

Irrigation Returns Monitoring Program

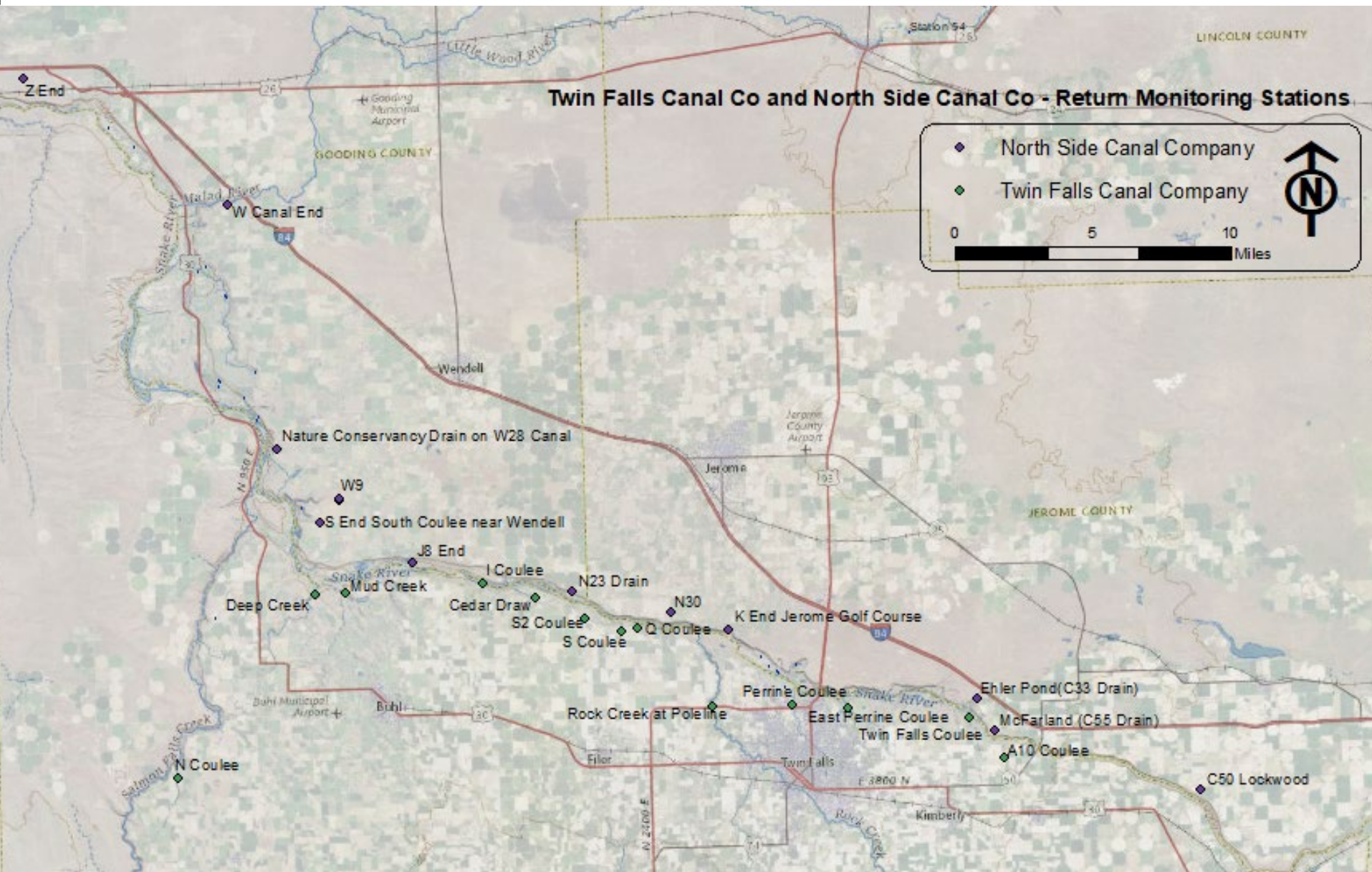
Presented by C. Macheel

Date 2022-06-06



IDAHO DEPARTMENT OF
WATER RESOURCES





Twin Falls Canal Co

- 12 Returns
 - 7 Rated Sections
 - 5 Weirs
- All sites telemetered – reporting hourly
- Table below summarizes data available on IDWR's webpage

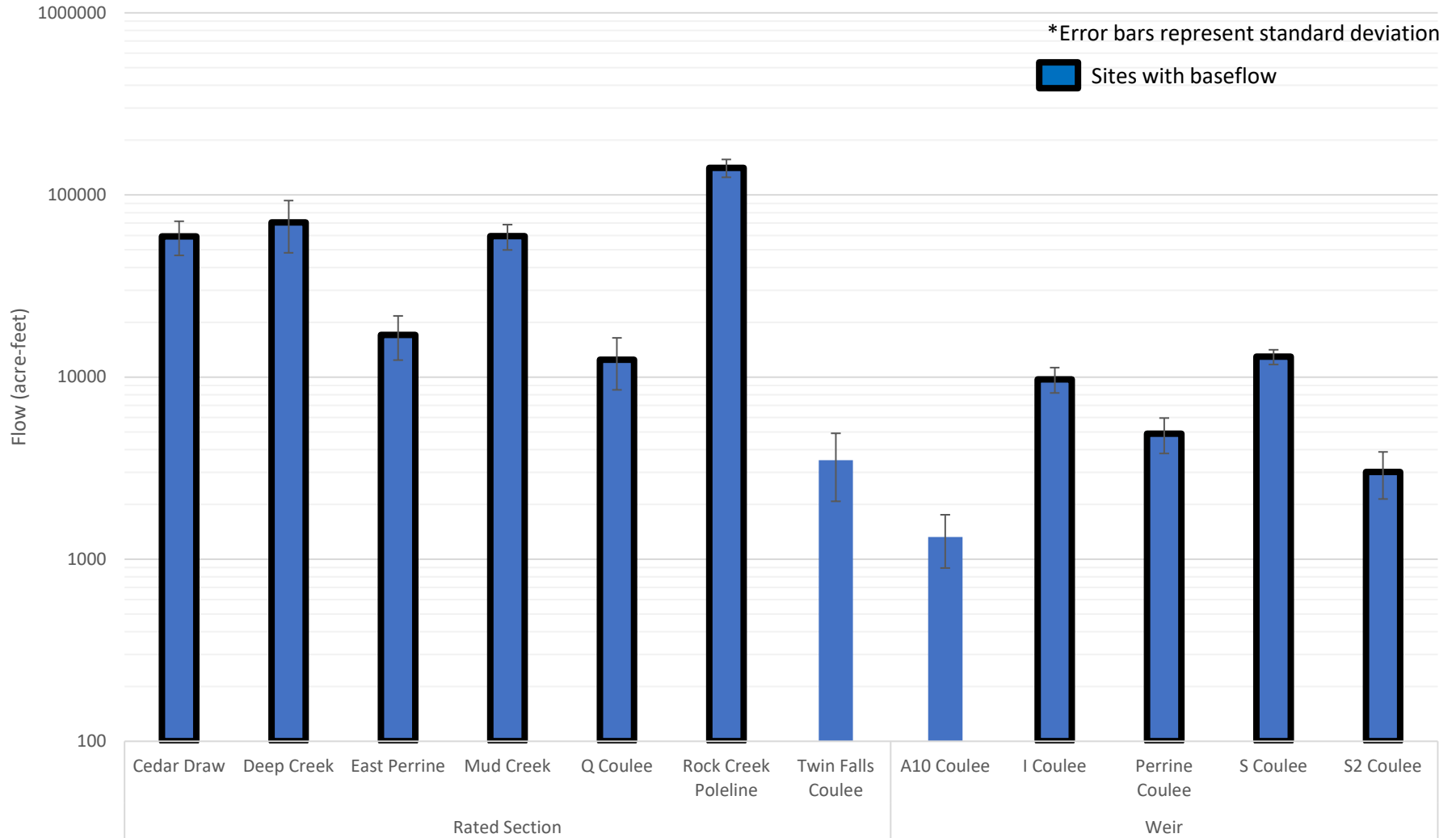
Site	Method	Instrumentation	Start	End
Cedar Draw	Rated Section	Submersible Pressure Transducer	2002 ¹	Present
Deep Creek	Rated Section	Submersible Pressure Transducer	2002 ¹	Present
East Perrine Coulee	Rated Section	Non-submersible Pressure Transducer	2002	Present
Mud Creek	Rated Section	Submersible Pressure Transducer	2002	Present
Q Coulee	Rated Section	Non-submersible Pressure Transducer	2006	Present
Rock Creek at Poleline Dr.	Rated Section ²	Submersible Pressure Transducer	2009 ¹	Present
Twin Falls Coulee	Rated Section	Non-submersible Pressure Transducer	2002	2020 ³
A10 Coulee	Weir	Non-submersible Pressure Transducer	2014	Present
I Coulee	Weir	Non-submersible Pressure Transducer	2002	Present
Perrine Coulee	Weir	Daily readings by TFCC	2002	2021
S Coulee	Weir	Non-submersible Pressure Transducer	2006	Present
S2 Coulee	Weir	Non-submersible Pressure Transducer	2002	Present

1 – Sites have prior data in NWIS

2 – USGS rating from the 80's, sparse discharge measurements collected in 00's

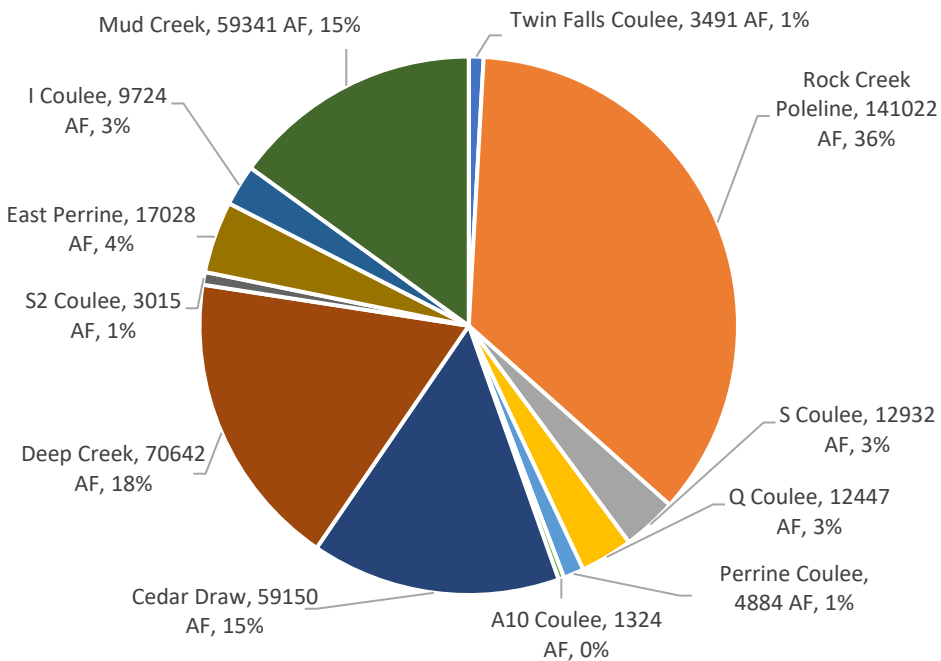
3 - Site discontinued in 2021 due to reconfiguration of ditch

TFCC - period of record median **annual** flow



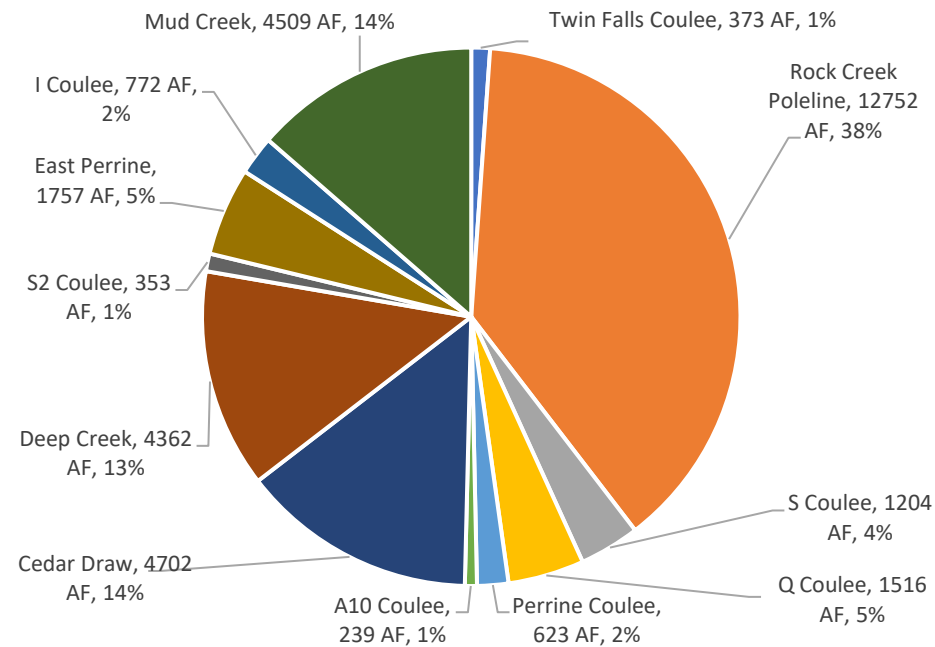
No baseflow correction in presented flows.

TFCC - Period of record **annual** median



100% = 474,828 AF

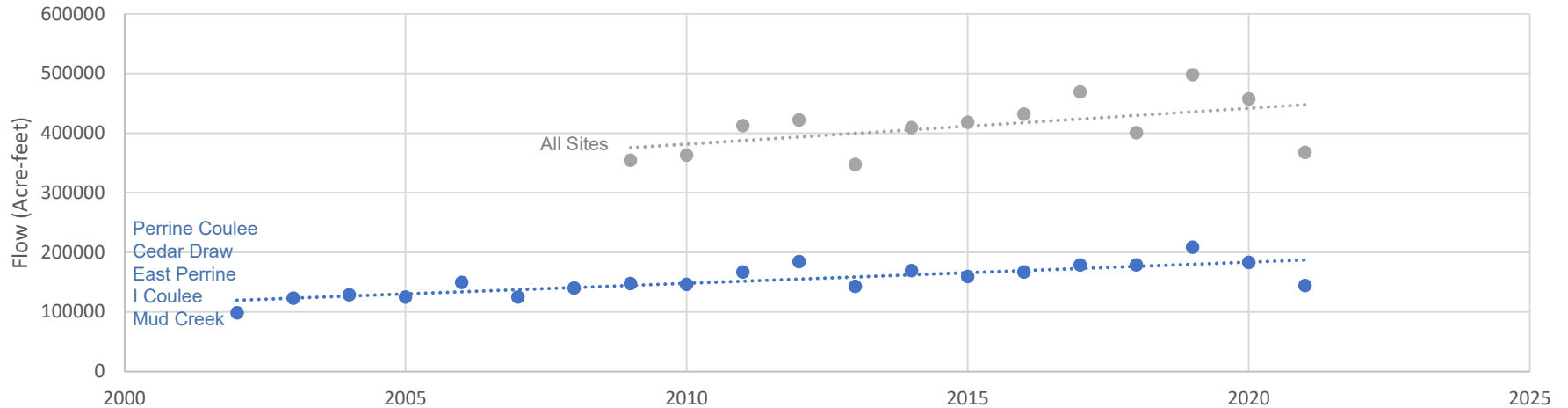
TFCC – Period of record **July** median



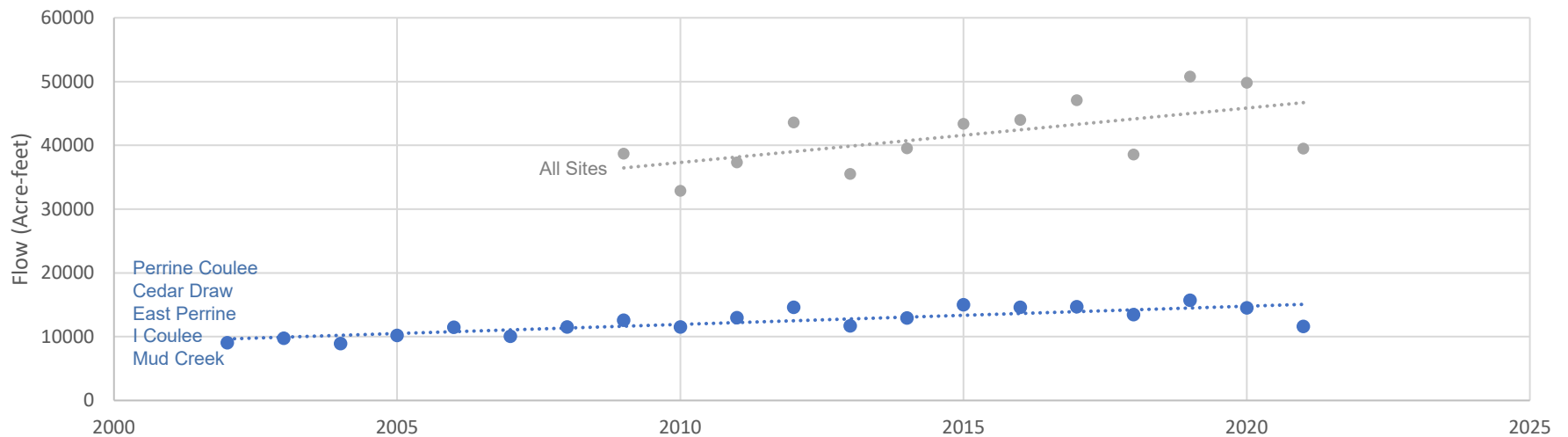
100% = 39,668 AF

No baseflow correction in presented flows.

TFCC - Total **annual** flow



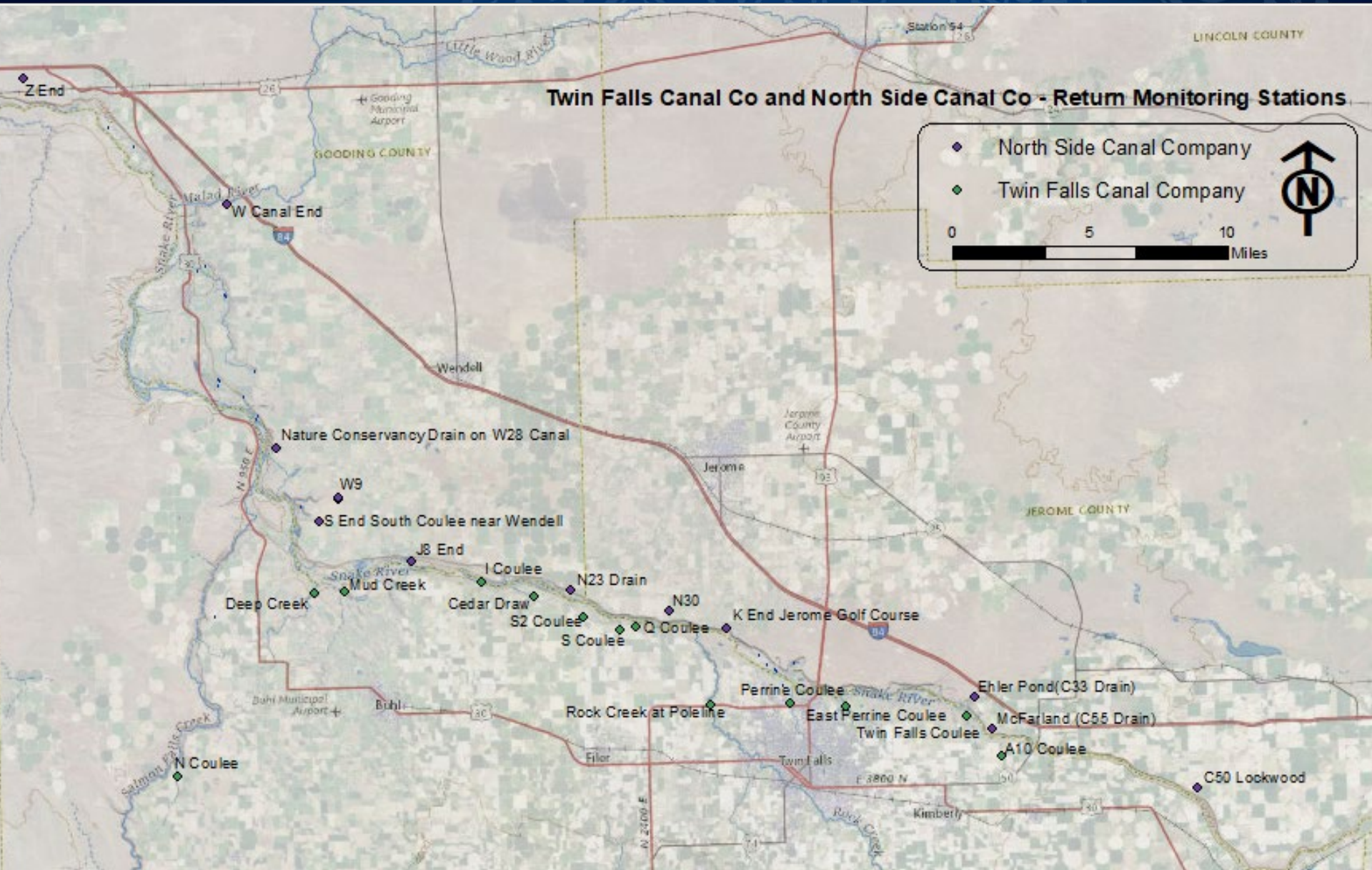
TFCC - Total **July** flow



No baseflow correction in presented flows.

Twin Falls Canal Co – Possible improvements

- Investigate relocation of the Rock Creek at Poleline Dr. site with a more accessible site closer to the Snake River.
- Potential additional sites in collaboration with City of Twin Falls / Water Quality improvement projects

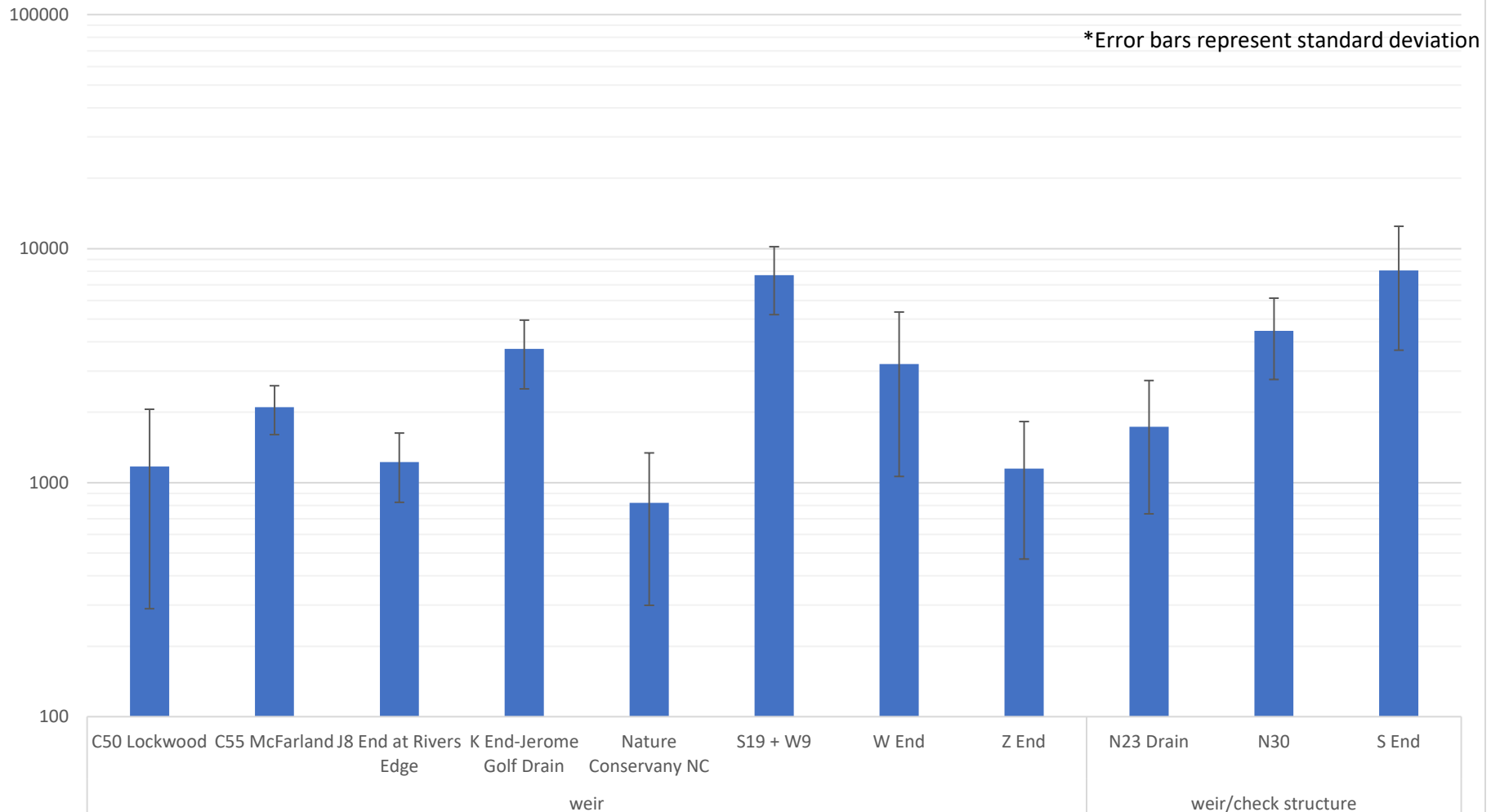


North Side Canal Co

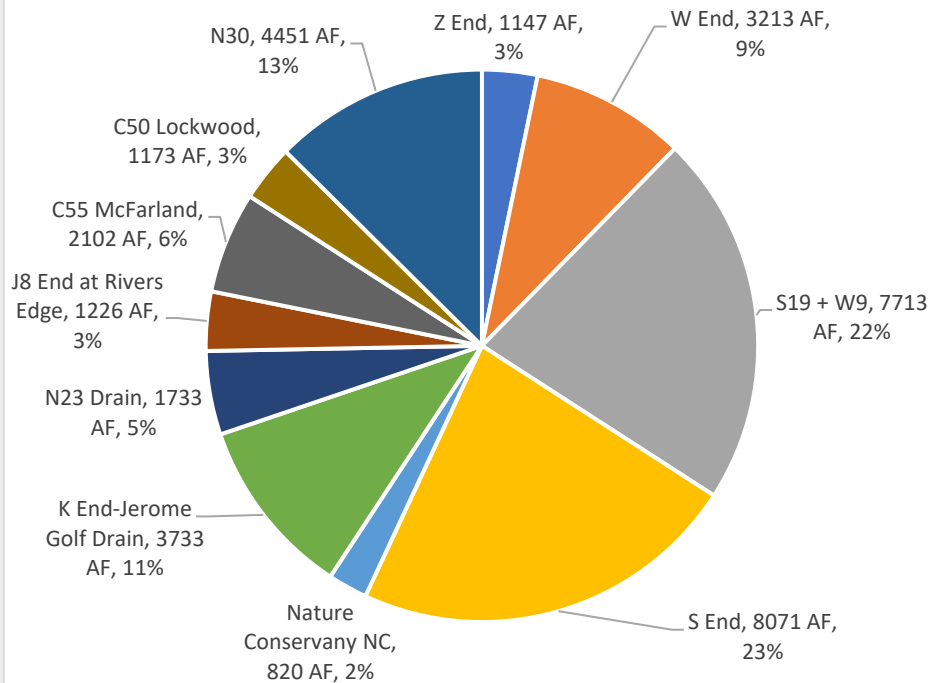
- 12 Returns
 - All weirs
 - 3 are weir / check structures
- Site data is reported annually
- Table below summarizes data available on IDWR's webpage

Site	Method	Instrumentation	Start	End
C50 Lockwood	Weir	Non-contact accoustic	2008	2021
C55 McFarland	Weir	Non-contact accoustic	2007	2021
J8 End	Weir	Submersible Pressure Transducer	2002	2021
K End - Jerome Golf Drain	Weir	Submersible Pressure Transducer	2002	2021
Nature Conservancy	Weir	Non-contact accoustic	2002	2021
S19	Weir	Non-contact accoustic	2002	2021
W9	Weir	Non-contact accoustic	2002	2021
W End	Weir	Submersible Pressure Transducer	2002	2021
Z End	Weir	Submersible Pressure Transducer	2002	2021
N23 Drain	Weir / Check	Submersible Pressure Transducer	2008	2021
N30	Weir / Check	Non-contact accoustic	2002	2021
S End	Weir / Check	Non-contact accoustic	2008	2021

NSCC - period of record median **annual** return flow

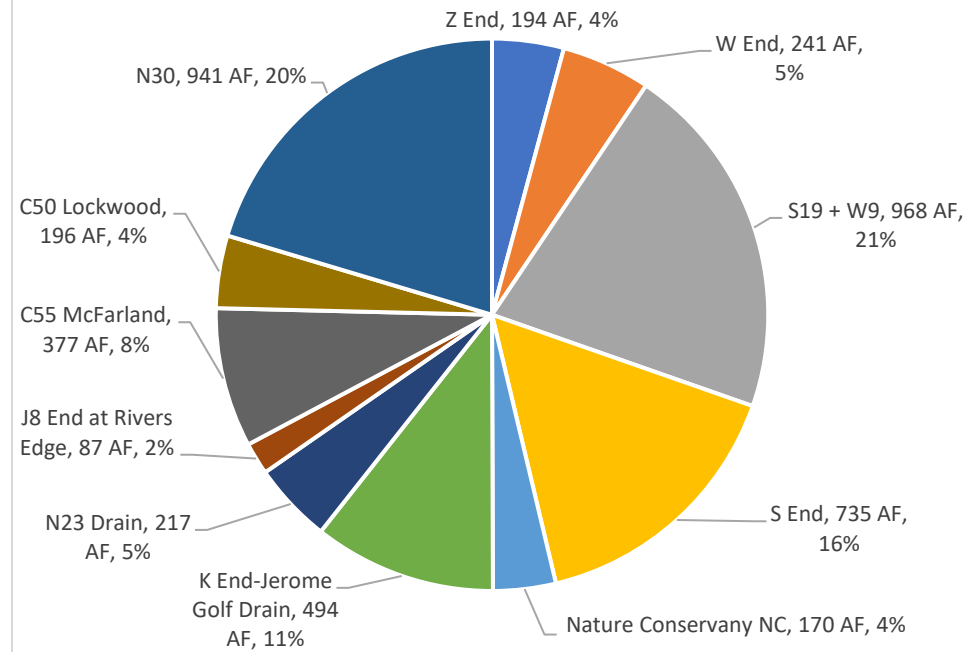


NSCC - period of record **annual** median

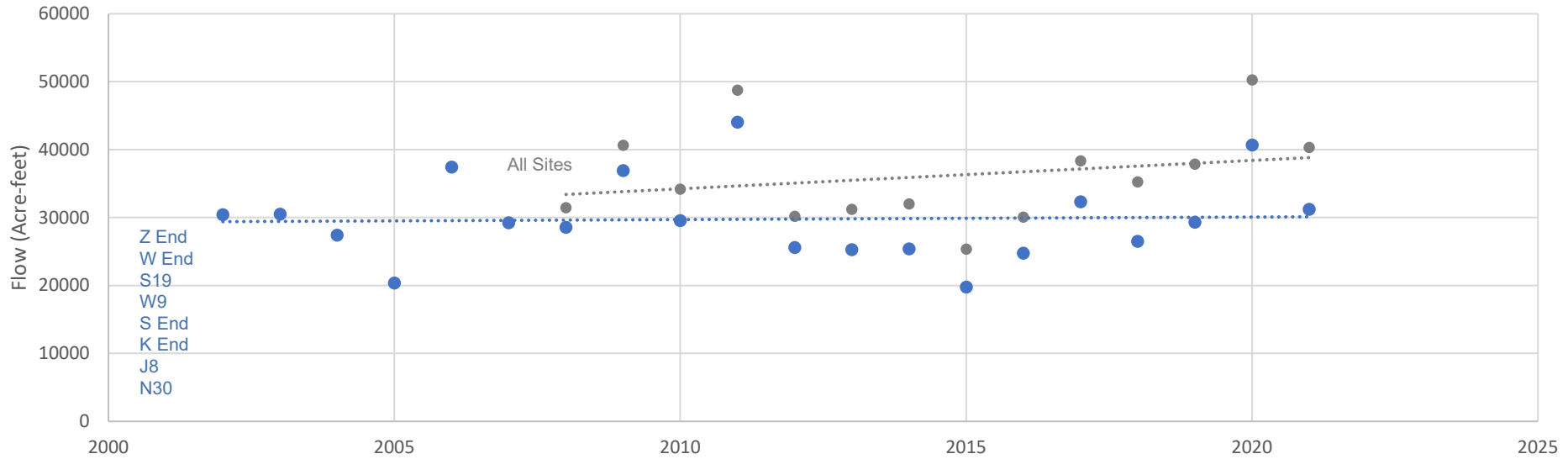


100% = 45,927 AF

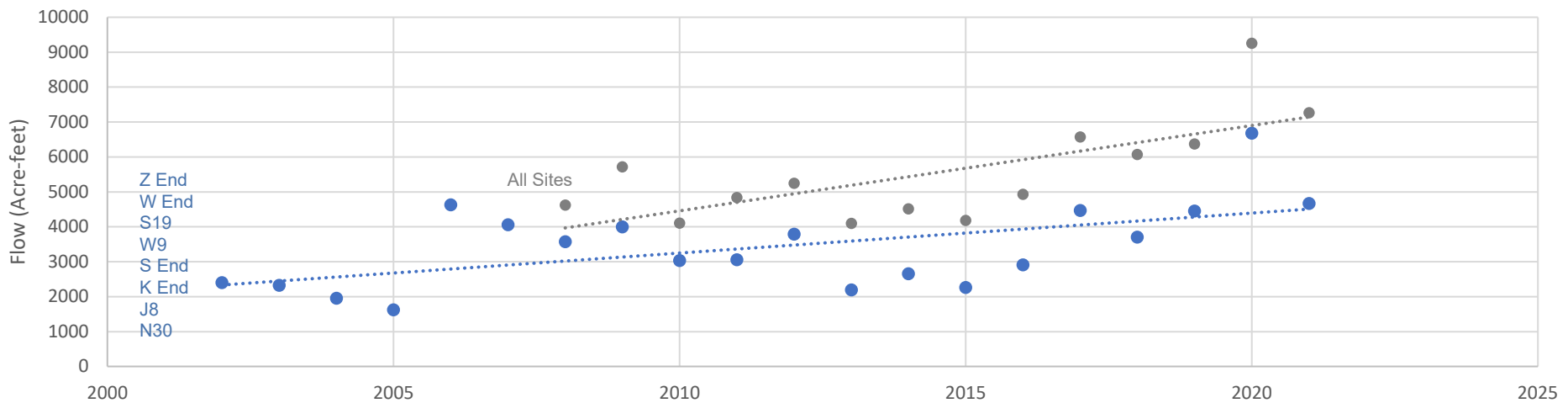
NSCC – period of record **July** median



100% = 5,844 AF

NSCC - Total **annual** return flow

NSCC - Total **July** return flows



North Side Canal Co – Issues and planned improvements

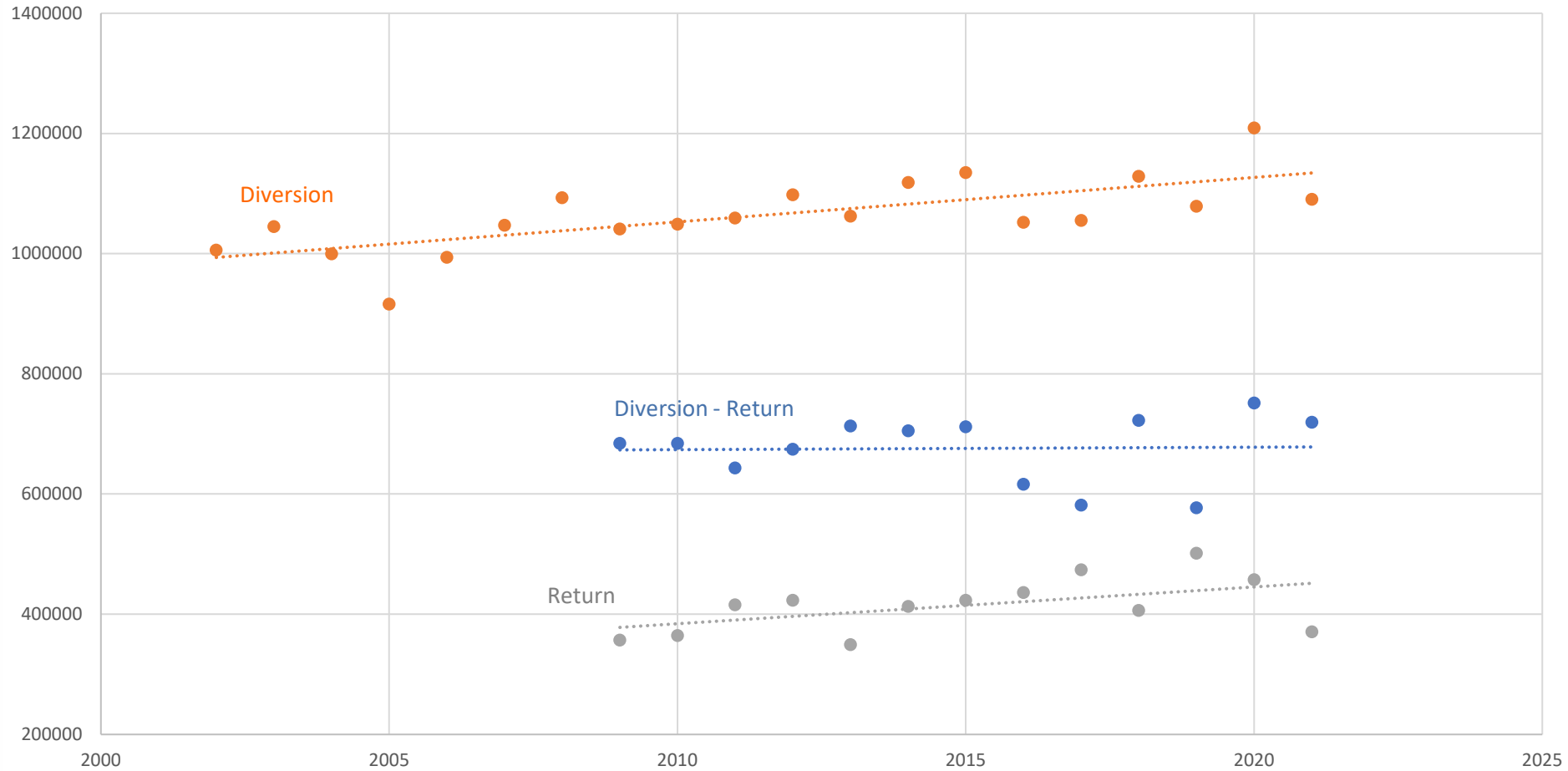
- Station outages have been a major issue

Site	Estimated Annual Flow (AF)	Percent Missing Data (2014-2020)	2020 Missing Data	2021 Missing Data
S End	8,081	7%	41%	100%
W9	7,850	13%	3%	100%
N30	5,104	96%	100%	100%
K End – Golf Drain	4,268	62%	7%	0%
W End	2,472	46%	15%	100%
S19	2,202	0%	0%	0%
C55 McFarland	2,090	0%	0%	0%
N23	1,954	18%	0%	0%
C50 Lockwood	1,175	14%	0%	0%
J8 End	1,157	39%	100%	100%
Z End	1,035	56%	100%	100%
Nature Conservancy	598	59%	100%	100%

- New cost-sharing contract in-place as of Feb 2022 to bring return the network onto the NSCC telemetry network.
- Sensor upgrades to replace aging sensors with shaft-encoders.

Questions?

TFCC - Total diversion (inflow) minus return (outflow)



NSCC - Total diversion (inflow) minus return (outflow)

