

NPS Form 10-900  
(Rev. 8-86)

OMB No. 1024-0018

United States Department of the Interior  
National Park Service

RECEIVED

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NATIONAL REGISTER OF HISTORIC PLACES  
REGISTRATION FORM

NATIONAL  
REGISTER

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1. Name of Property

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historic name: Salt River Hydroelectric Powerplant Historic District

other name/site number: 48LN1915

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2. Location

=====

street & number: Lincoln County Road 12-104

not for publication: N/A

city/town: N/A

vicinity: x Etna, WY

state: WY county: Lincoln code: 023 zip code: 83118

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3. Classification

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Ownership of Property: Private

Category of Property: District

Number of Resources within Property:

Contributing	Noncontributing	
<u>1</u>	<u>0</u>	buildings
<u>0</u>	<u>0</u>	sites
<u>6</u>	<u>0</u>	structures
<u>0</u>	<u>0</u>	objects
<u>7</u>	<u>0</u>	Total

Number of contributing resources previously listed in the National Register: 0

Name of related multiple property listing: N/A

4. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1986, as amended, I hereby certify that this nomination request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property meets does not meet the National Register Criteria. I recommend that this property be considered significant nationally statewide locally. ( See continuation sheet for additional comments.)

Signature of Wyoming SHPO: John J. Keck Date: 9/14/93

Wyoming State Historic Preservation Office

In my opinion, the property meets does not meet the National Register criteria. ( See continuation sheet for additional comments.)

Signature of Idaho SHPO: [Signature] Date: 7 OCT 93

Idaho State Historic Preservation Office

In my opinion, the property meets does not meet the National Register criteria. ( See Continuation sheet for additional comments.)

Signature of U.S. Forest Service Preservation Officer: Ewan J. DeBois Date: 10/28/93

United States Forest Service

5. National Park Service Certification

I, hereby certify that this property is:

- entered in the National Register determined eligible for the National Register
determined not eligible for the National Register
removed from the National Register
other (explain):

Signature of Keeper of Action: [Signature] Date: 12/2/93

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6. Function or Use  
=====

Historic: INDUSTRY/PROCESSING/ Sub: Energy Facility Waterworks  
EXTRACTION  
Current: Work In Progress Sub: \_\_\_\_\_  
\_\_\_\_\_

=====  
7. Description  
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Architectural Classification:  
OTHER: Power Generating Facility  
\_\_\_\_\_

Other Description: N/A

Materials: foundation CONCRETE roof ASPHALT  
walls BRICK, CONCRETE other EARTH CANAL

Describe present and historic physical appearance. X See continuation sheet.

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8. Statement of Significance  
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Certifying official has considered the significance of this property in relation to other properties: STATEWIDE.  
Applicable National Register Criteria: A

Criteria Considerations (Exceptions) : N/A

Areas of Significance:  
Industry  
\_\_\_\_\_  
\_\_\_\_\_

Period(s) of Significance: 1938-1942

Significant Dates : November 12, 1938

Significant Person(s): N/A

Cultural Affiliation: N/A

Architect/Builder: N/A

State significance of property, and justify criteria, criteria considerations, and areas and periods of significance noted above.  
X See continuation sheet.

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9. Major Bibliographical References
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X See continuation sheet.

Previous documentation on file (NPS):

- \_ preliminary determination of individual listing (36 CFR 67) has been requested.
\_ previously listed in the National Register
\_ previously determined eligible by the National Register
\_ designated a National Historic Landmark
\_ recorded by Historic American Buildings Survey # !
\_ recorded by Historic American Engineering Record # !

Primary Location of Additional Data:

- x State historic preservation office
\_ Other state agency
\_ Federal agency
x Local government
\_ University
\_ Other -- Specify Repository: Library, Lincoln County, Star Valley Branch

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10. Geographical Data
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Acreage of Property: 36 Acres

UTM References: Zone Easting Northing Zone Easting Northing

A \_ \_ \_

x See continuation sheet.

USGS QUAD MAP: Etna, Idaho-Wyoming 7.5 Minute

x See continuation sheet.

Verbal Boundary Description: x See continuation sheet.

Boundary Justification: x See continuation sheet.

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11. Form Prepared By
=====

Name/Title: Scott D. Heiner, Owner
Rheba Massey, Survey Historian, Wyoming SHPO

Organization: Salt River Power Date: August 30, 1991

Street & Number: 612 Beech Avenue Telephone: 307-276-6248

City or Town: Kemmerer State: WY ZIP: 83101

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NATIONAL REGISTER OF HISTORIC PLACES  
CONTINUATION SHEET

Section number 7 (Salt River Hydroelectric Plant) Page # 1  
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The Salt River Hydroelectric Powerplant Historic District is located along the valley floor of the Salt River. The plant sits west of the river in the SW1/4 NE1/4 NW1/4 NE1/4 SE1/4 of Section 9, T36N, R119W (southeast corner reference). The canal that supplies water for the powerplant has its' headgate 2.7 miles south of the facility in the SW1/4 NW1/4 SW1/4 NW1/4 SE1/4 of Section 21, T36N, R119W (Figure 1).

The environment in the area is indicative of an Intermountain Riparian Zone. The site contains willows, pines meadow grass, and sedges. To the west of the site a hill rises to a height of 5966 ft. and contains a conifer forest with an understory of low lying grasses and forbs. The powerplant elevation is 5640 ft. The area is rural in nature and is mostly used for grazing purposes with meadow hay harvested to the east of the site.

The hydroelectric powerplant was constructed along the Salt River to take advantage of a steady supply of water. The powerplant site itself contains four architectural features: a concrete inlet structure which directs water into three steel penstocks which lead to the powerplant, the powerplant building, a concrete overflow spillway located northwest of the building, and a tailrace canal. The spillway has since collapsed from excessive erosion and neglect. Water from the turbines is discharged to the short earthen tailrace canal which connects the powerplant with the nearby river.

To insure an adequate flow of water, a log diversion dam was constructed across the channel of the river approximately 2.7 miles south of the powerplant in order to divert water into the canal. This structure was removed and destroyed when the powerplant was abandoned in 1971. The purpose of this structure was to raise the water level in the river by 2 feet to ensure adequate flows into the canal. The dam was 150 feet wide and composed of 14 triangular sections built with 8 inch diameter logs. The base of the dam sections varied from 10 to 22 feet wide with a height from 2.5 to 5.5 feet. The largest sections were installed at mid-channel. The center of the dam was filled with rock and gravel.

A control headgate was placed at the mouth of the canal (close to the diversion dam) in order to regulate the flow of water through it. The canal parallels the west bank of the Salt River for 2.7 miles north to the powerplant.

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BUILDINGS

Powerplant Contributing-1938

This building is 17.2 meters long by 7.8 meters wide. It is approximately 1-1/2 stories tall. The long axis of the building is set on a northwest to southeast orientation. The building is constructed of concrete blocks with a cement and wood floor and a flat wooden roof. The roof consists of 2" x 12" wooden trusses covered by wooden planking and asphalt shingles. Sheetrock panels once covered the interior surface of the ceiling but are now gone. The floor is concrete with the exception of the northern third of the switchgear room, which has a wooden plank subfloor.

Access to the building is through the southeast elevation. A double wide metal door is located in the northeast corner of the southeast elevation. This elevation also contains 1 window, a fixed metal frame window containing 24 panes of glass arranged 4 panes across by 6 vertically.

The southwest elevation contains three similar windows. Earth is ramped along the base of the elevation to a height of 2 meters to cover the penstocks which enter the building in this elevation.

The northeast elevation contains six windows, similar to the others. Below this wall is the discharge from the turbines where water is returned to the river. Each discharge is 4.5 meters wide by 2.25 meters high. The floor of the discharge area is concrete and extends 3 meters past the edge of the building.

The northwest elevation contains an add-on structure used to house the switchgear. This add-on extends along the length of the northwest wall and is approximately 2 meters wide. The roof of the add-on is some 3 meters lower than the roof of the main building. This elevation contains three windows which contain 8 panes of glass arranged 4 panes across by 2 panes high.

The interior of the structure consists of a single large room. The add-on is separated from the main room by a wooden and sheetrock wall with a door to the south end for access. An electrical control panel is located on the north end of this wall. The control panel contains switches and meters with Westinghouse labels on them, but no patent dates are evident. Behind the control panel are various fuses, transformers, relays, circuit breakers, and copper wiring manufactured by Westinghouse.

The main room of the building contains two water-driven Francis-type turbines driving 300 kilowatt synchronous generators manufactured by Westinghouse. The generators are painted orange and contain shaft driven exciters mounted on top. A fly-ball governor is located on the floor which controlled the turbine speed by way of wicket gates and a hydraulic actuator. The turbines are painted green

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and are located along the southwest wall. Facilities were made for a third generator and turbine on the east side of this wall, but the turbine was never installed. The turbine housings are approximately 2.4 meters in diameter and 3 meters in height. The other mechanical feature of the main room is the bridge crane and chain hoist rated at 5 tons. The crane can traverse the length of the main room.

A small bathroom was set in the southeast corner. This bathroom stall consists of two wooden walls, one on the east side and a second on the north. The walls are approximately 2 meters long by 2 meters high. There is no roof on the bathroom stall. Access is gained through a doorway on the north side.

The building and mechanical equipment inside are in good condition and remain largely intact. The equipment is in the same configuration as from the original period of operation. Some of the concrete blocks near the entrance are collapsed, and the add-on switchgear room has experienced some differential foundation settlement which resulted in the north wall pulling away from the main building by about 4 inches at the top near the roof.

STRUCTURES

Inlet Structure Contributing-1938

This is a reinforced concrete structure used to direct the flow into the penstocks. It is located at the north end of the canal directly behind the powerplant building. The inlet structure is located approximately 30 feet above the level of the floor of the powerplant. The structure contains three trash racks with open spaces of 2.5 inches, and three stop-log gates which were used to de-water individual penstocks. The gates are raised and lowered by worm gear assemblage. Wooden steps led from the powerhouse level up to the inlet structure. General condition of the inlet structure is good with minor concrete erosion on exposed edges due to freeze/thaw effects.

From the inlet structure, two steel penstocks angle down to the powerhouse. The third penstock and turbine were never installed. These penstocks are made of 1/4 inch plate steel and are entirely underground.

Overflow Spillway Non-Contributing-1938

The overflow spillway was used to divert flow around the turbines when needed and also served to dewater the canal. The structure is of reinforced concrete construction and is located approximately 50 feet west of the powerplant building. The spillway was used to convey the water from the canal elevation to the river located approximately 40 feet below. Two vertical concrete wing-walls remain intact on either side of the canal, but the spillway chute has collapsed due to

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erosion of the underlying base material. General condition of the overflow  
spillway is poor.

Tailrace Canal Contributing-1938

The tailrace canal extends 100 feet to the northeast of the powerplant and is 50 feet wide. This earthen canal is still functioning. Water from the turbines is discharged to the tailrace canal which connects the powerplant with the nearby river.

Canal Contributing-1938

The earthen canal was used to convey the water to the powerplant from the diversion point on the Salt River. The canal follows the contour line along a terrace on the west side of the river. This terrace runs along the foot of a southwest-northeast trending mountain range. The canal extends 2.7 miles north to the powerplant, and total length of the canal is approximately 13,800 feet. The canal was constructed in a trapezoidal shape with a bottom width of about 10 feet, top width of about 36 feet, and a depth of about 12 feet. Corrugated metal pipe and reinforced concrete box culverts were installed along the canal to divert surface water under the canal and into the Salt River. The canal retains its physical integrity and is still used.

Wooden Stringer Bridge Contributing-1938

Two wooden stringer bridges were installed for vehicular traffic across the canal. These bridges were approximately 14 feet wide and 30 feet long with a center support. One of the bridges has been removed and destroyed, while the other remains and is in fair condition. This bridge is 1000 feet north of the control headgate.

Control Headgate Contributing-1938

The control headgate is a reinforced concrete structure with an iron radial gate used to control flow into the canal. The structure is located alongside the Salt River approximately 300 feet downstream from the site of the demolished diversion dam. The structure is approximately 30 feet wide by 40 feet long. The radial gate is 12 feet wide by 10 feet high. The southeast corner of the structure has settled approximately 6 inches since abandonment. Overall, the concrete is in good condition with some minor deterioration along the exposed edges due to freeze/thaw action.



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The Salt River Hydroelectric Powerplant is significant under Criterion A for its industrial contribution to the development of the Star Valley region of Wyoming. The construction of the Salt River Powerplant was the first effort to provide electricity to the entire area of Star Valley using Rural Electric Association (R.E.A.) funds. During the Depression years the state of Wyoming benefitted from the expansion of electrical services into rural areas, largely due to efforts of Rural Electric Associations. These associations, subsidized by the Federal Government as part of Franklin Roosevelt's "New Deal", helped expand electrical service to ranches and farms throughout rural America, and made a major impact on the way these people lived. This R.E.A. hydroelectric plant remained in operation until 1967, and for 30 years it served as the principal source of electricity for the entire area. Therefore its period of significance is 1938-1942.

The Salt River Hydroelectric Plant was not the first attempt at trying to provide power to Star Valley. When the R.E.A. entered the valley in the late 1930s, the "Star Valley Swiss Cheese Company" in Freedom was using a gasoline-powered generator. The generator was used to provide power for the refrigeration units at the cheese factory. "The town of Afton had electrical power from the diesel and hydroplant in the mouth of Swift Creek Canyon." This hydroelectric plant was part of the Star Valley Power and Light company. The service area for this plant did not extend a great distance, and it was decided a larger electric facility was needed. The Salt River Hydroelectric Plant was seen as a means of providing power to the entire Star Valley (Star Valley Independent, April 9, 1937).

In April of 1937 a Certificate of Incorporation was issued to the Lower Valley Power and Light. Construction costs for the powerplant and powerlines were funded through loans from the R.E.A. By September of 1938 the last of the concrete was poured for the powerplant, and the canal was dug right up to the plant. By November 3rd the final dyking, digging and packing of the canal was completed, and the first water was directed into the canal to begin to soak up the soil.

On Saturday, November 12th, 1938, the residents of Star Valley held a celebration marking the beginning of valley-wide electric service. The festivities were held in the "new Freedom Church House." On hand for the occasion were Mr. John M. Carmody, Administrator of the R.E.A. from Washington, D.C., Mr. Ben W. Crehn, Regional Engineer for the R.E.A. and Mr. Carl Robinson, State Representative. Also present were Mr. W. B. Bigelow, Project Supervisor of Construction and Mr. and Mrs. Flora, who was the design engineer for the project.

The Lower Valley Power and Light proved to be a success. In January of 1947 two additional diesel-powered generators were added at the Salt River Hydroelectric Powerplant to carry additional loads, and provide for increased reliability of electric power. The hydroelectric plant operated from 1938 until 1967 when it

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was put on standby due to the availability of inexpensive power from the Bonneville Power Administration. For nearly 30 years the powerplant served as the principal source of electricity for the entire area.

Few power generating facilities remain intact in Wyoming from this period of nationwide powerplant construction. Most of the plants have been heavily modified or dismantled completely. The Salt River Hydroelectric Plant has had very little modification to the structure. Moreover, the equipment inside the building is in excellent condition and is situated in the same configuration as when the plant was first constructed. Much of the equipment is original. The powerplant and contributing structures retain their setting, location, design, workmanship, materials, feeling, and association. The Salt River Hydroelectric Powerplant is being rehabilitated and revitalized as a power generating facility closely resembling the original use and design of the plant.

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Section number 9 (Salt River Hydroelectric Plant) Page # 1  
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Major Bibliographical References

- Conkin, P.K.  
1985 The New Deal. AHM Publishing Corporation, Arlington Heights, Illinois.
- Gardner, Dudley  
1989 "Historic Evaluation of the Salt River Hydroelectric Plant".  
Archeological Services, Western Wyoming College, Rock Springs, Wyoming.
- Leuchtenburg, W. E.  
1963 Franklin D. Roosevelt and the New Deal, 1932-1940. Harper and Row, New York.
- Star Valley Independent, September 30, 1937, Afton, Wyoming.
- Star Valley Independent, August 11, 1938, Afton, Wyoming.
- Star Valley Independent, November 3, 1938, Afton, Wyoming.
- Star Valley Independent, November 12, 1938, Afton, Wyoming.
- Star Valley Independent, April 9, 1987, Afton, Wyoming.

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UTM References

Point	Zone	Easting	Northing
A	12	497320	4774250
B	12	497320	4773820
C	12	497100	4773820
D	12	497100	4774250
E	12	497200	4773820
F	12	497160	4773260
G	12	496800	4773125
H	12	496390	4772320
I	12	496640	4771560
J	12	496425	4771230
K	12	496600	4770520
L	12	496780	4770380

Verbal Boundary Description:

The boundary of the Salt River Hydroelectric Powerplant and associated generating facilities begins at an arbitrary point (A) located 450' north-northeast of the northeast corner of the powerplant. It then proceeds south in a straight line to an arbitrary point (B) located approximately 210' southeast from the southeast corner of the powerplant building. It then proceeds west in a straight line to another arbitrary point (C) located approximately 180' southwest of the south west corner of the powerplant. It then proceeds north in a straight line to an arbitrary point (D) located approximately 440' north northwest from the north west corner of the powerplant. Thus, points A - D form a rectangular shaped boundary which encompasses the powerplant, the inlet structures and the tailrace canal that returns the water to the Salt River. Points E - L are located along the canal system itself. Point E is located at the midline of the canal where it intersects line C-B and follows the general serpentine course of the canal in a series of straight lines. The boundary extends a distance of 50' east and west from the midline of the canal, and is shown as a dotted line on the accompanying USGS map entitled "Project Boundary, Salt River Hydroelectric Powerplant".

Boundary Justification:

The boundary is defined by 4 arbitrary points, located for convenience and to minimize inclusion of extraneous land area, and 8 specific points located at major changes of direction of the course of the canal. This boundary represents the leased portion of the canal and powerplant and includes the powerhouse, penstock inlet, spillway, tailrace, control headgate, wooden stringer bridge, and canal that have historically been a part of the Salt River Hydroelectric Powerplant, all of which maintain historical integrity.

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# National Register of Historic Places Continuation Sheet

Section number \_\_\_\_\_ Page \_\_\_\_\_

### SUPPLEMENTARY LISTING RECORD

NRIS Reference Number: 93000889

Date Listed: 12/2/93

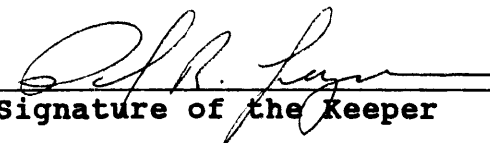
Salt River Hydroelectric Powerplant  
Property Name

Lincoln  
Bonneville  
County

WY  
OR  
State

N/A  
Multiple Name

-----  
This property is listed in the National Register of Historic Places in accordance with the attached nomination documentation subject to the following exceptions, exclusions, or amendments, notwithstanding the National Park Service certification included in the nomination documentation.

*for*   
Signature of the Keeper

1-27-94  
Date of Action

=====  
Amended Items in Nomination:

**Location:**

The locational information is amended to add:

STATE: Idaho CODE: ID COUNTY: Bonneville Code: 019

This reflects the fact that a small portion of the nominated resource (the power canal) extends into the state of Idaho.

This information was confirmed by telephone with the Idaho and Wyoming state preservation offices.

**DISTRIBUTION:**

- National Register property file
- Nominating Authority (without nomination attachment)