Appendix D. Photo documentation of aerial and underwater radiotelemetry antenna deployments at FCRPS dams: McNary to Lower Granite

This Appendix includes photos and site metadata for locations of aerial antennas that were used to monitor radio-tagged adult salmon and steelhead at McNary, Ice Harbor, Lower Monumental, Little Goose, and Lower Granite dams in 2013-2014. Many of the sites were also deployed in previous years, but not all sites were deployed in all years. Please see the database:

Receiver_Deployments_1996-2014 for annual details. Appendix A provides generalized maps of aerial and underwater antenna locations at main stem dams for all years.

Table E1. Summary of receivers described in this Appendix that were deployed at McNary, Ice Harbor, Lower Monumental, Little Goose, and Lower Granite dams.

Receiver location	Receiver code
McNary Dam	1MN 2MN 3MN 8MN BMN CMN DMN EMN FMN
Ice Harbor Dam	1IH 2IH 9IH AIH BIH CIH DIH EIH MIH
L. Monumental Dam	1LM 2LM 8LM 9 LM ALM BLM CLM TLM
Little Goose Dam	1GO 2GO 7GO AGO BGO CGO FGO MGO TGO
Lower Granite Dam	1GR 2GR 7GR 8GR 9GR BGR DGR FGR MGR TGR

1MN: Oregon shore tailrace



LAT/LON: 45.633000° N

-121.960631° W

RKM: 467.3

Receiver type: SRX

Antennas (1): A1 - yagi

Distance from

receiver to antenna: 20 feet

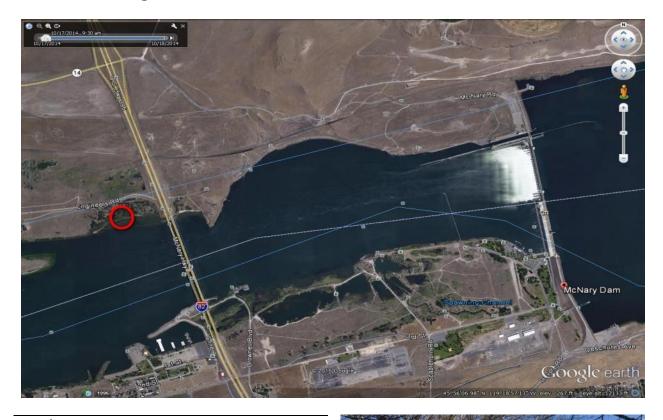
Power source: Hard wired (AC)

Notes:

Receiver located inside a small shed on the Oregon shore just south of I-82. Antenna mounted on pole on outside of building.



2MN: Washington shore tailrace



LAT/LON: 45.633594° N

-121.965760° W

RKM: 467.3

Receiver type: SRX

Antennas (1): A1 - yagi

Distance from

receiver to antenna: 10 feet
Power source: Solar

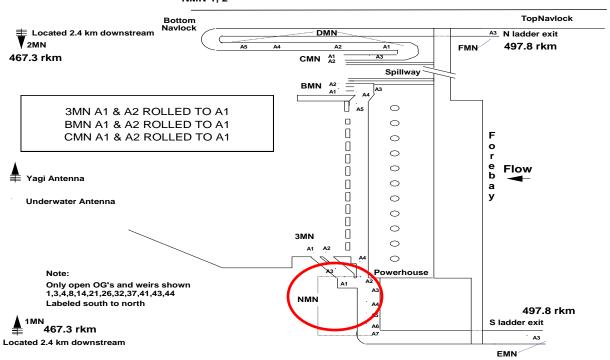
Notes:

Receiver located down a trail from Engineers Rd. Access via the town of Plymouth WA. Off Hwy 14.



3MN: Washington shore south powerhouse entrance.

McNary Dam Note: orifice gates are Open FP = CMN-3 NMN-1, 2



RKM: 469.8 Receiver type: SRX/DSP

Antennas (4): A1: Outside entrance.

A2: Outside entrance. Rolled together with A1 or just t'd together.

A3: Inside entrance.

A4: Inside. South end of collection channel.

Distance from

receiver to antenna: A1: 30 feet

A2: 30 feet A3: 60 feet A4: 60 feet

Power source: Hard wired (AC)

Notes:



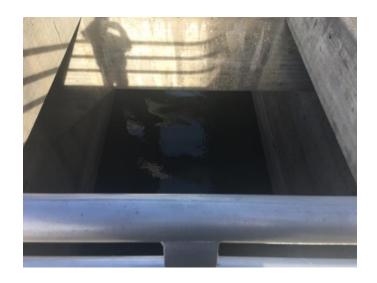
3MN antenna 1 location



3MN antenna 2 location



3MN antenna 4 location



3MN antenna 4 location

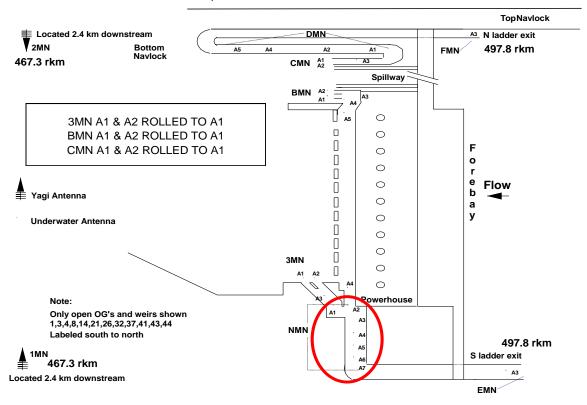


3MN receiver receiver box location

NMN: Washington shore transition pool.

McNary Dam Note: orifice gates are Open

FP = CMN-3 NMN-1, 2



RKM: 469.8 Receiver type: SRX/DSP

Antennas (7): A1: Transition pool channel from entrance.

A2: Transition pool channel from collection channel.
A3: Bottom south ladder before weir 1 (elevation 249 ft.)

A4: Mid south ladder (bottom section)

A5: (261 ft. elevation) A6: (266 ft. elev.) A7: (280 ft. elev.)

Distance from

receiver to antenna: A1: 130 feet

A2: 100 feet A3: 10 feet A4: 60 feet

A5: 170 feet approx. Line amp needed A6: 290 feet approx. Line amp needed A7: 550 feet approx. Line amp needed

Power source: Hard wired (AC) All wire runs were done on East side of ladder



NMN A1 and A2



NMN A3 and Receiver box



NMN A4



NMN A5



NMN A6

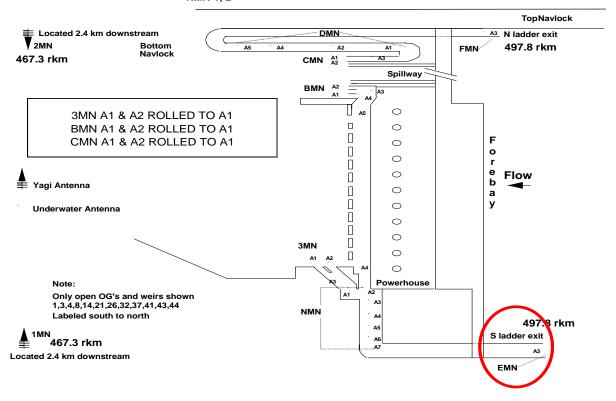


NMN A7

EMN: Washington shore top of ladder

McNary Dam Note: orifice gates are Open

FP = CMN-3 NMN-1, 2



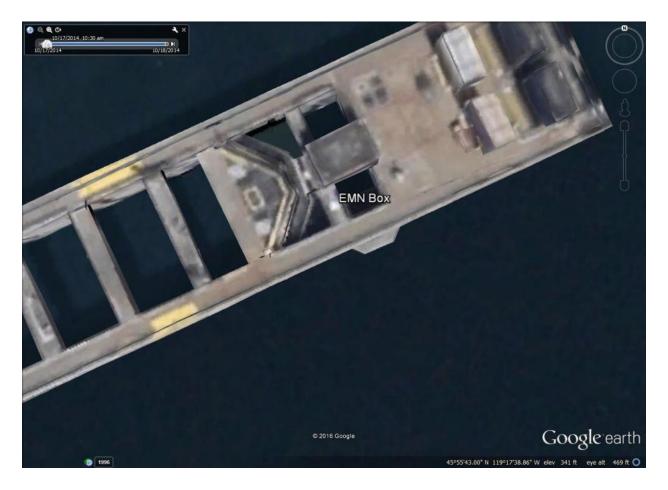
RKM: 469.8 Receiver type: SRX/DSP

Antennas (1): A1: Top of ladder just inside the exit.

Distance from

receiver to antenna: A1: 10 feet

Power source: Hard wired (AC)



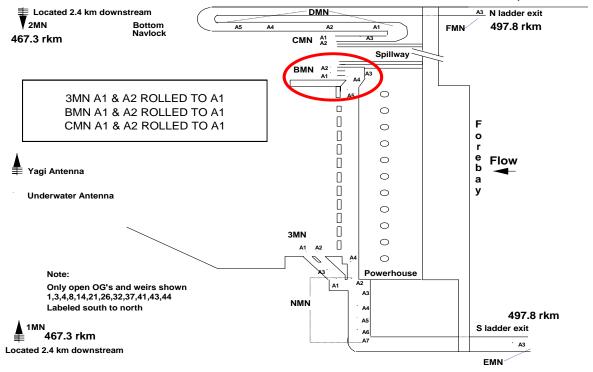
EMN receiver box

BMN: North Powerhouse entrance.

McNary Dam Note: orifice gates are Open FP = CMN-3

TopNavlock

NMN-1, 2



RKM: 469.8 Receiver type: SRX/DSP

Antennas (5): A1: Outside entrance W3

A2: Outside Entrance W2, rolled into A1 or T'd.

A3: W2,3 inside pool

A4: W2,3 inside at exit from collection channel tunnel

A5: Entrance to collection channel tunnel

Distance from

A1: 20 feet receiver to antenna:

> A2: 20 feet A3: 30 feet A4: 30 feet A5: 40 feet

Hard wired (AC) Power source:



BMN A1



BMN A2



BMN A3



BMN A4

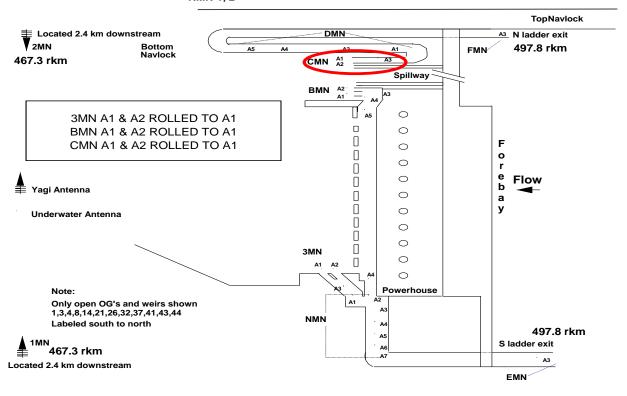


BMN A5

CMN: Oregon shore spillway entrance.

McNary Dam Note: orifice gates are Open

FP = CMN-3 NMN-1, 2



RKM: 469.8 Receiver type: SRX/DSP

Antennas (3): A1: Outside entrance W3

A2: Outside Entrance W2, rolled to A1 or T'd.

A3: W2,3 inside pool

Distance from

receiver to antenna: A1: 50 feet

A2: 35 feet A3: 200 feet

Power source: Hard wired (AC)



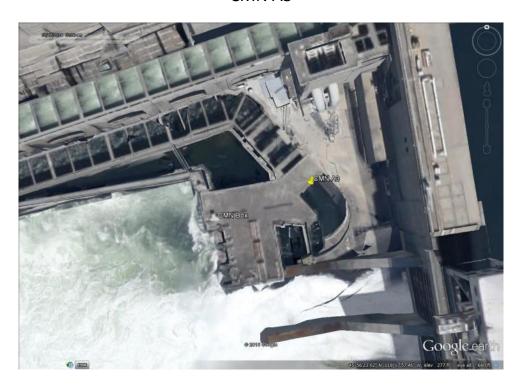
CMN A1



CMN A2



CMN A3

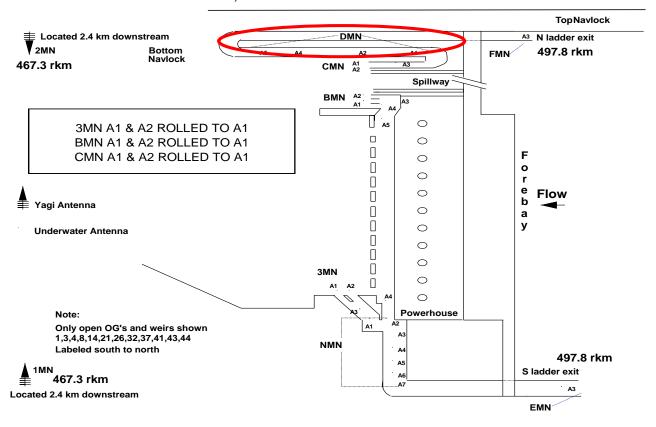


CMN A3 Location

DMN: Oregon shore ladder transition pool.

McNary Dam Note: orifice gates are Open

FP = CMN-3 NMN-1, 2



RKM: 469.8 Receiver type: SRX/DSP

Antennas (4): A1: Between weirs 1 and 2 (same) (elevation 248-249)

A2: Between weirs 7 and 8 (same) (elevation 255-256) A4: Located between weirs 12 and 13 (elevation 260-261)

A5: Located between weirs 16 and 17 (elevation 264-265)

Distance from

receiver to antenna: A1: 180 feet All approx

A2: 100 feet A4: 50 feet A5: 100 feet



DMN A1



DMN A2



DMN A4

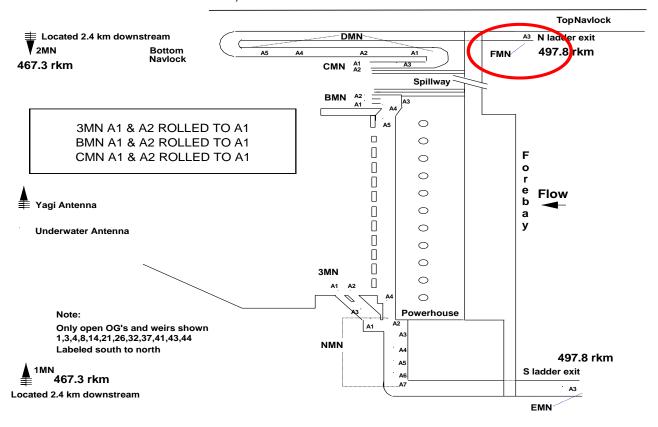


DMN A5

FMN: Oregon shore top of ladder.

McNary Dam Note: orifice gates are Open

FP = CMN-3 NMN-1, 2



RKM: 469.8 Receiver type: SRX/DSP

Antennas (1): A1: Located in last pool area before the exit.

Distance from

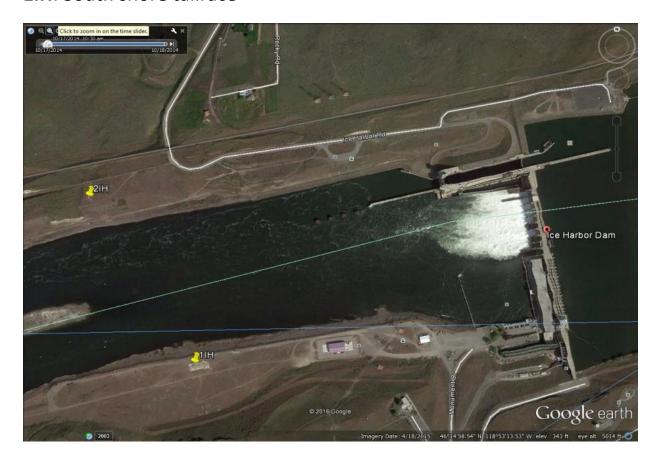
receiver to antenna: A1: 10 feet

Power source: Hard wired (AC)



FMN A3

1IH: South shore tailrace



LAT/LON: 46°14'46.58"N

118°53'30.43"W

RKM: 537.2

Receiver type: SRX

Antennas (1): A1 - yagi

Distance from

receiver to antenna: 5 feet

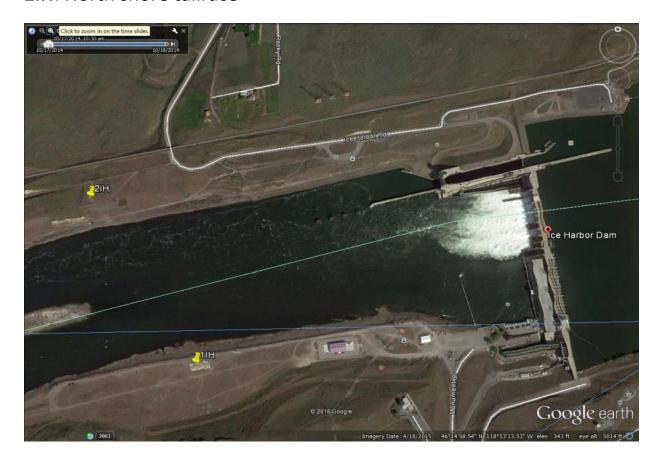
Power source: Solar

Notes:

Receiver located on corner of old concrete building pad. Solar panel removed spring 2016.



2IH: North shore tailrace



LAT/LON: 46°15'1.45"N

118°53'43.45"W

RKM: 537.2

Receiver type: SRX

Antennas (1): A1 - yagi

Distance from

receiver to antenna: 5 feet

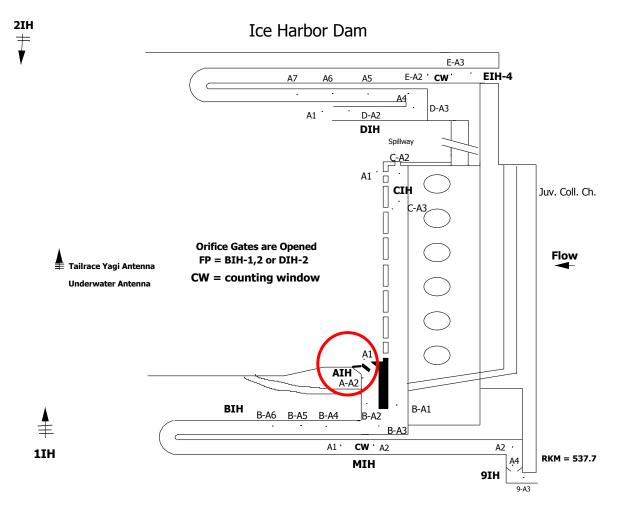
Power source: Solar

Notes:

Receiver located on old concrete round pad just below the road. Solar panel removed spring 2016.



AIH South powerhouse entrance.



RKM: 537.7

Receiver type: SRX/DSP

Antennas (2): A1: Located just outside entrance slot.

A2: Located just inside the entrance not over lapping with A1.

Distance from

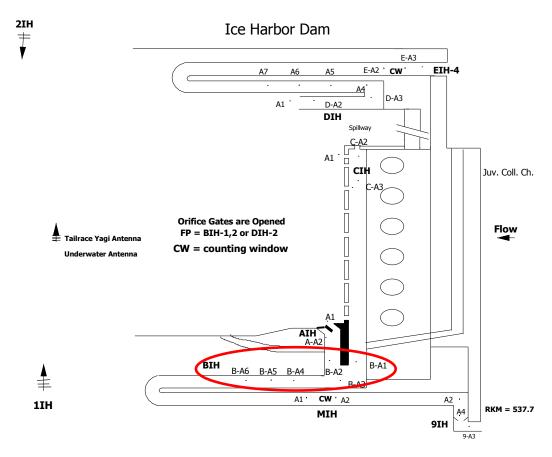
receiver to antenna: A1: 10 feet

A2: 40 feet

Power source: Hard wired (AC)

Notes: Requires fishway entry to install or maintain A2

BIH South ladder transition pool.



RKM: 537.7

Receiver type: SRX/DSP

Antennas (6): A1: Exit from collection channel.

A2: Exit from entrance area. A3: Before weir 1 (elev. 338 ft.)

A4: Between weirs 4,5 (elev. 342-343 ft.) A5: Between weirs 8,9 (elev. 346-347 ft.) A6: Between weirs 14,15 (elev. 352-353 ft.)

Distance from

receiver to antenna: A1: 75 feet in conduit on east wall

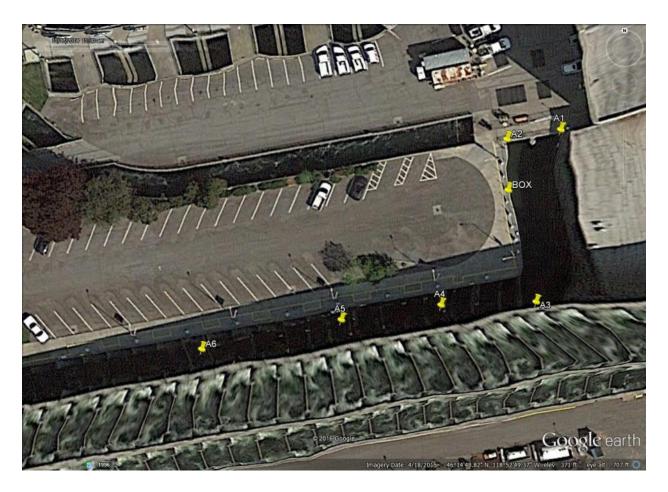
A2: 30 feet in conduit on west wall A3: 85 feet in conduit on south wall

A4: 100 feet. Drop in from cable across ladder. A5: 165 feet. Drop in from cable across ladder. A6: 250 feet. Drop in from cable across ladder.

Power source: Hard wired (AC)

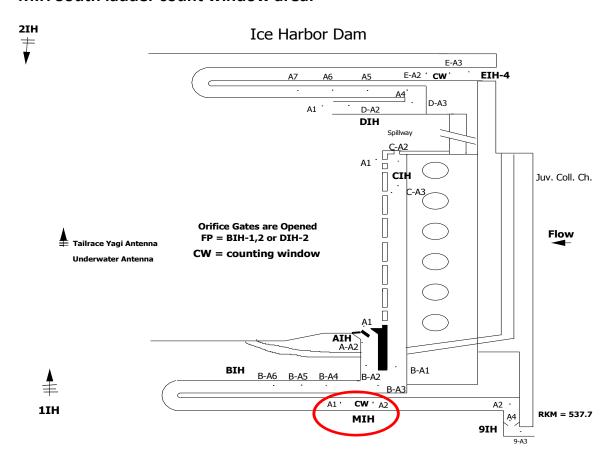
Notes: Requires fishway entry to install or maintain A1-A3. Receiver box

located at end of public parking area.



BIH A1-A6 and box location

MIH South ladder count window area.



RKM: 537.7

Receiver type: SRX/DSP

Antennas (2): A1: Just below count window

A2: Just above count window

Distance from

receiver to antenna: A1: 40 feet

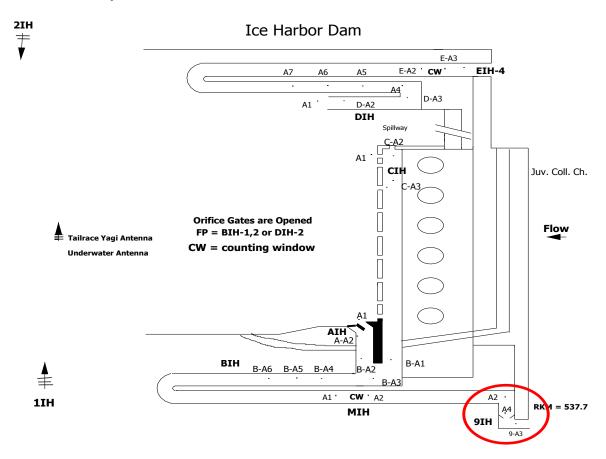
A2: 40 feet

Power source: Hard wired (AC)

Notes: Receiver box located on roof of count window area. Access is via a

ladder behind the turn pool. Antennas drop in from railing.

9IH South top of ladder area.



RKM: 537.7

Receiver type: SRX/DSP

Antennas (3): A2: Just below first vertical slot at turn pool

A3: Top of ladder. Drop in before it goes under roadway.

A4: Just above last vertical slot before trap deck.

Distance from

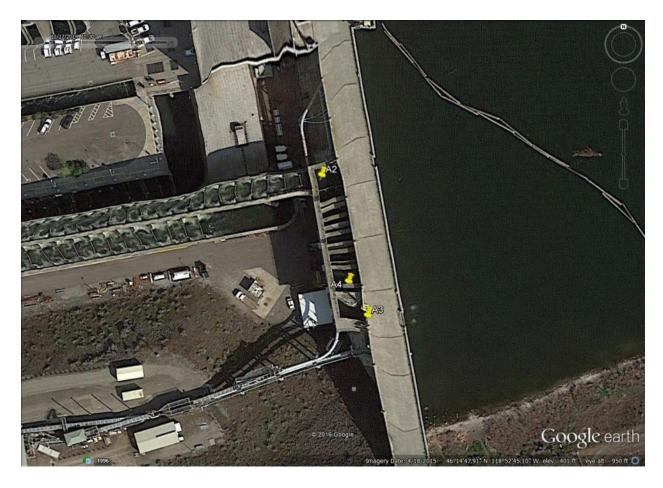
receiver to antenna: A2: 185 feet

A3: 5 feet A4: 80 feet

Power source: Hard wired (AC)

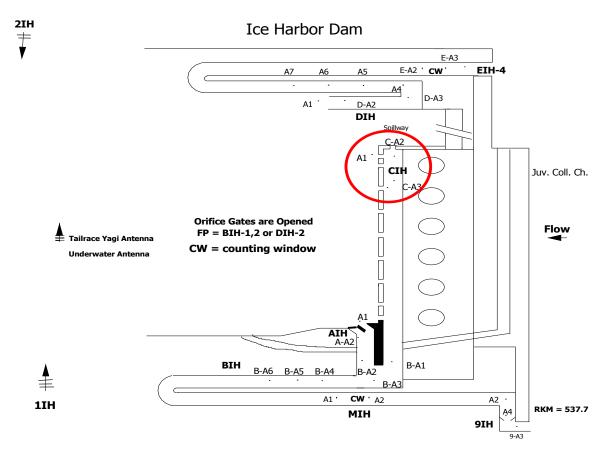
Notes: Receiver box located under stairs to trap deck. All antennas are drop in

from railings.



9IH A2-A4

CIH North powerhouse entrance.



RKM: 537.7

Receiver type: SRX/DSP

Antennas (3): A1: Outside entrance slot.

A2: Inside entrance slot. In conduit

A3: Inside, upstream of entrance area. In conduit.

Distance from

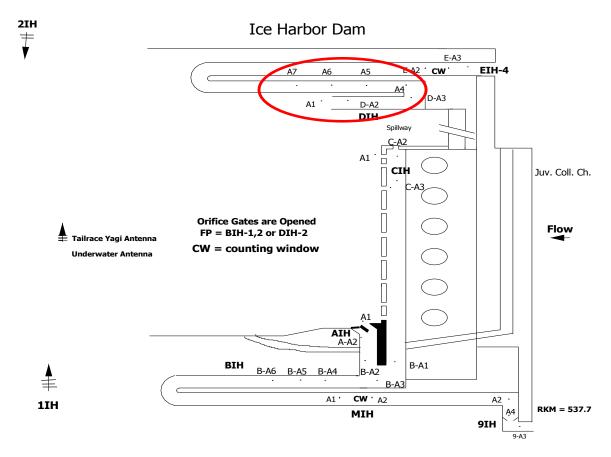
receiver to antenna: A1: 10 feet

A2: 40 feet A3: 50 feet

Power source: Hard wired (AC)

Notes: Fishway entry required for install or maintenance.

DIH North ladder spillway entrance.



RKM: 537.7

Receiver type: SRX/DSP

Antennas (7): A1: Outside entrance slot.

A2: Inside entrance slot. Through grating.

A3: Before weir 1

A4: Before weir 2 (elev. 339 ft.)

A5: Between weirs 4,5 (elev. 342, 343 ft.) A6: Between weirs 8,9 (elev. 346, 347 ft.) A7: Between weirs 12,13 (elev. 350, 351 ft.)

Distance from

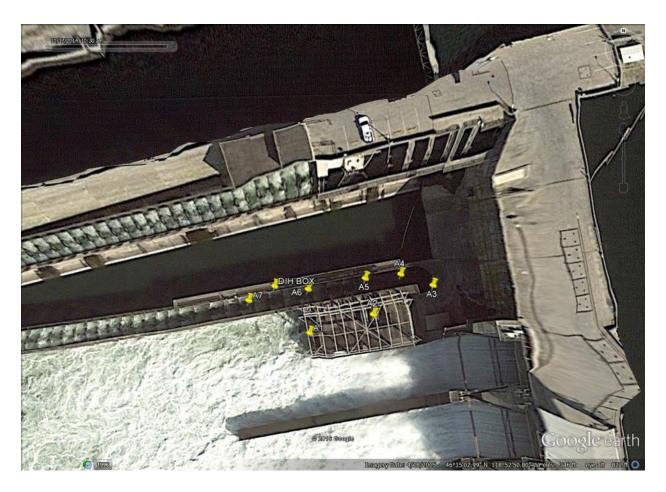
receiver to antenna: A1: 65 feet

A2: 110 feet A3: 160 feet A4: 110 feet A5: 75 feet A6: 30 feet A7: 25 feet

25 feet 34

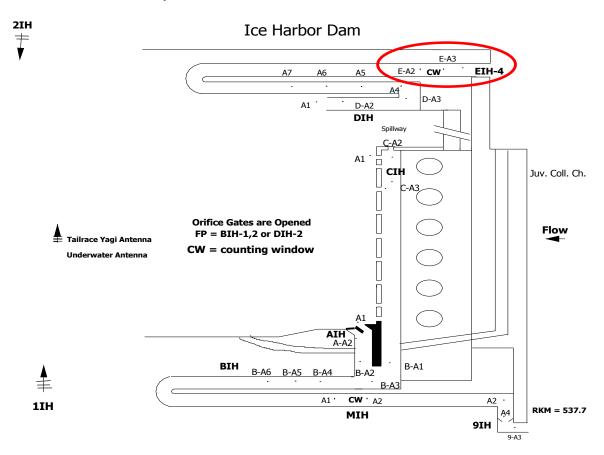
Power source: Hard wired (AC)

Notes: All antennas are drop ins.



DIH A1-A7 and receiver box locations

EIH North ladder top.



RKM: 537.7

Receiver type: SRX/DSP

Antennas (3): A2: Immediately downstream of count window in conduit.

A3: First weir up from count window and downstream of pit tag detectors.

A4: Top of the ladder exit before going under roadway.

Distance from

receiver to antenna: A2: 100 feet

A3: 65 feet A4: 20 feet

Power source: Hard wired (AC)

Notes: Receiver box located near bottom of stairs.

1LM: South shore tailrace



LAT/LON: 46°32'26.70"N

118°33'17.92"W

RKM: 587.6

Receiver type: SRX

Antennas (1): A1 - yagi

Distance from

receiver to antenna: 5 feet **Power source:** Solar

Notes:

Receiver located on hill just off curve in road.

Solar panel removed spring 2016.



2LM: North shore tailrace



LAT/LON: 46°32'36.94"N

118°33'36.21"W

RKM: 587.6

Receiver type: SRX

Antennas (1): A1 - yagi

Distance from

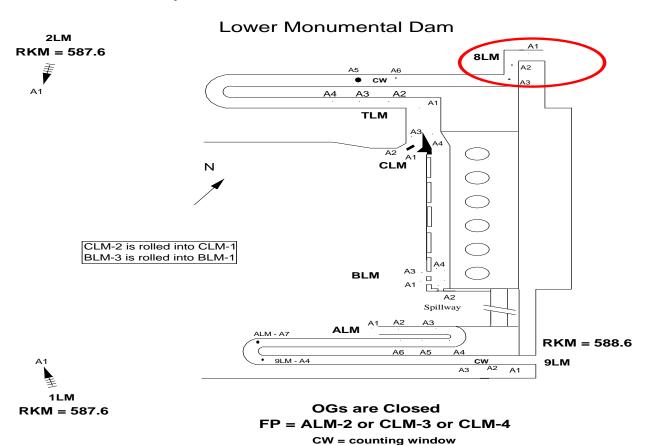
receiver to antenna: 5 feet **Power source:** Solar

Notes:

Receiver located on old RR grade above paved road. Up a rough access road. Solar panel removed spring 2016.



8LM North ladder top.



RKM: 588.6

Receiver type: SRX/DSP

Antennas (3): A1: Right next to receiver box before going under roadway TOL.

A2: Located before first vertical slot weir.

A3: Located at 2nd turn pool from top on handrail.

Distance from

receiver to antenna: A1: 5 feet

A2: 120 feet A3: 60 feet

Power source: Hard wired (AC)

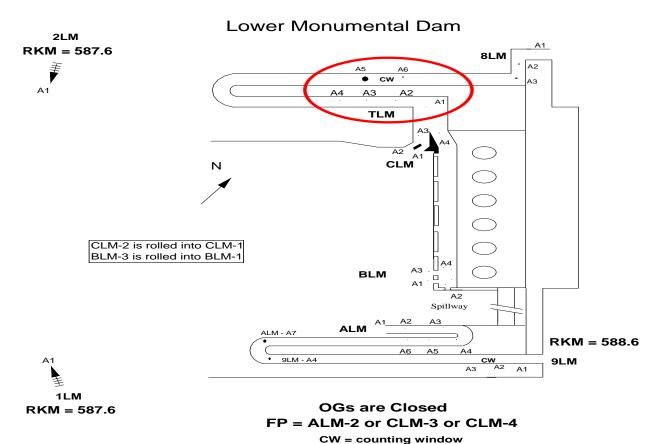
Notes: Receiver box located at top of ladder before it goes under roadway.

Fishway deck level.



8LM A1-A3 and receiver box locations

TLM North ladder transition pool and count window.



RKM: 588.6

SRX/DSP

Antennas (6): A1: Junction pool of entrance and collection channels.

A2: Before first weir.
A3: Between weir 2 and 3.
A4: Between weir 4 and 5.

A5: Just downstream of count window. A6: Just upstream of count window.

Distance from

Receiver type:

receiver to antenna: A1: 45 feet

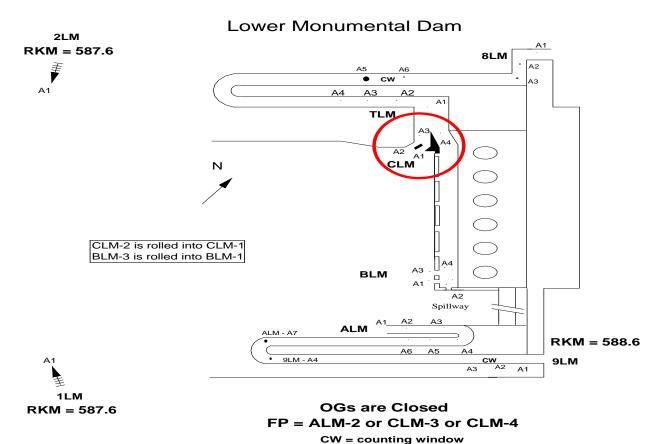
A2: 10 feet A3: 35 feet A4: 55 feet A5: 125 feet A6: 155 feet

Power source: Hard wired (AC)



TLM A1-A6 and receiver box locations.

CLM North ladder north powerhouse entrance.



RKM: 588.6 Receiver type: SRX/DSP

Antennas (4): A1: Outside entrance slot nearest powerhouse.

A2: Outside downstream slot.

A3: Inside entrance slot channel. (from railing). A4: Inside collection channel slot. (from railing).

Distance from

receiver to antenna: A1: 10 feet

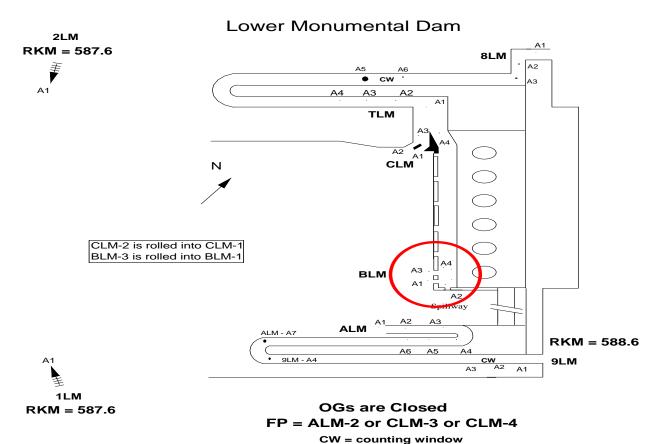
A2: 10 feet A3: 15 feet A4: 30 feet

Power source: Hard wired (AC)



CLM A1-A4 and receiver box locations.

BLM North ladder south powerhouse entrance.



RKM: 588.6 Receiver type: SRX/DSP

Antennas (4): A1: Outside entrance slot nearest spillway.

A2: Inside A1 entrance slot (in conduit).

A3: Outside downstream (other) slot.

A4: Inside A3 entrance slot (in conduit).

Distance from

receiver to antenna: A1: 10 feet

A2: 10 feet A3: 15 feet A4: 15 feet

Power source: Hard wired (AC)

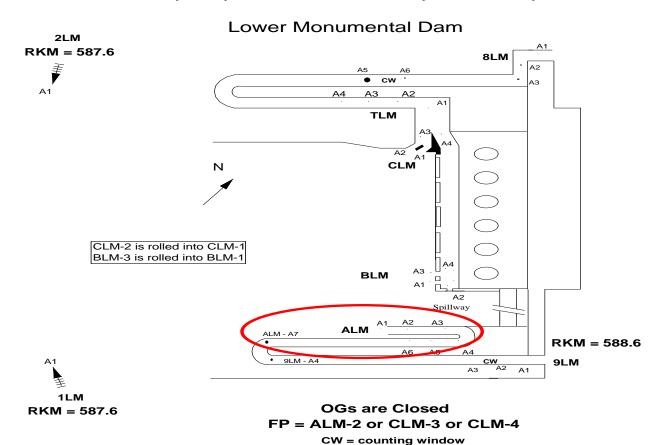
Notes: A2 and A4 are inside fishway in conduits. Ladder access required for

maint.



BLM A1 and A3 and receiver box locations. A2 and A4 are inside under deck.

ALM South ladder spillway entrance and transition pool and turn pool #1.



RKM: 588.6

SRX/DSP

Antennas (7): A1: Outside entrance slots.

A2: Inside through grating before turn pool.

A3: Before weir 1 (elev. 437 ft.) A4: Before weir 2 (elev. 438 ft.)

A5: Between weirs 3,4 (elev. 439, 440 ft.) A6: Between weirs 5,6 (elev. 441, 442 ft.) A7: At downstream end of turn pool.

Distance from

Receiver type:

receiver to antenna: A1: 75 feet

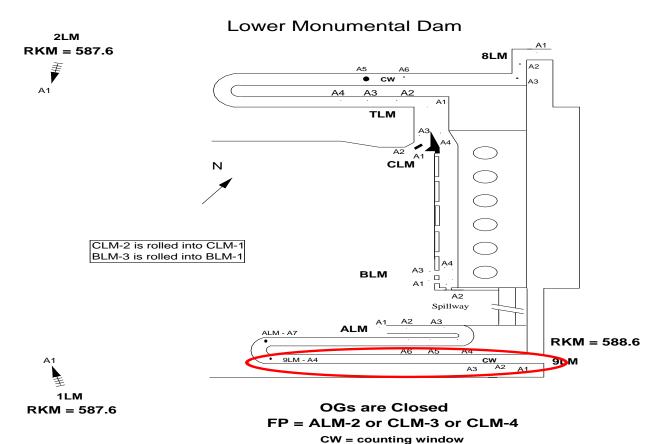
A2: 35 feet A3: 35 feet A4: 25 feet A5: 15 feet A6: 5 feet A7: 385 feet

Power source: Hard wired (AC)



ALM A1-A7 and receiver box locations.

9LM South ladder top, count window and turn pool #2.



RKM: 588.6 Receiver type: SRX/DSP

Antennas (4): A1: Top of ladder before going under roadway.

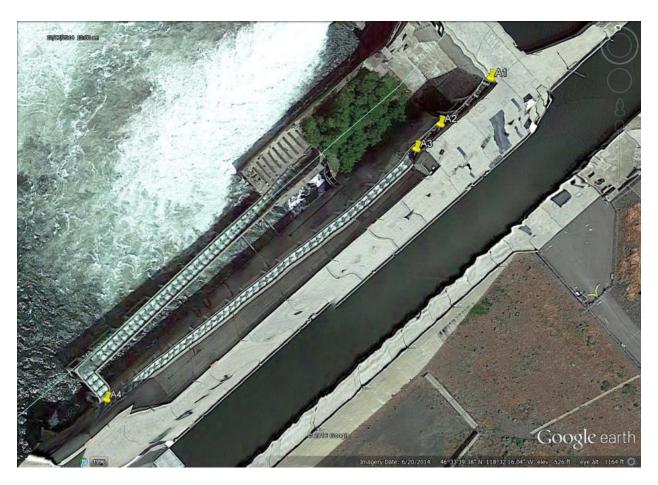
A2: Upstream of count window. A3: Downstream of count window A4: Upstream end of turn pool.

Distance from

receiver to antenna: A1: 120 feet

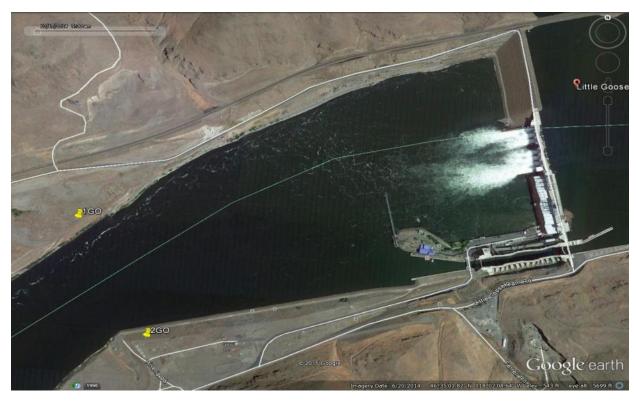
A2: 35 feet A3: 5 feet A4: 500 feet

Power source: Hard wired (AC)



9LM A1-A4. Receiver box located at count window (A3).

1GO: North shore tailrace



LAT/LON: 46°34'59.66"N

118° 2'42.03"W

RKM: 634.3

Receiver type: SRX

Antennas (1): A1 - yagi

Distance from

receiver to antenna: 5 feet

Power source: Solar

Notes:

Receiver located on hill behind and unlocked gate. Follow the two track to the left after entering. Solar panel removed spring 2016.



2GO: South shore tailrace



LAT/LON: 46°34'46.56"N

118° 2'32.66"W

RKM: 634.3

Receiver type: SRX

Antennas (1): A1 - yagi

Distance from

receiver to antenna: 5 feet

Power source: Solar

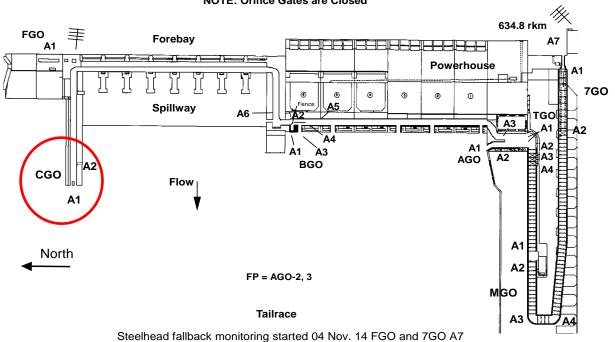
Notes:

Receiver located on the west end of the boneyard area. Solar panel removed spring 2016.



CGO: North spillway entrance.

Little Goose Dam NOTE: Orifice Gates are Closed



Steelhead fallback monitoring started 04 Nov. 14 FGO and 7GO A7 BGO A1 ADDED 19FEB15

1GO **⊞** 634.3 rkm

Located 0.5 km downstream on north shore

RKM: 634.8 Receiver type: SRX/DSP

Antennas (2): A1: Two drop in antennas T'ed as needed if both slots open hanging

from handrail.

A2: One drop in antenna hanging from cable spanning fishway. Approx

60 ft. from entrance.

Distance from

receiver to antenna: A1: 265 feet

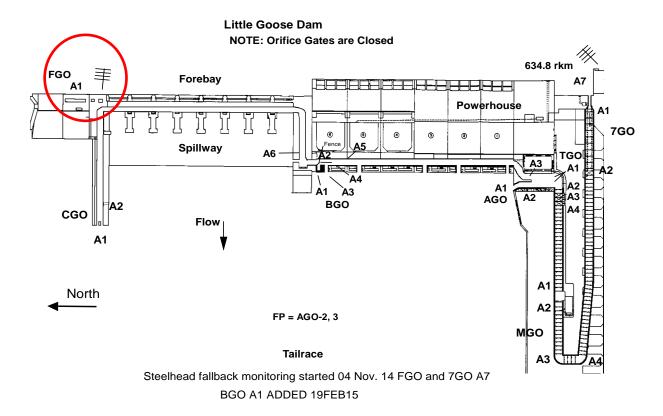
A2: 175 feet

Power source: Hard wired (AC)

Notes: Line amps required. Receiver box located in shed near the door to the

dam.

FGO: North spillway area of forebay.



RKM: 634.8 Receiver type: SRX

Antennas (1): A1 – one 3 element yagi aimed into forebay overlooking north end of

spillway.

Distance from

receiver to antenna: A1: 5 feet

Power source: Solar

Notes: Antenna and solar panel mounted on steel antenna base.

Appendix D



FGO

BGO: North power house entrance.

Little Goose Dam NOTE: Orifice Gates are Closed 634.8 rkm **FGO Forebay** Powerhouse **7GO** 0 **Spillway A**6 A3 `A3 AGO **A2 BGO** CGO Flow North FP = AGO-2, 3 MGO Tailrace

Steelhead fallback monitoring started 04 Nov. 14 FGO and 7GO A7

BGO A1 ADDED 19FEB15

1GO # 634.3 rkm

Located 0.5 km downstream on north shore

634.3 rkm 4 2GO Located 0.5 km downstream on south shore

RKM: 634.8 Receiver type: SRX/DSP

Antennas (6): A1: one drop in antenna hanging from handrail in north slot.

A2: one conduit antenna mounted just inside slot to the south.
A3: one drop in antenna hanging from handrail in south slot.
A4: one conduit antenna mounted just inside slot to the south.

A5: one conduit antenna mounted to the power house wall upstream

of A4.

A6: one drop in antenna hanging from handrail in opening near the

spillway.

Distance from

receiver to antenna: A1: 90 feet

A2: 70 feet A3: 65 feet A4: 50 feet A5: 35 feet A6: 300 feet

300 feet

56

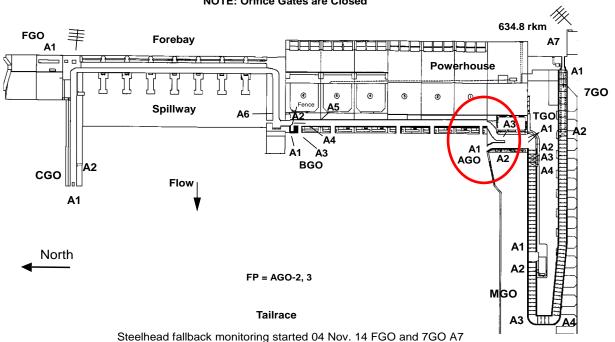
Power source: Hard wired (AC)



BGO A1-A6 and receiver box location.

AGO: South power house entrance.

Little Goose Dam NOTE: Orifice Gates are Closed



634.3 rkm <a> 2GO Located 0.5 km downstream on south shore

RKM: 634.8 Receiver type: SRX/DSP

Antennas (3): A1: one drop in antenna hanging from handrail in the slot.

BGO A1 ADDED 19FEB15

A2: one drop in antenna hanging from handrail in entrance channel

upstream side.

A3: one drop in antenna hanging from handrail in collection channel

upstream side.

Distance from

receiver to antenna: A1: 15 feet

A2: 50 feet A3: 50 feet

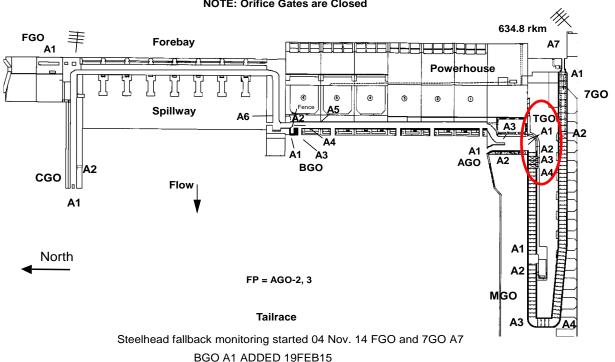
Power source: Hard wired (AC)



AGO A1-A3 and receiver box location.

TGO: Transition pool area.

Little Goose Dam NOTE: Orifice Gates are Closed



RKM: 634.8 Receiver type: SRX/DSP

Antennas (4): A1: two drop in antennas (T'ed) hanging from handrail spaced across

channel as it emerges from under roadway deck.

A2: one drop in antenna hanging from cable spanning the fishway before weir #1. Elev. 538.

A3: one drop in antenna hanging from cable spanning the fishway

between weir #2 and #3. Elev. 539-540.

A4: one drop in antenna hanging from cable spanning the fishway

between weir #4 and #5. Elev. 541-542.

Distance from

receiver to antenna: A1: 15 feet

A2: 40 feet A3: 60 feet A4: 80 feet

Power source: Hard wired (AC)

Notes:

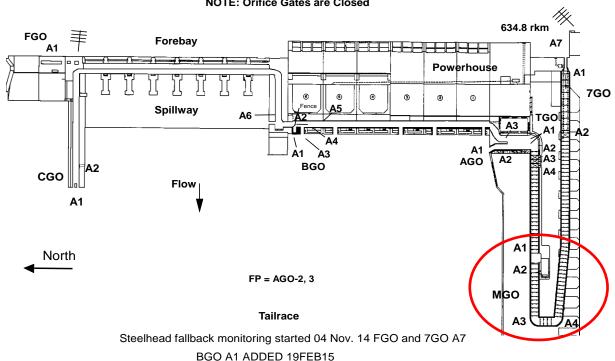
60



TGO A1-A4 and receiver box locations.

MGO: Count window and turn pool areas.

Little Goose Dam NOTE: Orifice Gates are Closed



RKM: 634.8 Receiver type: SRX/DSP

Antennas (4): A1: one drop in antenna hanging from anti jump-out fence below

count window.

A2: one conduit antenna mounted on first weir above count window

(downstream side).

A3: one conduit antenna on first upstream weir in first turn

(downstream side).

A4: one conduit antenna on first upstream weir in second turn

(downstream side).

Distance from

receiver to antenna: A1: 25 feet

A2: 40 feet A3: 160 feet A4: 205 feet

62

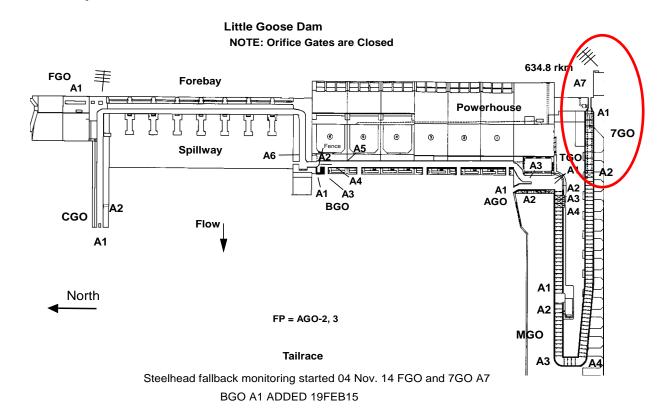
Power source: Hard wired (AC)

Notes: Line amps needed for A3 and A4.



MGO A1-A4 and receiver box locations.

7GO: Top of ladder.



RKM: 634.8 Receiver type: SRX/DSP

Antennas (3): A1: one drop in antenna over rail before channel goes under roadway.

A2: one drop in antenna from hand rail before first vertical slot weir. A7: one six element yagi pointed to forebay in front of navigation lock.

Distance from

receiver to antenna: A1: 20 feet

A2: 160 feet A7: 5 feet

Power source: Hard wired (AC)

Notes: Antenna 7 mounted on steel antenna base next to receiver box.



7GO A1, A2, A7 and receiver box location.

1GR: South shore tailrace



LAT/LON: 46°40'5.13"N

117°26'43.18"W

RKM: 693.8

Receiver type: SRX

Antennas (1): A1 – yagi

Distance from

receiver to antenna: 5 feet

Power source: Hard wired (AC)

Notes:

Receiver located in fenced bone yard behind trailer next to the fence. Power from extension cord from inside trailer run out the window.



2GR: North shore tailrace



LAT/LON: 46°40'9.75"N

117°26'30.22"W

RKM: 693.8

Receiver type: SRX

Antennas (1): A1 - yagi

Distance from

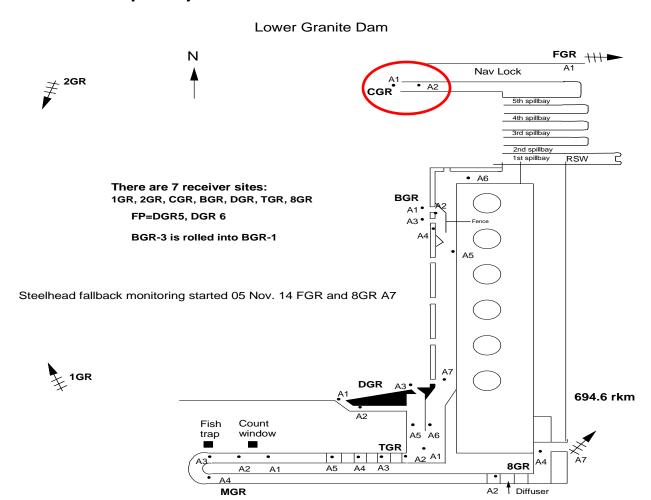
receiver to antenna: 5 feet **Power source:** Solar

Notes:

Receiver located on hillside above paved Boyer park river trail. Approx. .87 mi upstream from locked gate in Boyer park.



CGR: North spillway entrance.



RKM: 694.6

Receiver type: SRX/DSP

Antennas (2): A1: one drop in antenna over rail covering open slot, two ant. T'ed if

both slots open.

A2: one drop in antenna from cable spanning fish way. Approx. XX ft.

upstream from entrance slots.

Distance from

receiver to antenna: A1: 45 feet

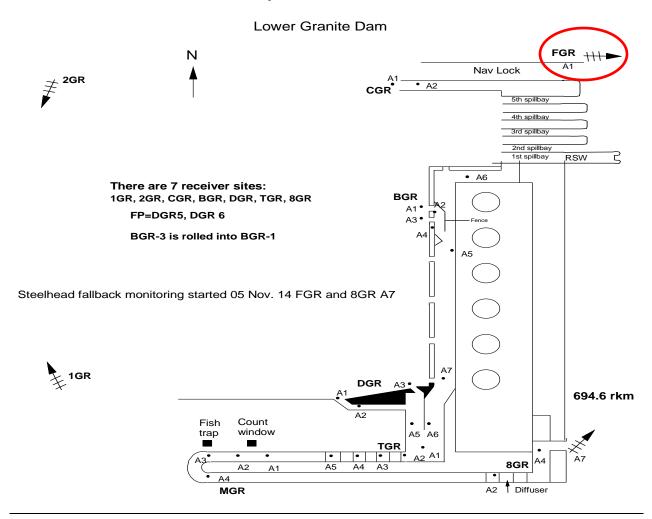
A2: 20 feet

Power source: Hard wired (AC)

Notes: Receiver box located at entrance area near light pole. Only power

source.

FGR: Nav. lock/north forebay area.



RKM: 694.6

Receiver type: SRX

Antennas (1): A1: one three element yagi pointed to top of nav lock and forebay.

Distance from

receiver to antenna: A1: 5 feet

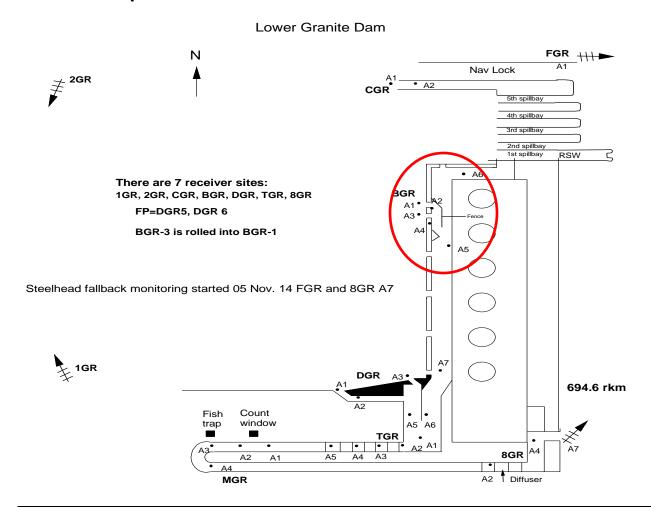
Power source: Hard wired (AC)

Appendix D



FGR

BGR: North powerhouse entrance.



RKM: 694.6 Receiver type: SRX/DSP

Antennas (6): A1: one drop in antenna hanging from handrail in north slot.

A2: one conduit antenna mounted just inside slot to the south.
A3: one drop in antenna hanging from handrail in south slot.
A4: one conduit antenna mounted just inside slot to the south.

A5: one conduit antenna mounted to the power house wall upstream

of A4.

A6: one drop in antenna hanging from handrail in opening near the

spillway

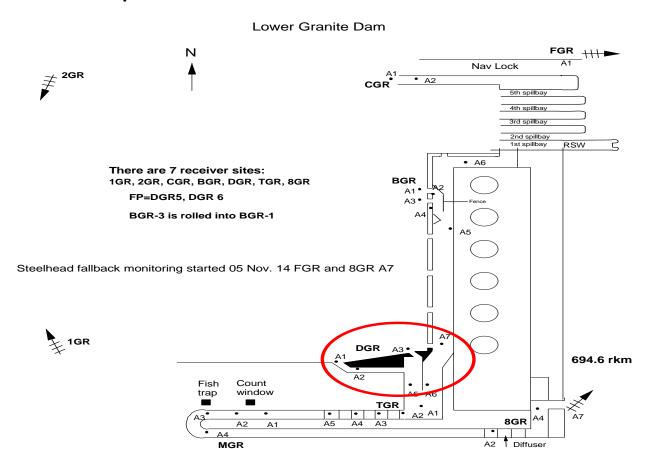
Distance from

receiver to antenna: A1: 90 feet

A2: 70 feet A3: 65 feet A4: 50 feet A5: 35 feet A6: 175 feet

Power source: Hard wired (AC) ⁷¹

DGR: South powerhouse entrance.



RKM: 694.6

Receiver type: SRX/DSP

Antennas (6): A1: One drop in ant. at downstream slot.

A2: One drop in ant. inside downstream slot through grating.

A3: One drop in ant. outside upstream slot.

A5: One drop in ant. inside entrance channel from upstream railing. A6: One drop in ant. inside collection channel from upstream railing. A7: One drop in ant. inside collection channel near first orifice gate.

Hanging from bolt in roadway drain hole

Distance from

receiver to antenna: A1: 125 feet

A2: 100 feet A3: 25 feet A5: 50 feet A6: 50 feet A7: 55 feet

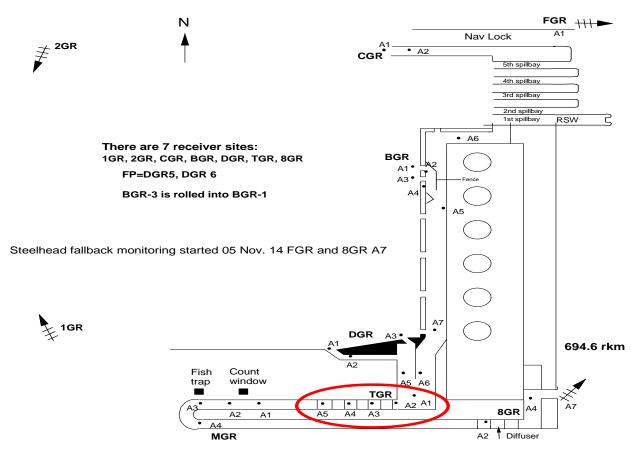
Power source: Hard wired (AC) 72



DGR A1-A3, A5-A7 and receiver box locations.

TGR: Transition pool.

Lower Granite Dam



RKM: 694.6

Receiver type: SRX/DSP

Antennas (5): A1: Two drop in ant. t'd from railing at roadway edge.

A2: One drop in ant. before weir 1

A3: One drop in ant. between weirs 2, 3 A4: One drop in ant. between weirs 4, 5 A5: One drop in ant. between weirs 6, 7

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Distance from

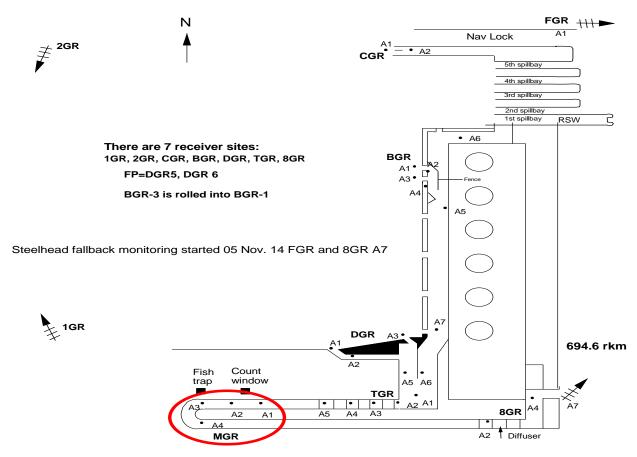
receiver to antenna: A1: 30 feet

A2: 5 feet A3: 20 feet A4: 40 feet A5: 60 feet

Power source: Hard wired (AC)

MGR: Count window and trap areas.

Lower Granite Dam



RKM: 694.6

Receiver type: SRX/DSP

Antennas (4): A1: One drop in ant. from cable below count window.

A2: One drop in ant. from cable above count window.

A3: One drop in ant. from cable below trap entrance, first turn A4: One drop in ant. from cable above trap entrance, second turn.

Distance from

receiver to antenna: A1: 30 feet

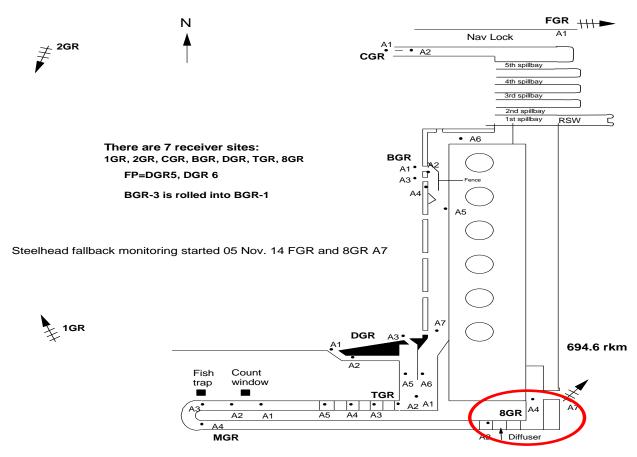
A2: 20 feet A3: 130 feet A4: 160 feet

Power source: Hard wired (AC)

Notes: Receiver box located on deck above count station.

8GR: Top of ladder.

Lower Granite Dam



RKM: 694.6

Receiver type: SRX/DSP

Antennas (3): A2: One drop in ant. at bottom of access ladder near diffuser.

A4: One drop in ant. at the ladder top before going under roadway.

A7: One aerial ant. from metal base at receiver box location next to guard

shack aimed at forebay.

Distance from

receiver to antenna: A2: 90 feet

A4: 20 feet A7: 5 feet

Power source: Hard wired (AC)

Notes: Receiver box located on N. side of guard shack.