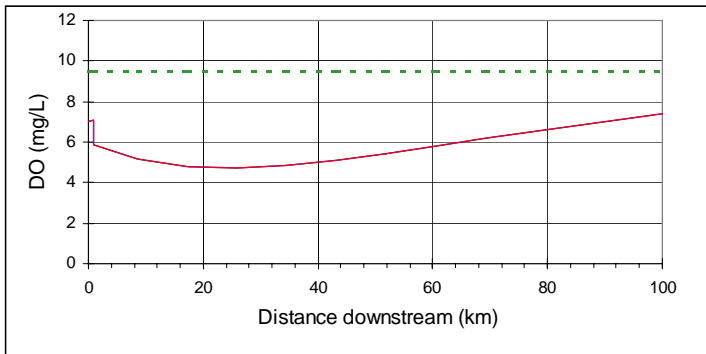


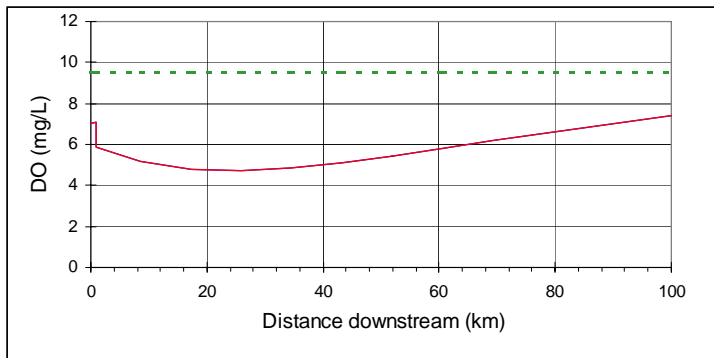
What If Exercise -- DOSAG Model

0. Baseline Condition

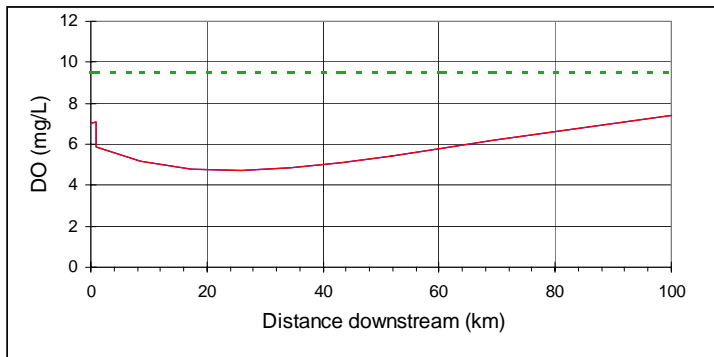


$C_{sat} = 9.5 \text{ mg/L}$
 $k_d = 0.23/\text{d}$
 $k_r = 0.2/\text{d}$
 $BOD_{u,WWTP} = 46 \text{ mg/L}$
 $Q_{WWTP} = 2 \text{ m}^3/\text{s}$
 $Q_{river} = 10 \text{ m}^3/\text{s}$

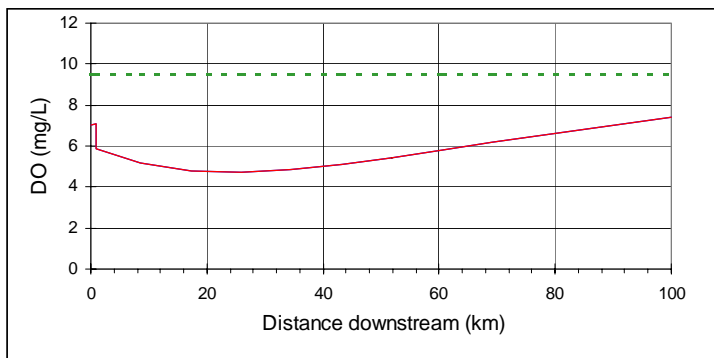
1. What if there was no BOD in the waste stream?



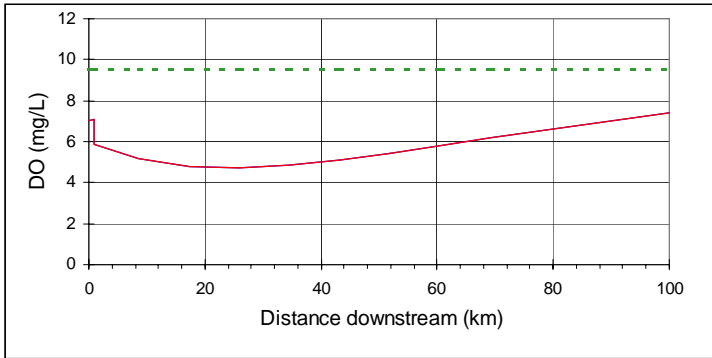
2. What if the reaeration was faster, or slower?



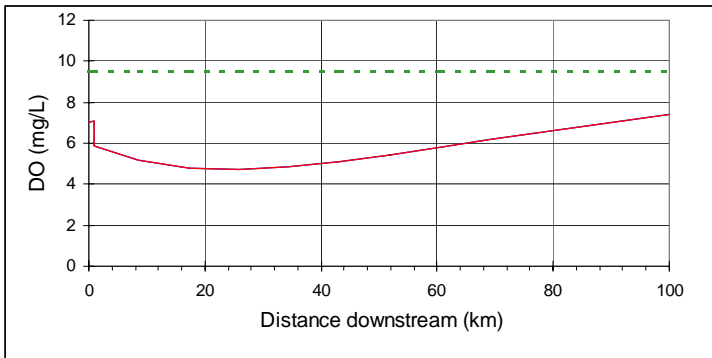
3. What if there was no reaeration and no BOD?



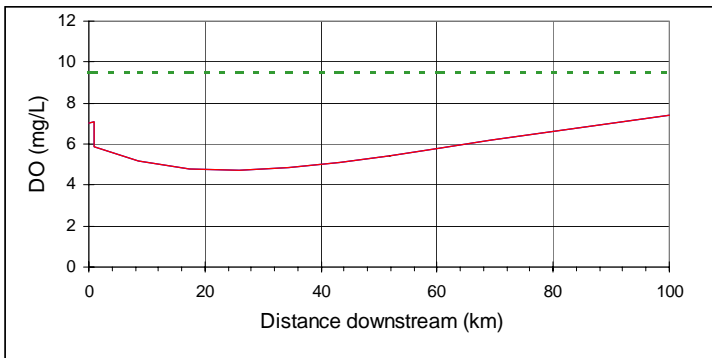
4. What if there was no reaeration but BOD = original value, or was reduced?



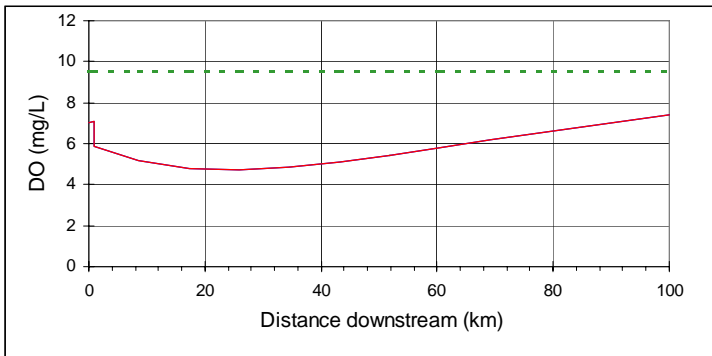
5. What if we had reaeration but reduced the BOD by treatment?



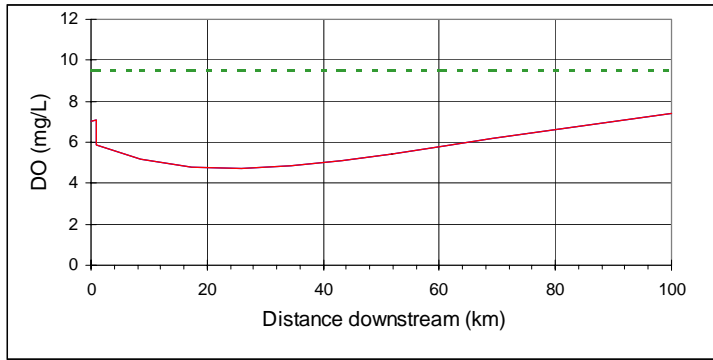
6. What if we increased or decreased the dilution in the river?



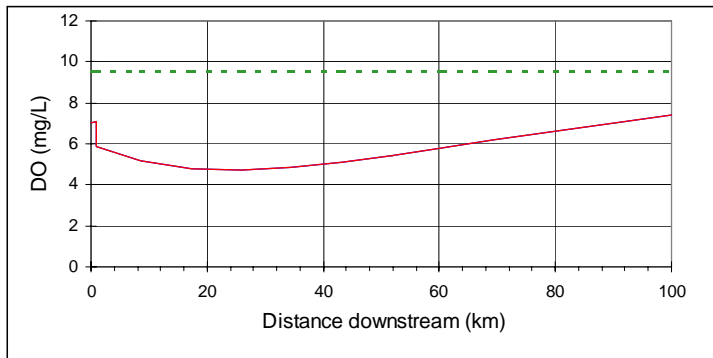
7. What if the temperature goes down?



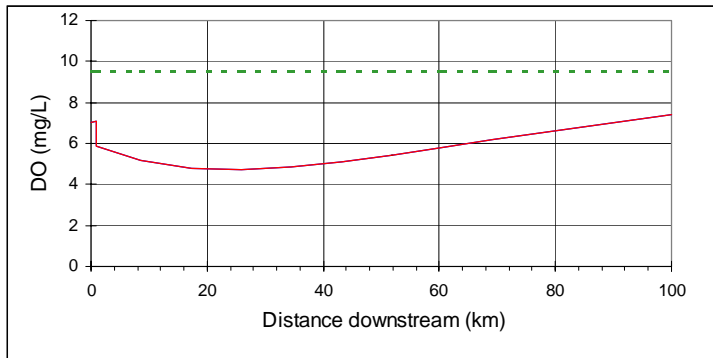
8. What if the temperature goes up?



9. What if the velocity of the river increases or decreases?



10. What if there is a clean stream entering the river at x=26?



11. What if there is another wastewater treatment plant downstream at x=26?

