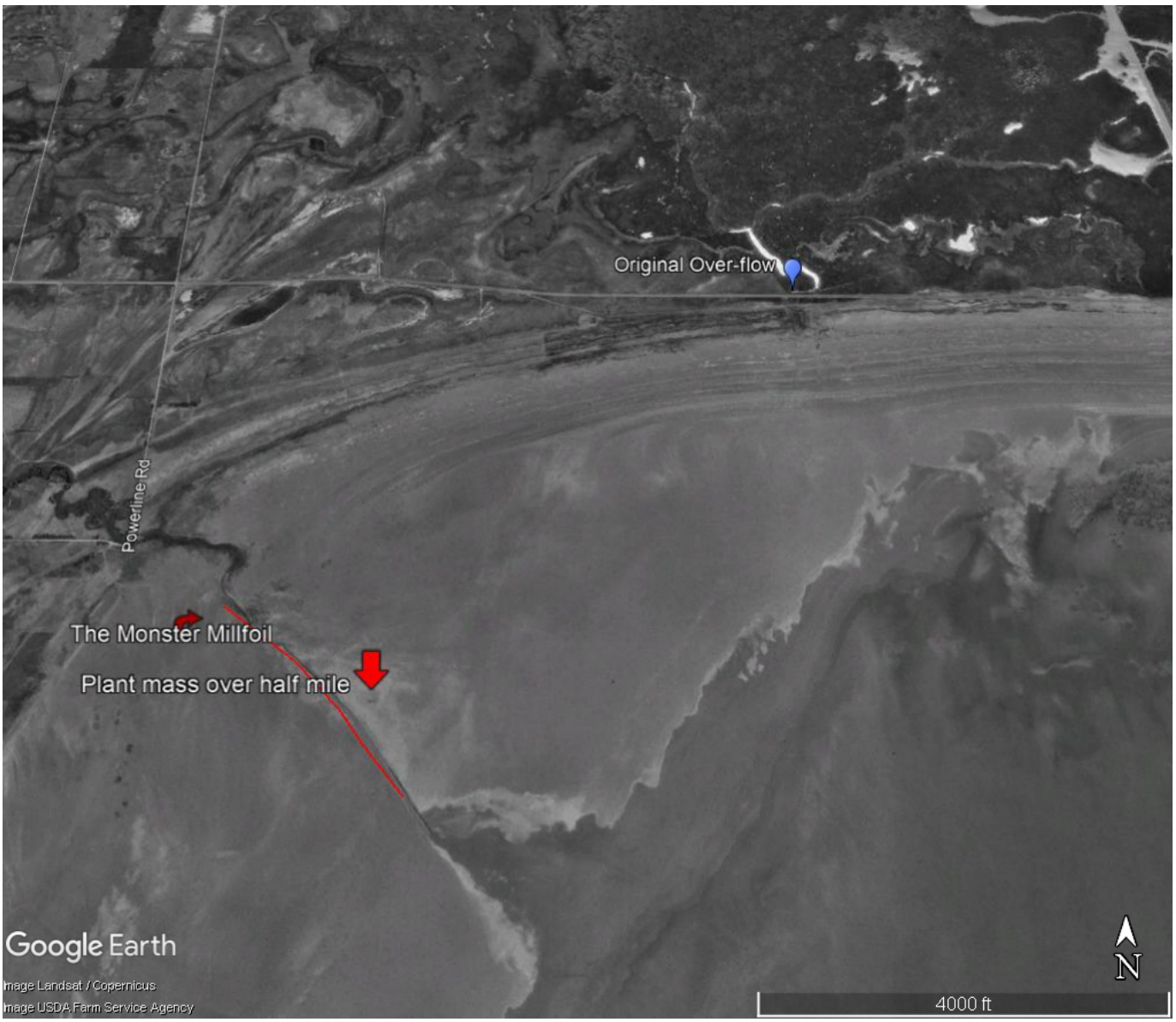
Fish Ladder & Interpretive Kiosk.

The Fish Ladder was completed by PacifiCorp, IDFG, and Trout Unlimited circa 1995. Ostensibly to restore a better connection of St. Charles Creek to Bear Lake for fish passage. The original connection, (per the 1877 map) appears to be only though what is now known as the Little Arm of St Charles Creek. Settlement era diversions moved a good share of the creek into the north for irrigation, with the return flows collected in the marsh.

" North of North Beach Road is the
St. Charles Unit and Dike, which were completed ~2004 . The dike directs the creek and return flows into the Bear Lake at the fish ladder. The dike's control structures with fish screens keep the Bonneville cutthroat trout in the creek rather than going out into meadows to be lost to the breeding population."

This image of Goggle Earth1992- a near record low, shows no Fish Ladder connection and also illustrates a mile-long swim-thru-the-sand spawning route a Cutthroat trout would have to make. This distance is one of the reasons that the Fish Ladder location was chosen.



ORIGINAL OVER-FLOW

This North Beach Road is built upon a natural ridge of sand, described below. One of the out-flow channels was believed to be near the fish ladder.

From the Newell Report 1891:

"The lake is separated from the marsh to the north by a long, low ridge of sand, thrown up by the waves to a height of from 2 to 5 feet above the ordinary water level. This sand ridge is about 5 miles in length and from 100 to 300 feet in width. It is pierced in two places by narrow passages, through which the water flows from the lake into the marsh, or from the marsh to the lake, depending upon the relative elevation of each.

In the fall of 1889 the Bear Lake and River Canal Company was by means of plow and scraper raising this natural embankment by scraping up the sand from the shore of the lake and dumping it on top, the object being, it was asserted, to increase the storage capacity of the lake by blocking the natural outlet. It was obvious, however, that such construction could be of little if any use toward this end, but was undertaken as a preliminary step toward the attempt to acquire some right or title to the use of this lake as a storage reservoir."

How it came to be that a private power company could use Bear Lake

December 1, 1906 almost five years after several rejections from the federal General Land Office of the U.S.(GLO), Nunn filed a motion to re-open the matter of his right of way application.

GLO decision reversed, application approved: On January 21, 1907, Nunn wrote to Department of Interior stating plans for irrigation and power requirements and on April 1, 1907, Department of Interior Secretary, James R. Garfield
wrote to the Commissioner of the GLO reversing the prior rejection of Nunn's right of way application and approving the application filed by L. L. Nunn as of April 1, 1907.

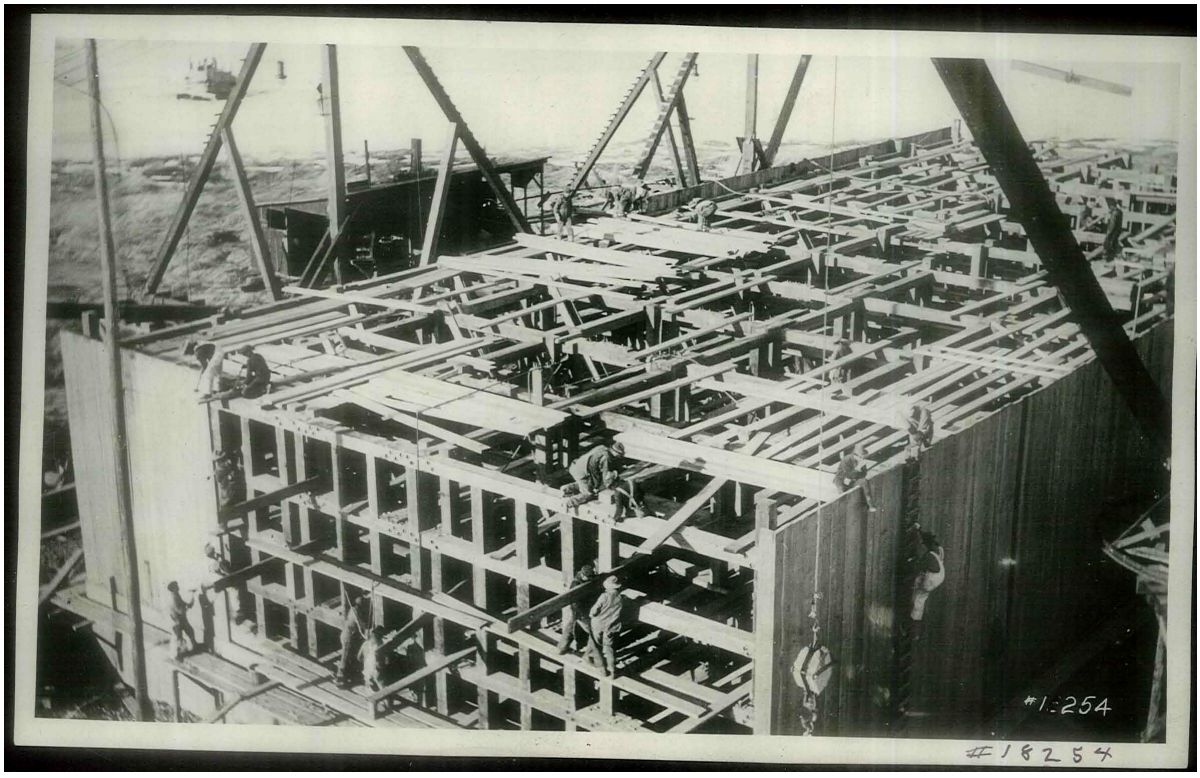
Utah Power & Light Company acquired Bear Lake interest: December 21, 1907, Nunn transferred to Telluride Power Company his interest in Bear and Mud Lakes and waters thereof.

Five years later, on November 12, 1901, Telluride Power Company transferred its interest to Utah Power Company…

The Pumps

The building to house the pumps was created by sinking a caisson - a large honeycomb like box - by pressing it down into the soft ground then excavating each of the cavities as they progressed. When deep enough, a concrete floor was poured and the walls fortified. Afterwards the waterways were then dredged out on either side.

Why was it called Lifton? Maybe because it would lift a proverbial "ton" of water up and out of Bear Lake. Or perhaps because the builders would have to lift tons of mud out of the Caisson to sink it.



Camp Lifton
This was a huge undertaking. Whole buildings were hauled in by horses to house the workers... one is still on the premises. See if you can identify it

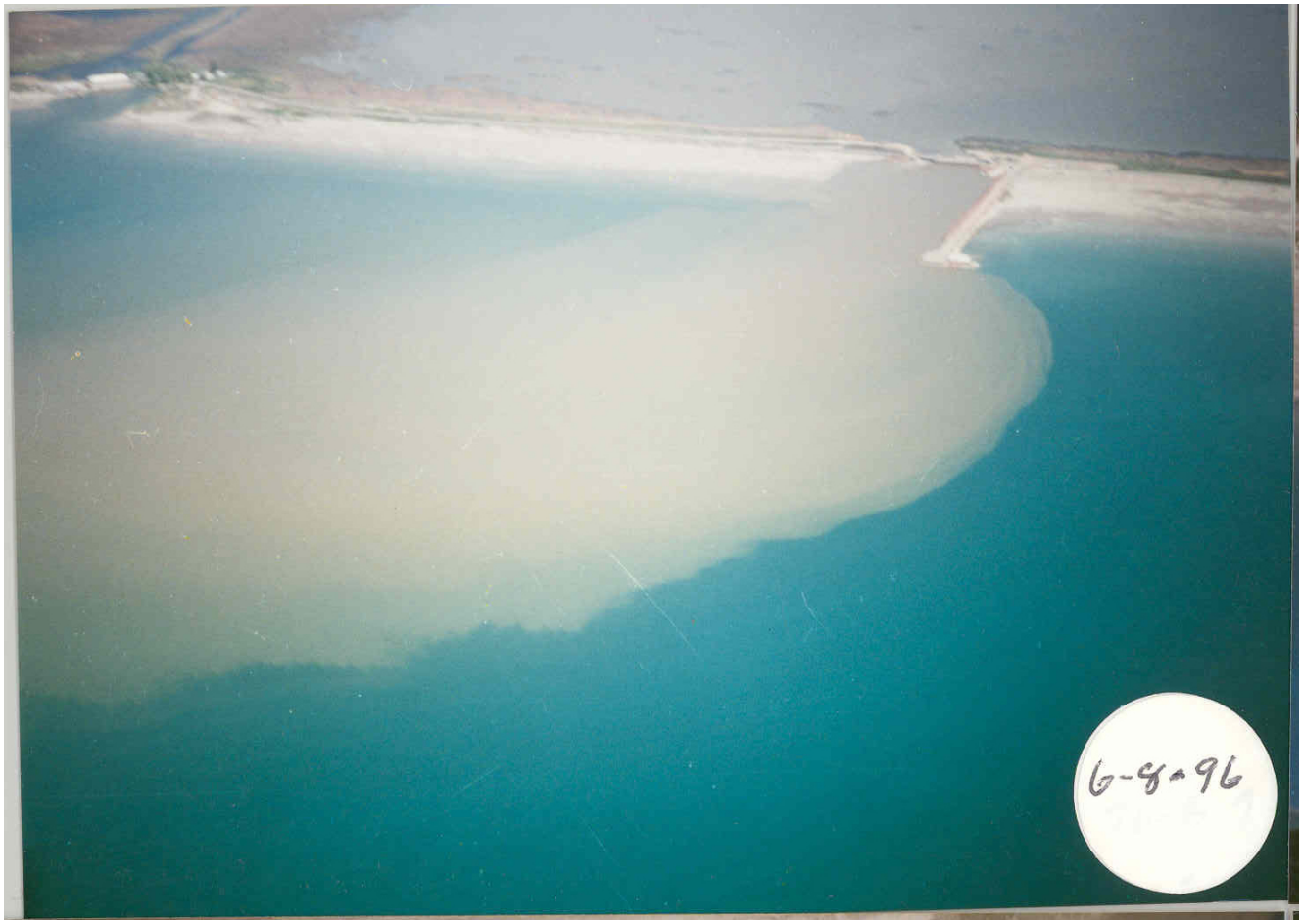
The Old Causeway

Originally, they moved most of the water INTO Bear Lake through the pump house. In more recent times they began using the old causeway... until it failed in 1993.

New Causeway

The new Causeway structure was built quickly after the failure in 1993.
Photo from October 1994 - Thanks to “Love Bear Lake” and Jim Kimbal for diligence in following this event and providing these photos for history. (This happened after Bear Lake Watch was formed 1992 and the lawsuit had been filed, but before the Settlement Agreement was signed in 1995. Some have mistakenly identified it as the cause of the suit.)

Sediment flume three years later.



Historic Hot Springs Resort:
Joseph C Rich channeled the hot springs water into the original swimming pool in the 1870s. He also built a large two story Resort Hotel.

A launch owned by the Stock Brothers Resort, called the "Columbia" was used to bring visitors from Fish Haven. It was often captained by the young Jesse Cottle.

As you travel north, you can see where the hot springs come out of the base of the hills and the hot water piped to the resort.

The Refuge

Refuge Boundary goes up the hill in this area. Anyone know why? Elsewhere it follows the Ordinary High Water Mark that is the same as Bear Lake's 5923.65.

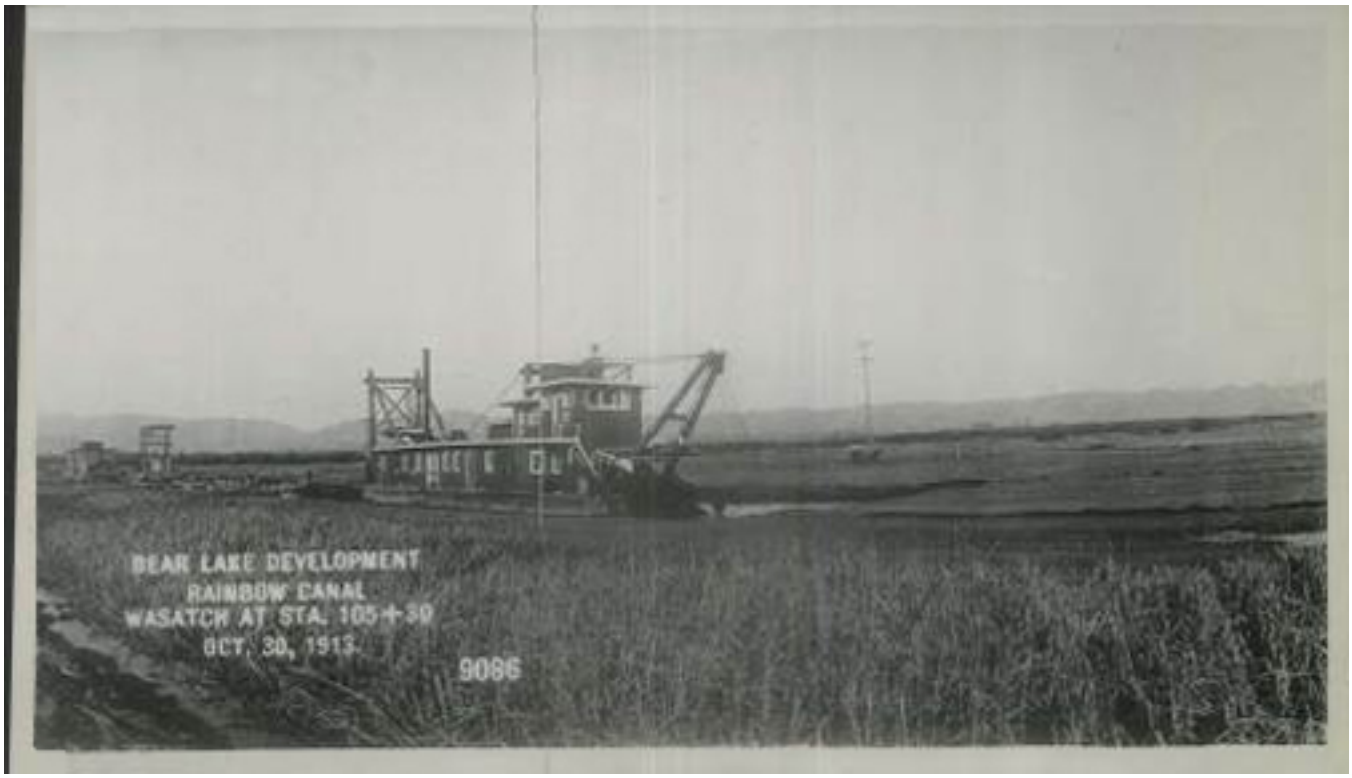
Note how clear this water is. It is open to Mud Lake, but the waters don't seem to mix.

Merkley Lake

Compare the shape to the early survey maps!
(It is labeled "Meckley" in 1877.)

The Dredge that worked on the Rainbow Canal was BUILT in Merkley Lake! It then it dredged its way out into the marsh to complete the Rainbow Canal.

It is reported that this allowed Asian Carp to escape into the whole of the Marsh and then to Bear Lake. Why were Carp in Merkley Lake? Purportedly, someone had created or modified this spot and brought in carp to raise for food.



The Telluride Canal

Watch for it....

Many still refer to it as the old Telluride Canal, aka Dingle Canal, started in 1902 and first used in 1911.
This was one of the first attempts to divert Bear River water into Bear Lake. It was reported to have failed because it was not successfully engineered to handle high flow.

(It is interesting to follow it in Google Earth -or for real- to its diversion on the Bear River.)

Now known as the Ream Crockett Canal and still used for local irrigation.

For some 10,000 years the Bear River did not flow into Bear Lake

Read this description below:

From the report of
FN Newell, HYDROGRAPHY OF THE ARID REGIONS
as reported in the Twelfth Annual Report
of the USGS to the Secretary of Interior,
1890-1891

"Bear River does not flow directly into Bear Lake, but in times of high water floods the marsh, and from thence the water backs into the lake. In time of drought the water in turn flows from the lake into the marsh, and in many tortuous channels finally enters the lower portion of the river at the north end of the valley. There is no well defined passage through the marsh, the river where it enters dividing into channels and, spreading through this low land, finally converges upon its lower reaches. The lake and marsh thus have a modifying effect upon the regime of the river, cutting it into two portions, the Upper Bear River, above Bear Lake Valley, and the Lower Bear, below that point, the action of the upper river being felt only indirectly in the lower Bear."

Consider what this area north of Bear Lake was like. It was known as the Dingle Marsh and was mostly impassible. It was a two day buggy journey from Fish Haven to Montpelier, as one had to travel all the way up past Bern to stay on high and dry ground. It is one of the reasons the two regions evolved and were quite socially separate. Not only did the new canals divert the river into the lake, they also caused the marsh to dry up.

At some point in your travels, find a high spot to pull over and view the valley to contemplate what it was like. There is a good spot on Hwy 30 south of Montpelier. You can see where this might have been a good place to have built a dam instead of using Bear Lake. ;(

Another Canal Crossing

This canal comes of an old rock diversion on the river that can be seen from Highway 30. It appears to follow a very old natural meandering channel. Is this the Black Otter?

Watch for this turn!
Turn West on Camp Stewart Rd also called Airport Rd

Stewart Dam

This is the second Stewart Dam, the first was destroyed by a flood in 1916 but it was rebuilt 1917.

The whole Bear River is diverted out of its channel and down the Rainbow Canal. The last time these gates were open was in the high water of the 1980's. Even in 2011, it was not opened to pass any of the high flows down the old channel.

What are the possibilities and barriers to reconnecting a fish passage? There has been some talk about it. Naturally Cutthroat trout moved up and down the Bear River for their spawning migration.
FYI: The Bear Lake Cutts had been isolated for thousands of years and for a long time were thought to be a separate species from the Bonneville Cutts in the area rivers.

The Rainbow “Dam” is not intended to dam or hold back any water but rather is a control structure to allow for measurement of the water as it is diverted down the Rainbow Canal.

Some years there is a lot of water, other years not so much!

Why is this called the "Rainbow" Canal? No one seems to know. Maybe because it is a bow-

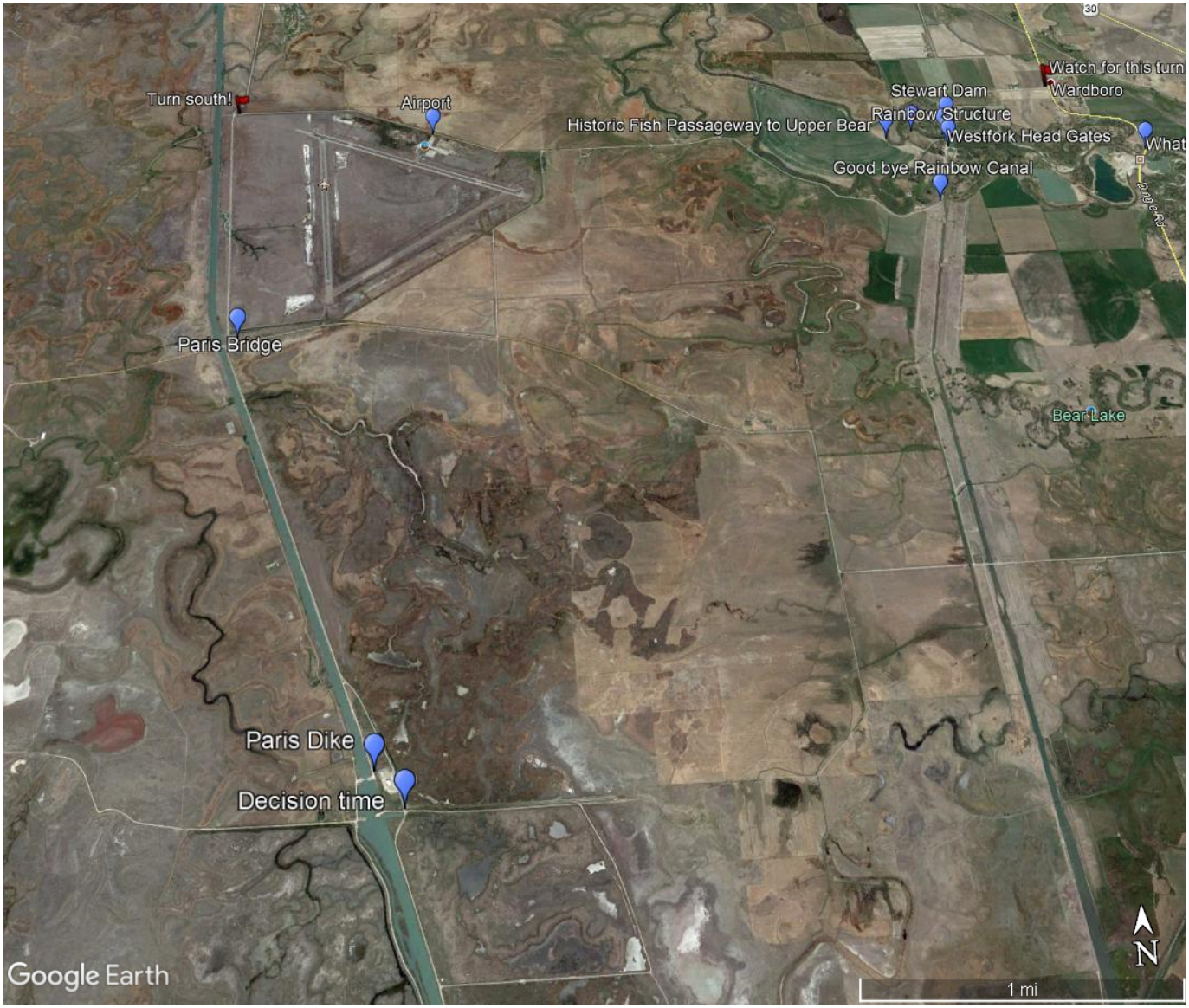
Continue south until the roadway turns westward - Follow Airport Road

You will leave this water for now, but you saw (or will see depending which way you are driving the tour) where it comes out through Mud Lake and the Outlet Canal.

see map below... this is the part that you can't drive to except for special situations. Waterfowl hunters are allowed in during hunting season.

Turn South, toward the lake, to complete your tour. You will be going up-stream of the Outlet Canal that carries water back to the river.
If the canal is flowing, it will be either Blue with lake water if they are *pumping* and/or Brown river water if they are *by-passing.*

(If you turn north you'd be going with the flow, following the canal to its junction with the highway to Montpelier. Where the canal continues about another mile where it rejoins the natural river channel.)



Approaching a cross road.
Jog just a bit west and continue into the Refuge, staying on east side of the canal.

Paris Dike – Is a dam that does back-up some water but is also a control structure that regulates the elevations in the Mud Lake / Bear Lake Complex.

When it is closed, all water from the Bear River is stored in Bear Lake. When it is open, river water is either being bypassed and/or Bear Lake water is being moved out.

"YOU SHALL NOT PASS!"

Sorry, you can drive up to view the structure, but not cross it.

This structure was replaced by PacifiCorp circa 1993 - around the same time as the Causeway was replaced... when it blew out during record spring snowmelt and severe rainstorms.

The original Paris Dam was immediately to

the south where you can see two buoys.

FYI: Paris Creek comes in just to the north

and goes directly into the Outlet Canal.

You can drive back and around the refuge

buildings...

Depending on the road conditions and season, you may be able to continue into the Refuge but eventually you will circle back to this point.

When you are done, return to the Paris Bridge where you may choose your own adventure … To Paris, Montpelier or Dingle!

Hope you had fun, call or text me if you have questions (or get lost LOL) 801-243-8980 comments? blue@bearlakewatch.com