COMMUNITY WATER SUPPLY ASSESSMENT

NORTH DAVIS MEADOWS COUNTY SERVICE AREA

JULY 31, 2018

COUNTY SERVICE AREAS

- Purpose
- Governance
  - *CSA Advisory Committee makes recommendations*
  - *Board of Supervisors makes decisions*
- Yolo County Priorities
  - *Protect public health, welfare, and safety (CA. Constitution)*
  - *Address critical service delivery and infrastructure needs**
  - *Ensuring a **safe** and **reliable** water supply**

* *Goals adopted in 2016-19 Yolo County Strategic Plan*

WATER SUPPLY ASSESSMENT

- Assessment Purpose
  - *Evaluate the risk associated with each approach*
  - *Ensure all previous efforts are understood by NDM community*
- Assessment Process
  - *Review and compile previous CSA work in one document*
  - *Research and analyze new Point of Use regulations*
  - *Obtain updated information, where feasible*

WATER SUPPLY RISK ASSESSMENT

Assessment contains description of the current alternatives, costs, pros and cons, and risk analysis. Risk factors include:

- *water quality reliability,*
- *water supply reliability,*
- *anticipated longevity of system,*
- *cost/frequency/responsibility of operations and maintenance (O&M), and*
- *uncontrollable external factors such as future regulation, drought and land subsidence.*

Risk describes the **likelihood of future intervention**.

Risk is categorized as LOW, MEDIUM, or HIGH.

NORTH DAVIS MEADOWS CSA

Existing water supply is shallow wells

- Flat rate for water services
- Approaching end of useful well life
- Deficient water quality
- Insufficient water capacity

WATER SUPPLY APPROACHES

Previously analyzed and rejected (2009 – 2014)

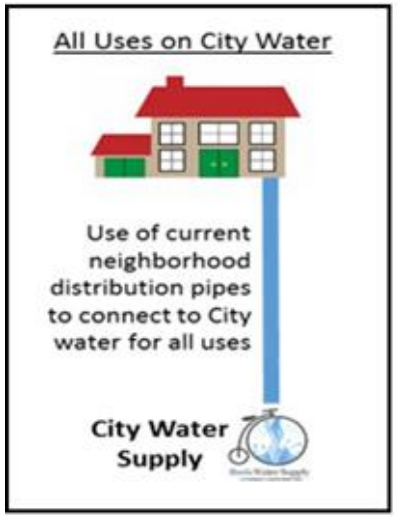
- Well rehabilitation with treatment system (~ $5M)
- City consolidation during WDCWA buildout (~ $2M)
- Individual wells for each household (~ $30K / home)

WATER SUPPLY APPROACHES

This assessment looked at:

- Full City Consolidation (Approved Project, March 2018)
- Dual Water Supply
- New Deep Wells

FULL CONSOLIDATION WITH CITY



Cost

Project Construction	Annual Water Consumption Est.	Estimated Annual Charges per parcel
$8.3M total ($4,157 per parcel/year)	$3,655 - $6,215	$7,813 - $10,365

Risk Analysis

Water Quality	Water Supply	System Longevity	O&M	External Factors
LOW	LOW	LOW	LOW	LOW

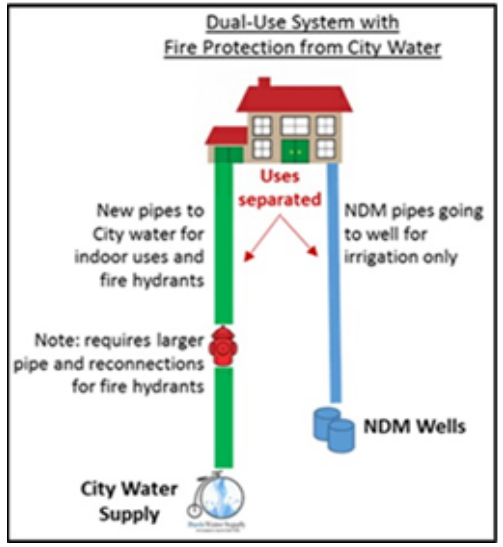
Pro

- Moderate const. cost with low risk
- Low interest, long-term financing
- No O&M
- Water quality and quantity assured
- Future repair and replacement City responsibility

Con

- Higher water charges
- Individual meters required

DUAL USE ALTERNATIVE



Cost

Project Construction	Annual Water Consumption Est.	Estimated Annual Charges per parcel
$12.2 M total ($9,242 per parcel/years 1-4) ($5,174 per parcel/years 5-30)	$3,200	$ 12,442 years 1-4 $ 8,374 years 5-30

Risk Analysis

Water Quality	Water Supply	System Longevity	O&M	External Factors
LOW	LOW	MED	MED	MED

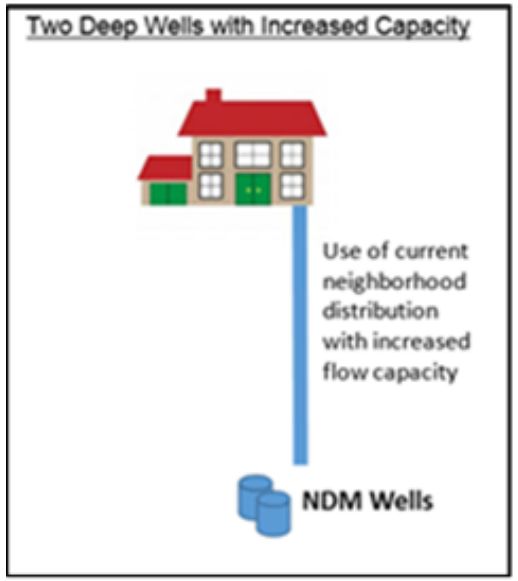
Pro

- Low interest, long-term financing for City portion of project
- Water quality and quantity assured
- Low cost water for outdoor uses

Con

- High construction costs
- Higher residential water charges
- Individual meters required
- Outdoor water uses need to be privately financed

NEW DEEP WELLS



Cost

Project Construction	Annual Water Consumption Est.	Estimated Annual Charges per parcel
$4.6 M to $6.6 M ($2,090 - $2,998 per parcel/year))	$2,000/year	$ 4,090 -$4,998/year plus $ 8,505 per parcel (one time deficit repayment)

Risk Analysis

Water Quality	Water Supply	System Longevity	O&M	External Factors
MED/HIGH	MED	MED	MED	MED

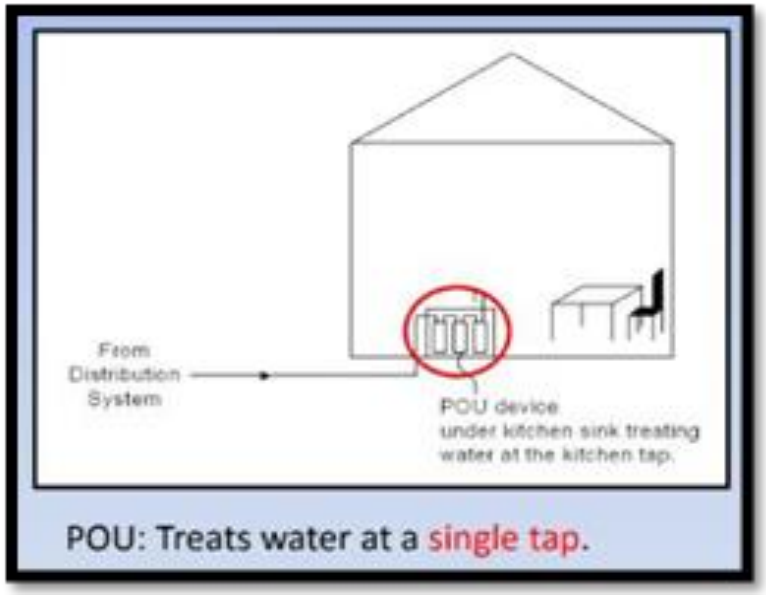
Pro

- Lowest construction costs
- Low interest, long-term financing may be available
- Low cost water for all uses

Con

- No guarantee of water quality
- CSA responsible for all system O&M costs
- Unknown regulatory future
- Infrastructure will need future replacement
- Individual meters required with public financing, no flat rates

NEW DEEP WELLS + POU



Pro

- Effective at reducing known contaminants
- Low cost to install and maintain

Con

- New wells still required to meet fire flow
- No guarantee of permit issuance/renewal
- CSA responsible for all system O&M costs
- Water quality monitoring burden is high
- Does not protect bacterial, fungal, etc contaminants

WATER SUPPLY ALTERNATIVES

Summary

- Risk is tied to cost
- Lack of community consensus on any alternative
- Consolidation does not prevent dual use at later date
- County focused on protecting public health, welfare, and safety