

# Dams trap sediment in the Saskatchewan River Basin

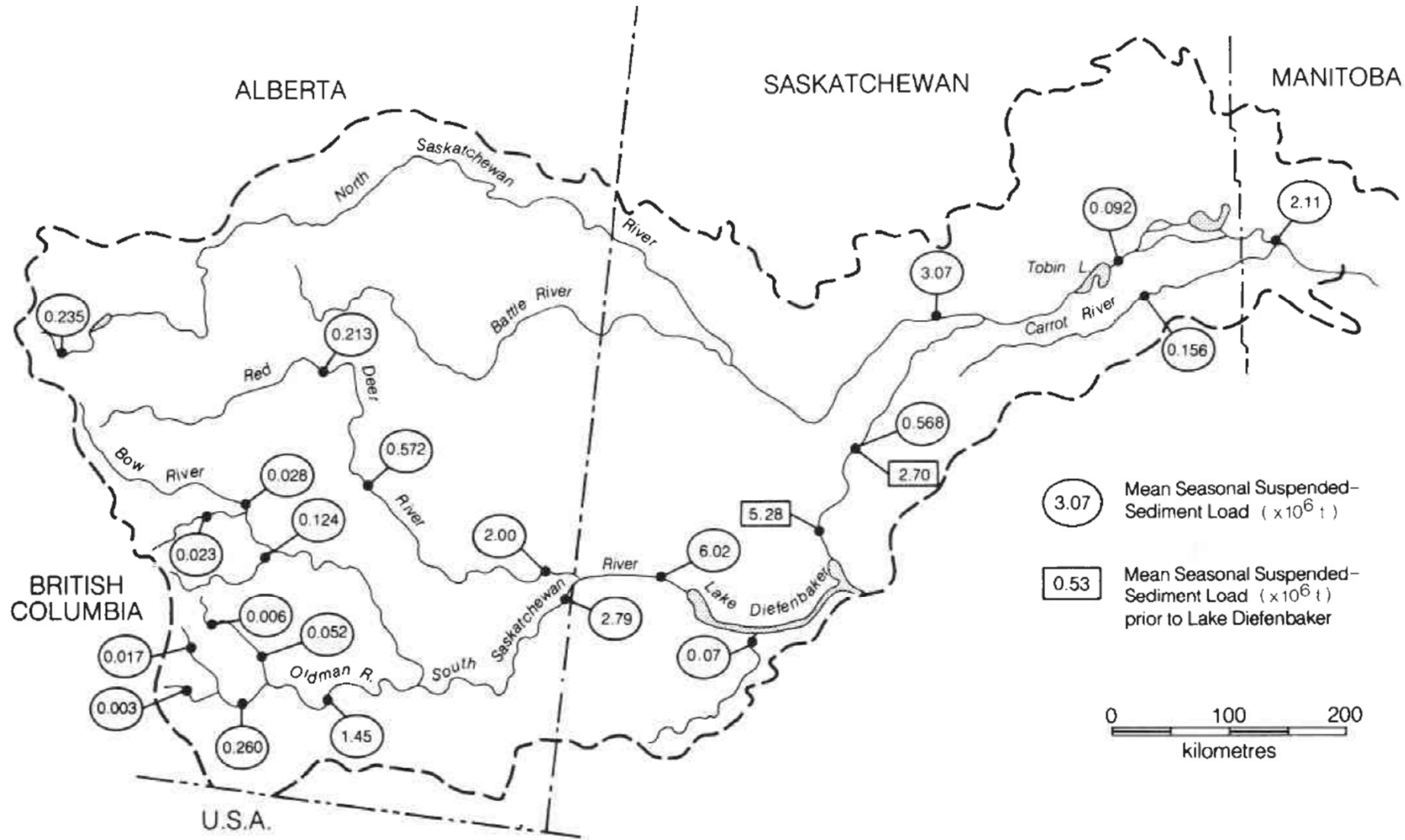
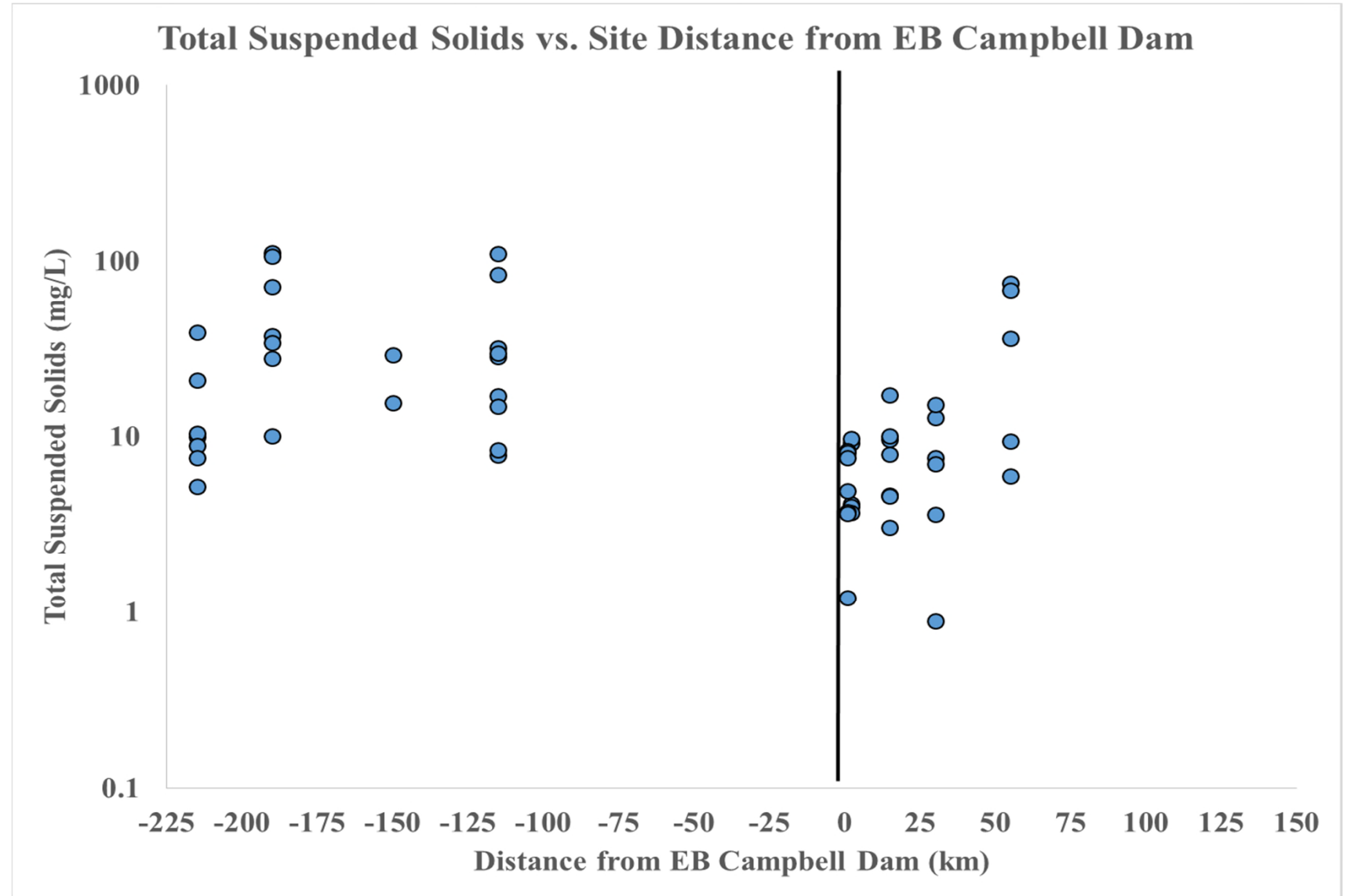


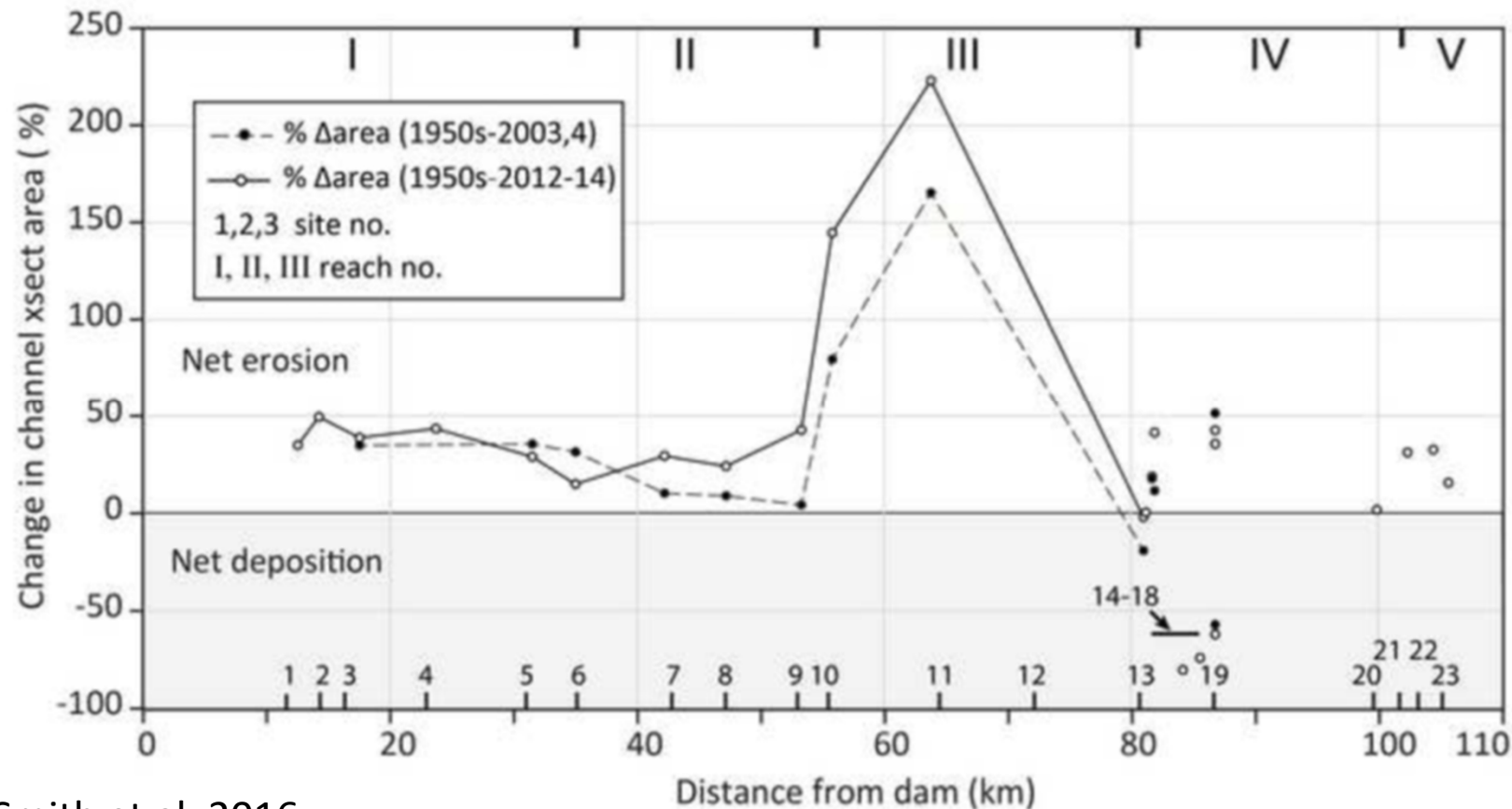
FIG. 3. Mean seasonal suspended-sediment load at Water Survey of Canada sediment stations.

About 1000 tonnes (40 dump truck loads) settles out in Codette Lake every day

Water coming out of the dam is clearer than water at upstream sites



The clear water coming out of the dam scours the bottom of the river, making it wider and deeper

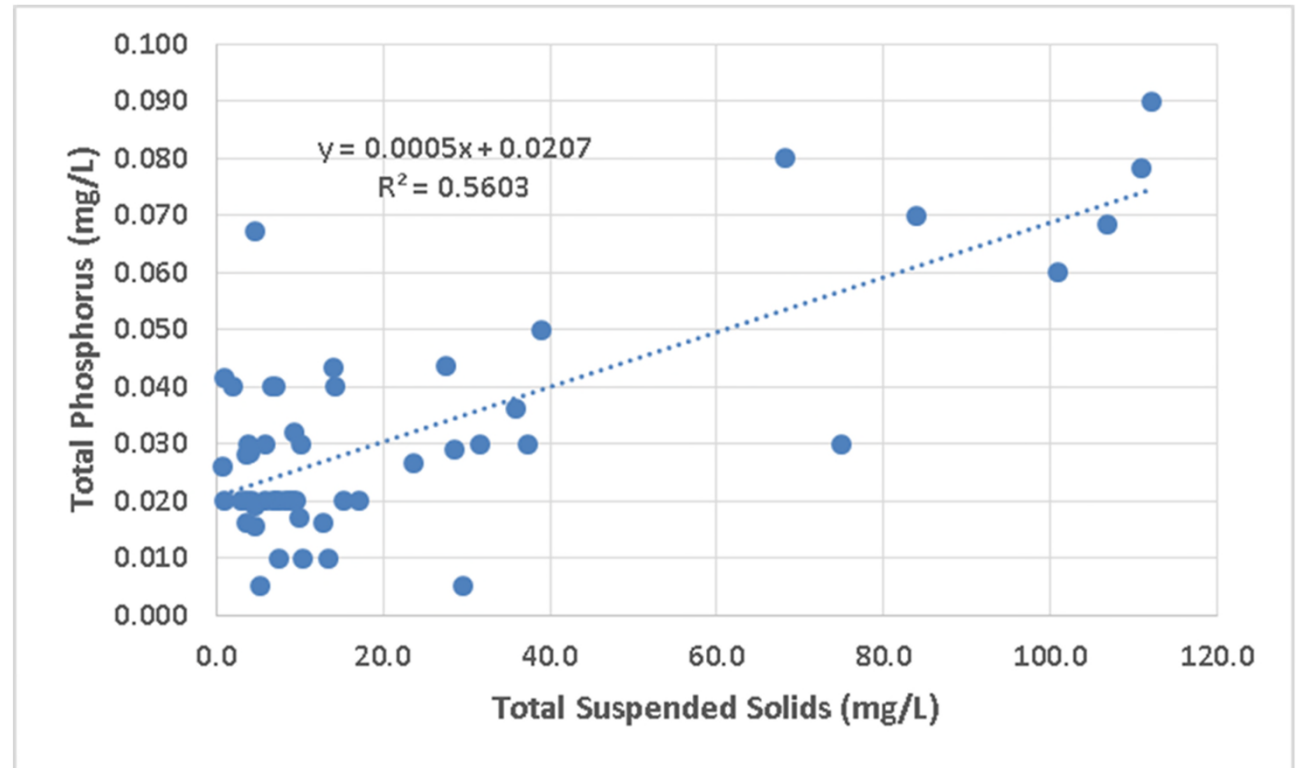


Smith et al. 2016

Over the long term, this will continue to cut off wetlands and side channels from the river. In other parts of the world, sediment is put back in the river to prevent this from happening

# There are good things and bad things that get carried along with sediment

- Good things
  - Nutrients (fertilizer) that will keep the wetlands productive
    - phosphorus
- Bad things
  - Pesticides
  - Mercury and other metals
- We need to test the sediment before we think about putting it back in the delta



# The plan

- Talk with elders
  - How do they remember floods and sediment
- Test the sediment
  - For good (nutrients) and bad (pesticides, metals, other chemicals)
- Build a computer model
  - Will tell us where sediment will get carried and where it will drop if:
    - We add sediment
    - A weir gets built
    - Less water comes down the river
- See if the model works
  - Field collections with land users (paid for their time)
- Based on the information, the Stewardship Committee will make recommendations to leadership