NATIONAL REGISTER OF HISTORIC PLACES
INVENTORY - NOMINATION FORM
FOR FEDERAL PROPERTIES
(Type all entries - complete applicable sections)

1. NAME
COMMON:
Water Disposal Plant (H.3.-2)

AND/OR HISTORIC:
Water Reclalm Plant

2. LOCATION
STREET AND NUMBER:
Route 8A 0 & SR-89
S of Grand Canyon National Park, NE 4 of NE 4 of Sec. 27, T31N, R2E

CITY OR TOWN:
Grand Canyon

STATE:
Arizona

CODE:
04

COUNTY:
Coconino

CODE:
005

3. CLASSIFICATION
CATEGORY
(Chose One)

☑ District
☐ Building
☐ Site
☐ Structure
☒ Object

OWNERSHIP

☐ Public
☐ Private
☐ Both

ACCEESIBLE
TO THE PUBLIC

☑ Occupied
☐ Unoccupied
☐ Preservation work in progress
☐ Unrestricted

STATUS

☐ In Process
☐ Being Considered

PRESENT USE
(Chec. One or More as Appropriate)

☐ Agricultural
☐ Government
☐ Park
☐ Transportation
☐ Comments
☐ Commercial
☐ Industrial
☐ Private Residence
☐ Religious
☐ Other (Specify)

☐ Educational
☐ Military
☐ Scientific

☐ Entertainment
☐ Museum

4. AGENCY

National Park Service

REGIONAL HEADQUARTERS: (If applicable)
Western Regional Office

STREET AND NUMBER:
450 Golden Gate Ave., 36063

CITY OR TOWN:
San Francisco

STATE:
California

CODE:
06

5. LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC:
Coconino County Courthouse

STREET AND NUMBER:

CITY OR TOWN:
Flagstaff

STATE:
Arizona

CODE:
04

6. REPRESENTATION IN EXISTING SURVEYS

TITLE OF SURVEY:

DATE OF SURVEY:
☐ Federal
☐ State
☐ County
☐ Local

DEPOSITORY FOR SURVEY RECORDS:

STREET AND NUMBER:

CITY OR TOWN:

STATE:
**7. DESCRIPTION**

<table>
<thead>
<tr>
<th>CONDITION</th>
<th>(Check One)</th>
<th>□ Excellent</th>
<th>□ Good</th>
<th>□ Fair</th>
<th>□ Deteriorated</th>
<th>□ Ruins</th>
<th>□ Unexposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Check One)</td>
<td></td>
<td>□ Altered</td>
<td>□ Unaltered</td>
<td>□ Moved</td>
<td>□ Original Site</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**CONDITION**

Preservation recommended

This plant is composed of a number of related structures, and its appearance is essentially the way it has been over the years.

Pipes bring the waste water to the plant where it passes first through a bar-screen box that filters out solids. It passes through the pipe to a flume where the water is measured to determine the amount passing to the plant. From here, it goes to another bar-screen box that filters other solids. There, the solids are diverted to the sludge pond some distance from the plant. The waste water then passes on to a pre-sedimentation tank where grease is separated and solids are diverted to the sludge pond. The water then goes to aeration tanks where bacteria work to help purify the waste water. From there it goes to clarifiers, where remaining grease and solids are removed. The water then passes through filters of stone topped by anthracite coal where the water is "polished" to a clear appearance. This water is then chlorinated and transmitted to a storage tank.

The plant consists of the bar-screen boxes, a pre-sedimentation tank, three aeration tanks (two of 25,000 gallons, and one of 50,000 gallons), two clarifiers, a secondary tank, two filters, a storage tank (nearly 300,000 gallons capacity), a holding tank, and a water tank that is used to back-wash the filters. A frame structure with a corrugated tin exterior, houses the filter system, aeration generators, and the chlorination system. This two-level, concrete based building also has two shops, an office, and a laboratory to test the water.

**Boundary:** The historic land embraced in this site would be a rectangle formed by using the aeration tanks as a center and extending lines 100 yards to the north, 200 yards to the east, 200 yards to the west, and 400 yards to the south.

**Class VI lands:** 37 acres

**Cost:** current maintenance adequate

(The Water Disposal Plant is classified as a historic district in order to include the inter-connecting series of tanks, basins, and facilities, even though it varies from the normal description of a historic district, that of numerous separate buildings.)
The South Rim of Grand Canyon, where most of the tourist developments have traditionally been, possesses little water. To help augment the available supply of fresh water, the Santa Fe Railroad, then principal concessioner of the park, developed a plant to reclaim water. This reclaimed water was to return by its own pipeline to the hotel area where it would be used to water grass and plants, to flush toilets in the El Tovar Hotel, for train steam engines, etc. The plant was built and put into operation in May 1926, and since then has served the needs of the park, supplying reclaimed water at nearly one-sixth the cost of obtaining fresh water.

Although tests have proved the reclaimed water to be potable, it has never been used for drinking purposes.

With the building of the Bright Angel Lodge in 1934, the Water Reclaim Plant was expanded with the addition of the third aeration tank.

This plant has been in continuous operation with no serious breakdowns since it was first started, and much of the equipment and machinery is original. Moreover, this plant, basically simple in operation, has proven conclusively that reclaiming water is economically feasible.

The significance of this plant lies partly in the fact that it helped solve a major problem (water shortage) in the development of Grand Canyon National Park, and the fact that it is one of the earliest water reclamation plants in the country. Moreover, the scientific principles operating this plant are basically the ones used in today's water reclaiming systems.


<table>
<thead>
<tr>
<th>LATITUDE AND LONGITUDE COORDINATES DEFINING A RECTANGLE LOCATING THE PROPERTY</th>
<th>OR</th>
<th>LATITUDE AND LONGITUDE COORDINATES DEFINING THE CENTER POINT OF A PROPERTY OF LESS THAN TEN ACRES</th>
</tr>
</thead>
<tbody>
<tr>
<td>CORNER</td>
<td>LATITUDE</td>
<td>LONGITUDE</td>
</tr>
<tr>
<td>NW</td>
<td>36° 03' 00&quot;</td>
<td>112° 09' 28&quot;</td>
</tr>
<tr>
<td>NE</td>
<td>36° 03' 00&quot;</td>
<td>112° 09' 12&quot;</td>
</tr>
<tr>
<td>SE</td>
<td>36° 02' 49&quot;</td>
<td>112° 09' 12&quot;</td>
</tr>
<tr>
<td>SW</td>
<td>36° 02' 49&quot;</td>
<td>112° 09' 28&quot;</td>
</tr>
</tbody>
</table>

APPROXIMATE ACREAGE OF NOMINATED PROPERTY: 37

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES:

<table>
<thead>
<tr>
<th>STATE</th>
<th>CODE</th>
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<td>Coconino</td>
<td>005</td>
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</table>

STATE Liaison Officer recommendation:

☑  Yes
☐  No
☐  None

DENNIS McCARTHY
State Liaison Officer Signature

In compliance with Executive Order 11593, I hereby nominate this property to the National Register, certifying that the State Liaison Officer has been allowed 90 days in which to present the nomination to the State Review Board and to evaluate its significance. The recommended level of significance is □ National ☐ State ☐ Local

DENNIS McCARTHY
Federal Representative Signature

I hereby certify that this property is included in the National Register.

AR WARTENBERG
Director, Office of Archeology and Historic Preservation

Date 9/6/74

ATTEST:

Charles R. WILKINS
Keeper of The National Register

Date 9-6-74
NATIONAL REGISTER OF HISTORIC PLACES
PROPERTY PHOTOGRAPH FORM

(Type all entries - attach to or enclose with photograph)

1. NAME
   COMMON: Water Disposal Plant
   AND/OR HISTORIC: Water Reclaim Plant

2. LOCATION
   STREET AND NUMBER: Grand Canyon National Park
   CITY OR TOWN: Grand Canyon
   STATE: Arizona

3. PHOTO REFERENCE
   PHOTO CREDIT: F.R. Holland, JR.
   DATE OF PHOTO: May, 1972
   NEGATIVE FILED AT: Denver Service Center

4. IDENTIFICATION
   DESCRIBE VIEW, DIRECTION, ETC.
   1. Aeration Tanks

PROPERTY OF THE NATIONAL REGISTER
NATIONAL REGISTER OF HISTORIC PLACES
PROPERTY PHOTOGRAPH FORM

(Type all entries - attach to or enclose with photograph)

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4. IDENTIFICATION

DESCRIBE VIEW, DIRECTION, ETC.

2. Clarifiers

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CODE: 04
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CODE: 005

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DATE OF PHOTO: May, 1972
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DESCRIBE VIEW, DIRECTION, ETC.

5. Water Storage Tank

PROPERTY OF THE NATIONAL REGISTER

INT: 154-72
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4. IDENTIFICATION
DESCRIBE VIEW, DIRECTION, ETC.

4. Pre-sedimentation Tank

PROPERTY OF THE NATIONAL REGISTER
UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
PROPERTY PHOTOGRAPH FORM

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DESCRIBE VIEW, DIRECTION, ETC.

3. Main Plant Building

PROPERTY OF THE NATIONAL REGISTER

INT: 154-72