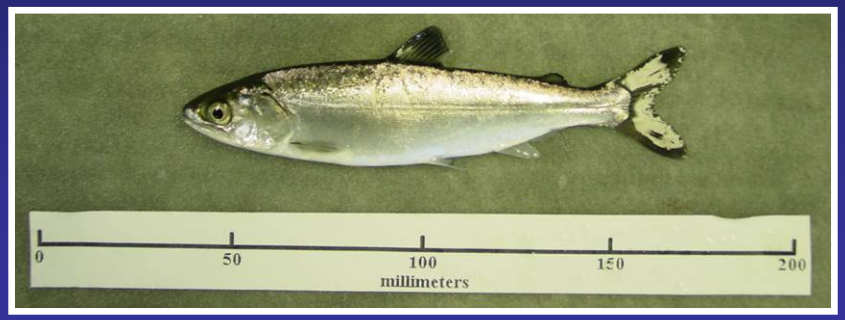
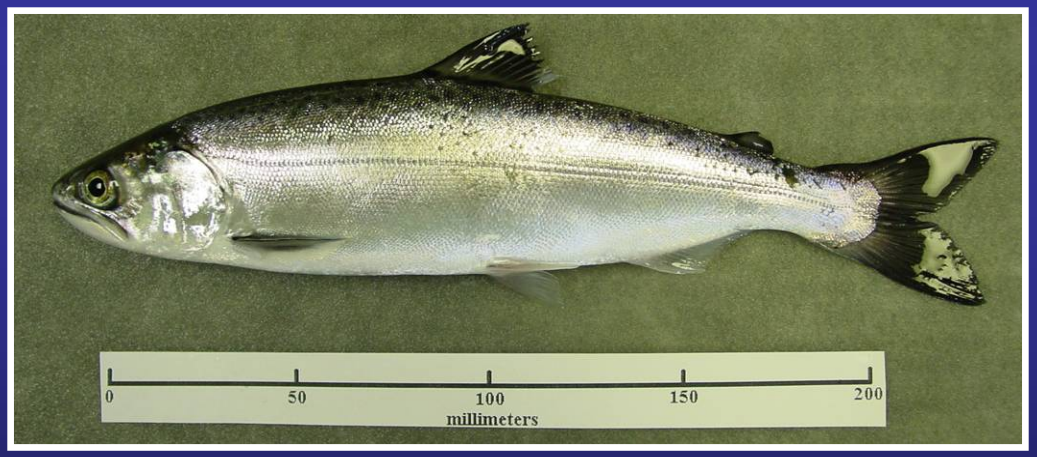
Snake River fall Chinook salmon summer travel time and winter passage

BPA Projects 1991029 and 2002032



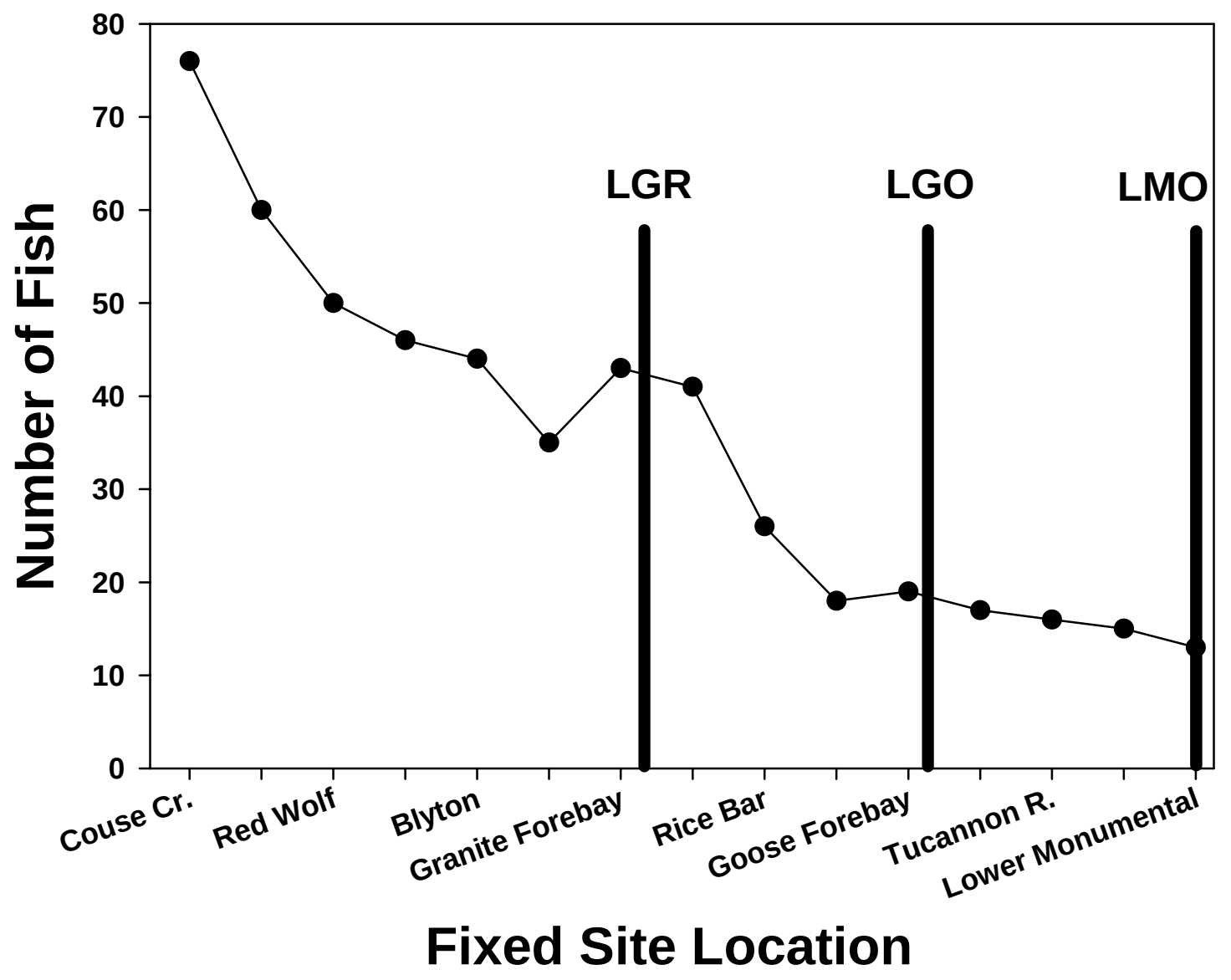


Kenneth F. Tiffan
U.S. Geological Survey
Cook, Washington

William P. Connor
U.S. Fish and Wildlife Service
Ahsahka, Idaho

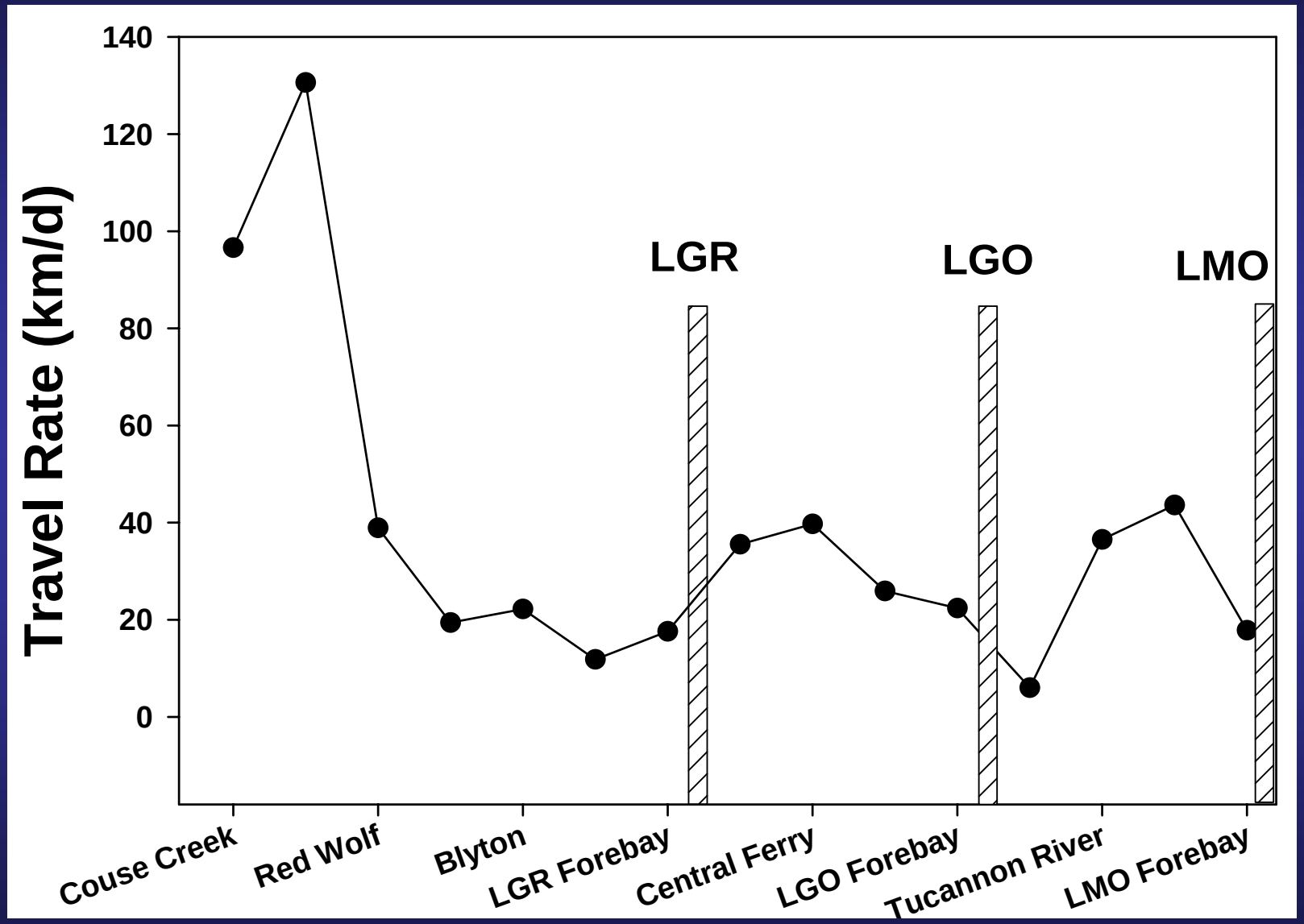
USGS

Detections, 2005



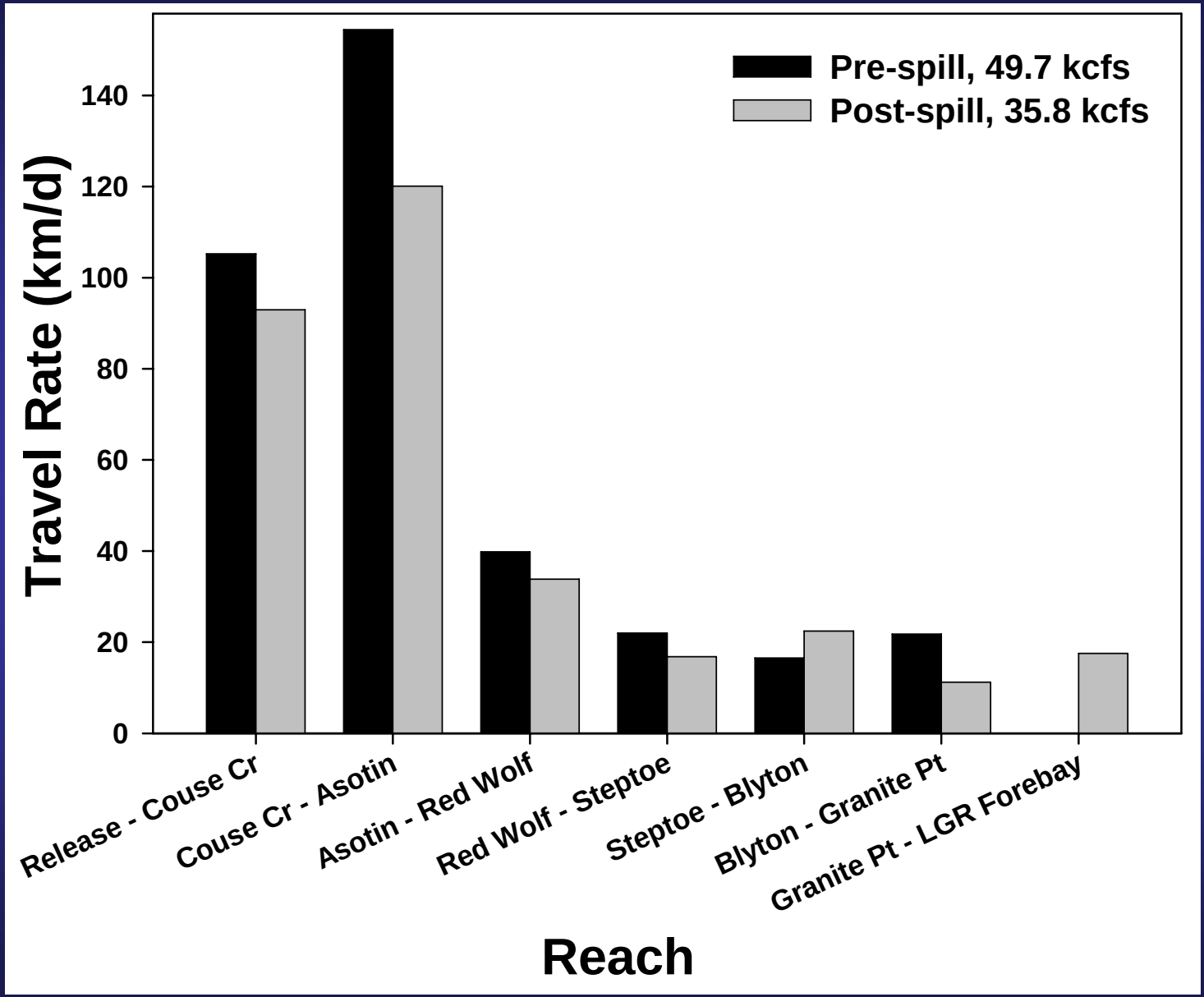
USGS

Travel rate vs Location



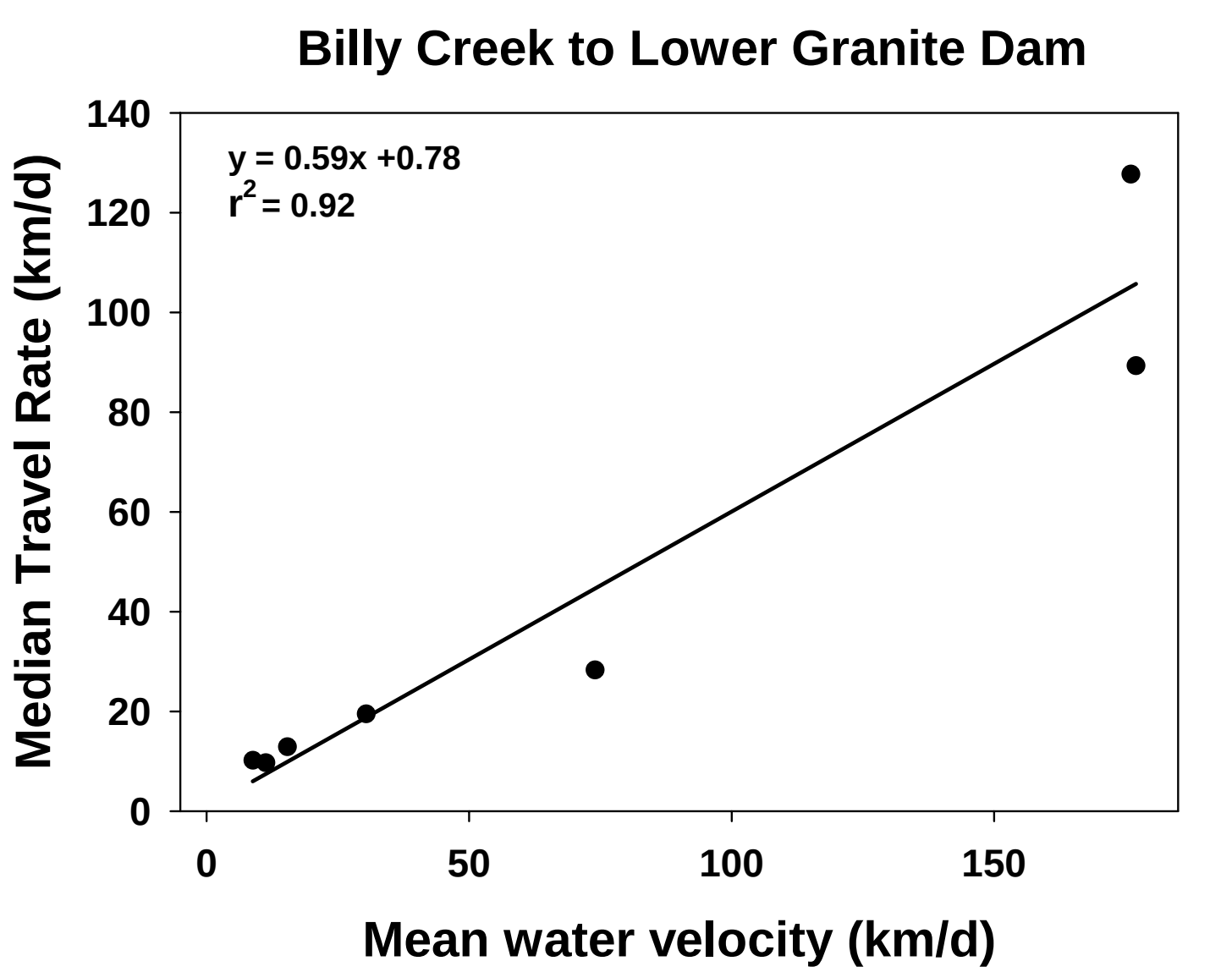
USGS

Travel Rate and Spill



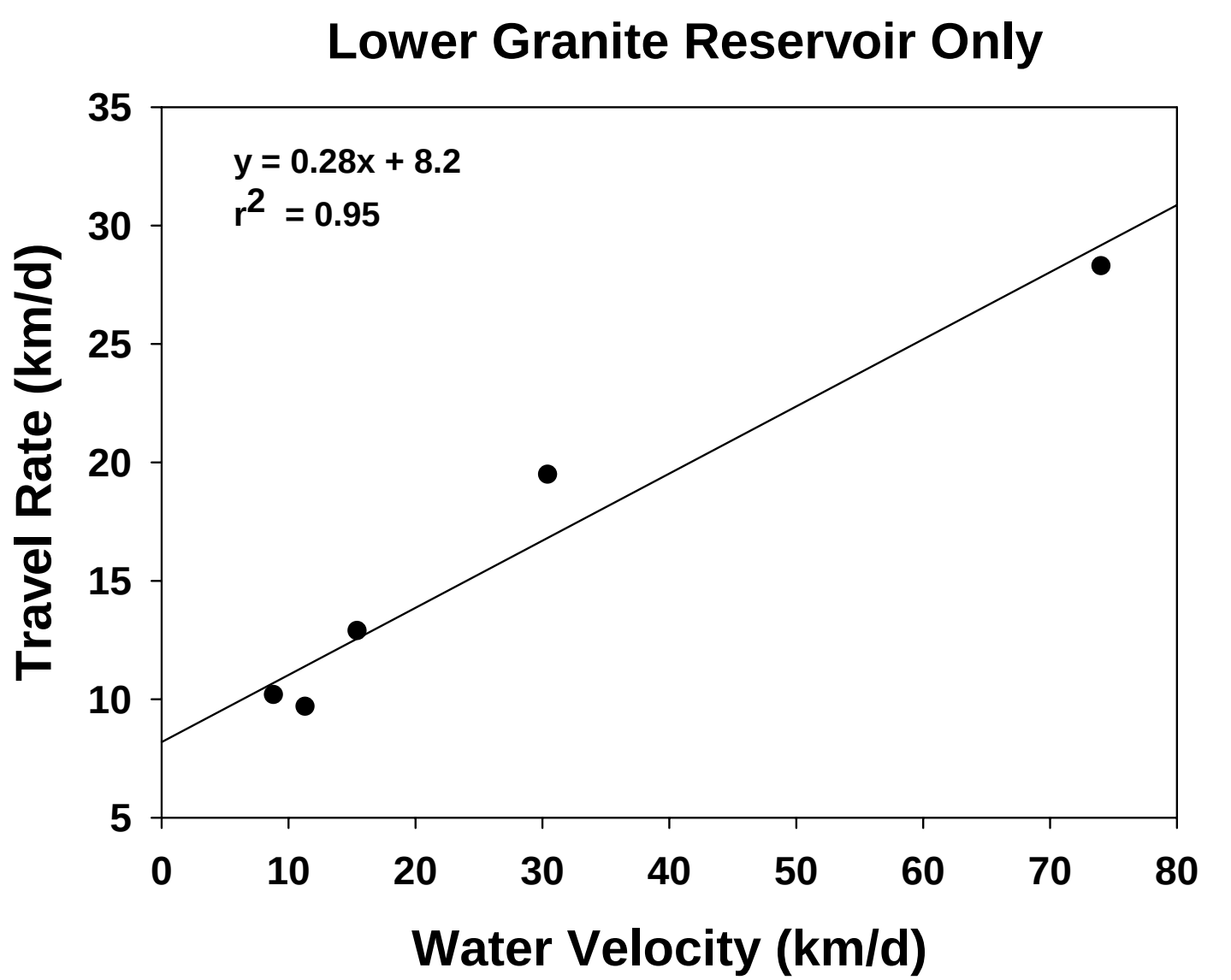
USGS

Fish Travel Rate vs Water Velocity, 2005



USGS

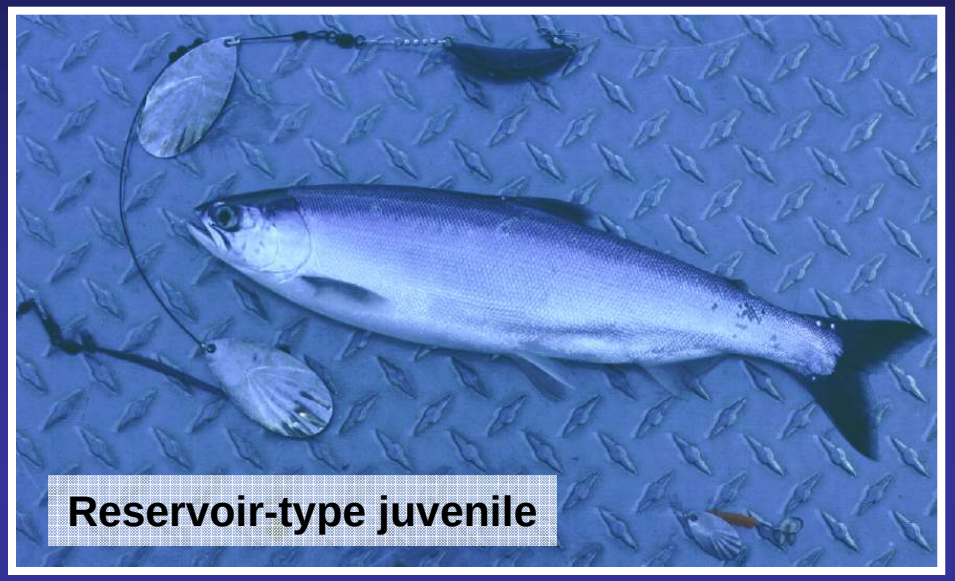
Fish Travel Rate vs Water Velocity, 2005



USGS

Winter Passage

When do reservoir-type juveniles pass dams?


Reservoir-type juvenile

Winter sampling

Implanting radio tag

Tagged 104 fish from November to February

Monitored forebay and tailrace of each Snake River dam through beginning of May

Compiled detection and passage timing information

USGS

Total Detections

LGR forebay	LGR tailrace	LGO forebay	LGO tailrace	LMO forebay	LMO tailrace	ICH forebay	ICH tailrace
102 (98%)	88 (85%)	41 (39%)	33 (32%)	23 (22%)	17 (16%)	14 (13%)	6 (6%)

Detections Before Bypass

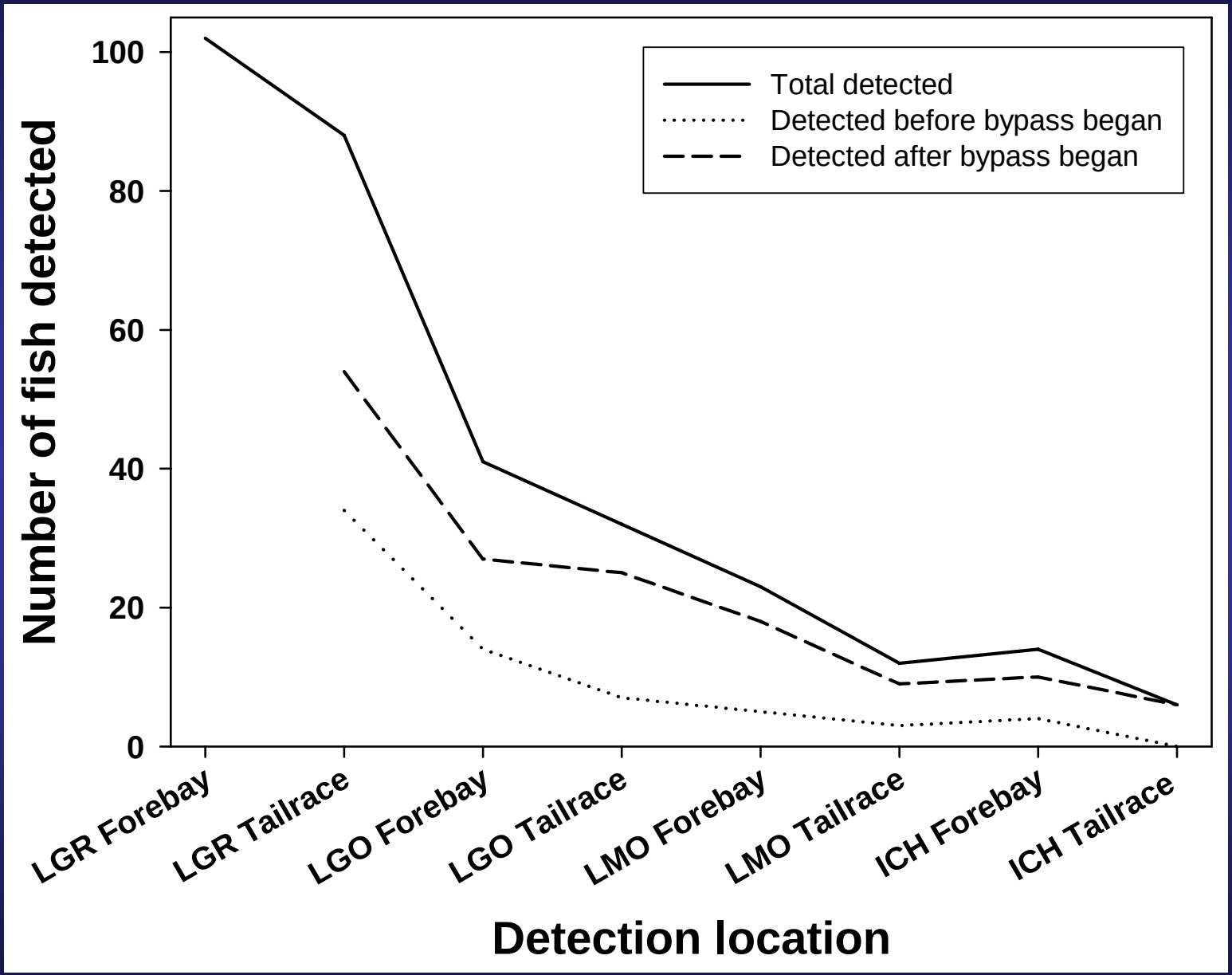
LGR forebay	LGR tailrace	LGO forebay	LGO tailrace	LMO forebay	LMO tailrace	ICH forebay	ICH tailrace
57 (56%)	48 (55%)	15 (37%)	13 (39%)	6 (26%)	4 (24%)	14	6

Detections After Bypass

LGR forebay	LGR tailrace	LGO forebay	LGO tailrace	LMO forebay	LMO tailrace	ICH forebay	ICH tailrace
45 (44%)	40 (45%)	26 (63%)	20 (61%)	17 (74%)	13 (76%)	0	0

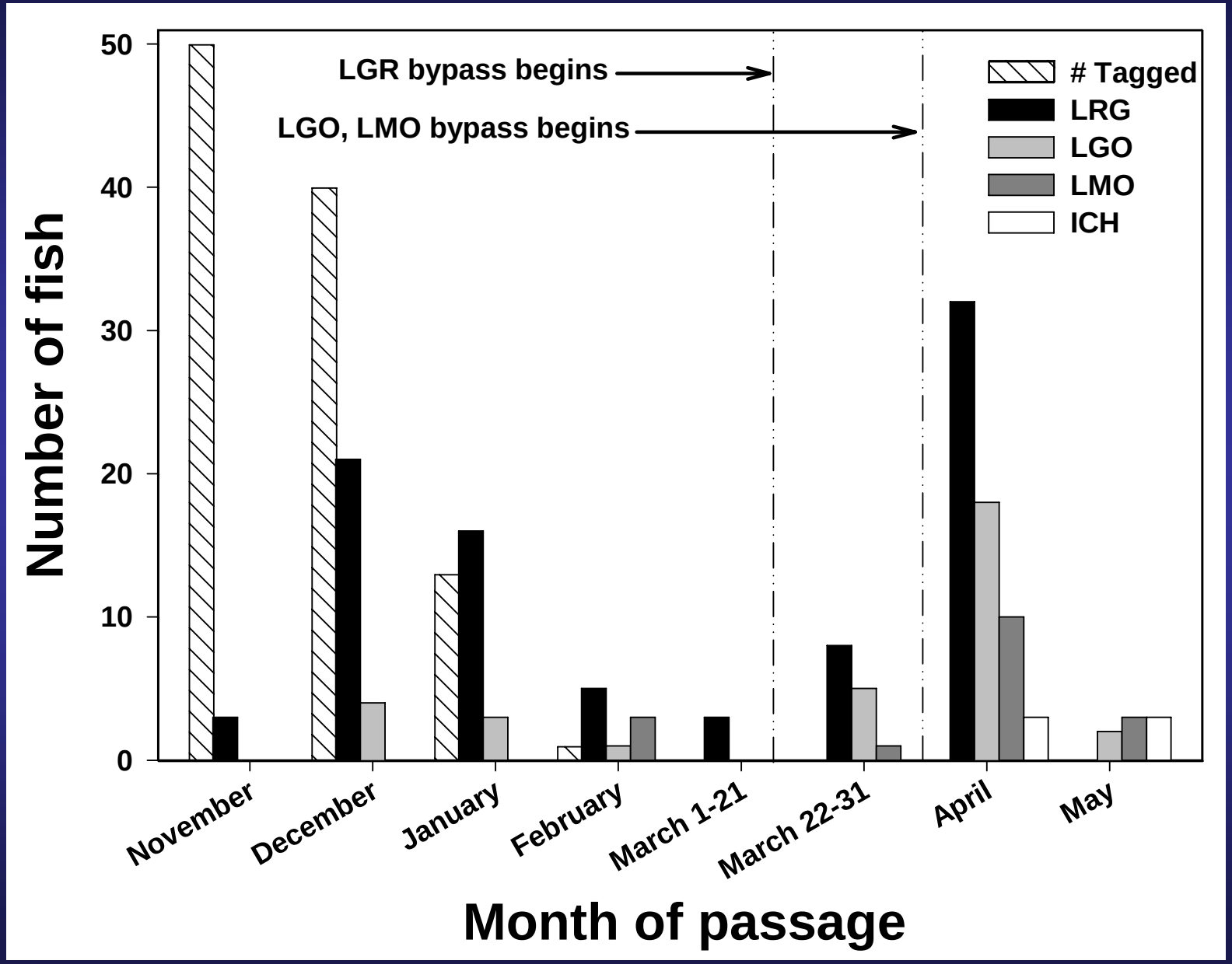
USGS

Detections by Location



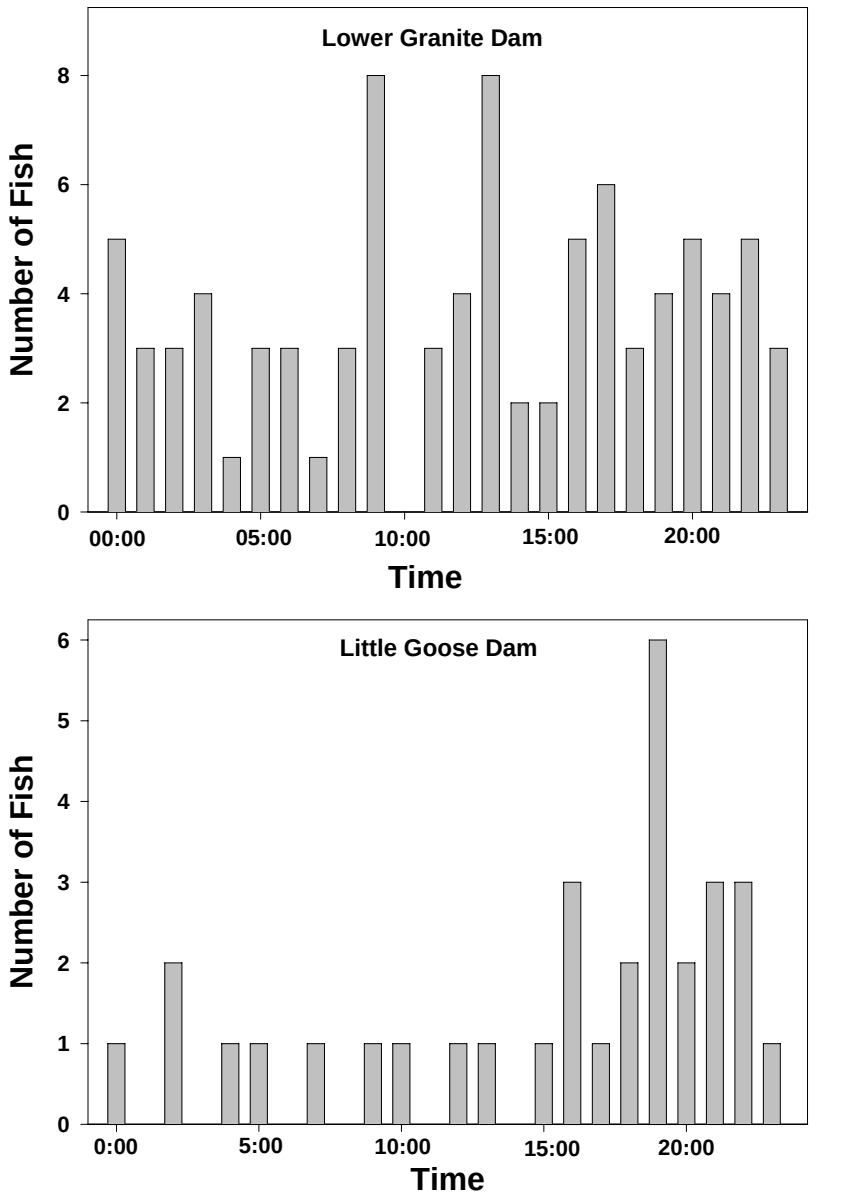
USGS

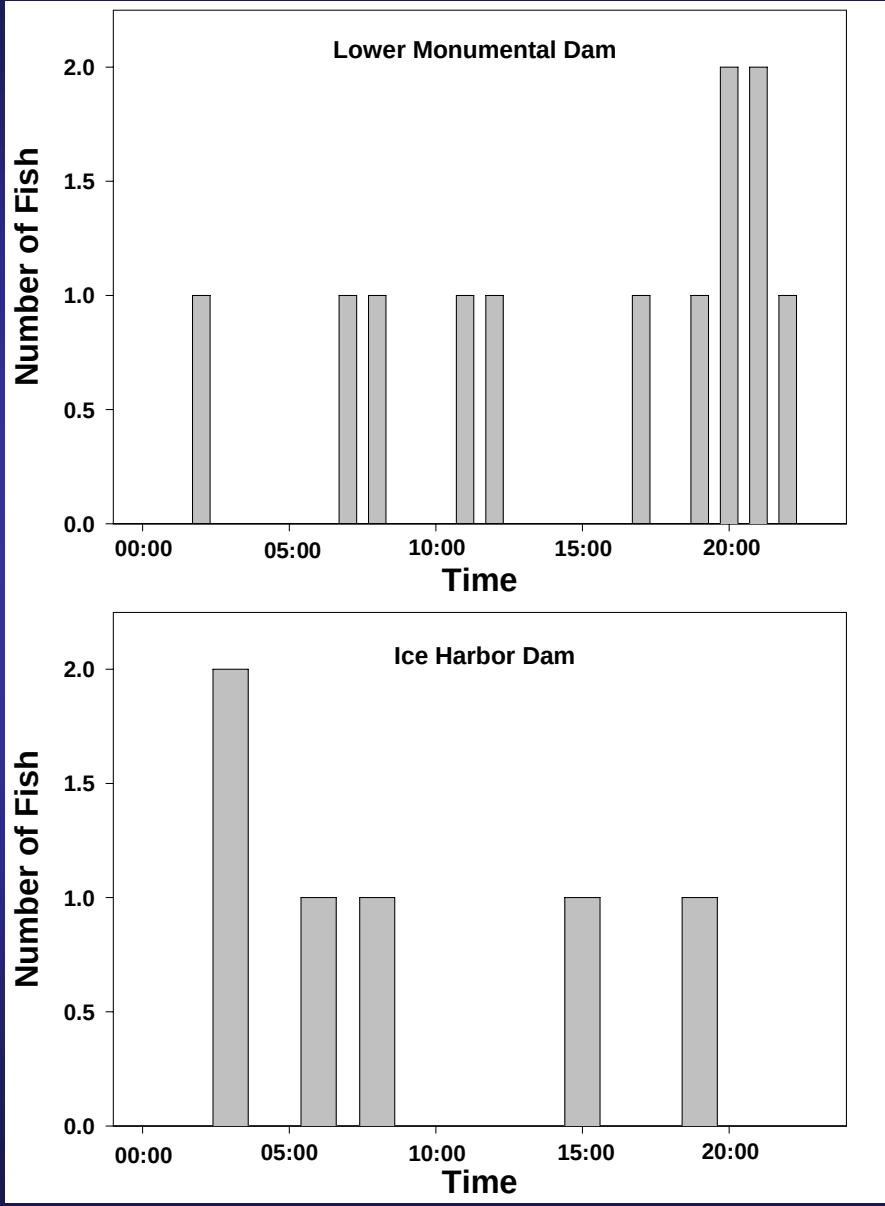
Monthly Passage



USGS

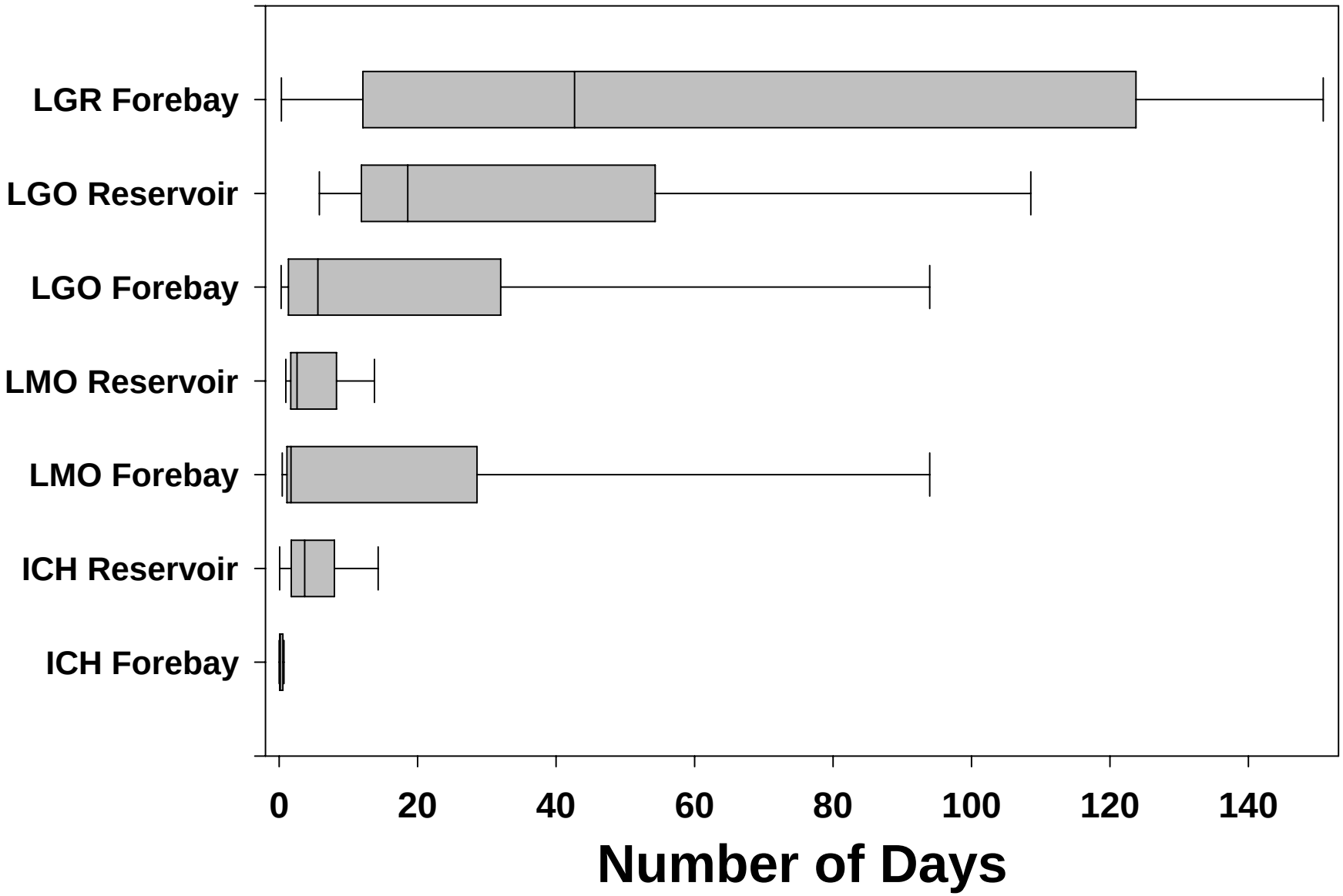
Hourly Passage





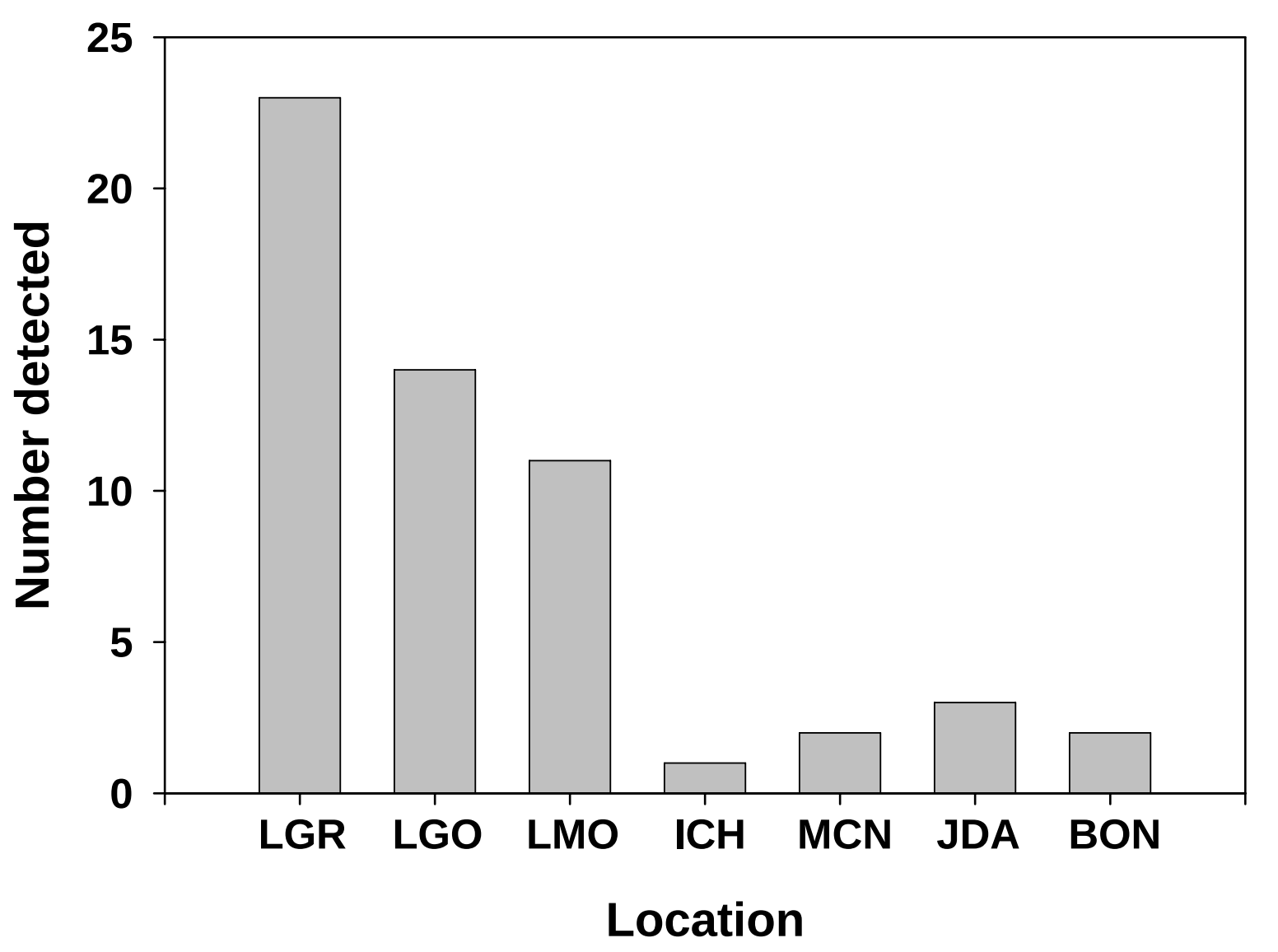
USGS

Residence Times



USGS

Detections of PIT-tagged Holdovers



USGS