



2018

STATE of the **LAKE** and **Ecosystem Indicators Report** for Lake Champlain



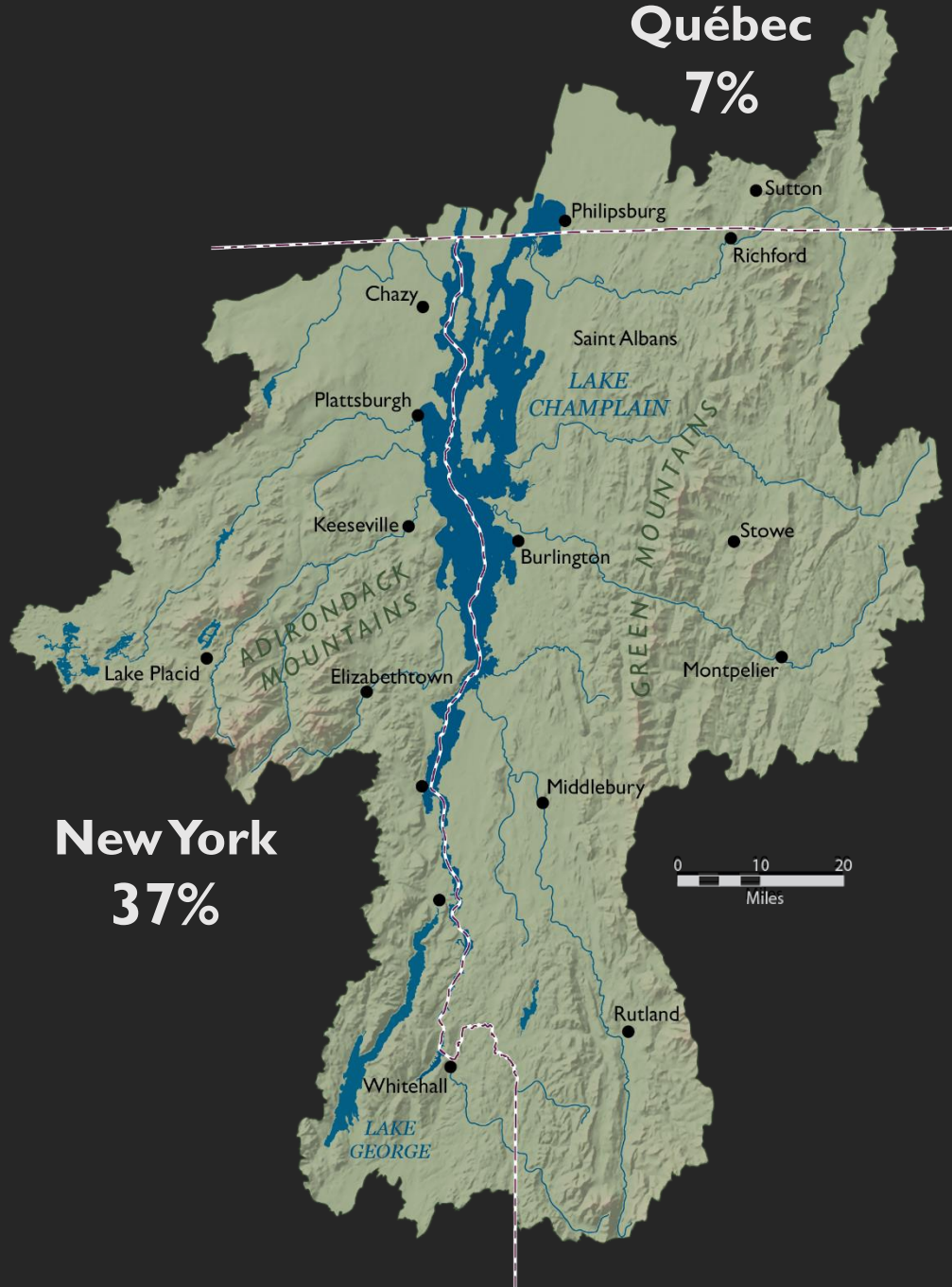
Photo: Perri Siverhart



Québec
7%

Vermont
56%

New York
37%



Inside cover

Pressure State Response Model





Photo: LCBP

5 Lake Segments

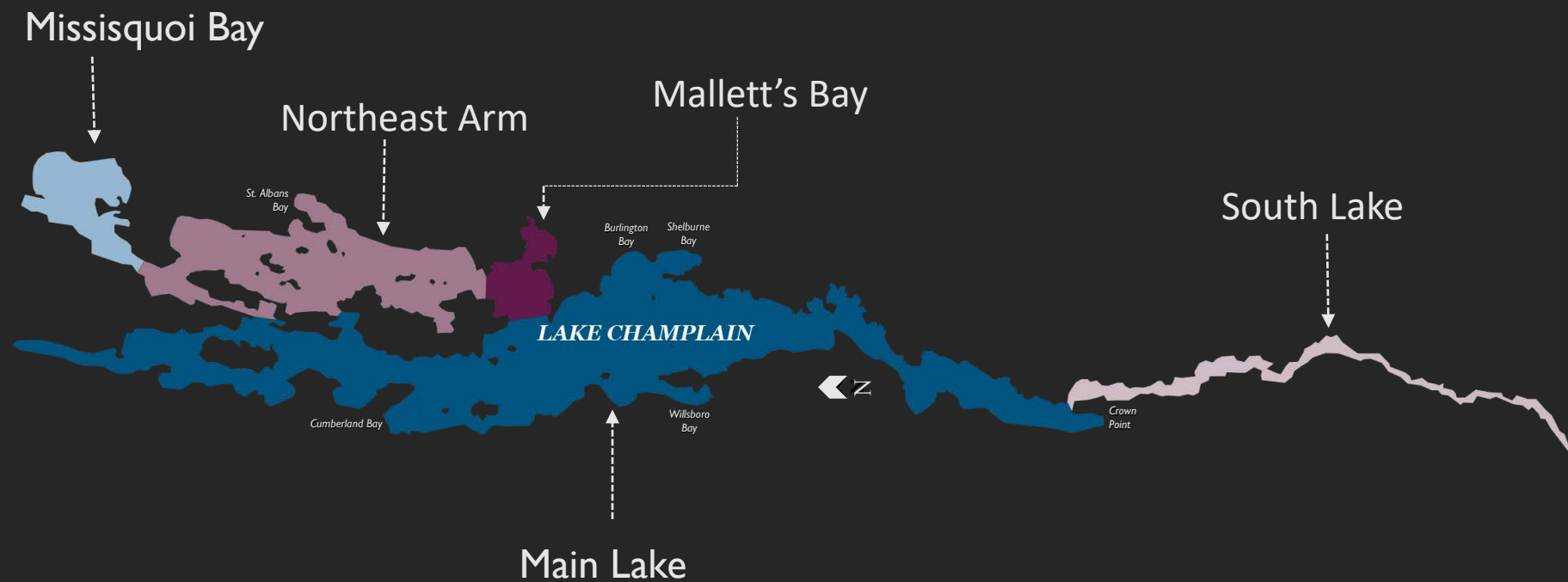




Photo: LCBP

Clean Water





Photo: LCBP

Public beach closures on Lake Champlain, 2015-2017



STATUS

Closures between Memorial Day and Labor Day



GOOD:

Closed 0-5 days



FAIR:

Closed 6-19 days



POOR:

Closed 20+ days



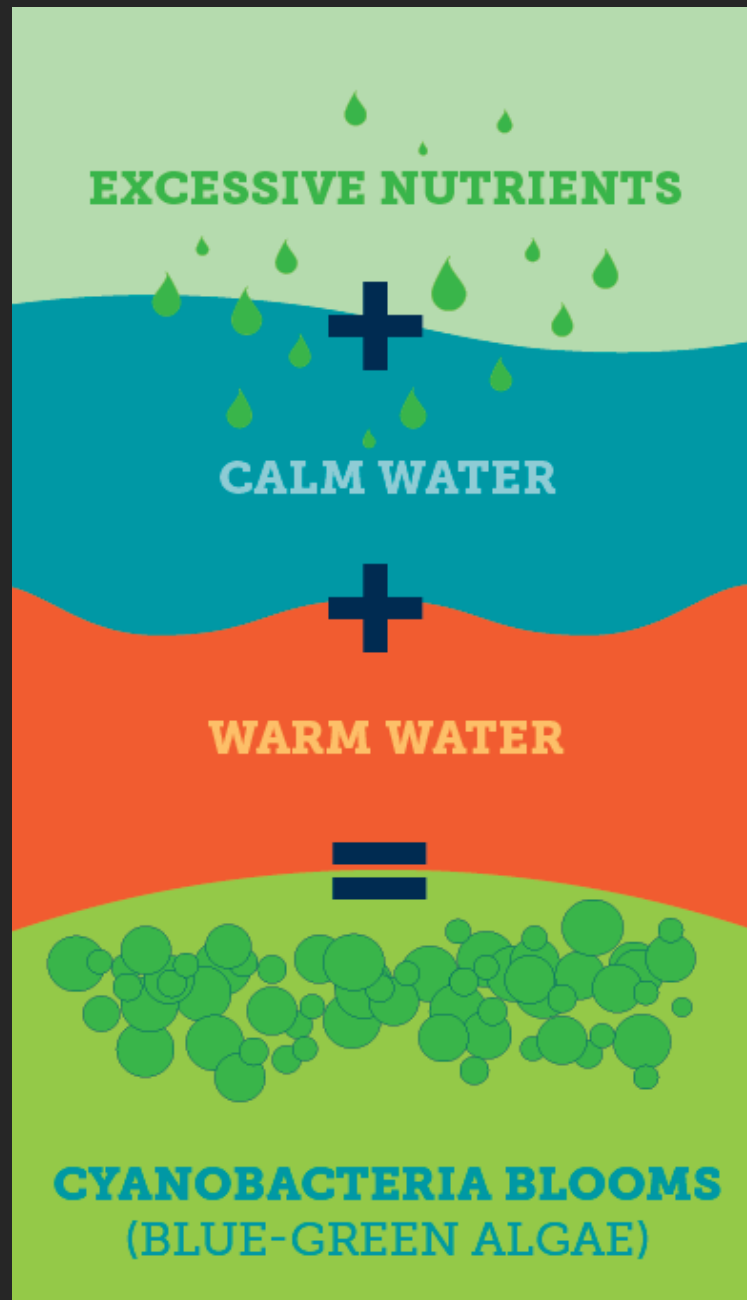
*Cyanobacteria
closure*



*Coliform bacteria
closure*

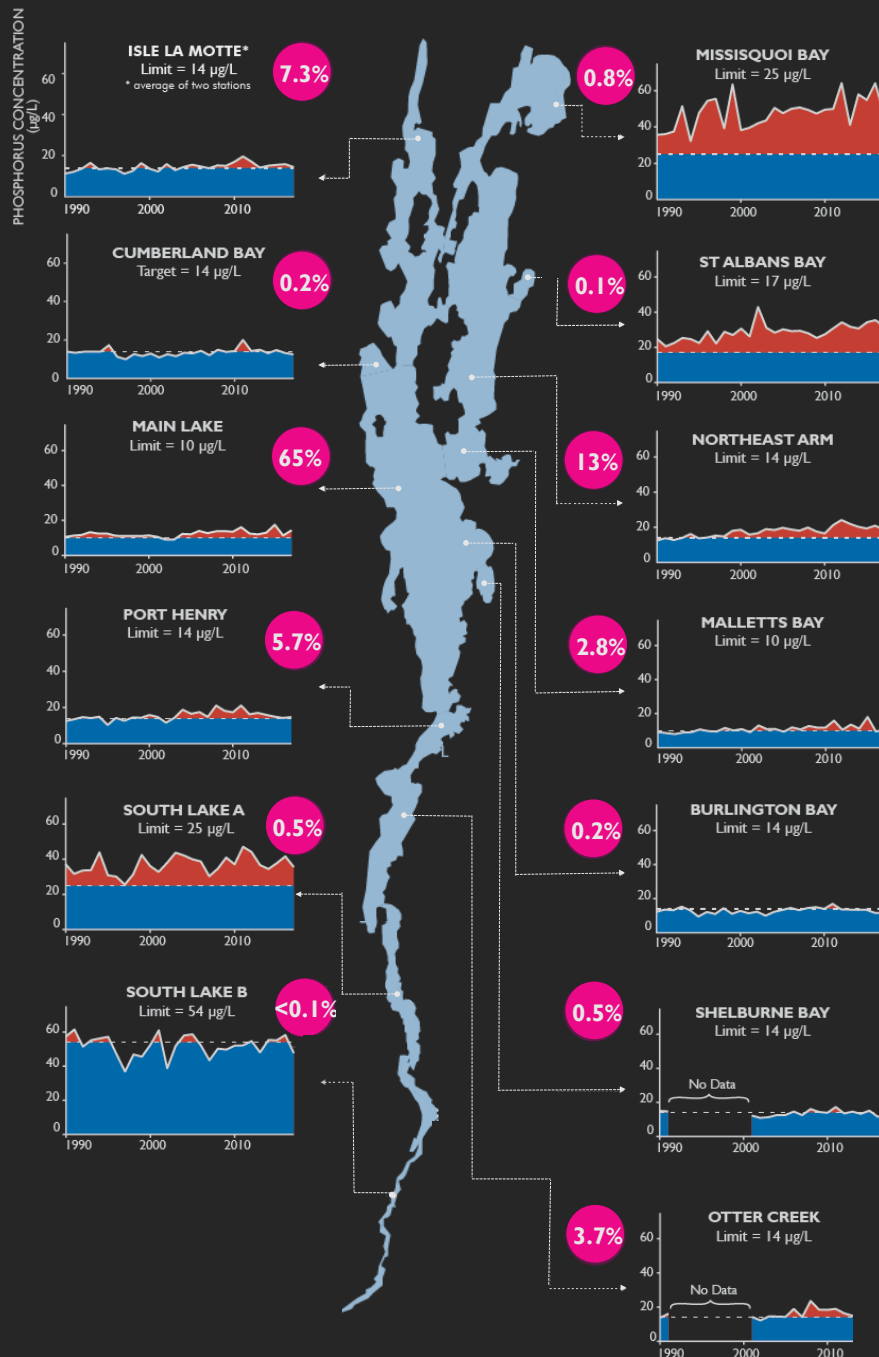


Photo: LCBP

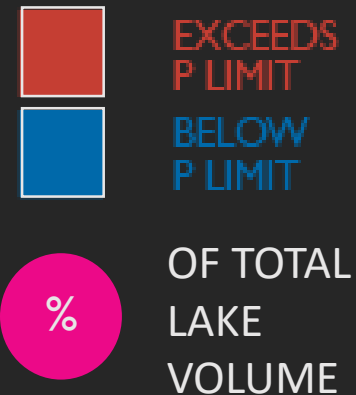




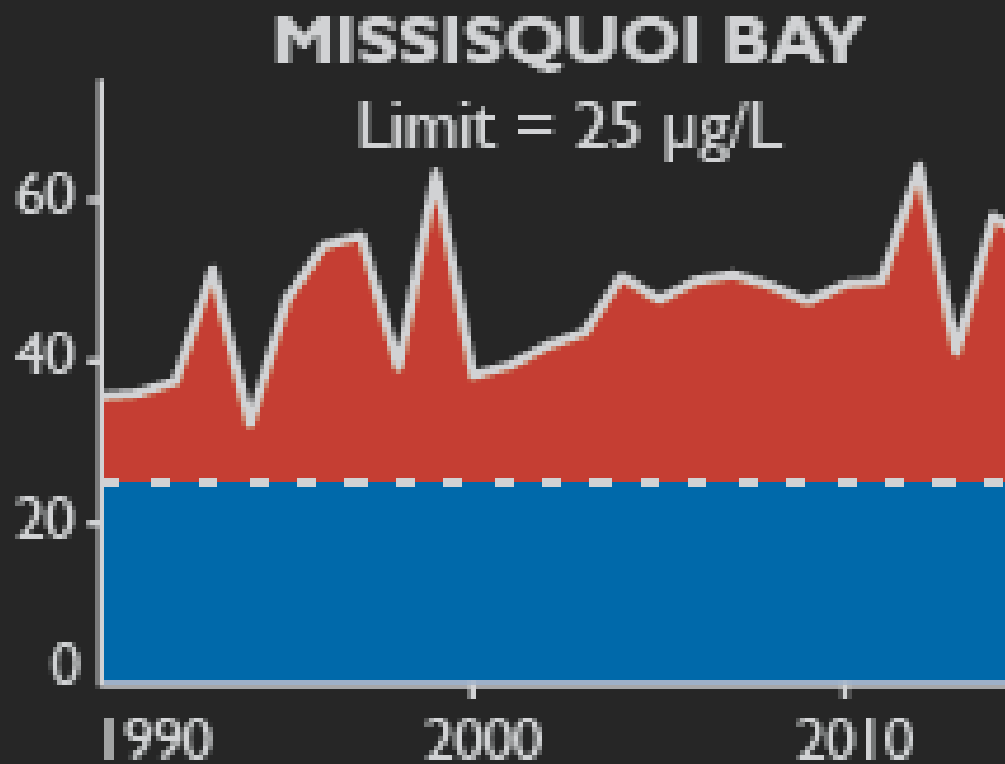
Annual mean phosphorus concentration, 1990-2017



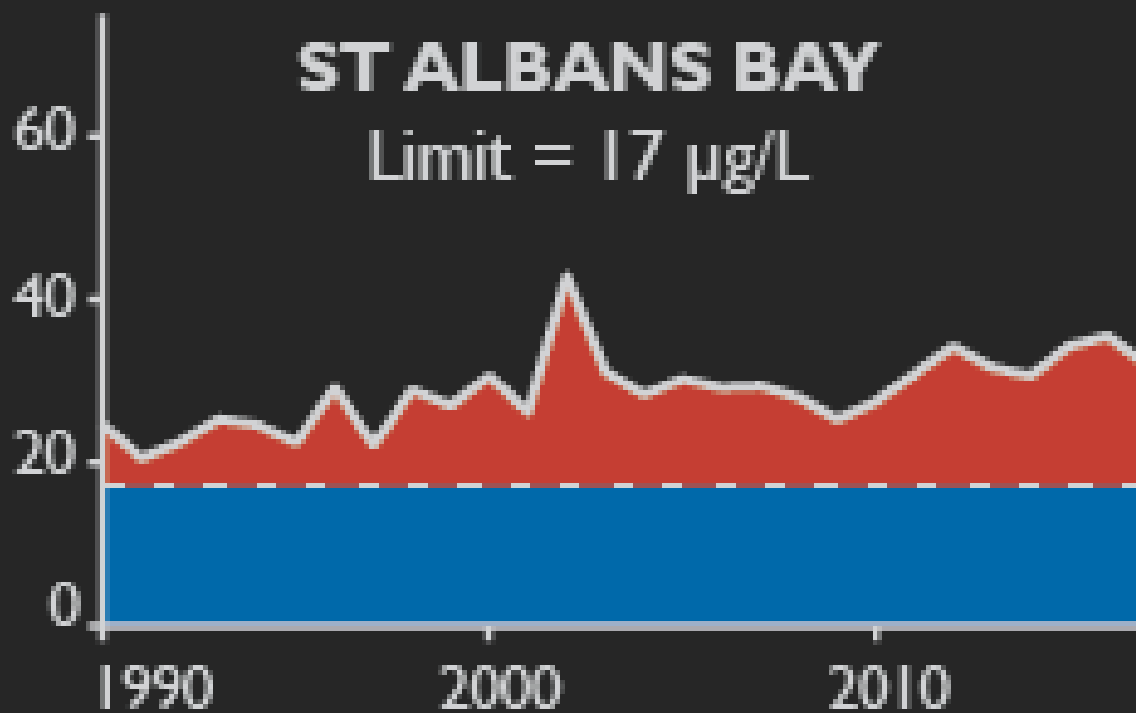
KEY



PHOSPHORUS CONCENTRATION
($\mu\text{g/L}$)



PHOSPHORUS CONCENTRATION
($\mu\text{g/L}$)



RAISE the BLADE

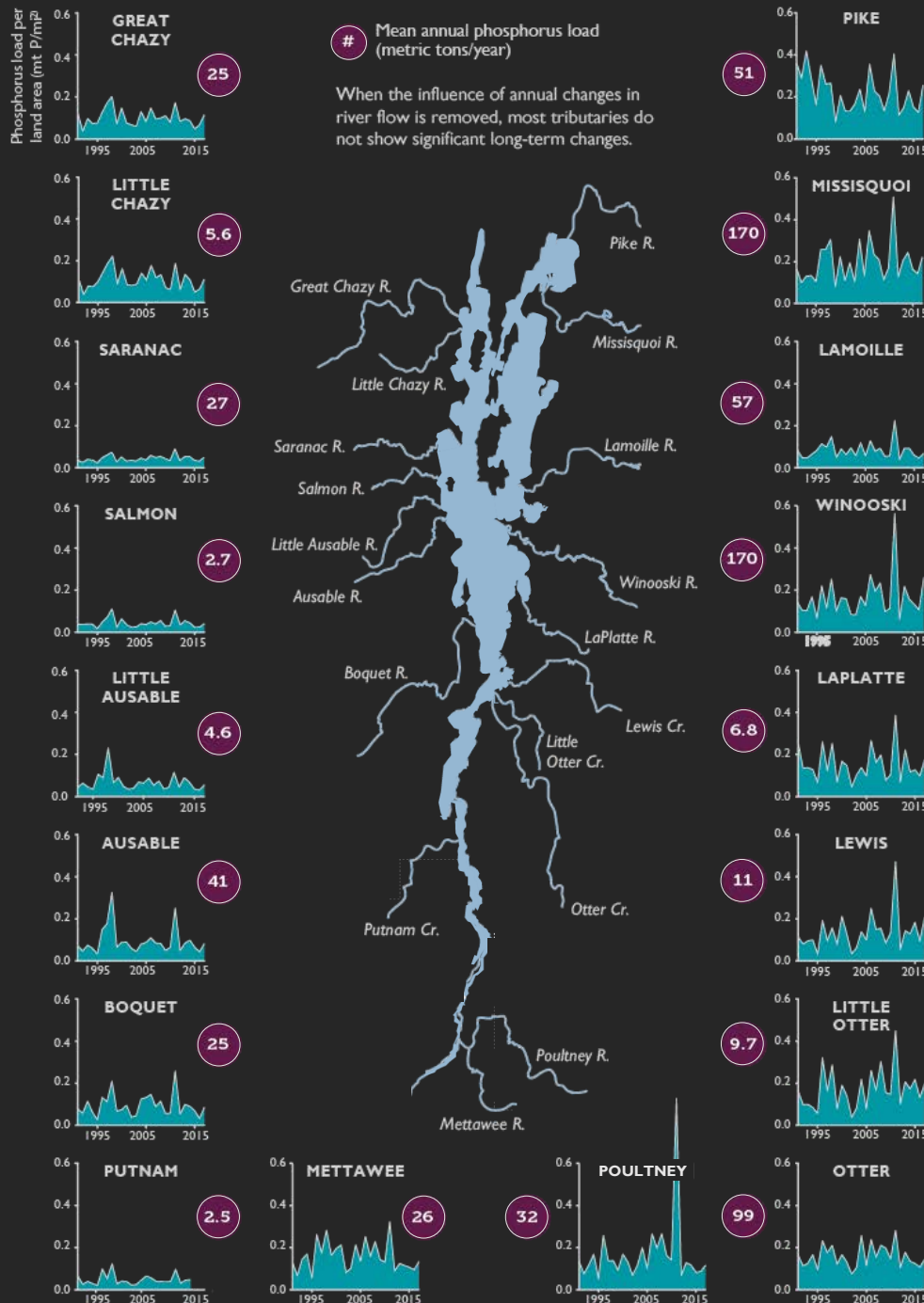


Runoff Volume



Photo: LCBP

Annual tributary loading, 1990-2017

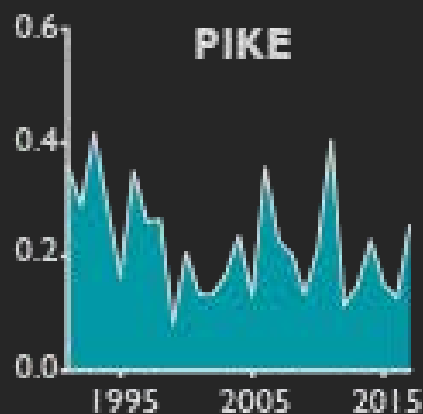


us load

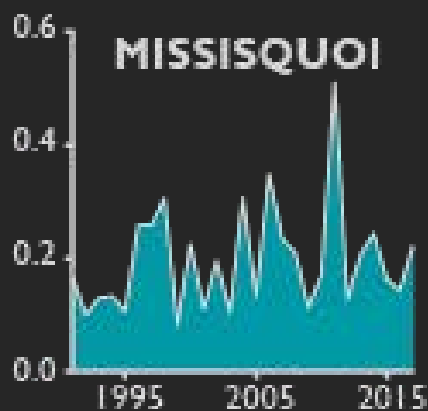
l changes in
tributaries do
m changes.



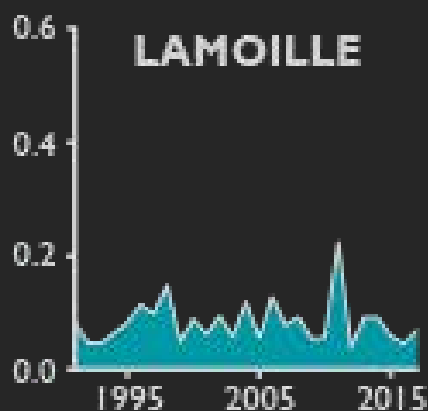
51



170



57

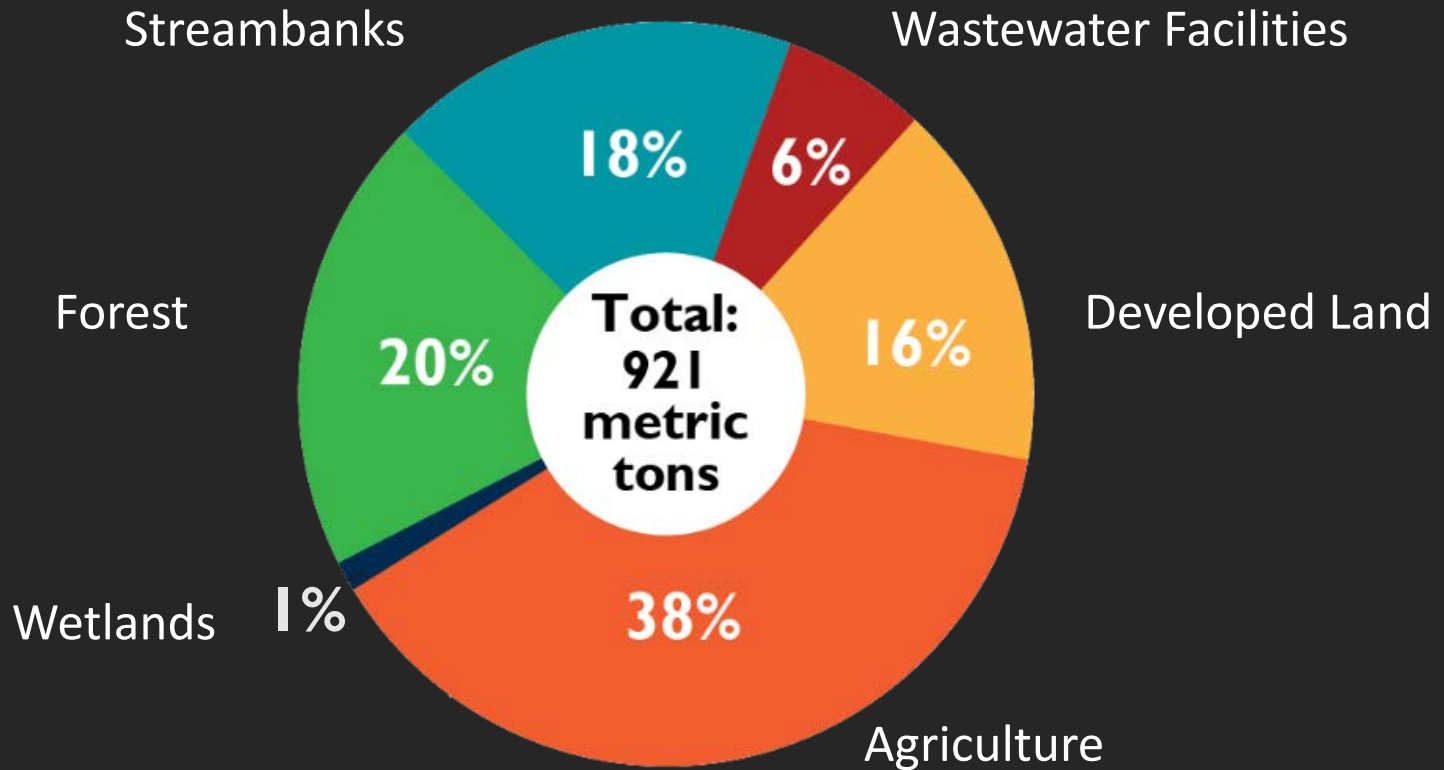


Annual tributary loading, 1990-2017



Photo: LCBP

Annual phosphorus loading and land cover

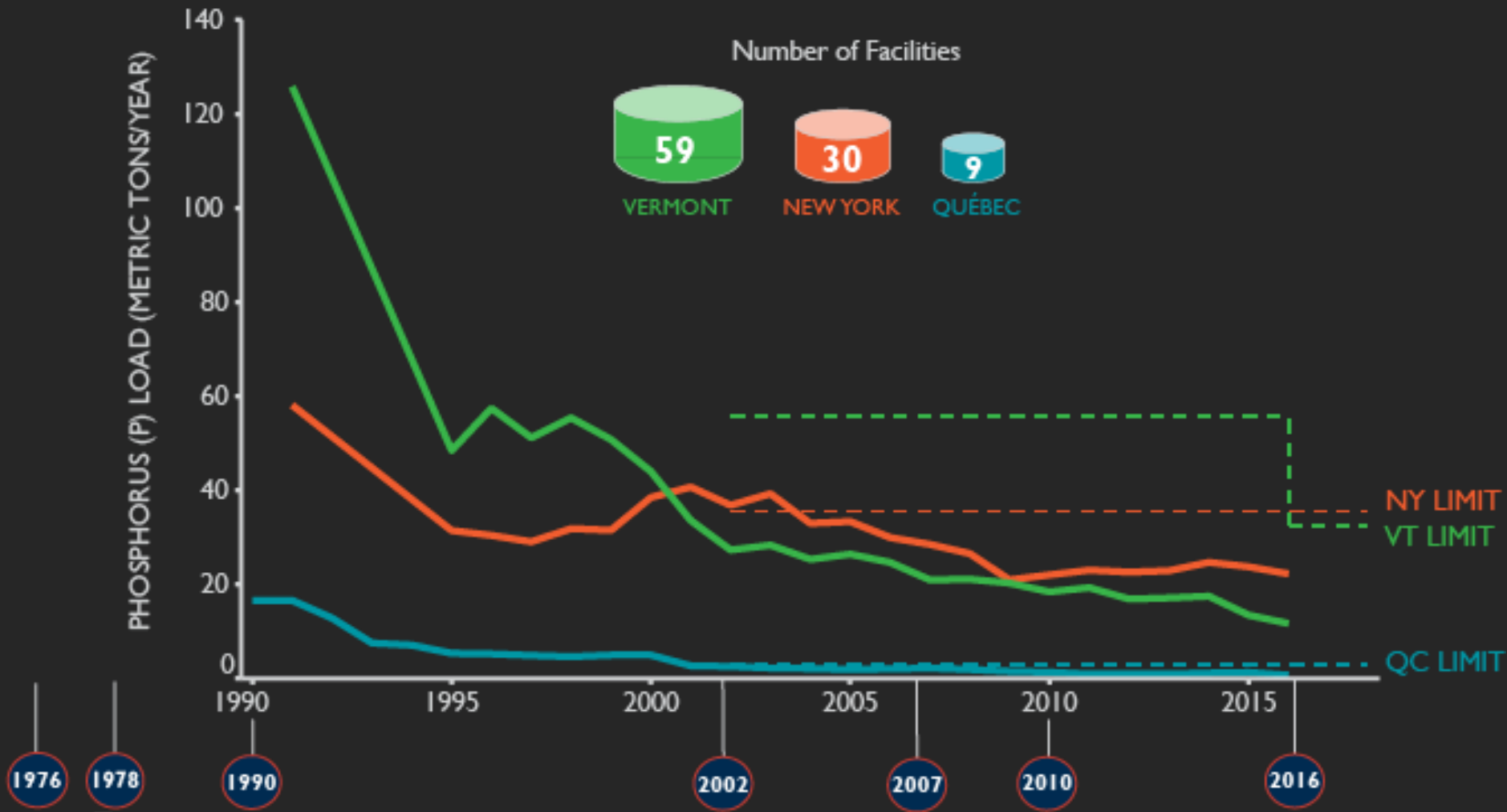


Load



Photo: Stone Environmental, Inc

Phosphorus load from wastewater treatment facilities, 1990-2016



Dive in: What you can do



Flushable wipes
are not flushable!



Photo: Rosalia Project

Dive in: What you can do



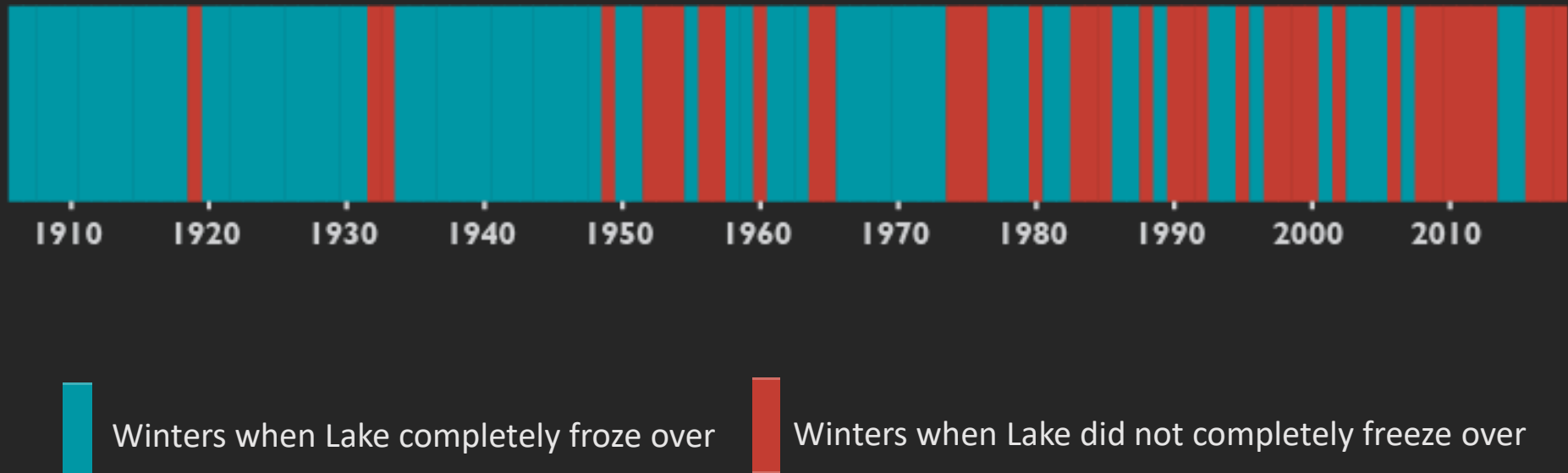


Photo: LCBP





Freeze-over of Lake Champlain, 1906-2016





ATTENTION ANGLERS!

WE NEED YOUR HELP TO GAIN MORE
INFORMATION ON WINOOSKI RIVER
TROUT AND SALMON FISHING

Please fill out the survey inside when
done fishing. Your input is important
even if you did not catch any fish.

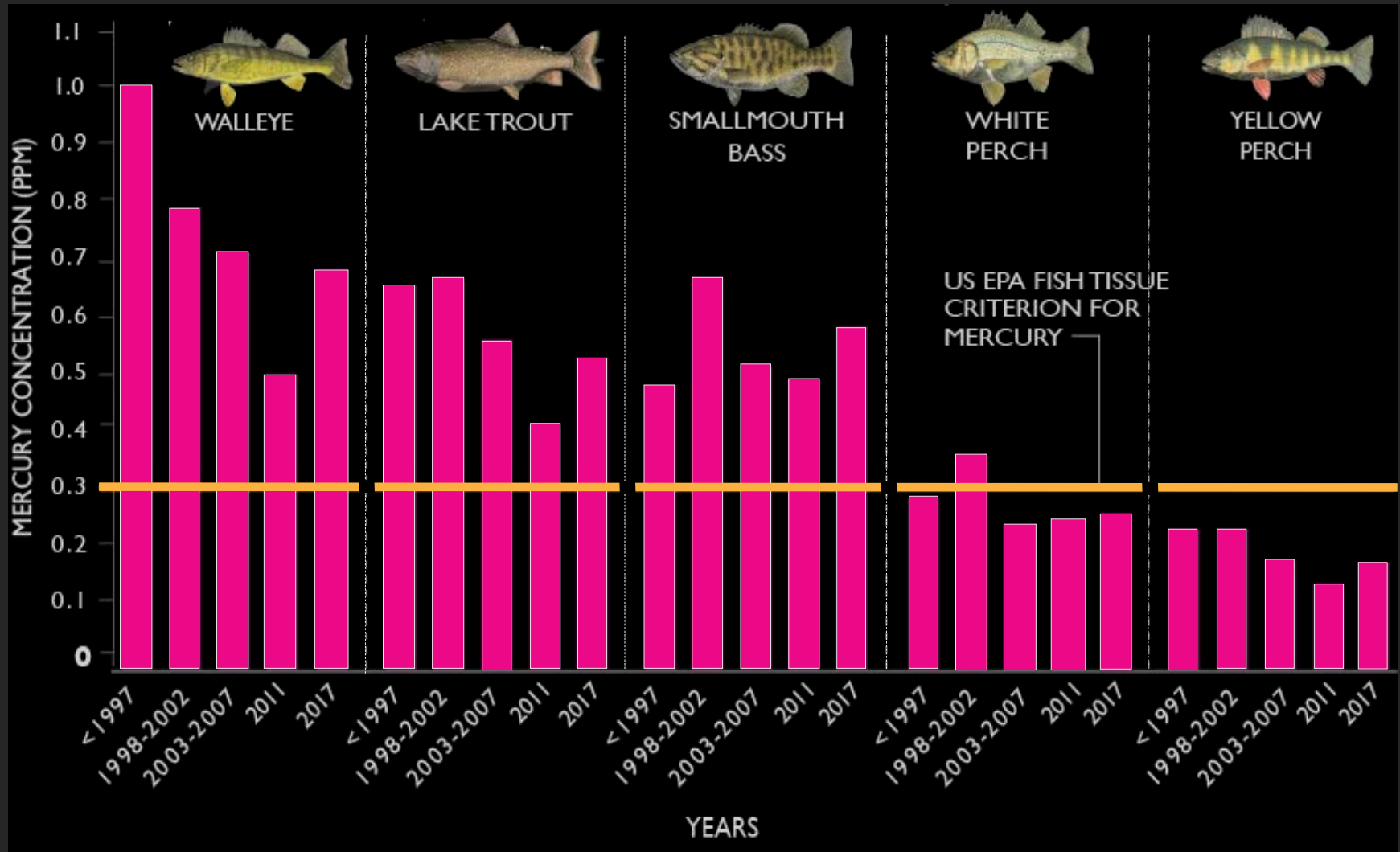
THANK



WINOOSKI

Photo: USFWS

Mercury concentration in fish tissue



Dive in: What you can do



Don't trash toxics

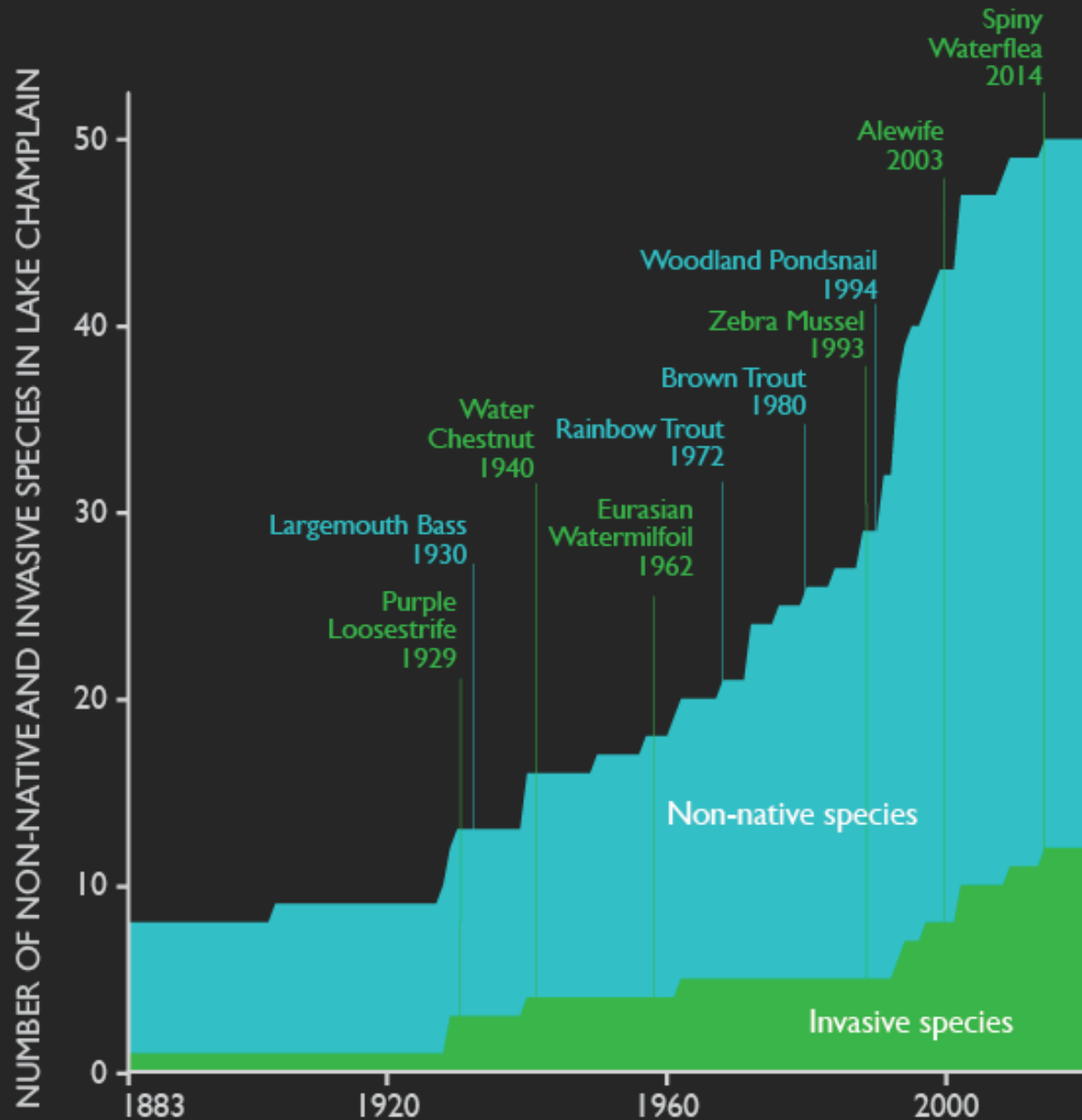


Photos: iStock

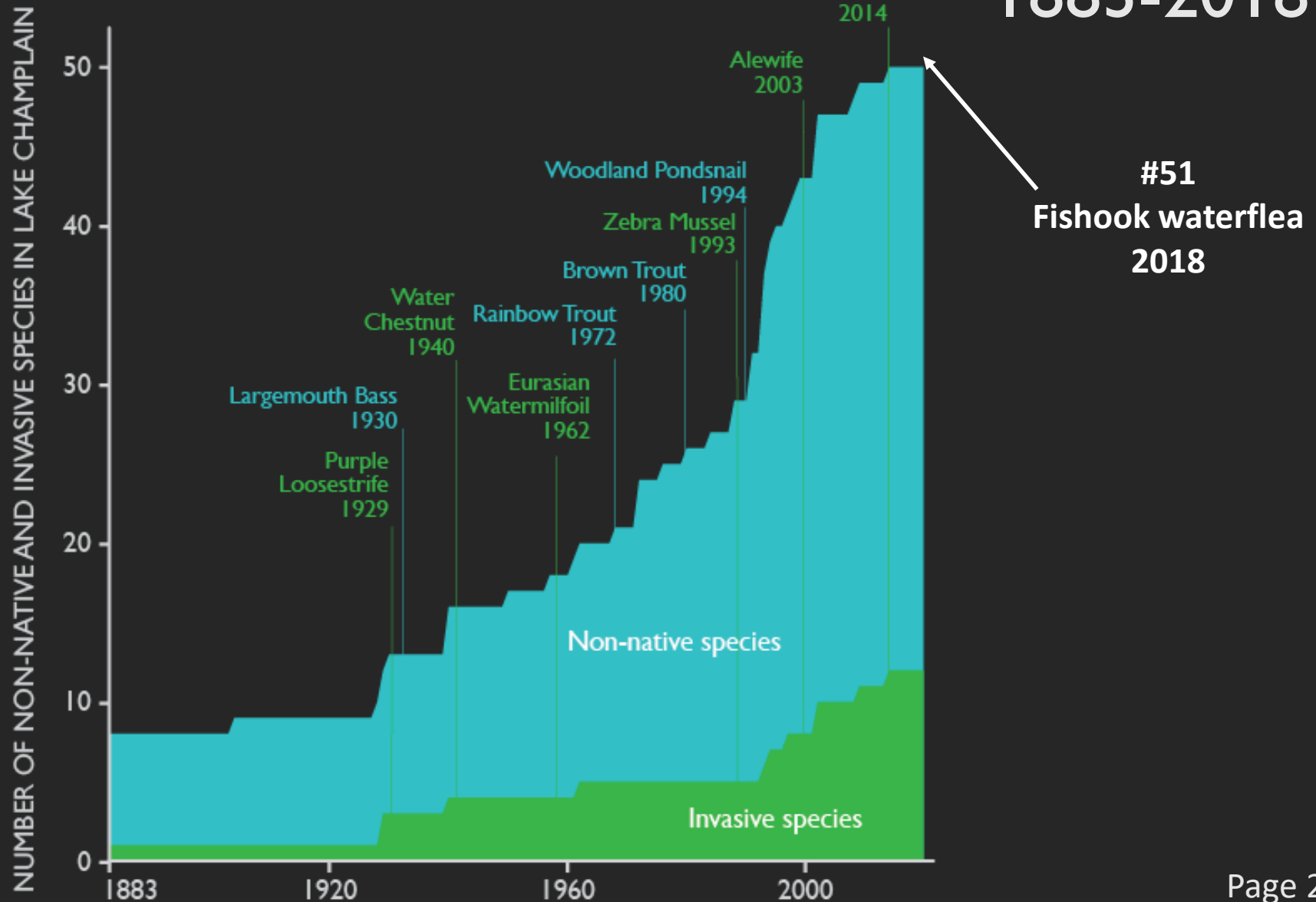


Photo: Vic Putman

Aquatic non-native and invasive species, 1883-2018



Aquatic non-native and invasive species, 1883-2018





Photos: (clockwise from top left) University of Florida, Ellen Marsden, USFWS Minnesota DNR

Non-native threats to Lake Champlain Basin from connected waterways

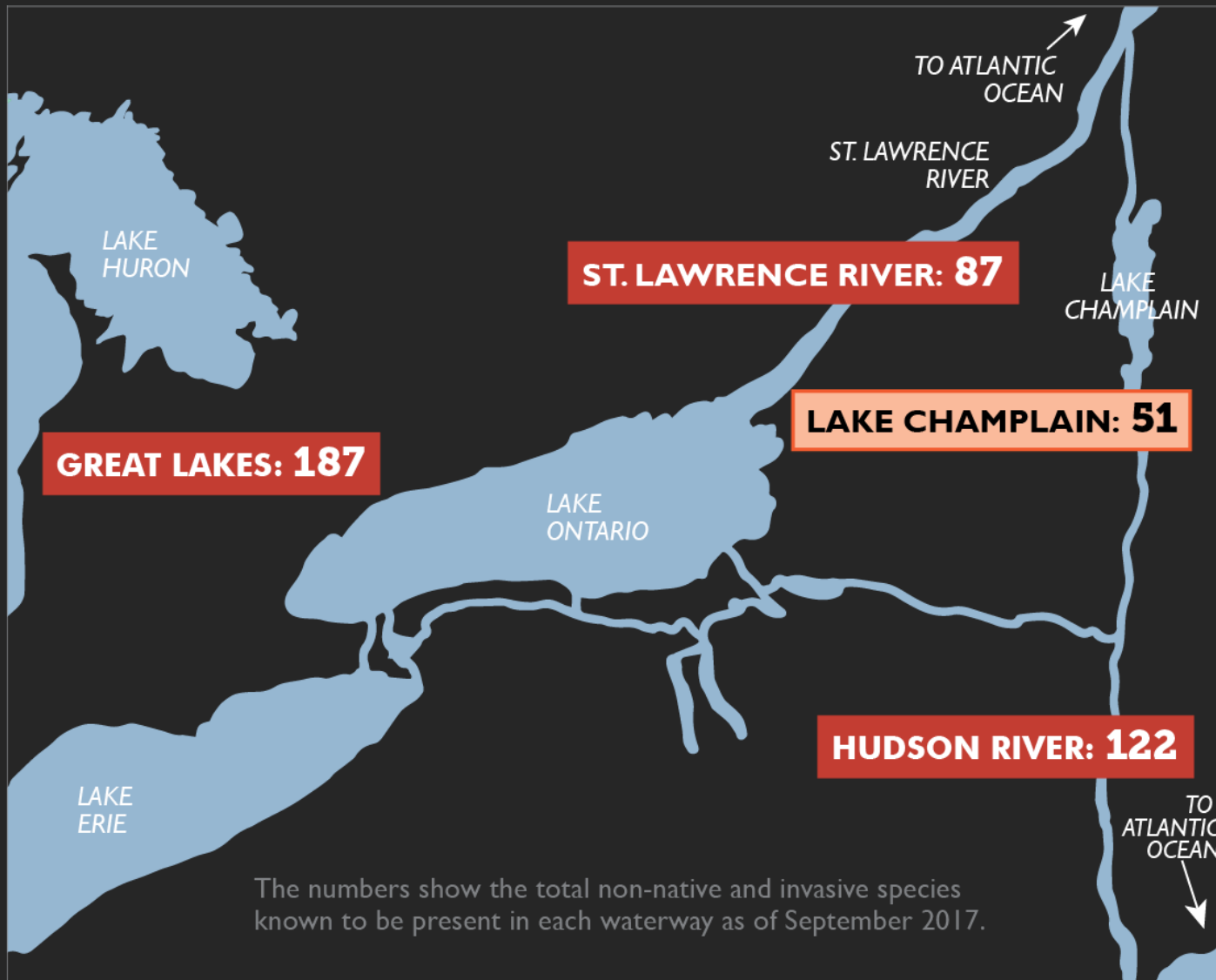




Photo: LCBP

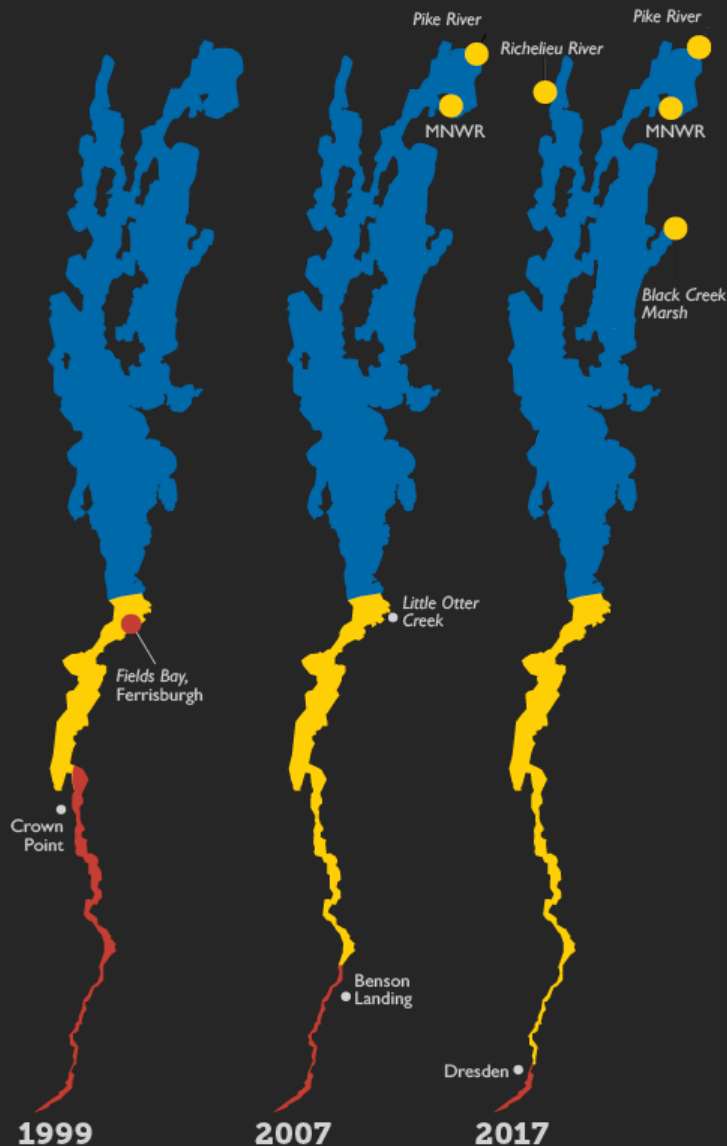


Photo: OBVBM



Photo: Martin Mimeault

Extent of water chestnut coverage



MISSISQUOI BAY



NORTHEAST ARM



MAIN LAKE



SOUTH LAKE

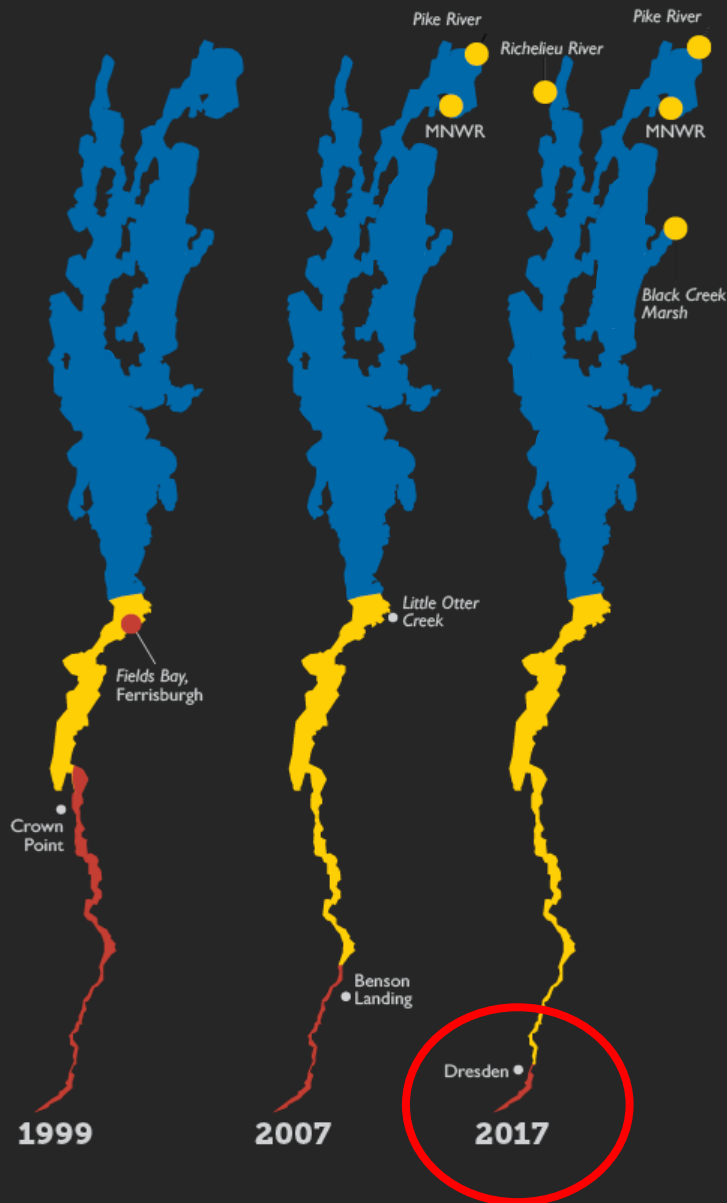


GOOD

FAIR

POOR

Extent of water chestnut coverage



MISSISQUOI BAY



NORTHEAST ARM



MAIN LAKE



SOUTH LAKE



GOOD

FAIR

POOR

Dive in: What you can do

clean



drain



dry





Photo: LCBP



Photo: LCBP





Photo: Wildlife Management Institute

THE ECONOMIC IMPACT OF CLEAN WATER



Lake Champlain generates
\$300 MILLION
in VT tourism every year



water quality
improves



water quality
decreases



Secchi disk depth measures the clarity of water,
which is an indicator of water quality.

Tourism



+10%

higher seasonal
room rates for towns
with lake-dependent
tourism



-\$16.8 MILLION*
July/August



Lost Jobs*

195

👤 = 10 full-time jobs

* Projected impacts with
a 3 ft (1 m) decrease
in water clarity

Home Values



+\$15,200

if water quality
standards are met



3%*

year-round
homes



37%*

seasonal
homes



New and improved cartop boat access sites, 2015-2018



Dive in: What you can do



Help the next generation of lake stewards get involved

Dive in: What you can do



Join a watershed group

Photo: Scott
Staples

Dive in: What you can do



Help the next generation of lake stewards get involved

Grant

Thank you!

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