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| Cornell Notes Activity | Settling Basins and Clarifyers<https://www.youtube.com/watch?v=PPYXKHxDDsk>December 11, 2020 |
| Sedimentation4 main Zones2 Main Types | Once floc is formed it must have time to settle outThis occurs in a settling basin or clarifier which can be round or rectangularDirect filtration plants do not include a settling basin or clarifierSolid particles are kept in suspension as long as there is enough flow and turbulenceSedimentation removes floc by slowing flow and removing turbulenceHeavier floc particles settle to the bottom and clarified water collects at the top which then is ready for filtrationInfluent zone – decreases the velocity of water and distributes it across the basinSettling zone – provides the calm area necessary for the suspended particles to settleEffluent zone – provides a smooth transition from the settling zone to the effluent flow area – it is important that currents don’t stir up any particles and carry them into this transition areaSludge zone – settled solids are separated from other particles in the settling zoneRectangular – water flows across a rectangular basinCircular – water is either centre or perimeter fedPlates and tubes may also be used to increase the settling area and allow for increased flow rates from smaller basinsThis allows particles to settle only a few inches rather than feet |
| Summary | Sedimentation is used to clarify water2 main types – rectangular and circular4 main zones to a clarifier – influent, settling, effluent, and sludge |