TRAINING MATERIAL

Sampling methods for the monitoring of the water quality parameters

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W a t e r sampling



Sampling procedure for the basic water chemical properties

- Identify the water source (i.e., irrigation system, water well, lake, etc..)
- Record the location as accurately as possible either by using the global positioning system (GPS) or a high-resolution topographic map



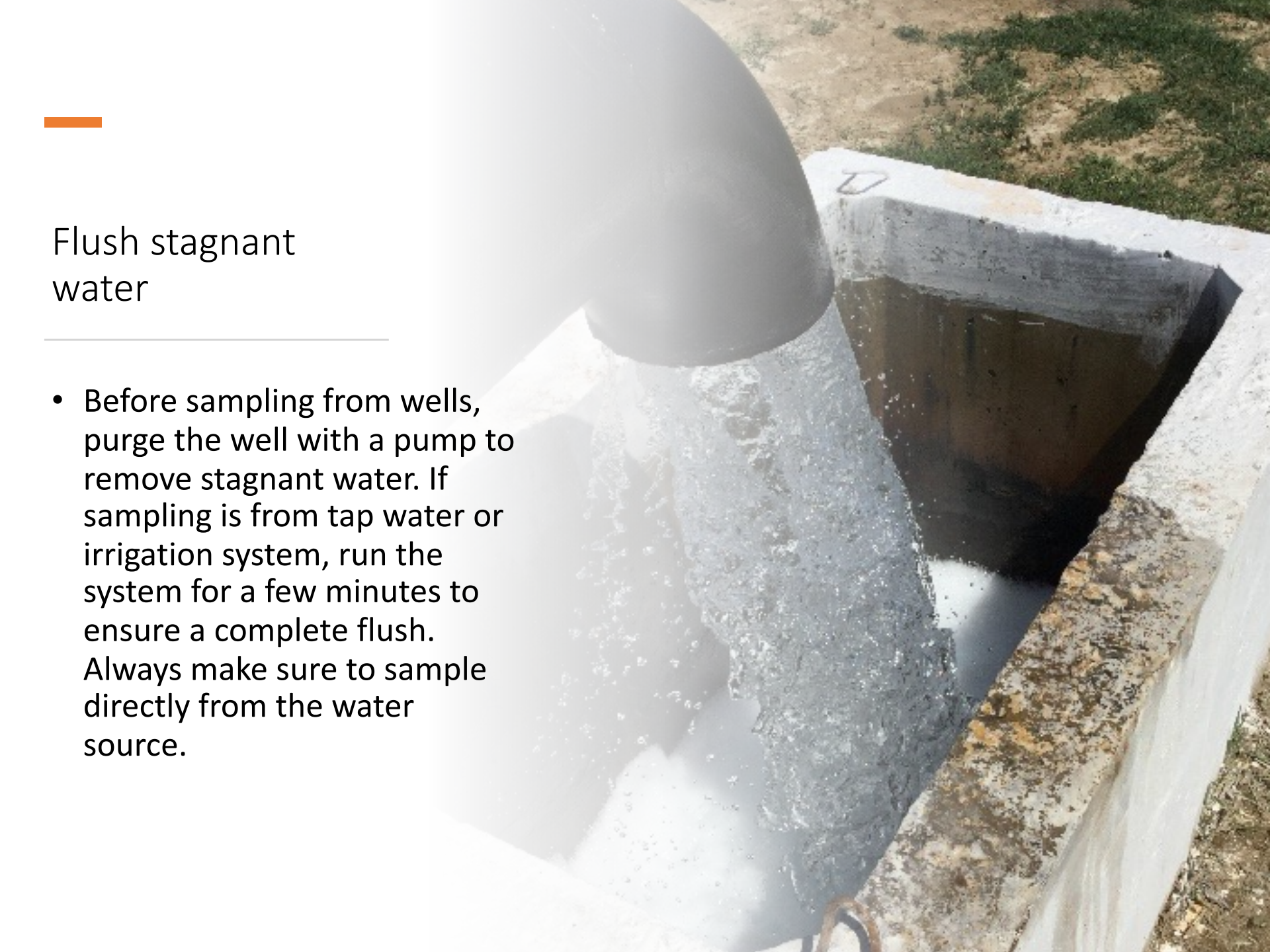
Measure well depth

- In case sampling is for water from well, it is better to measure the depth using either a measuring tape or commercially available electrical sounders and record the readings



Flush stagnant water

- Before sampling from wells, purge the well with a pump to remove stagnant water. If sampling is from tap water or irrigation system, run the system for a few minutes to ensure a complete flush. Always make sure to sample directly from the water source.



Conductivity and pH measurements

- Make sure that conductivity and pH electrodes are calibrated
- Rinse it with sampled water before the measurement.
- Pour the sample into a clean beaker, insert the electrode and wait for the reading to stabilize
- Record the reading in the sampling sheet along with other sample information



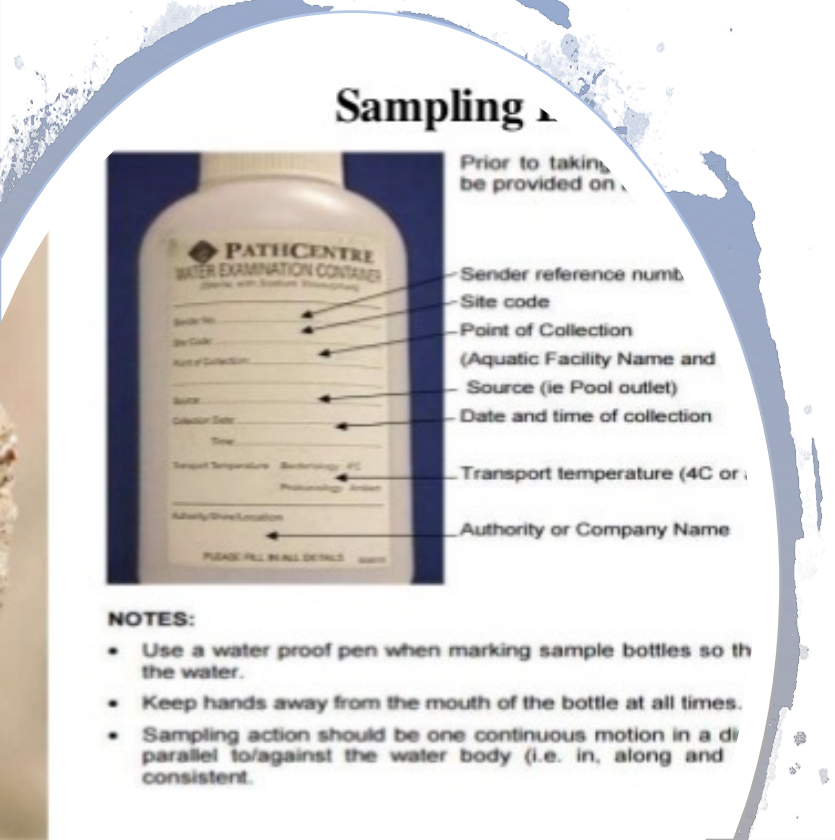
Sampling for hydrochemical composition (cations and anions)



- Prepare two analytical grade HDPE sampling bottles 125 ml
- Use the 0.45 µm membrane filter assembly for sample filtration.
- When the sample is filtered, pour the filtered sample into the sampling bottles.
- For cations, acidify the filtered water sample using a few drops of concentrated nitric acid. Close the lid and shake the bottle







Transferring samples to the lab

- Label the bottles carefully with the relevant information about the sample and complete the Chain of Custody form, indicating the analysis to be completed
- Pack the water sample with frozen ice packs in the cooler to keep it cold, seal the cooler with tape and transport it to the testing laboratory within 24 hrs of sampling.

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