

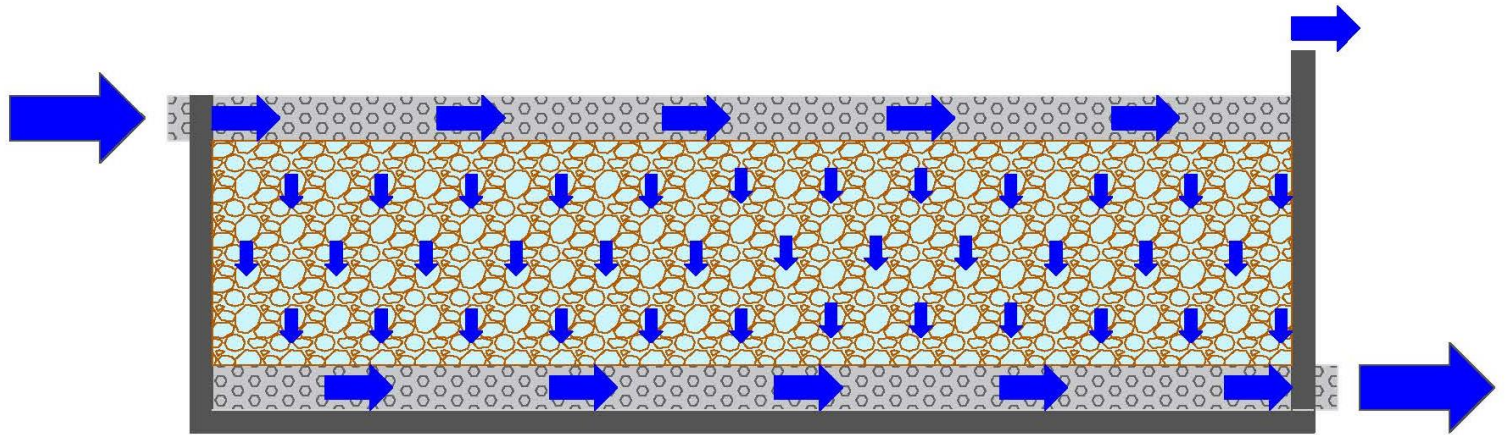
# A Dissolved Phosphorus Filter

Testing for Alberta Conditions



# Oklahoma State University

- Research on landscape scale filters to remove dissolved Phosphorus
- Removal by flowing runoff water down through the filter media
  - Iron slag, acid mine drainage treatment residuals



- Filter media has a functional life and must be replaced when spent

# OK Farm Site



# Filter Inlet



**Outlet**





# Golf Course Site



# 15 Phrog

Phosphorus Removal Online Guidance™

- **Software developed by OSU to design filters**
- **Type of structure (bed, box, ditch)**
- **Water volume**
- **Peak flow**
- **Dissolved Phosphorus concentration**
- **Filter material properties**
  - Hydraulic conductivity
  - Phosphorus binding capacity



# Demonstration Site

An aerial photograph of a rural landscape. A winding stream flows through the center of the image. The surrounding land is a mix of brown and green, indicating agricultural fields and some vegetation. An orange arrow points to a specific location on the stream, likely the demonstration site mentioned in the text.

- **County of Warner obtained Growing Forward funding**
  - Staff from AF, OSU and NRCS
- **A site near Warner selected**
- **Other BMPs can be used at this site to reduce the amount of P in runoff**
- **Obtaining permits**
  - OSU license
  - Water license

# Testing Alberta Conditions

- **Larger watershed/ water volumes**
- **Filter media**
  - Access to useable waste products
  - Man-made product
- **Freeze/thaw effects**

