NORTH SAN JOAQUIN WATER CONSERVATION DISTRICT
PROPOSED SOUTH SYSTEM IMPROVEMENT - GROUNDWATER REPLENISHMENT PROJECT
FREQUENTLY ASKED QUESTIONS
Updated: February 1, 2018

1. **What is the Project?**

The NSJWCD proposes to bring surface water from the Mokelumne River to lands and natural channels south of the river to replenish groundwater supplies. The proposed project involves (1) replacing the district's pump station on the river; (2) improving seven miles of pipeline that run from the river south to Pixley Slough; and (3) improvements to allow surface water to flow down Bear Creek and Pixley Slough within the district. The project would accomplish direct groundwater recharge when surface water percolates into the ground from Bear Creek and Pixley Slough, and would accomplish in-lieu recharge when farmers use the surface water in the channels and pipeline instead of pumping groundwater.

The project would provide 10,000 to 12,000 acre-feet of surface water to the project area in about 55% of years (normal to wet years). This would allow the groundwater basin to recover in normal to wet years so that it could be relied on in drier years, with groundwater levels higher in all years types with the project, than without the project.

2. **What is "in-lieu recharge?"**

In-lieu recharge refers to projects that deliver surface water to farmers to use for irrigation instead of (in-lieu of) pumping groundwater. When a farmer who normally pumps groundwater every year for irrigation uses surface water instead, the groundwater basin is "recharged" by the amount of groundwater that was not pumped. In-lieu recharge is considered the most efficient way to accomplish groundwater recharge because it does not involve the losses associated with direct recharge ponds, such as evaporation. In-lieu recharge also allows agricultural areas to recharge their groundwater basins without taking land out of production to build recharge ponds, which helps the local economy.

3. **Why is the Project being proposed by the district?**

Our groundwater basin is critically overdrafted. Groundwater Levels in the district are declining an average of 1 foot per year.

Declining groundwater levels cause everyone to have higher energy costs to pump as well as costs to deepen pumps and replace wells. We can reduce these costs if groundwater levels improve. If we use more surface water, instead of groundwater, groundwater levels will improve, reducing costs for landowners.

A new law - the 2014 Sustainable Groundwater Management Act - requires the district to achieve groundwater "sustainability" - which includes stabilizing or improving groundwater levels. If the district

fails to do this, the state can take over groundwater management, charge landowners and impose pumping restrictions.

The district believes this project will help us achieve "sustainability," avoid future groundwater pumping restrictions and allow our area to maintain local control of our groundwater basin.

The district will lose its water right on the Mokelumne River if it does not use it.

The state has given the district a deadline to use the surface water available under its water right. The district must show substantial progress in using the water by the year 2025 and use all of the permitted right by 2040, or the state will terminate or reduce the district's water right and allow others to use that water. Our current water right is the least cost way the district has to improve groundwater conditions. If we lose that water right, it will be a permanent loss for our area and all other options to purchase surface water from others will be substantially more expensive, if they are available at all.

4. Who will benefit from the Project?

About 20,000 acres of land south of the river will benefit from the project. All of these lands will receive benefits from higher groundwater levels due to the project. The groundwater benefits include reduced pumping costs and reduced costs of lowering pumps and drilling new, deeper wells over time. Some of these lands will get additional benefits by having access to surface water for irrigation from the pipeline or channels. This additional benefit will be because the surface water delivered from the new pump station will cost less than it costs to pump groundwater. While there will be benefits to all irrigated lands, the level of benefits will be different for different properties.

5. How much will the Project cost?

The project will cost about $18 million to build. The district has already received $5.75 million ($1.75 mil in settlement and $4 mil in grants) in outside funds to pay for the project. The district needs to raise another $13-14 million to build the project.

6. Did the district look at other options that were less expensive?

The district researched other options, but determined they were more expensive and less effective at groundwater replenishment than the proposed project. For example, the district has looked at doing only direct recharge with recharge ponds. The cost of purchasing land and constructing and operating recharge ponds to recharge 10,000 acre-feet of water per year, plus the cost of the pumps and pipelines needed to get water into the recharge ponds is about the same as the cost of the proposed project. However, the benefits of the recharge ponds are less than the proposed project because: (1) recharge ponds concentrate the groundwater recharge mounding effect for lands near the ponds, but the proposed project spreads the groundwater recharge benefits across a broader area of the district; (2) recharge ponds have evaporation losses, while in-lieu recharge does not, which means that more water

stays in our area with the proposed project; and (3) recharge pond projects require that each acre-foot of water that is added to the area be pumped twice - once to get it into the pond for recharge, and then again when a landowner pumps it out of his or her well to use; alternatively, the proposed project reduces energy cost because water is only pumped once.

The district also researched whether or not to make the pipeline pressurized or non-pressurized. The district hired an expert in irrigation system design from Stantec Engineering to perform the analysis. The analysis showed that the additional cost of a pressurized pipeline was more than offset by the energy savings for landowners of providing pressurized water.

7. How will we pay for the Project?

The district is proposing an annual acreage assessment on lands that will be benefitted by the project to pay for the project. Landowners will get to vote on the proposed assessment. If landowners do not approve the assessment, the district cannot build the project and will lose $4 million in grants.

The proposed assessment would be a certain amount charged per acre, per year, for thirty years. For example, if you own 20 acres and the assessment rate for your property is $30/ac/yr, you would pay $600 per year in assessments for the next 30 years. The assessment would end in 30 years, but the project's useful life is 50 years or more. Therefore, your property would continue to receive benefits from the project for at least 20 years after the assessments ended.

The district is required by law (Proposition 218) to hire a registered civil engineer to analyze the proportional benefits that will be provided to different types of parcels and propose an assessment that is proportional to benefits. The district hired Provost & Pritchard engineers to perform this work. Once a draft report was prepared, the district conducted several landowner outreach sessions to receive feedback on the information contained in the report. After incorporating changes suggested by landowners, the final engineers' report was approved by the North San Joaquin Board. The report describes the anticipated financial benefits that will be produced by the project for each type of parcel and determines a per-acre assessment that is proportional to the anticipated financial benefits for each type of parcel. The proposed assessment amounts are as follows:

Category of Benefit	**Basic Assessment per Acre**	**Maximum Assessment per Acre (125% of Basic)**
Tier 1 Pipeline	$98.75	$123.44
Tier 1 Channel A - Open Ditch	$40.81	$51.01
Tier 1 Channel B - Bear Creek	$43.54	$54.42
Tier 1 Channel C - Pixley Slough off Bear Creek	$41.92	$52.40
Tier 1 Channel D - Pixley Slough off Pipeline	$44.61	$55.77
Groundwater Tier 2	$40.51	$50.64
Groundwater Tier 3	$20.26	$25.32
Groundwater Tier 4	$4.07	$5.09
Unirrigated Land 5 acres or larger	$0/ac	$0/ac

The maximum assessment amount will be charged the first year in order to build a reserve fund that will allow the District to receive a more-favorable financing rate. After year 1, the District anticipates that each parcel will only be charged the basic assessment rate. The district is only proposing to assess lands with irrigated commercial agriculture, parks, and golf courses. The district is not proposing to assess residential parcels or unirrigated parcels.

The assessment would only cover the capital cost to build the project and would be imposed each year for thirty years. Farmers who order surface water for irrigation will pay an additional water charge for that water, when they take it. The additional water charges will be set to cover the annual operation and maintenance costs to deliver the surface water to farmers who use it for irrigation. Again, these water charges are separate from the proposed acreage assessment and will only be paid by those who use surface water.

8. How much of the overdraft problem will this project address?

The entire Eastern San Joaquin Groundwater basin covers 772,377 acres. NSJWCD's total area is 150,000 acres, which is about 20% of the basin. Prior estimates of overdraft for the entire basin are 107,000 acre feet per year. NSJWCD's 20% share of the overdraft is about 21,400 acre-feet per year. The proposed NSJWCD South System project will reduce overdraft in our district by about 5,000+ acre feet per year, which addresses about 23% of the overdraft problem.

Other NSJWCD projects include the Tracy Lake Groundwater Recharge Project and updating the North System. These projects will reduce overdraft in our district by another 5,000 acre-feet per year. All of these projects together are expected to address at least 50% of our overdraft problem using just the NSJWCD water right. In the NSJWCD settlement with EBMUD, there is the ability for NSJWCD to receive additional surface water from EBMUD to address even more of the overdraft problem. But the district cannot access this water until we have a functioning South System that can deliver water efficiently.

9. Will the project assessment require landowners to measure the amount of groundwater used on their land?

No. The district does not currently require property owners to measure the amount of groundwater that is pumped from their wells. The proposed project does not propose to change this and does not require that landowners install groundwater well meters.

The proposed project does envision surface water deliveries to lands along the pipeline and open channels. Farmers who take surface water from the district will be required to install meters to measure the amount of surface water delivered.

10. Is the District's water right permit "temporary"?

The District's water right, Permit 10477, is only "temporary" in that it is junior to East Bay Municipal Utilities (EBMUD) water right for Camanche. If EBMUD ever builds up to the maximum possible use of water under its Camanche permit, this could reduce the District's right. However, this is not expected to happen in the next thirty years, if ever. EBMUD's water use has declined in recent years and is not projected to increase enough to impact the District's Permit 10477.

11. How can I participate in the process?

The district has been discussing and planning this project at its regular monthly meetings for two years. The district mailed informational letters to landowners in the proposed project area in mid-November and held 3 landowner workshops on November 27th and 28th. Thank you to those who participated.

The district also discussed the proposed project and assessment at a special meeting on **December 7, 2017 at 10:00 at the City of Lodi Policy Department Community Room at 215 W. Elm Street, Lodi 9524**0 and at a regular board meeting on **December 18, 2017 at 2:00 pm at the Lodi Library Community Room**. Several landowners attended these meetings and provided useful comments. The district also posted information about the proposed project on its website at: www.nsjgroundwater.org

The district board of directors approved the final Engineer's Report at a special board meeting on **January 8, 2018.** Then an independent elections company mailed written notices and ballots to landowners that explain the proposed assessment and how landowners can vote "yes" or "no".

The district, in conjunction with the League and Women Voters and San Joaquin County will hold an **informational workshop on February 15, 2018 at 6pm at the Grape Festival (Burgundy Hall)** to discuss the project and how it relates to groundwater management in the North County.

The district will then hold a public hearing **on February 26, 2018 at 2pm at the Lodi Library.** Ballots will be counted at the close of the public hearing. The ballots are weighted based on the financial obligation of each parcel. If the weighted ballots in favor exceed the weighted ballots against the proposed assessment, the district can proceed to levy the assessment and move forward with the project. Landowners are encouraged to continue to participate in the planning of the project, which will help reduce the overall cost of the project and improve its design.

The board of directors holds regular monthly meetings on the last Monday of each month at the Lodi Library at 2pm, with some exceptions for holiday weeks. The regular board meetings for the remainder of 2018 include:

February 26, 2018 2pm
March 26, 2018 2pm
April 30, 2018 2pm
May 21, 2018 2pm
June 25 2018 2pm
July 30, 2018 2pm
August 27, 2018 2pm
September 24, 2018 2pm
October 29, 2018 2pm
November 26, 2018 2pm
December 17, 2018 2pm