



# WASHOE COUNTY

"Dedicated To Excellence in Public Service"

www.washoecounty.us

CM/ACM KS  
Finance DW

DA ✓

Risk Mgt. N/A

HR N/A

Comptroller N/A

## STAFF REPORT

BOARD MEETING DATE: April 12, 2016

**DATE:** March 17, 2016  
**TO:** Board of County Commissioners  
**FROM:** Dwayne Smith, P.E., Division Director, Engineering & Capital Projects, Community Services Department, 328-2043, [desmith@washoecounty.us](mailto:desmith@washoecounty.us)  
**THROUGH:** Dave Solaro, Arch., P.E., Director  
Community Services Department, 328-3600, [dsolaro@washoecounty.us](mailto:dsolaro@washoecounty.us)  
**SUBJECT:** Update on the Spanish Springs Valley Phased Sewering Project and other related sewer planning efforts throughout Washoe County. (All Commission Districts.)

### SUMMARY

During the Washoe County Commission meeting on January 12, 2016, Commissioner Hartung requested an update from staff regarding the status of the Spanish Springs Valley Sewering Project. Chair Jung expanded the request to include an update on other areas of the County and associated planning efforts.

The Spanish Springs Phased Sewering Project was developed in response to an April 2000 directive from the Nevada Division of Environmental Protection (NDEP) to Washoe County to begin planning to expand the community sewer service in the area. The NDEP directive linked the density of residential septic systems with increasing nitrate levels in the public water supply wells and referenced sections of Nevada Revised Statutes and Nevada Administrative Code which identify State of Nevada policy to maintain the quality of water in the state.

With the directive from the NDEP, the County began the conceptual planning for the future conversion of approximately 2,000 individual sewage disposal systems (septic systems) to municipal customers in the central Spanish Springs Valley. Initial work identified the parcels to be sewered at an estimated cost of \$50 million dollars. Concurrent with this work, Washoe County initiated multiple meetings and focus groups with the area residents to gather input from the community

Due to the significant cost to sewer the central Spanish Spring area, a phased program was developed. The strategy of a phased project would give the County time to identify acceptable funding opportunities and to look for cost savings by possibly coordinating with other planned construction activities.

Spanish Springs Sewer Phase 1A was completed in 2007 at a total cost of \$5.1 million dollars which included design, construction and connection costs. Phase 1A was funded

AGENDA ITEM # 5.I.6.

through a federal grant, a state grant and a Special Assessment District (SAD 37) which was paid by the residents. Of the 168 properties identified, 161 parcels connected to the new sewer system and each paid approximately \$5,000 for their on-site costs to abandon existing septic tanks and to connect interior plumbing to the municipal sewer system.

Since 2007 there has been no funding source to complete the second half of the first project phase; however, Washoe County staff has continued to work with the U.S. Army Corp of Engineers (USACE), the State and other entities to seek funding to complete the work. Recent discussions with the USACE have indicated there may be a near-future grant opportunity which is being pursued by staff.

Using the lessons learned in the Spanish Springs Valley, in 2013 Washoe County entered into an agreement with the Western Regional Water Commission to sample and test groundwater at twelve study areas throughout Washoe County. The testing was for the presence of nitrates, chloride and total dissolved solids (TDS). The testing phase of this work is nearing completion with the results presented to the Western Regional Water Commission when finalized. In the meantime, Washoe County is developing a notification letter to be sent to domestic well owners located within those areas of unincorporated Washoe County, notifying well owners of the findings and to provide resources if there are questions or requests to have their domestic wells tested.

Strategic Objective supported by this item: Safe, Secure and Healthy Communities.

### **PREVIOUS ACTION**

On November 9, 2010, the Board of County Commissioners (Board) directed the Department of Water Resources to requested statements of qualifications from engineering firms to provide design services for the Spanish Springs Phase 1B Septic to Sewer Conversion program.

On July 13, 2010, the Board approved a Project Cooperation Agreement with the U.S. Department of the Army for design and construction of the Spanish Springs Valley Phased Sewering Project – Phase 1B.

On November 28, 2006, the Board adopted an ordinance authorizing the issuance of the Washoe County, Nevada, Special Assessment District No. 37 (Spanish Springs Sewer Phase 1a) Local Improvement District Bonds, Series 2006 in the maximum aggregate principal amount of \$1,069,082.00 to finance the cost of sanitary sewer improvements

On November 15, 2005, the Board awarded a bid for constructing Special Assessment District 37, Spanish Springs Sewer Phase 1A Project to A & K Earth Movers, Inc., in the amount of \$2,288,000.00.

On October 11, 2005, the Board introduced and held the first reading an ordinance creating Special Assessment District 37 (Spanish Springs Sewer Phase 1A Project); ordering a sanitary sewer project within Washoe County, Nevada; providing for the levy and collection of special assessments.

On June 21, 2005, the Board approved and authorized the interlocal agreement between Washoe County and the City of Sparks titled “Agreement to Provide Sanitary Sewer Service in Spanish Springs Valley.”

On June 21, 2005, the Board accepted a report titled "Facility Plan for Spanish Springs Valley Water Reclamation Facility," prepared by Stantec Consulting Engineers.

On October 14, 2003, the Board approved a Project Cooperation Agreement with the U.S. Department of the Army for design and construction of the Spanish Springs Valley Phased Sewering Project.

On June 24, 2003, the Board acknowledged receipt of the report entitled "Feasibility Analysis – Wastewater Treatment and Disposal Facilities in Spanish Springs Valley," and directed staff to complete a facility plan.

### **BACKGROUND**

The Spanish Springs Phased Sewer Project was developed in response to an April 2000 directive from the Nevada Division of Environmental Protection (NDEP) to Washoe County to begin planning to expand the community sewer service in the area. The NDEP directive linked the density of residential septic systems with increasing nitrate levels in the public water supply wells and referenced sections of Nevada Revised Statutes and Nevada Administrative Code which identify State of Nevada policy to maintain the quality of water in the state.

Nitrate is a regulated constituent in municipal drinking water by the Environmental Protection Agency (EPA) who adopted the 10 mg/L standard as the maximum contaminant level (MCL) for nitrate-nitrogen for regulated public water systems. While this is the standard for municipal and public water systems, there is no federal, state or local regulation of nitrate in domestic wells.

With the directive from the NDEP, the County began the conceptual planning for the future conversion of approximately 2,000 individual sewage disposal systems (septic systems) to municipal customers in the central Spanish Springs Valley. Through a combination of facility planning, regional stake-holder discussions, public meetings and staff efforts, a phased sewer project was developed. The plan included a cost estimate of approximately \$50 million dollars to design and construct a sanitary sewer collection system for conveyance and treatment of waste water at the Truckee Meadows Regional Water Reclamation Facility (TMWRF), a regional facility owned and operated jointly by the cities of Reno and Sparks.

### **FISCAL IMPACT**

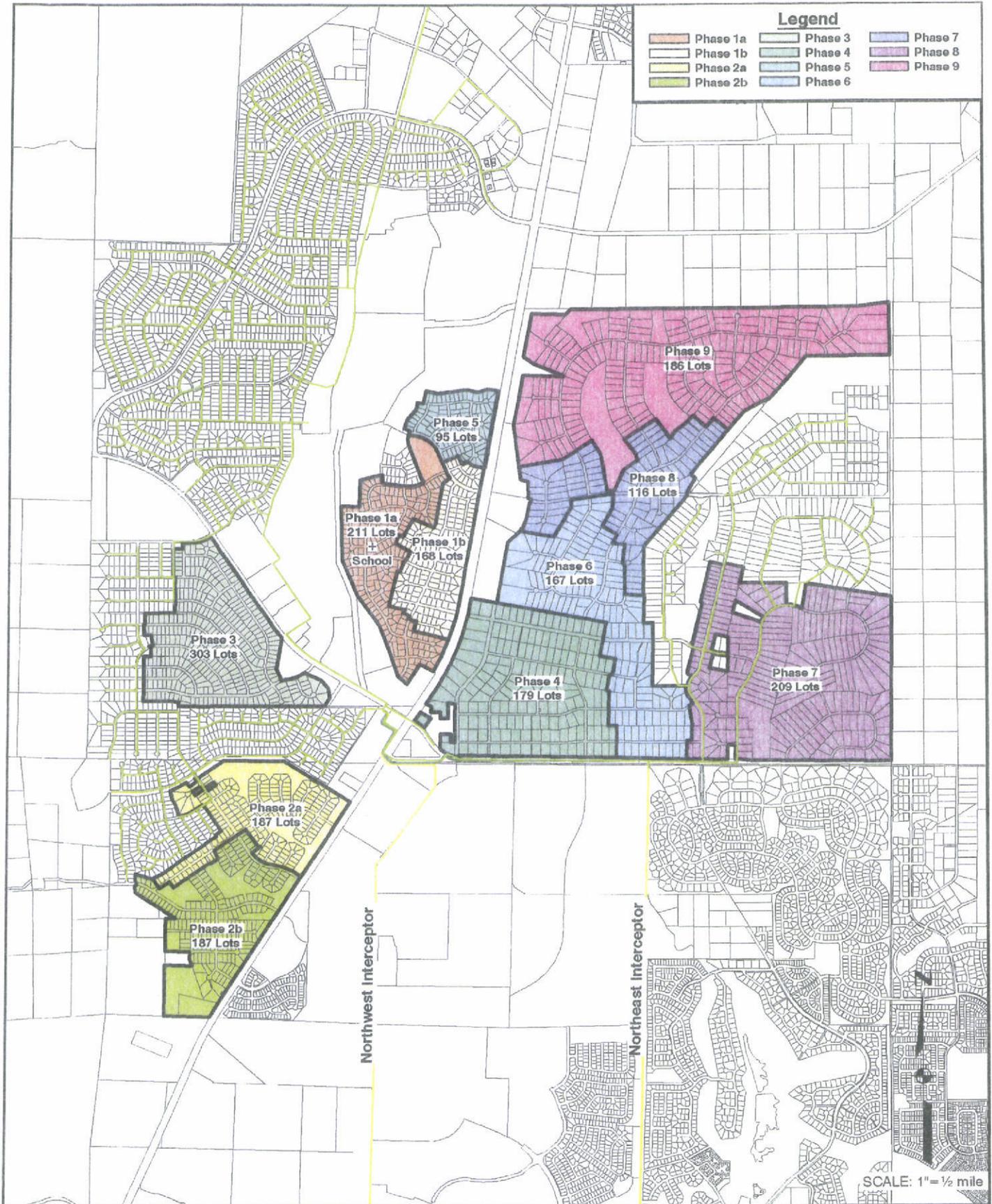
There is no fiscal impact associated with this item.

### **RECOMMENDATION**

It is recommended the Board of County Commissioners acknowledge the Update on the Spanish Springs Valley Phased Sewer Project and other related sewer planning efforts throughout Washoe County.

### **POSSIBLE MOTION**

Should the Board agree with staff's recommendations, a possible motion would be: "Move to acknowledge the Update on the Spanish Springs Valley Phased Sewer Project and other related sewer planning efforts throughout Washoe County."



Spanish Springs Sewer  
Phasing Plan



# Spanish Springs Valley Phased Sewering Project

## Background

- Early 1990s – Testing in municipal wells shows trend of increasing nitrate in groundwater
- 1995 – Nevada Division of Environmental Protection (NDEP) policy to deny subdivisions on Individual Sewage Disposal Systems (ISDS)
- 2000 – NDEP directive to Washoe County – Water Quality
- 2000 to 2006 – Development of Phased Sewer Project (Public Meetings, Facility Planning, Preliminary Engineering)
- 2007 – Phase 1A completed, 211 residential units, one school
- 2010 – Project Partnership Agreement for Phase 1B





## NITRATE

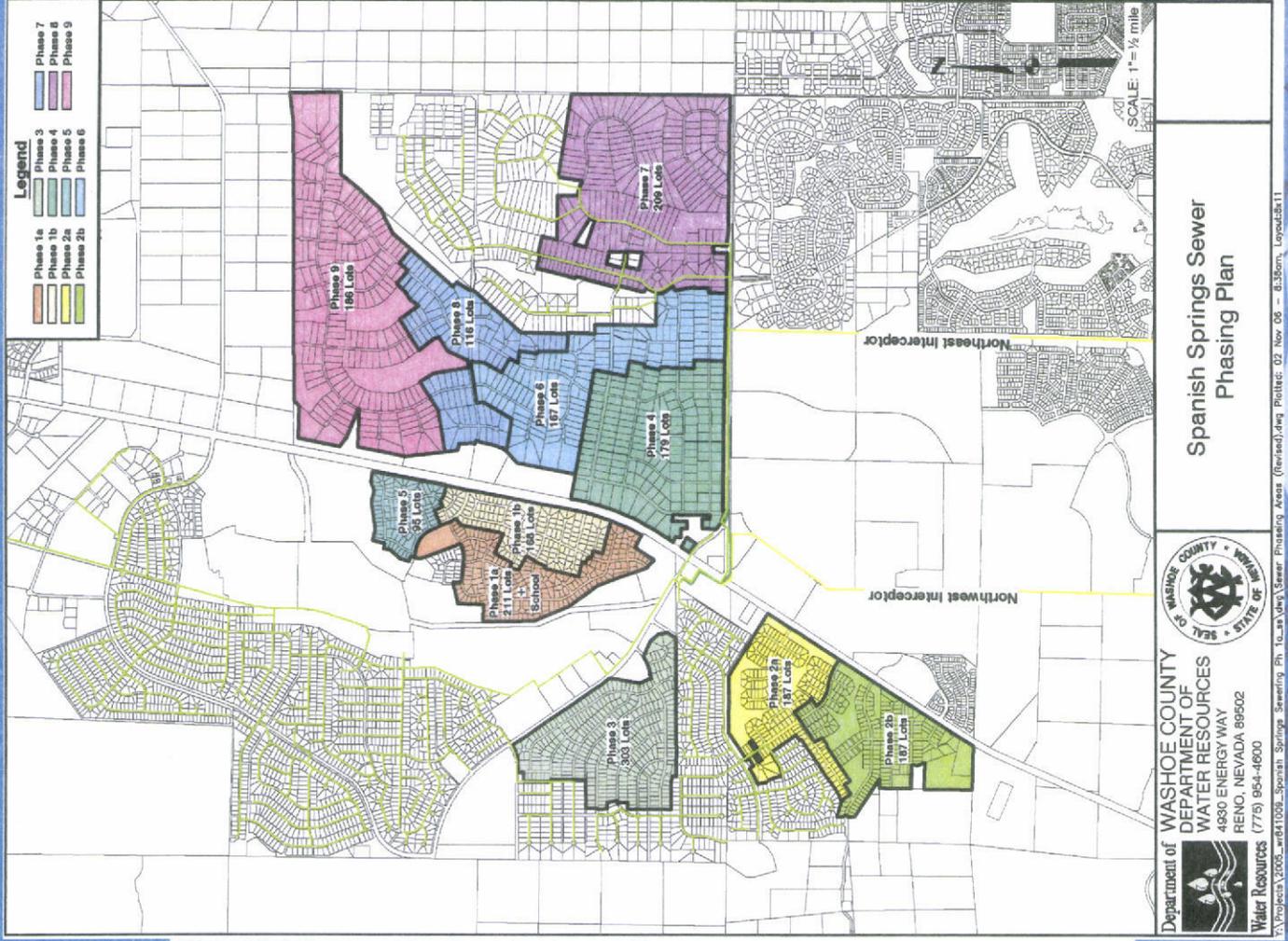
- Nitrate - nutrient essential for plant and animal growth
- Excess amounts in people can result in adverse health effects
  - Can restrict oxygen transport in blood system - methemoglobinemia
- Found in the natural environment
  - Deposited from atmosphere
  - Naturally occurring in the soil
  - Agricultural activities (fertilizers, animal manure)
  - Individual sewage disposal systems (septic systems) identified as main contributor in Central Spanish Springs Valley
- Municipal Drinking Wells – Regulated by the EPA – 10 mg/L MCL
- Nitrate not regulated in domestic wells





# Phased Sewering Plan

- 11 Phases Total
- 2,008 Residential Connections, 1 School
- Implementation over a 10-15 year period
- Estimated Total Project Cost - \$50M



Department of WASHOE COUNTY DEPARTMENT OF WATER RESOURCES  
4930 ENERGY WAY  
RENO, NEVADA 89502  
(775) 954-4600

Water Resources

WASHOE COUNTY • NEVADA  
SEAL OF

Spanish Springs Sewer Phasing Plan

Project\2005\_wr041009\_Spanish\_Springs\_Sewering\_Ph. to\_wash.dwg\Printer: 02 Nov 06 - 8:35am, Layout3A11



# FIRST PHASE 1A- 2005

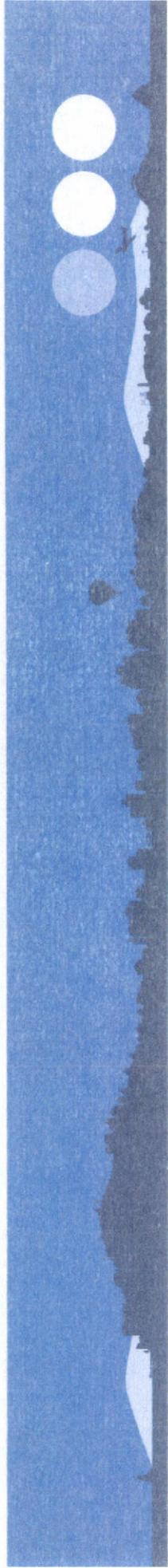
- 204 Residential Connections and Alyce Taylor Elementary School
- Total Project Cost \$6.12M
- Completed Spring 2007





## PHASE 1A – FINAL PROJECT COSTS

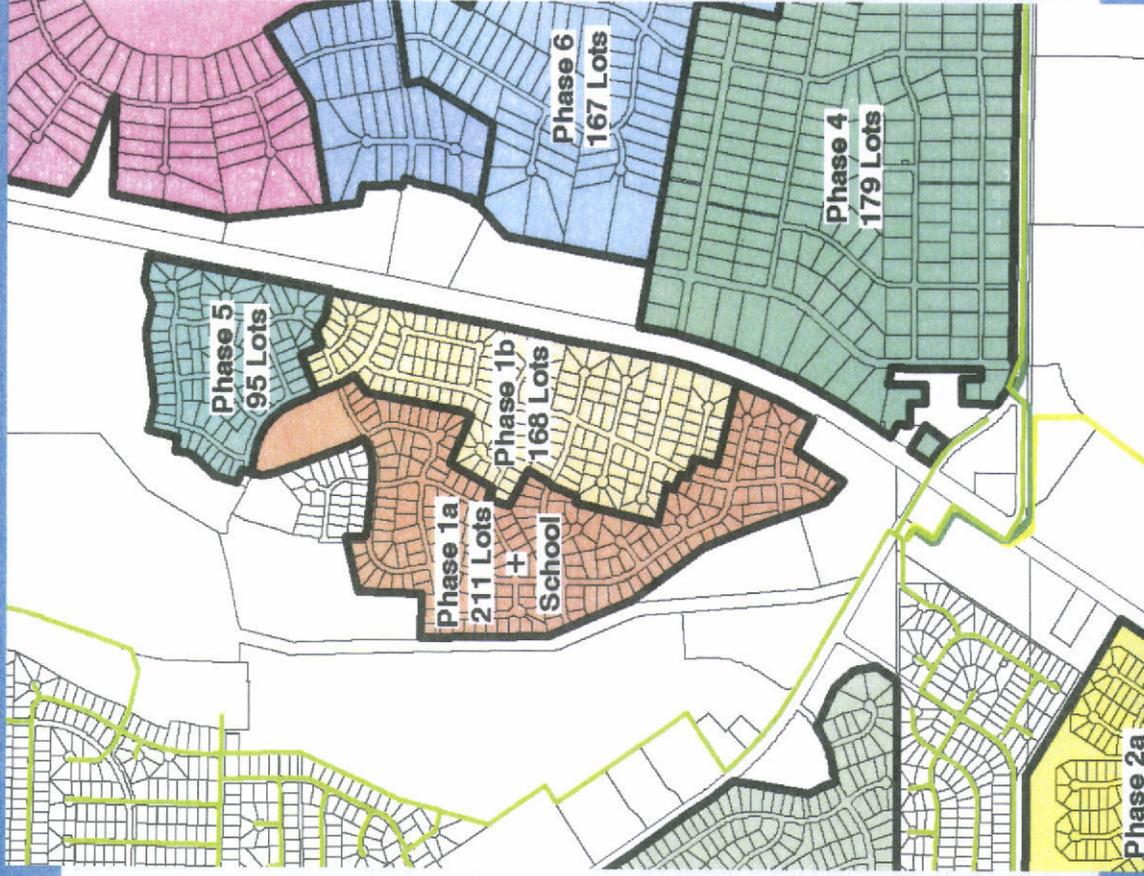
Total Project	\$6.12M
U.S. Army Corps of Engineers Grant Funding	\$2.94M
Washoe County Match	\$1.08M
Residential Special Assessment District (SAD) 37	\$1.07M
Residential On-Site Cost (est.)	\$1.03M
Individual Resident Cost (SAD 37, On-Site) - Net of \$2,000 State Grant (AB198)	≈\$8,000





## PHASE 1B

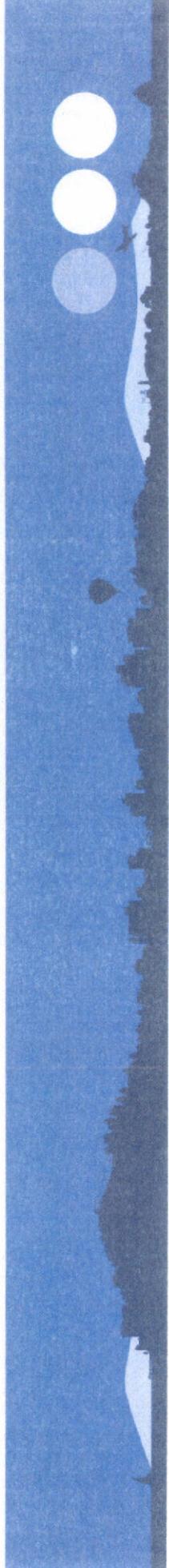
- 168 Residential Units
- Total Project Cost \$5.01M (est.)





## PHASE 1B – PRELIMINARY APPROACH AND COST ESTIMATES

Total Project – Construction Only	\$5.01M
U.S. Army Corps of Engineers Grant Funding	\$2.53M
Residential On-Site Costs	\$0.84M
Residential Connection Fees*	\$1.64M
Individual Resident Cost (estimated)	≈\$14,800





## PHASE 1B - IMPLEMENTATION

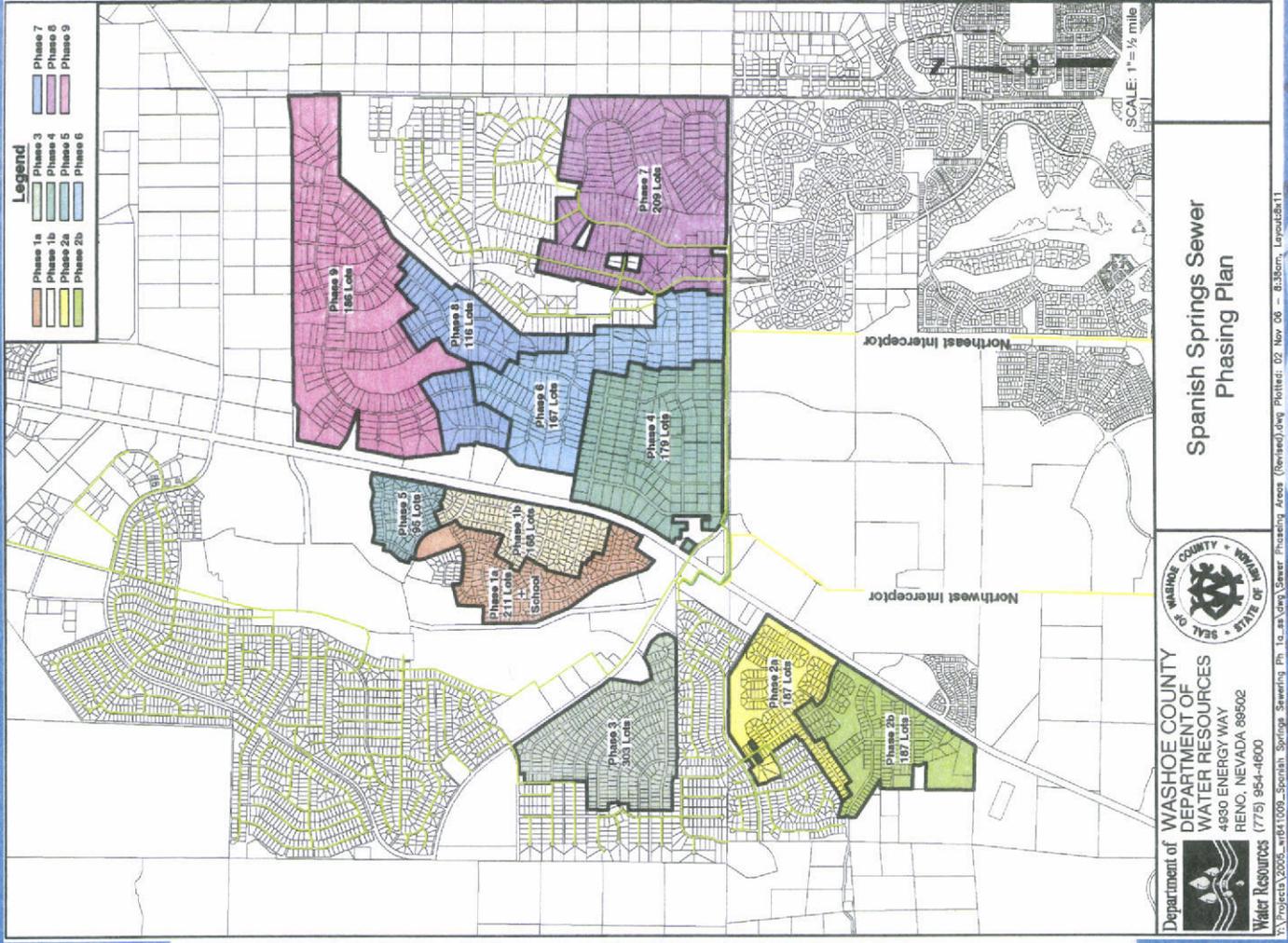
1. Revise Construction Cost Estimates
2. Revise Individual Customer Cost Estimate
3. Discuss Regulation Needs
4. Public Meetings with Customers
5. With Customer Acceptance and BCC  
Approval - Advertise, Bid, Award, Construct





# FUTURE

- 9 Phases Remaining
- 1,578 Residential Connections –
- Time Frame for Implementation –
- Unknown (funding dependent)
- Estimated Total Remaining Project
- Cost - \$61M



Spanish Springs Sewer  
Phasing Plan



Department of WASHOE COUNTY  
DEPARTMENT OF  
WATER RESOURCES  
4830 ENERGY WAY  
RENO, NEVADA 89502  
Water Resources (775) 954-4600



## Other Activities in Washoe County

- Western Regional Water Commission (WRWC) Phase II In-Depth Analysis of Prioritized Area
- Washoe County Notification Letters to Residents

