Community Watershed Monitoring Network 2022 Results by Water Region

Community Watershed Monitoring Network Active Sites

- Fanny Bay Salmonid Enhancement Society
- Qualicum Beach Streamkeepers
- Friends of French Creek
- Mid Vancouver Island Habitat Enhancement Society
- Lantzville Streamkeepers (MVIHES)
- Island Waters Fly Fishers - Group A
- Island Waters Fly Fishers - Group B
- Departure Creek Streamkeepers
- Walley Creek Streamkeepers
- Cat Stream Stewardship Group
- Vancouver Island University & Mount Arrowsmith Biosphere Region Research Institute
- Nanaimo & Area Land Trust
- Wexford Creek Streamkeepers
- Gabriola Streamkeepers
- Water Region

September 2022

Included in Water Region (WR) 1 package:

1. CWMN WR1 sample sites
2. How to interpret a box plot
3. Box Plot Comparison – 2022 data to previous years: *displayed by parameter (Turbidity, Dissolved Oxygen, Temperature, Conductivity) & sample period (summer, fall)*
4. FBSES CWMN map of sample sites

Water Region 1 sampled by:

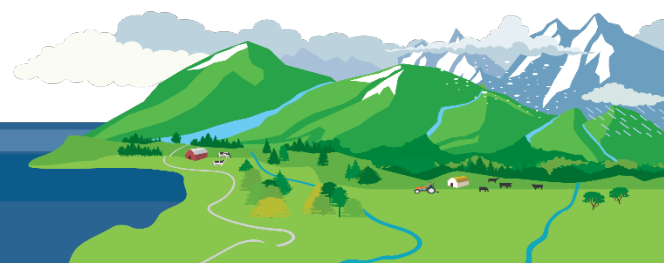**Fanny Bay Salmonid Enhancement Society (FBSES)**
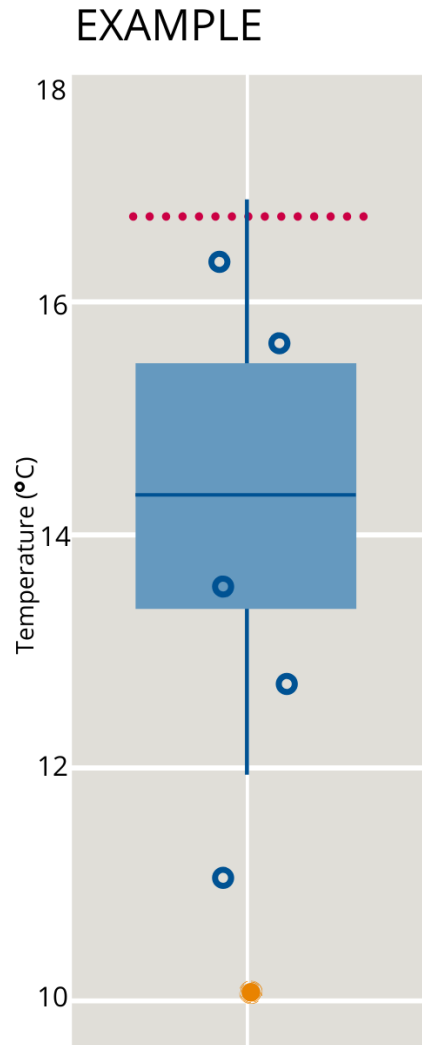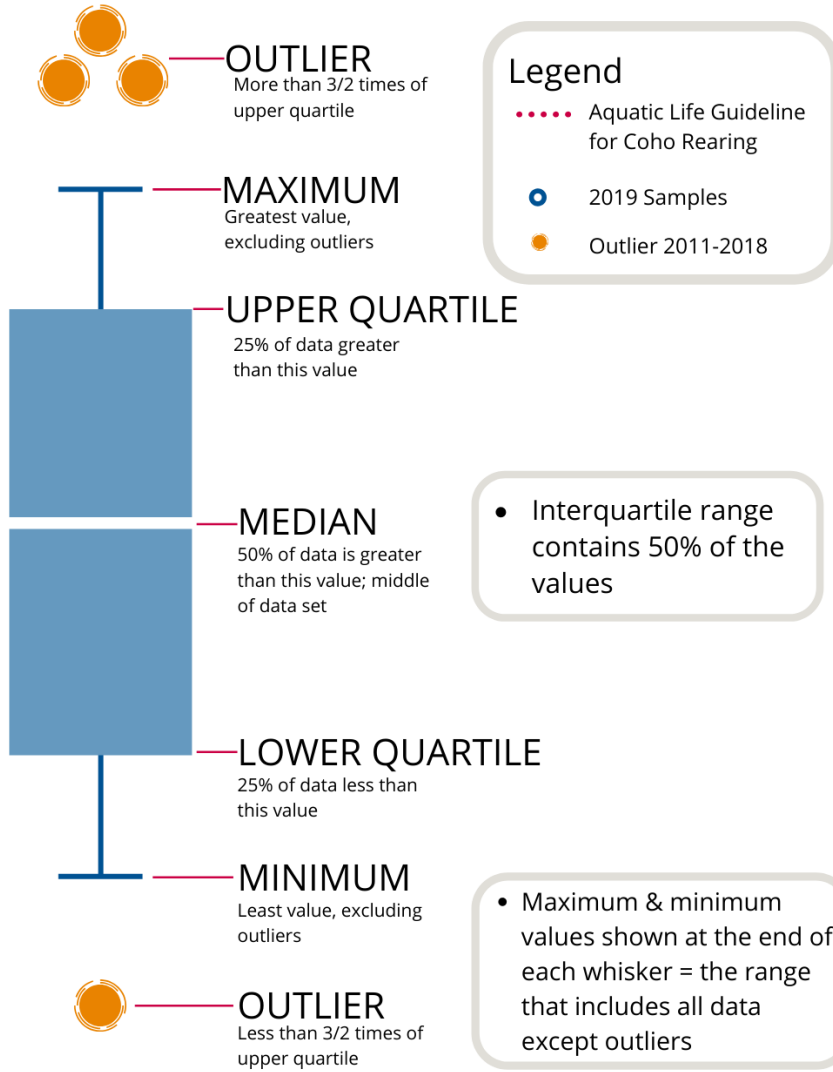
WR1 CWMN Sample Sites:

The table below shows the sites monitored by each of the streamkeeper organizations, as well as the number of years and which years a site was sampled. The number of years is important to keep in mind when interpreting the box plots as the plot for each site may contain a slightly different temporal range.

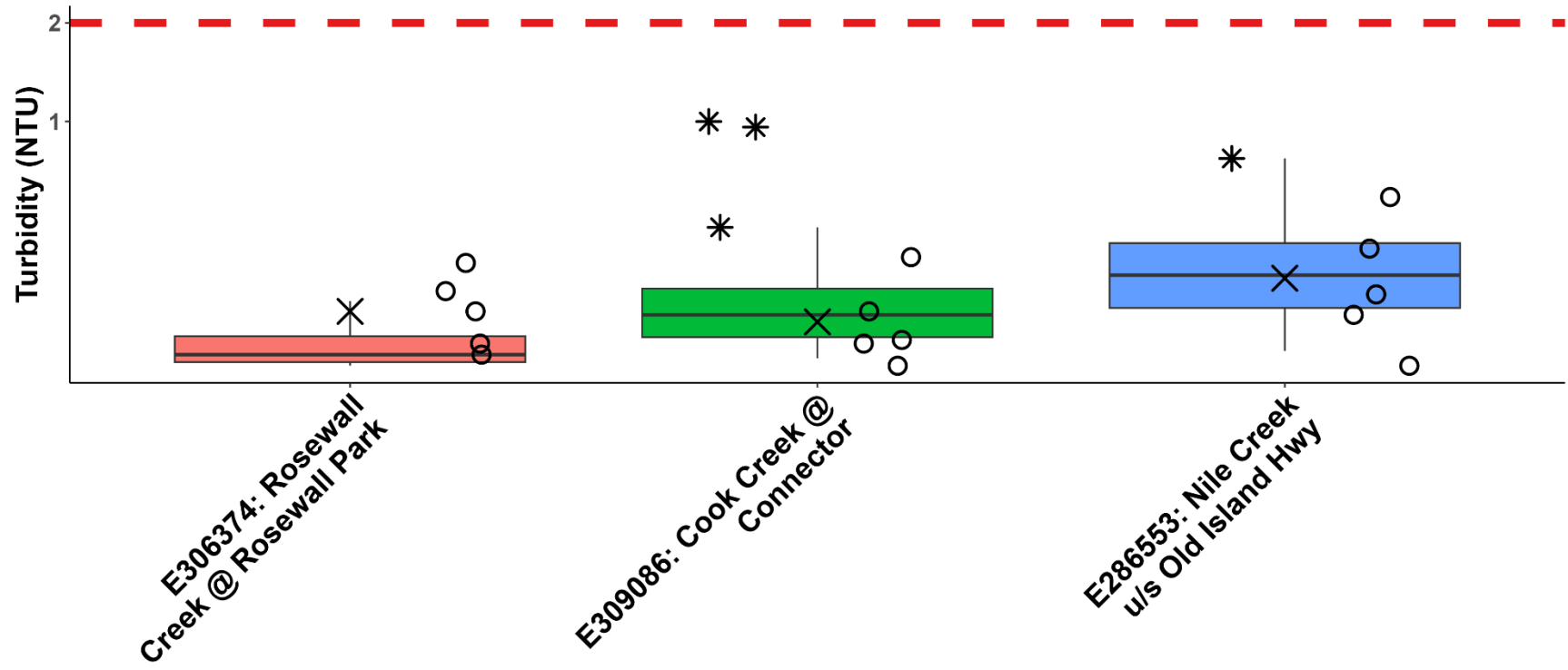| Group	EMS ID	Geographic Description	Years Sampled	Years Monitored
FBSES	E306374	Rosewall Creek @ Rosewall Creek Park	7	2016 – present
FBSES	E309086	Cook Creek at Old Island Hwy Connector	6	2017 – present
FBSES	E306375	Deep Bay Creek	7	2016 – present
FBSES	E286553	Nile Creek @ Rosepark Rd (50m u/s Old Island Hwy)	11	2011 – present^

WR1 notes for the number of years sampled: ^2016 not sampled.
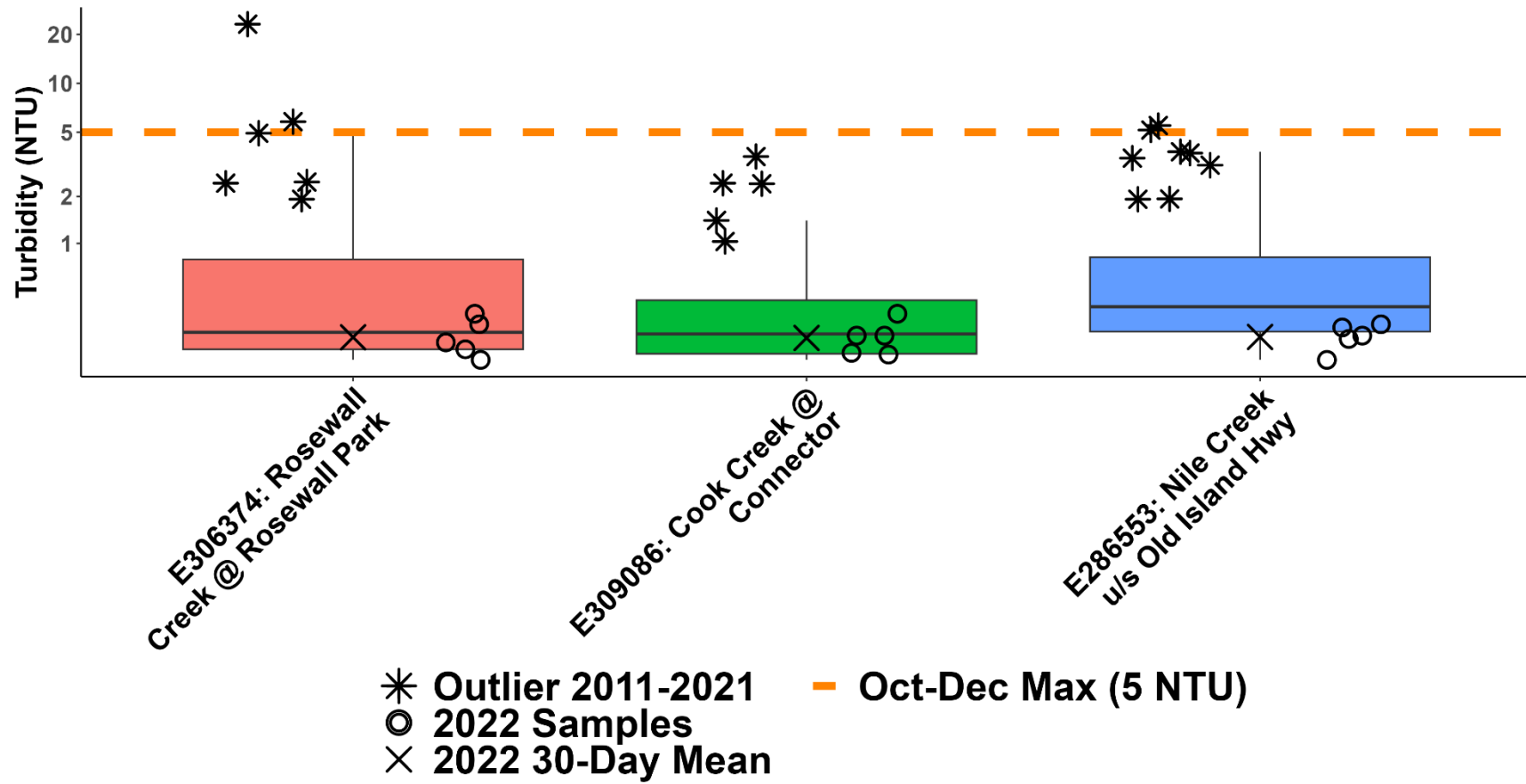
How to Interpret a Box Plot:

OUTLIER
More than 3/2 times of upper quartile

MAXIMUM
Greatest value, excluding outliers

UPPER QUARTILE
25% of data greater than this value

MEDIAN
50% of data is greater than this value; middle of data set

LOWER QUARTILE
25% of data less than this value

MINIMUM
Least value, excluding outliers

OUTLIER
Less than 3/2 times of upper quartile

Legend

- • • • • Aquatic Life Guideline for Coho Rearing
- ○ 2019 Samples
- ● Outlier 2011-2018

- Interquartile range contains 50% of the values

- Maximum & minimum values shown at the end of each whisker = the range that includes all data except outliers

EXAMPLE

Temperature (°C)

18
16
14
12
10

WR1: Big Qualicum Summer Turbidity

WR1: Big Qualicum Fall Turbidity

Turbidity (NTU)

Legend:
- ✳ Outlier 2011-2021
- ◎ 2022 Samples
- ✕ 2022 30-Day Mean
- ▬ Oct-Dec Max (5 NTU)

X-axis categories:
- E306374: Rosewall Creek @ Rosewall Park
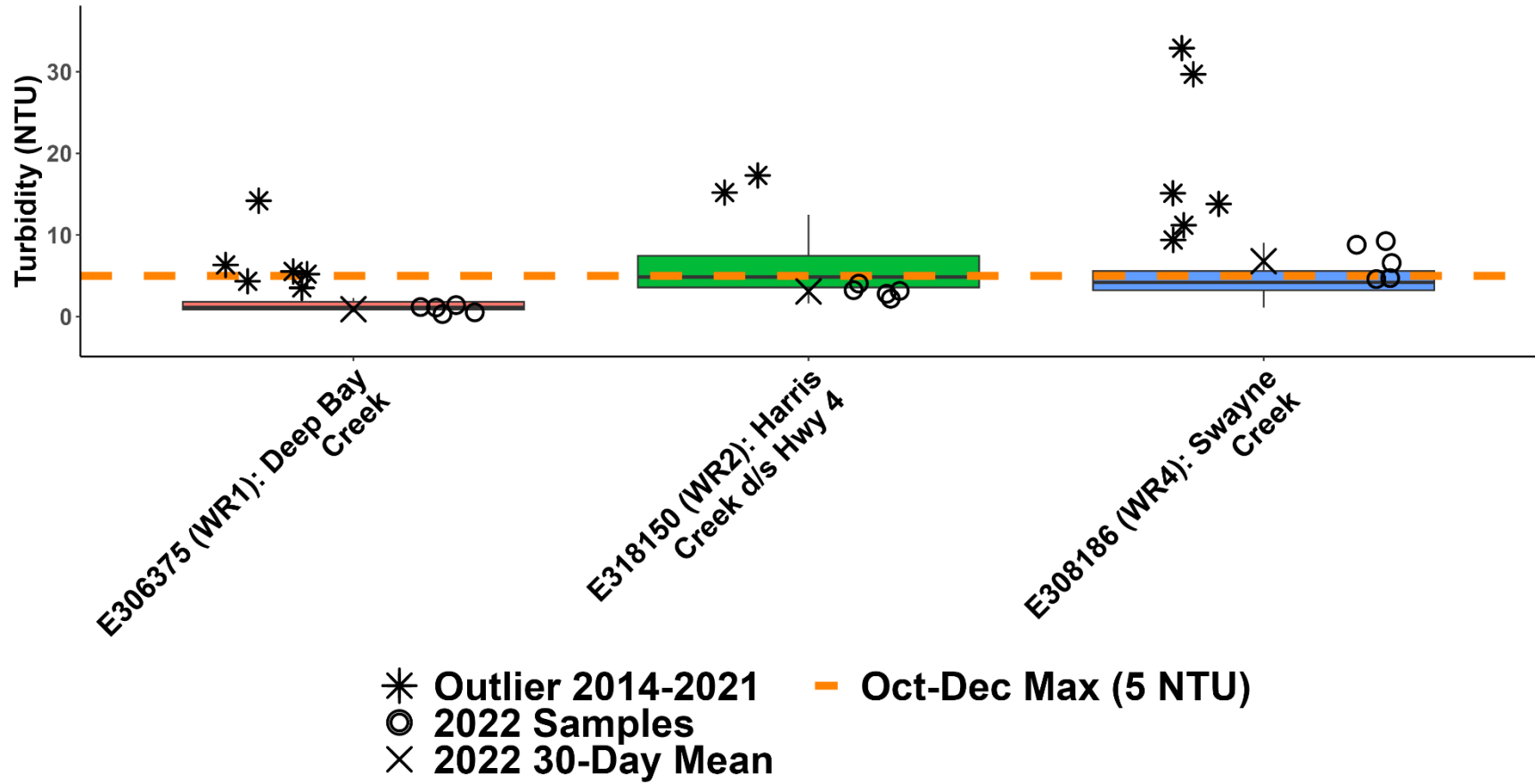- E309086: Cook Creek @ Connector
- E286553: Nile Creek u/s Old Island Hwy

Sites with High Summer Turbidity Values
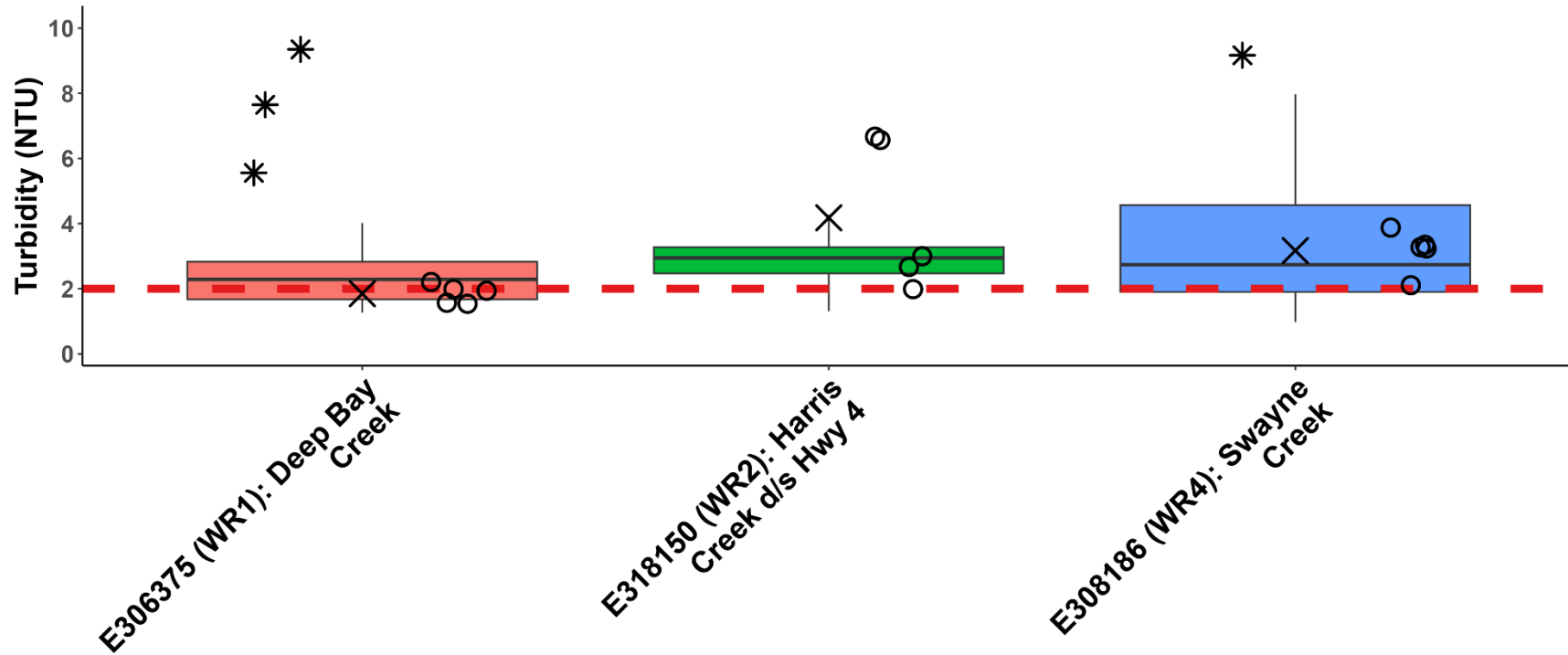
* Outlier 2014-2021   — Jan-Sept Max (2 NTU)
◎ 2022 Samples
✕ 2022 30-Day Mean

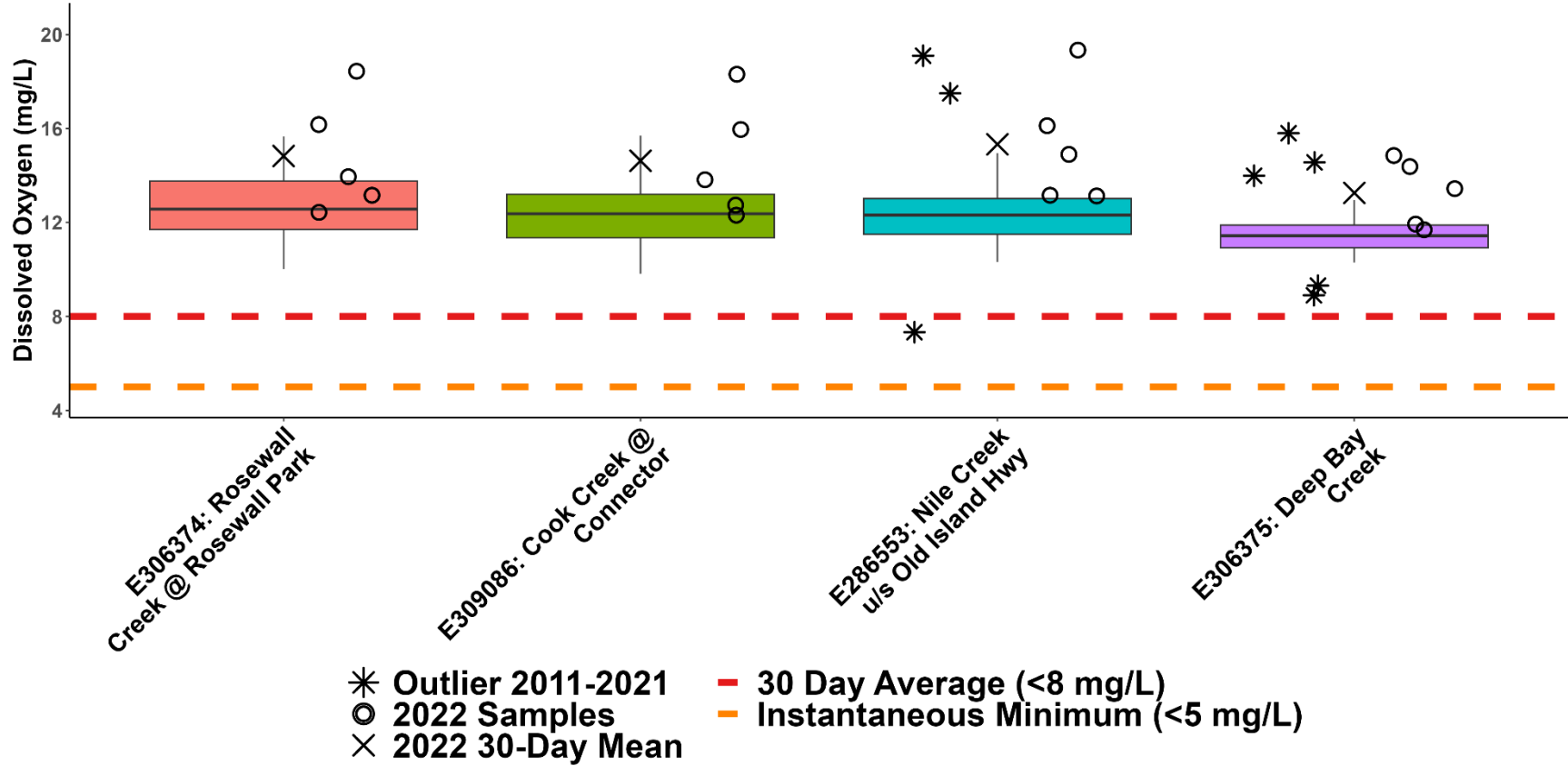*Created for the RDN's Community Watershed Monitoring Network using 2022 data collected by local Streamkeepers. Charts produced by Ecoscape Environmental Consultants Ltd. Question? Call 250-390-6560 or email watermonitoring@rdn.bc.ca*

Sites with High Fall Turbidity Values

Turbidity (NTU)

Outlier 2014-2021 — Oct-Dec Max (5 NTU)
2022 Samples
2022 30-Day Mean

E306375 (WR1): Deep Bay Creek

E318150 (WR2): Harris Creek d/s Hwy 4

E308186 (WR4): Swayne Creek

WR1: Big Qualicum Summer Dissolved Oxygen

Legend:
* Outlier 2011-2021
◎ 2022 Samples
✕ 2022 30-Day Mean
— 30 Day Average (<8 mg/L)
— Instantaneous Minimum (<5 mg/L)

Created for the RDN's Community Watershed Monitoring Network using 2022 data collected by local Streamkeepers. Charts produced by Ecoscape Environmental Consultants Ltd. Question? Call 250-390-6560 or email watermonitoring@rdn.bc.ca
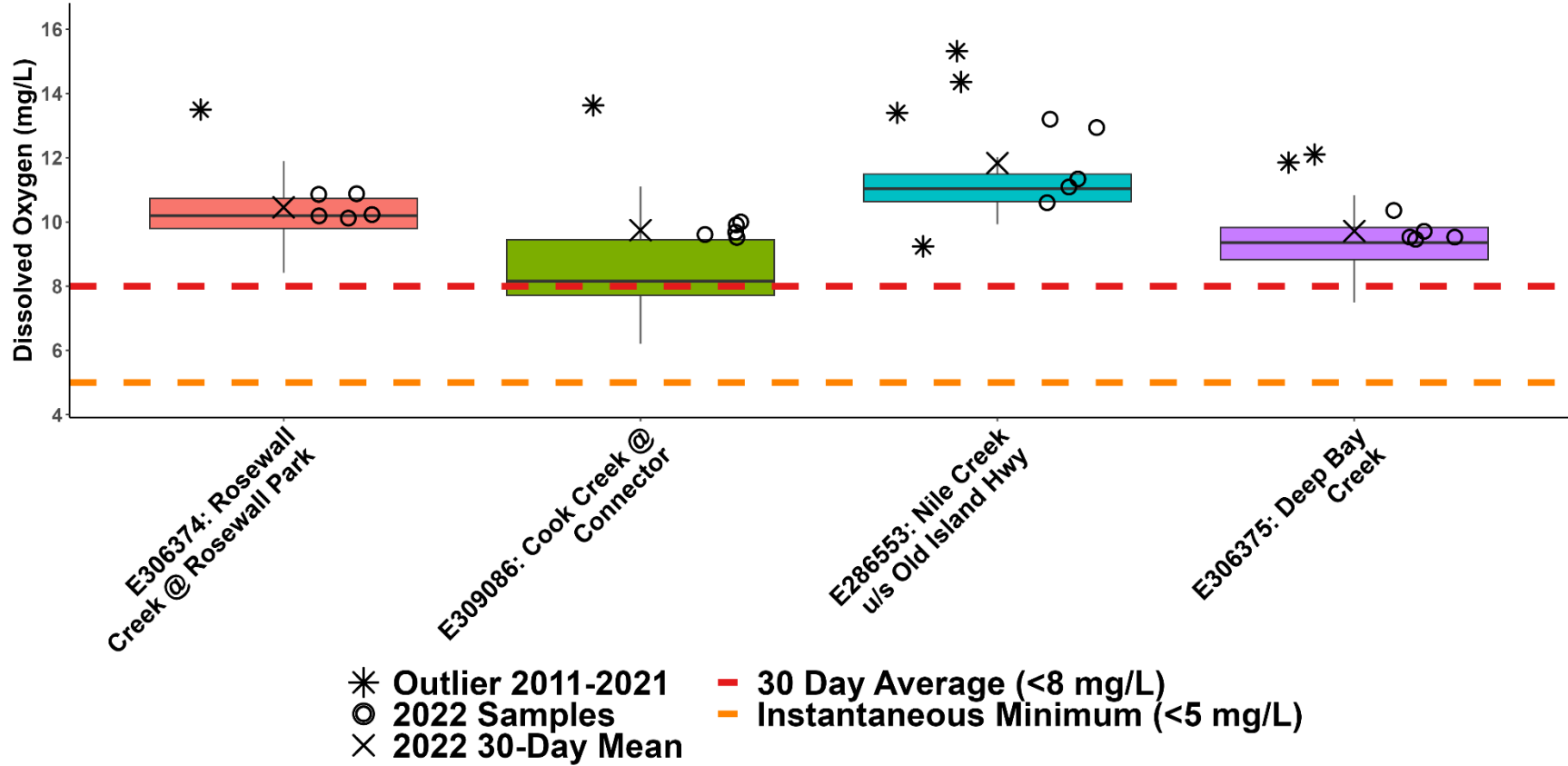
WR1: Big Qualicum Fall Dissolved Oxygen

Legend:
✳ Outlier 2011-2021
◎ 2022 Samples
✕ 2022 30-Day Mean

— 30 Day Average (<8 mg/L)
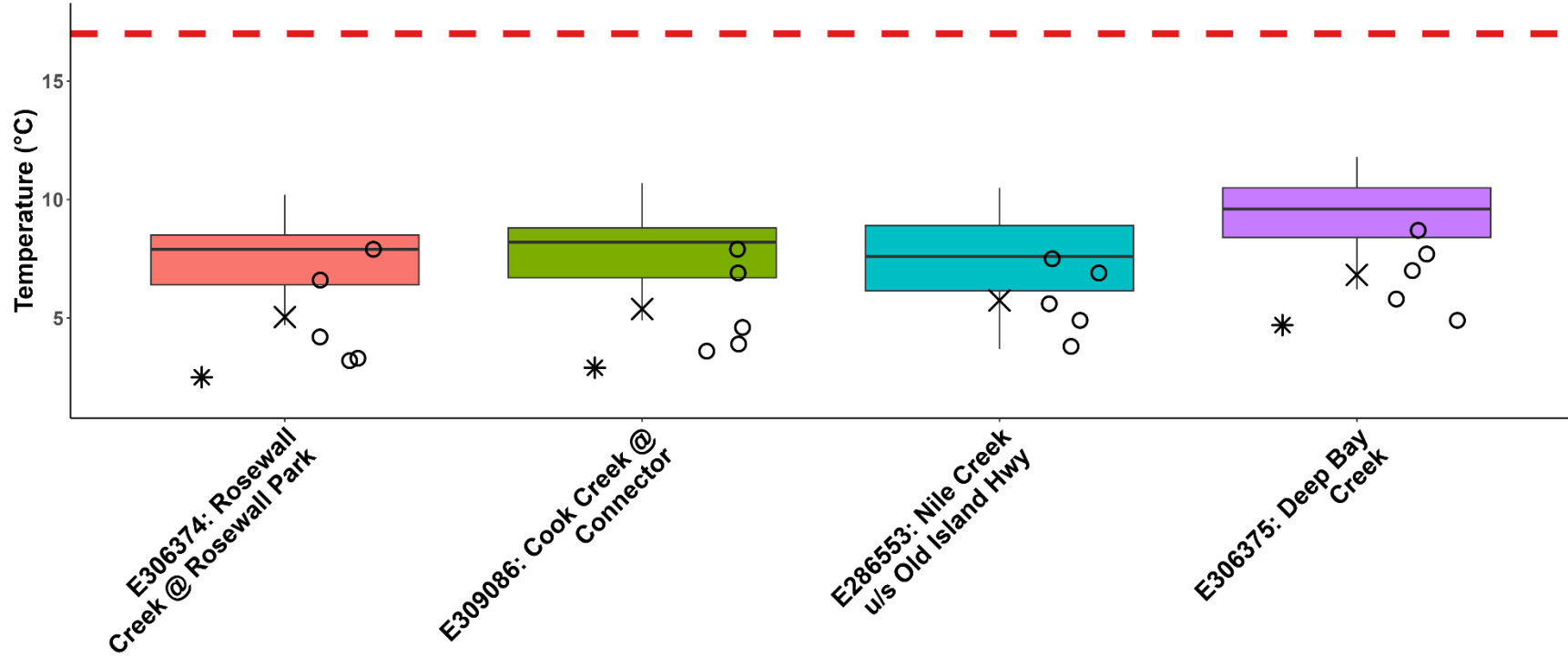— Instantaneous Minimum (<5 mg/L)

WR1: Big Qualicum Summer Temperature
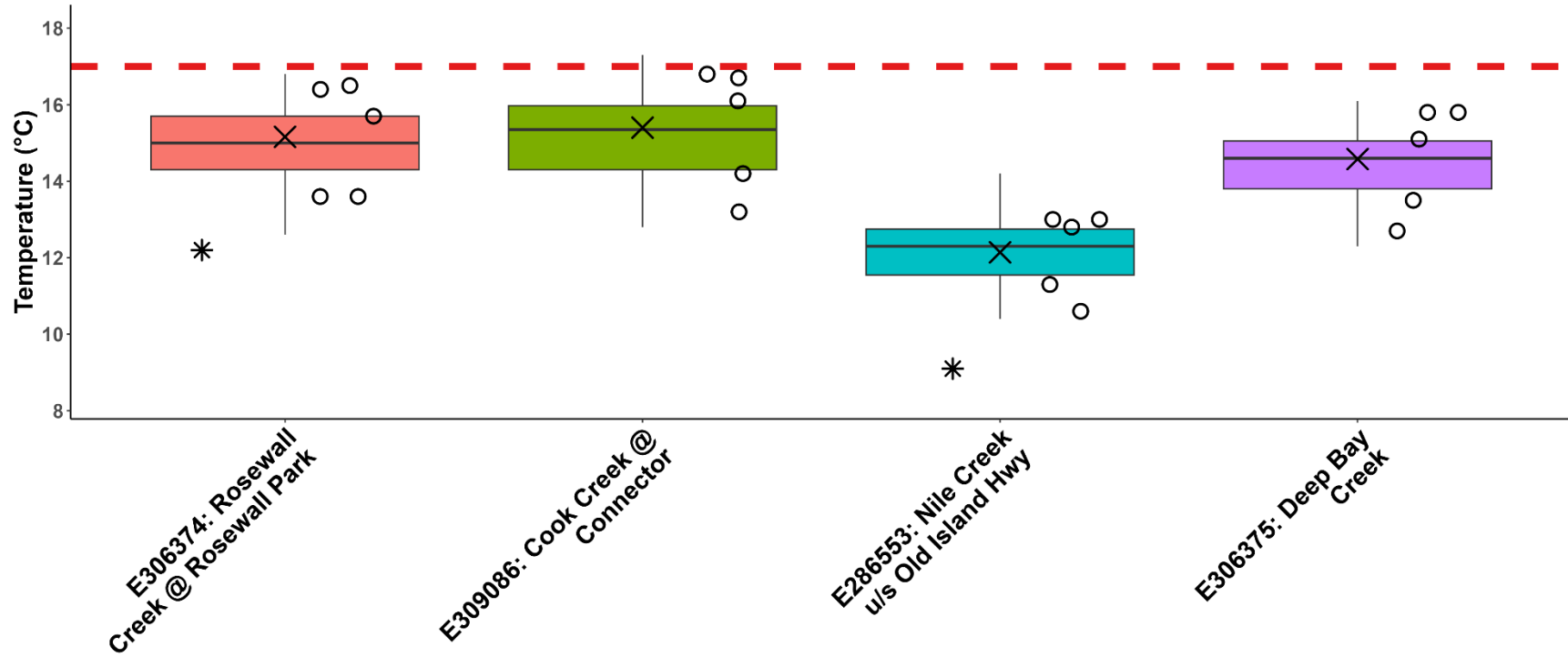
Legend:
✳ Outlier 2011-2021
◎ 2022 Samples
✕ 2022 30-Day Mean
— Aquatic Life Guideline for Coho Rearing (17°C)
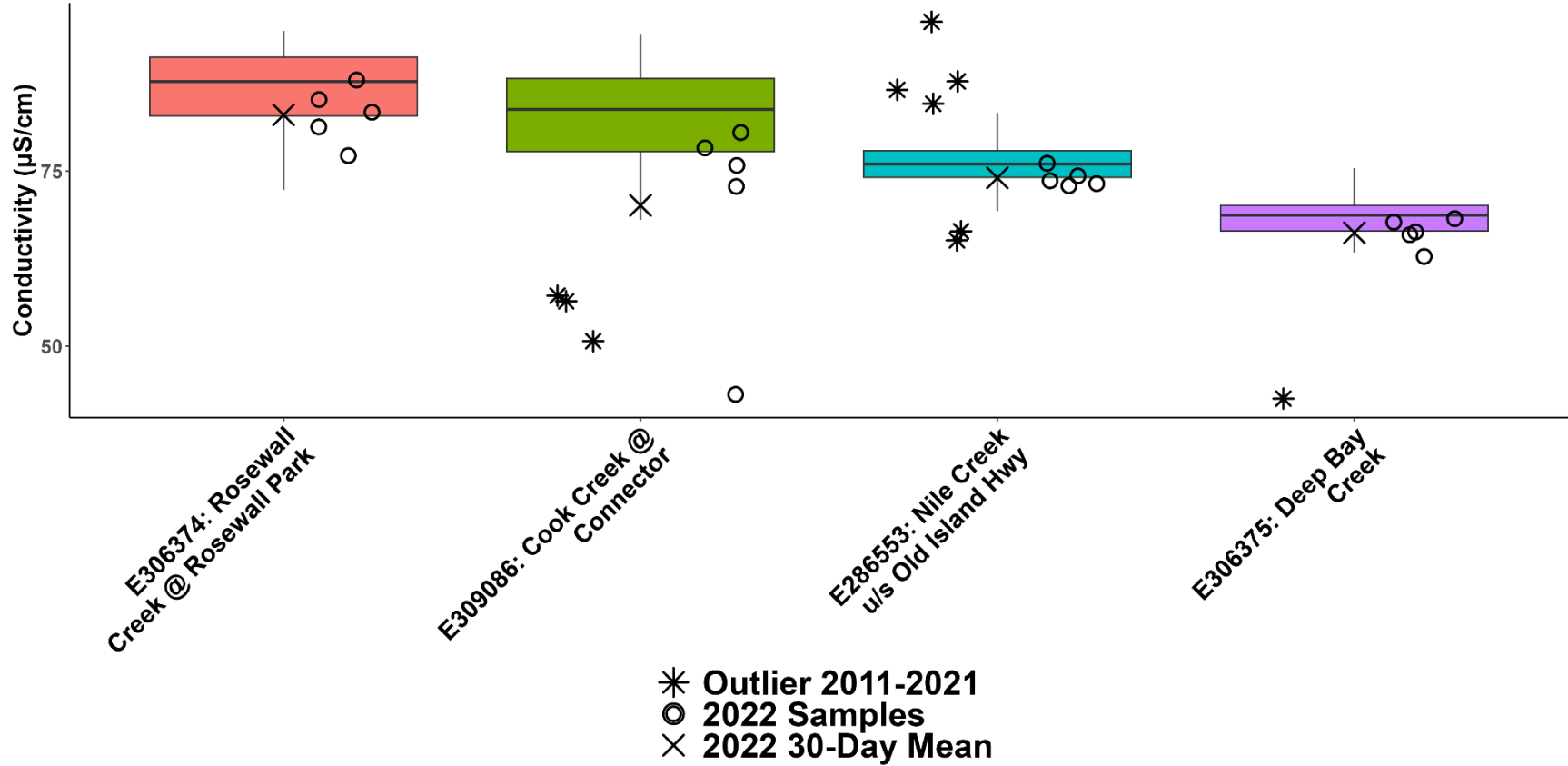
WR1: Big Qualicum Fall Temperature

Legend:
- ✳ Outlier 2011-2021
- ◎ 2022 Samples
- ✕ 2022 30-Day Mean
- ▬ Aquatic Life Guideline for Coho Rearing (17°C)

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WR1: Big Qualicum Summer Conductivity

Conductivity (μS/cm)

75

50

E306374: Rosewall Creek @ Rosewall Park

E309086: Cook Creek @ Connector

E286553: Nile Creek u/s Old Island Hwy

E306375: Deep Bay Creek

⁎ Outlier 2011-2021
◎ 2022 Samples
✕ 2022 30-Day Mean

WR1: Big Qualicum Fall Conductivity
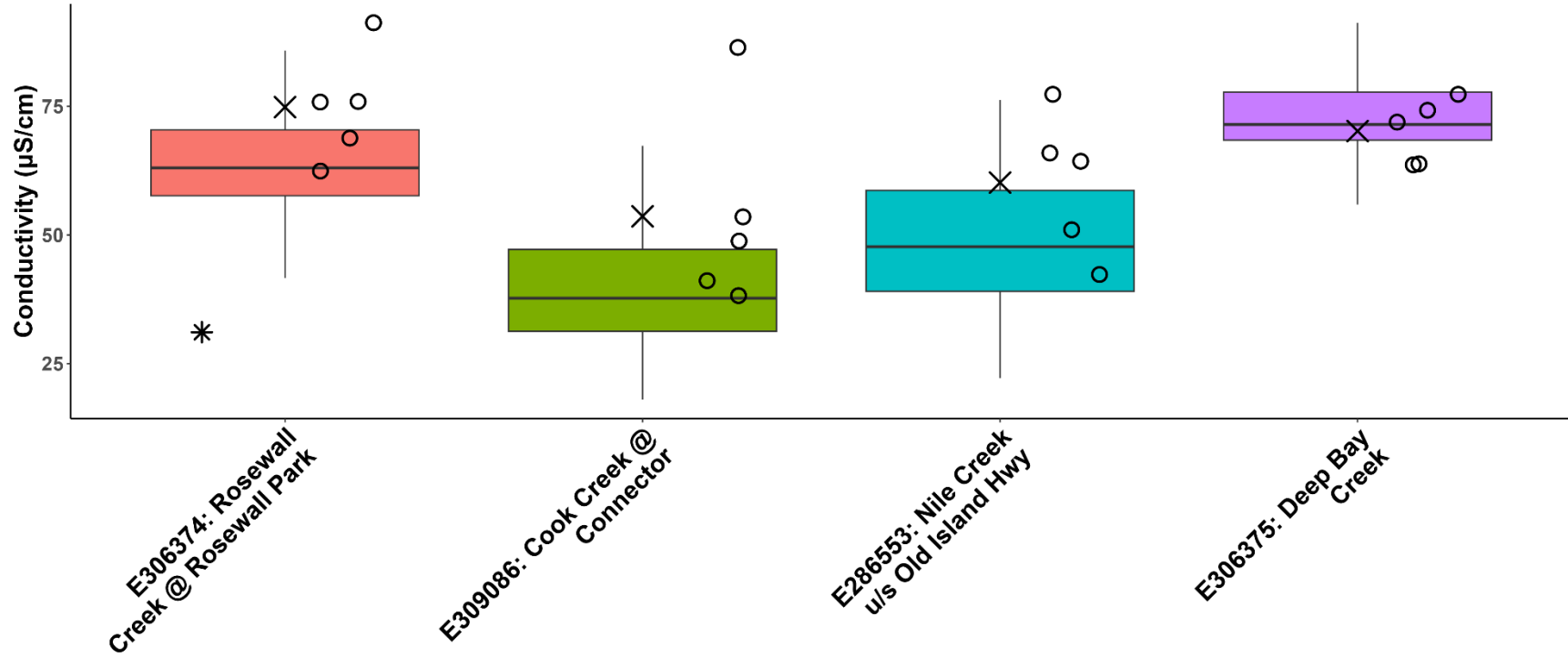
* Outlier 2011-2021
◎ 2022 Samples
✕ 2022 30-Day Mean

Fanny Bay Salmonid Enhancement Society 2022 Monitoring Sites

DEEP BAY DR

E306375

Rosewall Creek

E306374

McNaughton Creek

Cook Creek

E309086

Chef Creek

Sandy Creek

GAINSBERG RD

SHORE LINE DR

SEAVIEW DR

THOMPSON CLARKE DR W

OCEAN TRAIL

FAYE RD

JAMIESON RD

MAPLE GUARD DR

THOMPSON CLARKE DR E

ISLAND HIGHWAY WEST

COOK CREEK RD

CROSLEY RD

COWLAND RD

ANDERSON AVE

INLAND ISLAND HIGHWAY

ames Creek

BOVANIS RD

STEAD RD

CREEKSIDE DR

E286553

CHARLTON DR

LINX RD

Status

⬡ Active

⬡ Not Active

— Watercourse (approximate location)

2020 Air Photo

Community Park

0 200 400 800 Meters

July 2022

N

REGIONAL DISTRICT OF NANAIMO