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| Screening | Removes trash, rocks, animals, and other large debris |
| Because these objects would clog the filters and machinery used in the rest of the treatment process (does not affect water quality) AND their decay would deplete oxygen in the natural environment | Image result for wastewater treatment screening |
| Pumping | Moves water into aeration tanks |
| Because water can’t flow uphill (does not affect water quality) | Image result for wastewater treatment pumping |
| Aeration | Bubbles air into/agitates the water |
| Because oxygen is needed for the decay of small pieces of organic matter, and it separates the grit (sediment settles to the bottom to aid its removal) | Image result for wastewater treatment aeration |
| Sludge Removal | Removal of the organic matter that settled to the bottom of the tank |
| Organic matter can cause increased nitrates and phosphates, leading to algal blooms and then oxygen depletion | Gravity Belt Thickener |
| Scum Removal | Removal of floating materials (such as grease, oil, and soaps) |
| Because these items increase the turbidity of the water which would block sunlight from reaching plants AND would cause the temperature to increase, decreasing the dissolved oxygen | Image result for wastewater treatment scum removal |
| Disinfection | Addition of chlorine followed by neutralization of any excess |
| Because it kills the bacteria that could cause disease among wild animal populations | Image result for wastewater treatment disinfection chlorine |
| Residuals | Sludge is stored in tanks or buildings |
| Because bacteria need time to decay the organic material and remove disease-causing organisms | Image result for wastewater treatment biosolid storage |