2022 on the WRSE emerging regional plan and our response on that is available on the County Council's website with a press release². The County Council has also responded on various other consultations over recent years. Oxfordshire County Council has consistently questioned attempts to progress a proposal for a strategic reservoir in Oxfordshire.
3. The County Council response on the emerging regional plan for the West region in February 2022 supported transferring water from the West to the South East. This response remains supportive of transferring water and seeks further that all regional groups consider how to avoid the need for the scale of reservoir proposed in Oxfordshire, known as the South East Strategic Reservoir Option (SESRO).

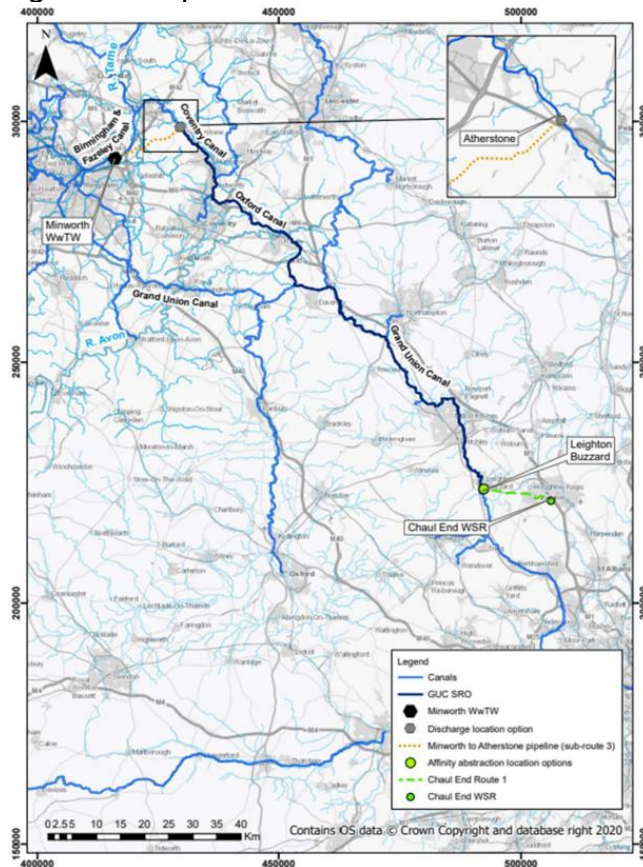
The Grand Union Canal Transfer (GUC)

4. The WRW draft plan provides for a scheme to transfer water from the West region to the South East via the Grand Union Canal as shown on Figure 1. Oxfordshire County Council strongly advocated for further consideration of this option in our responses to the emerging WRSE and WRW regional plans. We are pleased that the proposed Grand Union Canal transfer has been given greater priority and an earlier start date in the draft WRW and WRSE regional plans than was the case in the emerging regional plans.

¹ <https://waterresourceswest.co.uk/draftplandocuments>

² [Oxfordshire County Council calls for giant reservoir plan to be scrapped again](#)

Figure 1: Map of Grand Union Canal Transfer³



5. The GUC scheme now involves transferring water from Minworth wastewater treatment works in the West via the Coventry Canal, Oxford Canal and Grand Union Canal to Affinity Water in the South East, supplying Affinity Water customers with up to 50MI/d from 2031 and a further 50MI/day by 2040 to 2050.
6. The detailed information available on the strategic resource option indicates that that if demand management targets are met across the South East region, the Grand Union Canal transfer is required in a phased approach. If they are not met, the full proposal providing for 100MI/day is likely to be required in a single phase⁴. The same information also indicates that the phased scheme would have a construction timeline of four years for the first phase and two years for the second phase, making it a relatively quick win. The proposal is said to be on schedule to go through the Development Consent Order (DCO) process and be construction ready by 2027 therefore enabling water transfer by 2031.
7. Elements of the Grand Union Canal would be upgraded as part of this, for example increasing canal bank and towpath levels at certain locations, and there would be new pipeline connections at either end.

³ Scheme layout from November 2022 Gate Two GUC submission

<https://www.severntrent.com/content/dam/sros-gate-2-documents/guc/GUC-Gate-Two-Submission-111122-Redacted.pdf>

⁴ Information from paragraph 4.13 of GUC Gate 2 submission: [Strategic Resource Options | Affinity Water Have your say \(engagementhq.com\)](#)

8. The option sensibly uses an existing canal resource to get water from the Midlands to London. It is understood that the option is supported by the Canal & River Trust and there would be benefits from upgraded facilities, flood alleviation, habitat creation etc.
9. The proposed location at the southern end in Hertfordshire is Leighton Buzzard where there would be new abstraction and treatment facilities.
10. Severn Trent Water and Affinity Water are jointly promoting this water supply option. The route does not go through Oxfordshire. It enables Affinity Water to have a different new source of water than that from a pipeline from the River Thames i.e. the Thames to Affinity Transfer.
11. Given that the source of the water is to be treated wastewater from the Minworth Waste Water Treatment Works, it is an option which is resilient to drought because wastewater is produced and fed into the Works under all conditions.
12. Oxfordshire County Council supports the GUC proposal.

Severn to Thames Transfer (STT)

13. The WRW draft regional plan provides for a Severn to Thames Transfer (STT), which is a proposal to transfer water from the River Severn in the Water Resources West region to the River Thames in the Water Resources South East region. The transfer is being jointly promoted by Thames Water, Severn Trent Water and United Utilities.
14. The WRSE draft regional plan states that by 2050, in its 'reported pathway' which is the middle of the three alternative pathways, STT is envisaged to provide 160 MI/d, utilising water available in the River Severn and water from a new water recycling scheme at Netheridge; and by 2060 a further 130 MI/d is envisaged, using further water sources including the Minworth water recycling scheme and enhancements to Lake Vyrnwy in Wales as per Figure 2 below⁵. (Lake Vyrnwy is a reservoir in Wales which is functionally part of the supply system for England and the abstraction is licenced to United Utilities.)

Figure 2: Table with reported pathway use of STT from WRSE draft regional plan

Scheme Description	Completion Date	Water Available
Severn Thames Transfer (STT): the STT could move water from the North West and Midlands to the South East. It would transfer water using the River Severn in Gloucestershire, from where it would be transferred into the River Thames. It would initially transfer water available in the River Severn and water from a new water recycling scheme at Netheridge.	2050	160 MI/d

⁵ Page 28 of WRSE draft regional plan <https://wrse.uk.engagementhq.com/our-draft-best-value-regional-plan>

Severn Thames Transfer (STT): New water sources could be developed and transferred using the STT including the Minworth water recycling scheme and enhancements to Lake Vyrnwy in Wales.	2050 to 2060	130 MI/d
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15. The WRW draft regional plan records at Table 12 a baseline reconciliation position and Table 13 shows an alternative pathway, 'assuming no new reservoir development in the upper Thames Valley'⁶ i.e. how additional water can be supplied through STT making it unnecessary to build the SESRO. While the GUC remains the same in both the baseline and alternative pathways, the STT would be brought forward earlier and additional amounts of water transfer enabled in the alternative pathway. Later in the WRW draft regional plan, in section 7.4.1, it is noted that there will be decision points and if the reservoir does not progress, then the STT and its support options are needed earlier than they would otherwise be, and in this situation Minworth is also required to support the Severn Thames transfer. In section 7.4.2 the draft regional plan then goes on to describe post-reconciliation changes. The information is summarised below at Figure 3 and indicates that there is a lot of flexibility as to how to source water for the STT.

Figure 3: Table with baseline position, alternative pathway, and post-reconciliation position for STT from WRW draft regional plan

Baseline Reconciliation Position of Draft Regional Plans		
Transfer	Vol (MI/d)	Date
STT supported by Netheridge	35	2050
STT supported by North West Transfer (Vyrnwy)	135	2060
Alternative Pathway assuming no SESRO		
Transfer	Vol (MI/d)	Date
STT supported by Netheridge	35	2040
STT supported by North West Transfer (Vyrnwy)	25	2048
STT supported by North West Transfer (Vyrnwy additional amount)	80	2050
STT supported by Minworth	58	2050
STT supported by Minworth (additional amount)	57	2055
Post-reconciliation changes		
Transfer	Vol (MI/d)	Date
STT supported by North West Transfer (Vyrnwy)	25 – 60	2054
STT supported by North West Transfer (Vyrnwy)	105 (incl earlier)	2060
STT supported by Minworth	115	2060

16. The figures used in the RAPID gate 2 main report submitted in November 2022 are set out below at Figure 4.

Figure 4: Table with STT sources from RAPID gate 2 submission

Description	Vol (MI/d)
Lake Vyrnwy: Utilisation of up to 180MI/d of water licensed to United Utilities from Lake Vyrnwy (facilitated by North West transfer SRO) by two separate means: - a direct release of 25MI/d of water into the head of the River Vyrnwy. - a release of 155MI/d of water into the existing Vyrnwy Aqueduct/ Oswestry.	180 MI/d
Mythe: Temporary transfer of 15MI/d of Severn Trent Water - licensed abstraction at Mythe, thus releasing flows to the River Severn. This is needed in WRW so not available to transfer to WRSE.	0

⁶ Tables 12 and 13 on pages 69 to 70 of the Draft Water Resources West Regional Plan <https://waterresourceswest.co.uk/draftplandocuments>

Minworth: The transfer of 115MI/d of a highly treated wastewater discharge from Severn Trent Water's Minworth WwTW to the River Severn via the River Avon.	115 MI/d
Netheridge: The transfer of 35MI/d of a highly treated wastewater discharge at Severn Trent Water's Netheridge WwTW to a new location upstream of the current discharge to the River Severn. To ensure flows are provided to the Interconnector for all river conditions, Netheridge has been identified as the source for the 20MI/d sweetening flow when unsupported flows are unavailable.	20 MI/d as sweetening flow only
Shrewsbury: Reduction in abstraction at Shelton to provide 25 MI/d to STT. This is needed in WRW so not available to transfer to WRSE.	0

17. Figure 5 is the map from the RAPID gate 2 submission which shows the amounts in Figure 4. It also shows the route options for STT: a new pipeline (from Deerhurst in Gloucestershire to Culham in Oxfordshire which could provide for up to 500 MI/d); or to reinstate parts of the Cotswold Canals and augment that with pipelines (from Gloucester Dock to Culham which could provide for up to 300 MI/d). The draft WRSE and WRW regional plans indicate that it is the 500 MI/d pipeline Deerhurst to Culham which is preferred. Oxfordshire County Council is concerned that the preferred position is a missed opportunity as the alternative route using the Cotswold Canals utilises existing infrastructure and could help support the upgrading of the canals. Although theoretically the pipeline option provides much more capacity than the canals by enabling a transfer of 500 MI/d, the pipeline is stated in the November 2022 RAPID Gate 2 main report as enabling only a deployable output of up to 354 MI/d on average, which is not much more than the Cotswolds Canals option of up to 300 MI/d.

Figure 5: Map showing STT elements⁷



⁷ Map from November 2022 Gate 2 main report for STT available at: <https://www.thameswater.co.uk/media-library/home/about-us/regulation/regional-water-resources/water-transfer-from-the-river-severn-to-the-river-thames/gate-2-reports/STT-G2-S1-001-STT-Detailed-Feasibility-and-Concept-Design.pdf>

18. The STT includes water treatment works at the intake locations to mitigate potential impacts on water quality or from invasive species on the River Thames. A discharge outfall structure would need to be constructed within the banks of the River Thames at Culham in Oxfordshire.
19. The emerging regional plan for the South East early in 2022 indicated a need for STT post-2040 in the two higher pathways, with the highest pathway involving a greater transfer of water. The draft WRSE regional plan requirements for STT at 2050 and 2060 are now later, and it is still only anticipated in the two higher pathways, not in the lowest of the three.
20. The draft WRSE plan is for SESRO to be built before STT because the STT is seen as being a 'more expensive and carbon intensive option', but it is noted that 'if SESRO is not developed, the Severn Thames Transfer would be required by 2040, along with other additional schemes.'⁸
21. Provision is being made for the possibility of STT being built by 2040. The November 2022 RAPID Gate 2 main report for STT indicates that STT could be construction ready by 2028 and completed in 2033 if needed.
22. The cost estimate for STT is £1,270m. This is a similar cost to the SESRO cost of £1,244m.
23. Given that electric pumping will benefit from a decarbonised grid in future it is not clear that STT is a more carbon intensive option than SESRO.
24. It is queried whether the ongoing operation costs are higher for STT than SESRO, considering all matters such as ongoing management and maintenance.
25. Oxfordshire County Council noted in our response to the emerging WRSE regional plan early in 2022 that there are some environmental concerns with the STT pipeline. However, overall, such a pipeline would better meet policies about bringing in water to the South East and preferring underground infrastructure to a complex banded reservoir such as SESRO.
26. The WRSE draft regional plan eventually requires both SESRO and STT but requires that the SESRO is built first. Oxfordshire County Council considers that STT should be pursued first, and in combination with other factors, SESRO should not be needed at all.
27. Oxfordshire County Council would support provision to bring forward STT earlier and provided for additional amounts of water to be transferred.
28. The WRW regional plan should be amended from the draft to more clearly provide for STT at an earlier date.

⁸ See page 10 and page 28 of the draft WRSE plan <https://wrse.uk.engagementhq.com/our-draft-best-value-regional-plan>

Other Matters

29. We are generally supportive of the other proposals for water supply in the draft WRW plan.
30. We agree that water companies need to plan for sufficient water supply but consider the amount of additional water need being forecast is likely to be excessive. This is because the population forecasts are likely to be too high; the calculation of the amount of abstraction that needs to be reduced is likely to be too high; and more can be achieved through leakage reduction and reductions in individual water use.
31. We refer you to our response on the Water Resources South East regional plan consultation, attached as Appendix 1.

Conclusion

32. The below features of the WRW draft regional plan are supported:

- The GUC proposal is supported as it brings new water into the South East, utilises existing canal infrastructure, can be constructed quickly, is resilient to drought, and is an alternative for Affinity Water to sourcing water from the River Thames via SESRO. The early timeline is also supported.
- The STT proposal is generally supported, as is the flexibility implied in the draft plan to bring forward the STT earlier than 2050. The regional plan should more clearly provide for STT with sufficient source water earlier, so that, in combination with other factors, the SESRO in the South East is not needed.

Appendix 1

Copy of Oxfordshire County Council response on WRSE draft regional plan

(To be added)