

*South Fork State Recreation Area*

Nevada Division of State Parks  
Nevada Department of Conservation

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STATE ENGINEERS OFFICE

# WATER CONSERVATION PLAN

## 2007

Public Water System # NV0000873

Compiled by: Jim Wilkinson

South Fork State Recreation Area

353 Lower South Fork # 8

Spring Creek, NV 89815

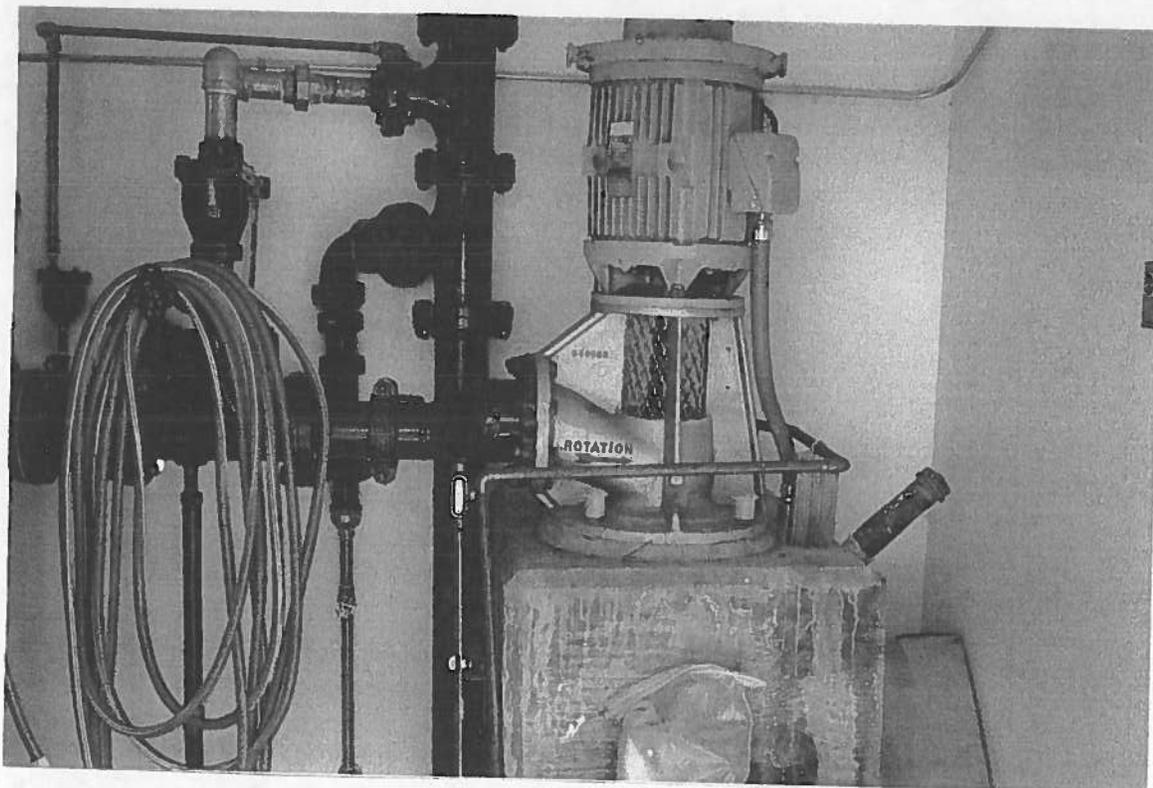
## **INTRODUCTION**

South Fork State Recreation Area is located approximately 17 miles southwest of Elko, Nevada. South Fork SRA was established as a State Recreation Area in 1988. Annual visitation currently exceeds 100,000 visitors per year.

South Fork SRA has one developed well within the park boundary. This is categorized as a Non-Community Non-Transient Public Water System. This well is numbered as South Fork Main.

Location of South Fork SRA Well		
Well #	GPS Coordinates.	
S.F. Main	N 40. 40.636	W 115. 44.646

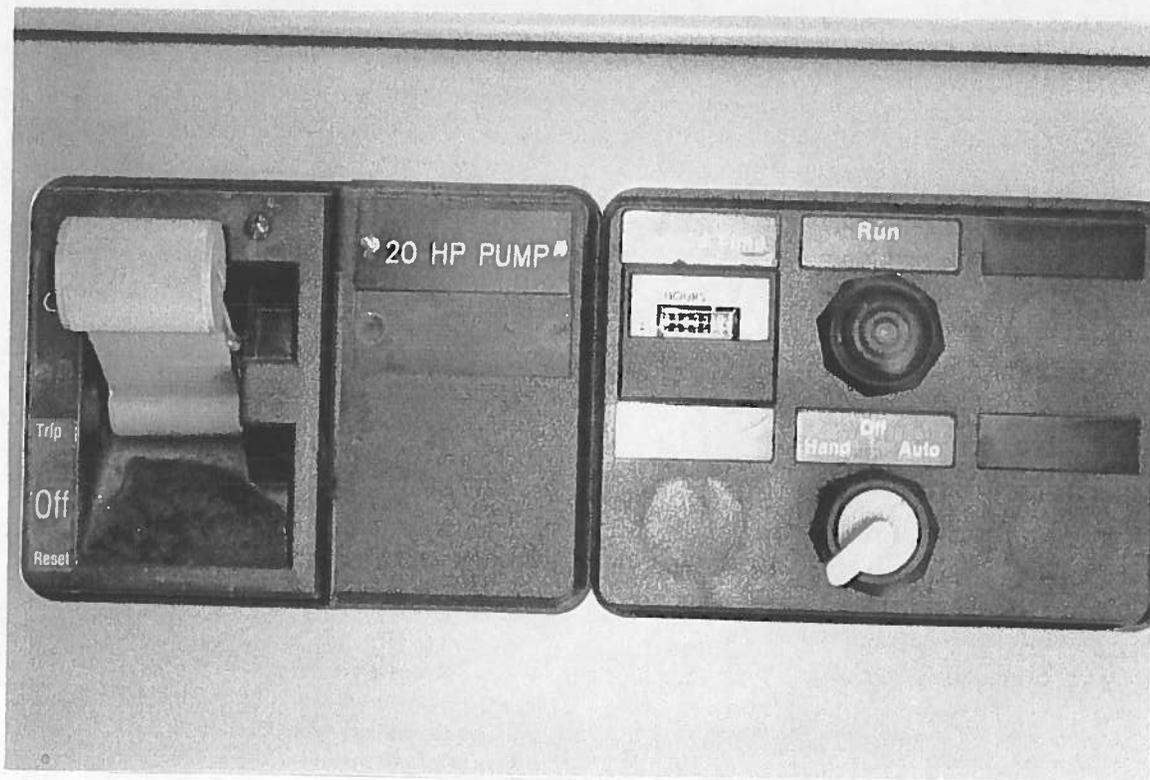
The coordinates for the South Fork Main Well are also delineated as being in Township 32 North, Range 55 East, Section 11 NW 1/4, NE 1/4.



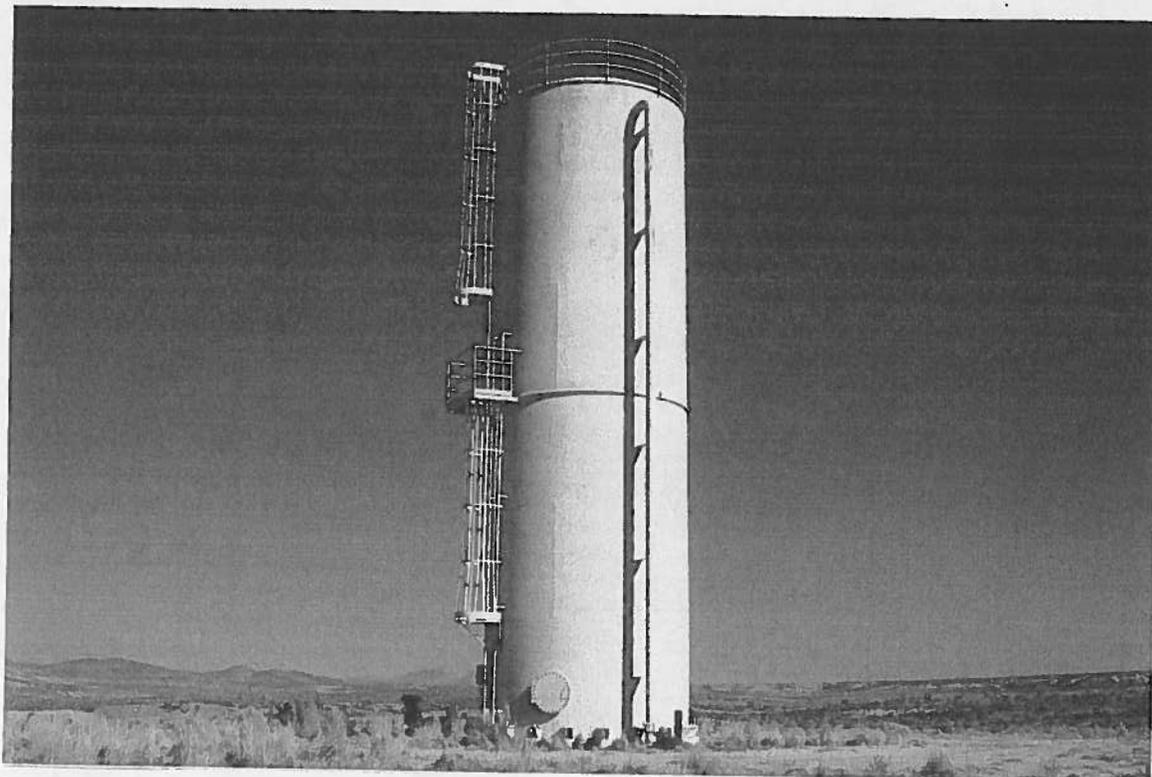
**South Fork Main Wellhead**



South Fork Main Pump house



South Fork Main Water Meter



**62,000 Gallon Water Storage Tank**

One 62,000 Gallon Storage Tank is used for the South Fork Main Well. 15,000 Gallons of this tank is dedicated as storage for fire suppression. The average number of visitors using this system per day was determined to be 17 for the 2006 year.

The South Fork Main Distribution System is a gravity-feed system that goes from the 62,000 gallon storage tank to A) South Fork SRA Maintenance Shop / Office, B.) RV Dump Station, C.) Ends at the South Fork Main / Developed Campground. This is an actual distance of less than 1 mile. >1. The inside diameter of the lines vary from 4" to 10". The 4" line is within the South Fork Developed Campground. The actual pipe material is PVC. Water usage is calculated using a Westinghouse Model # 549-15 water meter. This well pumps approximately 20 gallons per minute. The water is mixed with chlorine bleach at a specific rate to ensure public health. The readout is in hours, but is calculated to gallons pumped. A map of the distribution system is attached to this report.

**A. Public Education**

**(1) Water Conservation, Water Resources & Limited Supply.**

It is estimated that 80% of the water used within the South Fork Main water system is used to irrigate trees that are located at the South Fork developed campground & the maintenance yard area. The estimated 2006 water usage at South Fork was calculated to be less than >1 acre-foot of water or 131,000 gallons of water.

The following sources are used to obtain water conservation information.

State of Nevada. Department of Conservation & Natural Resources.

Division of Water Resources.

Website: [water.nv.gov/](http://water.nv.gov/)

USGS *Water in Nevada*

Website: <http://nevada.usgs.gov/wb/index.htm>

Park signage is used to increase public awareness & to educate park visitors on the practical measures in place at South Fork SRA for water conservation.

**(2) Encourage the reduction in size of lawns & encourage the use of plants that are adapted to arid & semi-arid climates.**

South Fork SRA does not currently have or anticipates having any lawn areas. South Fork uses tree & shrub species that have been identified as being drought tolerant. South Fork park staff maintains all planted trees & landscaped areas within the park.

Sources for information on planting drought tolerant tree & shrub species, & encourage water conservation are as follows. Handouts are available in the park office for free distribution to park visitors.

University of Nevada

Cooperative Extension Service

Website: <http://www.unce.unr.edu/>

Nevada Water Resources Association

Website: <http://www.nvwra.org>

**B. Conservation Measures**

Park visitors are charged a set entrance fee for entering & using the park. Potable drinking water is provided only within the developed portion of South Fork SRA. At this time, park visitors are not charged more if they use more water. There is no method available to monitor water usage by individual park visitors.

Conservation measures include:

- using water flow restrictors on the two shower heads
- using 1.6 LPF flush toilets.
- Tree irrigation systems are strictly monitored. & use low volume, emitters.
- Tree watering occurs after 6:00 p.m., & before 6:00 a.m. during the summer months.
- Developed campground is closed from November 15<sup>th</sup> to April 15<sup>th</sup>.

At this time, we have a water system in place that addresses our visitation needs. If discrepancies are noted, park staff will implement any necessary procedures to decrease water usage.

Park signage is used to increase public awareness & to educate park visitors on the practical measures in place at South Fork SRA for water conservation.

(3) Reduction of Pumping Capacity

South Fork SRA only has one well. During the winter months, this well is inactive. Water usage in the winter months is confined to the South Fork Park Office & Maintenance Shop. Water usage is minimal & drawdown occurs using the 62,000 gallon storage tank.

C. Water Management

(1) Identify any problems concerning water leakage.

The current (2007) South Fork water system only goes to the South Fork Park Office / Maintenance Shop & to the South Fork Developed Campground. This is a gravity feed system from our 62,000 water storage tank. Any leaks would be quickly identified, as the supply line runs parallel to the main access road. The supply line is a 10" PVC pipe buried below the frost line.

Daily Checks:

- Park staff checks for water leaks in park facilities & soft or wet spots on the park grounds.

Monthly Checks:

- Water usage is recorded.
- Unusually high water volume is identified to its source
- Confirm gallons per minute pumped from the well
- Inspect the pressure tank to confirm pressure is regulated from 40-60 PSI.

#### Spring / De-winterization

- Visually check all lines for leaks.

#### 10 Year Plan

- The 62,000 Gallon Storage tank is inspected on the inside using an underwater diver, for needed cleaning & leaks.

#### (2) Increase the use of effluent water.

At this time, effluent water is not used within the park for any reason. The South Fork Park Office / Shop, RV Dump Station & the Developed Campground Comfort Station all use septic systems & leach fields. A wastewater treatment plant is not feasible at this time.

#### D. Drought Contingency Plan

In the event that the South Fork well became inoperable, a contingency plan is in place. Tree Irrigation would be shut off first. The second closure would be the R.V. Dump Station. Barricades & signs would be placed to ensure compliance. The third closure would be the two shower stalls & the 4 flush restrooms in the comfort station in the developed campground. Signs would be placed & porta-potties would be rented to ensure sanitation.

South Fork has seven vault toilets that are non-flush & would stay open. Emergency water usage would be limited to only flush restrooms located in the South Fork Park Office / Shop. In the event of an extended power failure, South Fork does not have a generator. It is believed that the South Fork Well uses a highly recharged aquifer. Our proximity to South Fork Reservoir is a definite plus. If the well became inoperable, a contingency plan is in place to rent a water truck, for emergency water use.

#### E. Schedule for Carrying Out The Conservation Plan

The Conservation Plan will be implemented immediately upon approval. The plan will be reviewed & updated at five year intervals to ensure compliance with NRS 540.141.

**F. Evaluation of Plan's Effectiveness**

This could be measured in part by a comparison of total water use from month to month & year to year. However, the park visitation for South Fork has been consistently changing with monthly increases occurring for the past five years. The actual amount of water used can be calculated by way of a per visitor statistic. Also, weather changes & planting more trees affects the amount of water used for tree irrigation. Using low volume Liter Per Flush toilets & shower nozzles, & low volume water emitters for tree irrigation has & will encourage water conservation.

**G. Feasibility of charging Variable Rates to encourage Water Conservation**

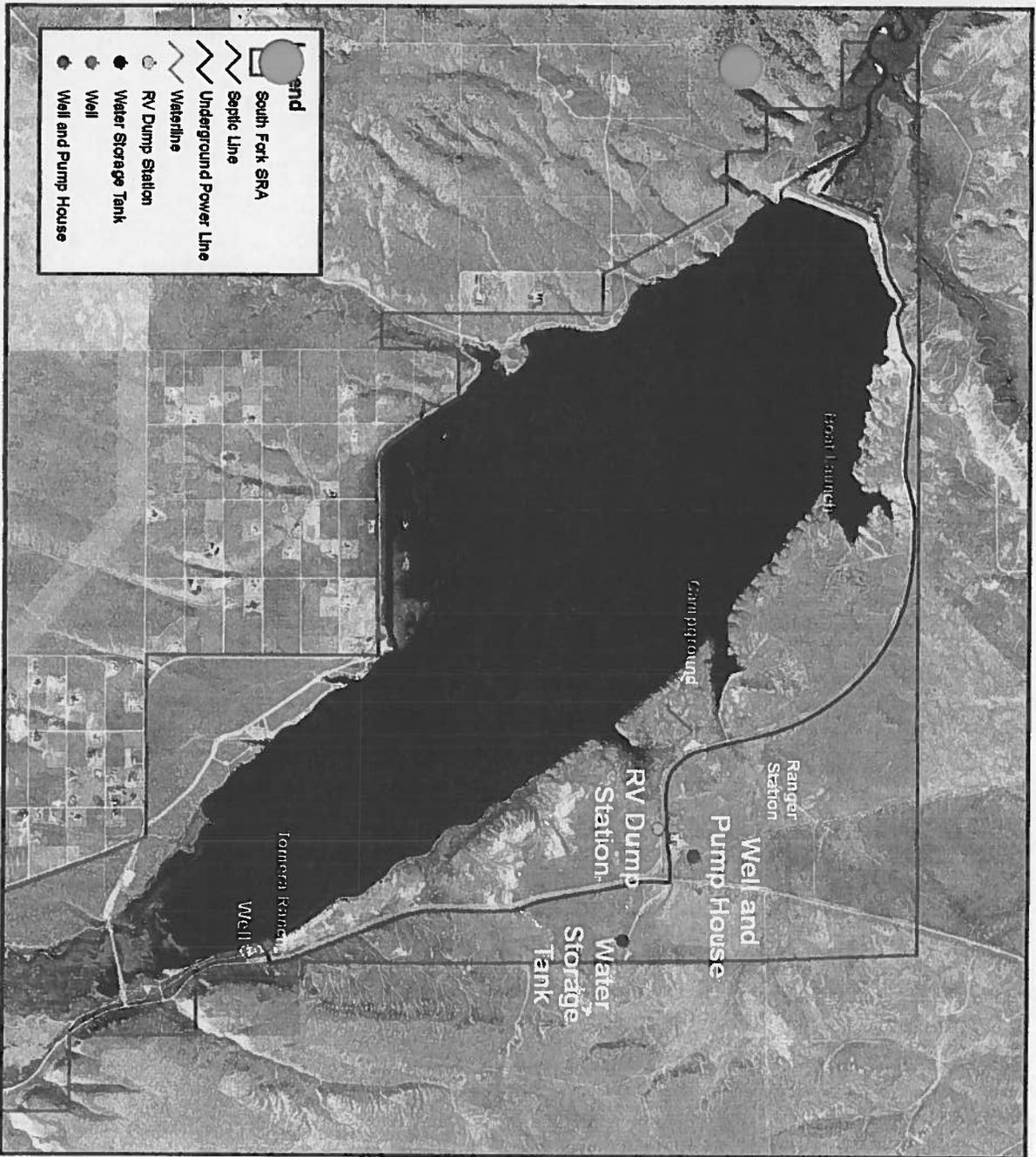
This is not applicable at this time. Park visitors are charged a set rate for entrance & other uses.

**H. Adoption of Plan to Provide Incentives to encourage Water Conservation**

Water conservation measures will continue to be used at South Fork SRA.

- (1) Adhering to Water Conservation measures.
- (2) Developed Campground is closed from November 15<sup>th</sup> to April 15<sup>th</sup>. No water use occurs during this time.
- (3) Using drought tolerant shrub & tree species for landscaping
- (4) Using water conserving plumbing fixtures in the Campground Comfort Station. This includes low volume shower controls & low volume, automatic lavatory faucets.
- (5) Having hand-outs available from The University of Nevada Cooperative Extension Service on Water Conservation. These will be available in the park office / visitor area.
- (6) Using low-volume, 1 GPH water emitters for tree irrigation. Trees will be watered after 6:00 p.m. & before 6:00 a.m. during the summer months.

*This Water Conservation Plan will be available to all interested park visitors. Park visitors will be provided an opportunity to submit written reviews & recommendations on this Plan.*



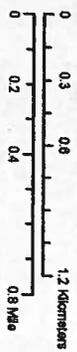
## Utilities

### South Fork State Recreation Area

South Fork SRA boundary and trails provided by Nevada Division of State Parks.

Water and sanitation information for campground and ranger station areas digitized from park blueprints.

All other utilities approximated based on verbal descriptions.



UNLV

Map of South Fork SRA Water Distribution System