

# Installation of small-scale filtration systems



**Interreg**  
**Estonia-Latvia**  
European Regional Development Fund



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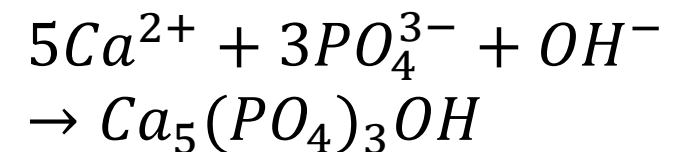
Pärnu

26.02.2020

# Locations of filtration systems



ID	Filtering material	Land use	Concentration of phosphorus (mg L <sup>-1</sup> )	
			PO <sub>4</sub>	Tot-P
1	Dolomite (16 – 32 mm)	Agriculture	0.15	0.35
2	Dolomite (12 – 16 mm) and Nordkalk™ calcium hydroxide granules	Agriculture, animal husbandry	0.10	0.13
3	Dolomite (12 – 16 mm)	Agriculture	0.13	0.16
4	Dolomite (16 – 32 mm)	Agriculture, forestry	0.12	0.26

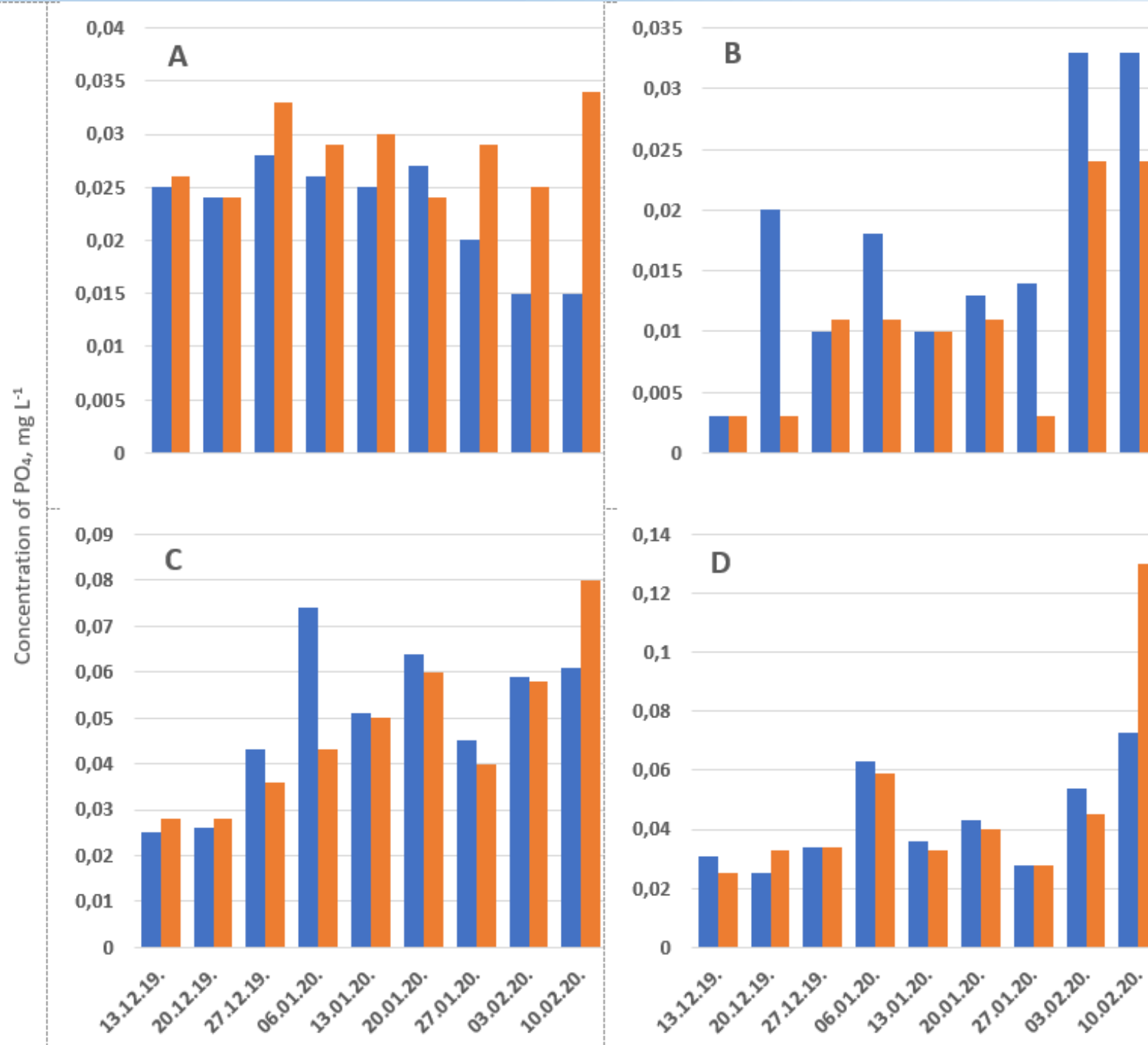




# Filtration systems on ditches near Burtnieks



# Results



# Conclusions

## Effectiveness - fraction, material, season

- The results show that the efficiency of the filters is mainly influenced by the filtration material chosen
- The best results are provided by Filter # 2, whose filter material consists of a mixture of dolomite chips (12 - 16 mm fraction) and calcium hydroxide granules
- The performance of the filters was adversely affected by the heavy rainfall. Under these conditions, the water flowing into the ditch is only partially filtered
- The resulting decrease in phosphorus load after installation of filters to Lake Burtnieks is not more than 2% of its total phosphorus load.
- In order to be able to objectively evaluate the performance of the filters, it is necessary to continue monitoring for the rest of the year 2020

# Benefits

- + Simple construction, easy maintenance
- + Locally and financially available filtration materials
- + Does not generate waste, dolomite chips can be re-used in construction works

# Flaws

- Bureaucracy
- Variable efficiency
- Limited duration
- Relatively few suitable places for installation available
- Very little effect on large water bodies

# THANK YOU!

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