

The Dalles



Installation: 2013
2 ladders
4 thin-walled counting window antennas

99.7%
PERCENT TAGS DETECTED

Lower Monumental



Installation: 2014
2 ladders
4 thin-walled counting window antennas

99.2%
PERCENT TAGS DETECTED

Little Goose



Installation: 2013
1 ladder
2 thin-walled counting window antennas

99.6%
PERCENT TAGS DETECTED

Bonneville



Installation: 2002
3 ladders
72 orifice antennas
8 vertical slot antennas
8 SbyC antennas in the AFT

98.2%
PERCENT TAGS DETECTED

John Day

PIT tag detection equipment not currently installed in the ladders.

Lower Granite



Installation: 1987
1 ladder
8 orifice antennas
8 SbyC antennas

99.4%
PERCENT TAGS DETECTED

Ice Harbor



Installation: 2003
2 ladders
16 orifice antennas

99.4%
PERCENT TAGS DETECTED

McNary



Installation: 2002
2 ladders
32 orifice antennas
8 counting window antennas

99.6%
PERCENT TAGS DETECTED

HISTORY OF ADULT ANTENNA DESIGN

ORIFICE STYLE ANTENNAS 2002

The first adult antennas constructed and installed were the orifice style antennas at Bonneville and McNary dams. These antennas were designed to be installed in existing cutouts in ladder weir walls. The weir wall had to be cut to allow for the installation of these antennas. Aluminum shielding had to be installed on both sides of the weir walls to avoid coupling of the antenna RF fields with existing rebar within the concrete walls.

Typical dimensions: 18"x18" to 26"x26" inches with a depth of 8"

SLOT STYLE ANTENNAS 2005

Slot style antennas were made possible by the development of shielding that both shaped the RF field and provided protection against coupling with rebar in concrete. These antennas were designed to be installed in counting windows and vertical slots of ladders. Installation required removing existing weir walls, building cast-in-place walls, using fiberglass reinforced plastic rebar in conjunction with stainless steel rebar, and cutting slots into concrete to allow for the antenna to be slid into place.

Typical Dimensions: 12" x 93" to 28" x 138" with a depth of 13"

THIN WALL ANTENNAS 2013

The next development in antenna design was the use of ferrite tiles for shielding, which can be placed much closer to the antenna wire, allowing for a much narrower antenna. These antennas were designed to be placed in ladder counting windows. Installation of these antennas requires no cutting of concrete or rebuilding of weir walls, but ramps have been constructed to provide improved lamprey passage.

Typical Dimensions: 18" x 51" to 32" x 88" with a depth of only 2 1/8"



PTAGIS is a Fisheries Data Project of the
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