Wild Wings CSA Water Regionalization Feasibility Study Summary

Feasibility Study Objectives

- ***Funding*** - County of Yolo received a grant from the California Department of Water Resources' Small Community Drought Relief Program for the construction of the Wood Duck production well, arsenic treatment plant included funding to perform a feasibility study analyzing potential consolidation of Wild Wings CSA to nearby public water systems.
- ***Goal*** – Prepare a feasibility study to review the options and preliminary cost opinions for a regionalized water supply that will withstand longer periods of drought conditions.

Wild Wings CSA Water System's Challenges

- ***Limited Source Capacity*** - Wild Wings CSA currently relies on a single active source, Pintail Well, which has plumbness and alignment issues that affect its production capacity. Wild Wings CSA does not have any interconnections with other water systems. Canvas Back Well can only be used in emergencies.
- ***Water Quality*** - Wild Wings CSA's standby well (Canvas Back Well) has water quality issues because it has historically exceeded the arsenic maximum contaminant level (MCL) and manganese secondary MCL. Pintail Well has high arsenic levels approaching the MCL.
- ***Drought Impacts*** - Wild Wings CSA has experienced drought impacts and declining water table levels and is also located in a groundwater basin designed as high priority to mitigate overdraft and declining groundwater supplies.

What is Consolidation?

- Consolidation is the joining of two or more water systems, which commonly includes a smaller system being absorbed into a larger water system, which generally has more resources to have more extensive, robust, and redundant infrastructure and larger customer bases. E.g., Wild Wings CSA households would become customers of a different, larger water system, and Yolo County would no longer own and operate the Wild Wings CSA system.
- ***Physical consolidation*** occurs when one water system's customers are provided service by another existing water system and its domestic water supply permit is relinquished.
- ***Managerial consolidation*** is when a small water system becomes part of a larger water system for all managerial purposes but continues to use their original water supply and distribution system.
- Consolidation agreements or will serve letters are typically required to formalize this process and outline terms and conditions of the consolidation.

Key Findings

- *No Action Alternative*
    - The Wood Duck Pump Station and Pintail Arsenic Treatment System Project (including Wood Duck Well) is in progress. Yolo County intends to request additional funding from the State in order to finish the project. The current grant is sufficient to cover the costs of drilling the well.
    - Yolo County would be responsible for operating and maintaining the water system. Additional regulatory requirements and costs such as regular sampling, reporting, and operations and maintenance will be needed for the treatment plant.
    - The anticipated water supply portfolio will include three wells. Long-term longevity of groundwater supply remains a concern during longer periods of drought conditions.

Key Findings Continued

- *Consolidation with the City of Woodland*
  - This alternative has the lowest capital cost out of the consolidation alternatives evaluated because it is the closest water system to Wild Wings CSA and requires the shortest length of new transmission pipeline.
  - The City has sufficient existing water capacity to serve Wild Wings CSA.
  - The City has the administrative and operational capacity to serve more customers.
  - However, the City currently cannot extend service outside its service area due to a moratorium. The City is planning a future ballot measure to repeal this moratorium. Several commercial businesses have approached the City for connection, including some water systems in the vicinity of the proposed transmission pipeline.
  - This option is preferred by Yolo County but not feasible until moratorium is repealed.
- *Consolidation with Esparto CSD*
  - Esparto CSD currently does not have sufficient source capacity to serve an expanded consolidation system. As a result, Alternatives C2, C3, and C4 (consolidation with Esparto CSD) would require the construction of two new production wells producing a minimum of 950 gpm total to be able to serve Wild Wings CSA to meet maximum day demand and fire flow requirements.
  - Esparto CSD currently has limited administrative and operational capacity to serve additional customers. Esparto CSD is already providing some contract administrative and operating services to nearby systems.
  - Inclusion of Madison CSD (disadvantaged community) in the consolidation would likely provide additional grant funding resources to the project.
- *Construction Project Financing*
  - Wild Wings CSA serves a non-disadvantaged community, so financing options could potentially be funding programs offered by State Water Resources Control Board, Department of Water Resources, USDA Rural Development, and I-Bank. However, because of the socioeconomic status of Wild Wings CSA, it is anticipated that financing that this project is eligible for will be primarily loan.

Consolidation Alternatives and Preliminary Cost Opinions (0% Design)

Alternative	Brief Description of Anticipated Infrastructure Improvements	Preliminary Capital Cost (Rounded)
Alternative NC – No Action	Wood Duck Well, pump station, arsenic treatment plant	$7.9M
Alternative C1 – Consolidate Wild Wings CSA into the City of Woodland	~4 miles of transmission pipeline and pump station	$17.0M
Alternative C2 – Consolidate Wild Wings CSA into Esparto CSD	~10 miles of transmission pipeline and pump station, 2 wells (900 gpm minimum)	$28.7M
Alternative C3 – Consolidate Wild Wings CSA and Madison CSD into Esparto CSD	~11 miles of transmission pipeline and pump station, 2 wells (600 gpm minimum)	$30.8M
Alternative C4 – Hybrid Consolidation with Esparto CSD (Physical Consolidation of Wild Wings CSA and Madison CSD & Managerial Consolidation of Cacheville CSD and Knights Landing CSD)	~11 miles of transmission pipeline and pump station, 2 wells (600 gpm minimum)	$32.2M

Questions?

Your input is valued. If you have any questions or would like to provide comments about the draft Feasibility Study, please email Shen Huang, PE, Senior Engineer at shen.huang@nv5.com.