From: GEORGE PAPADOPOULOS
To: jdowning,dpincumb
Date: 1/27/98 3:20pm
Subject: Wayland calculations

Greetings,

Here are some quick phosphorus loading calculations:

If we agree to a 0.7 mg/l effluent limit for phosphorus:

    (0.043 MGD) (0.7 mg/l P) (8.345)   =   0.25 lbsday of P
    design flow   factor

Using a trading scenario and suggesting a 3:1 ratio for nonpoint
vs. point source pollution, the permittee would have to remove
0.75 lbs/day from local septic systems.   Therefore, the
additional flow which they must treat is solved for below.
Assume an influent level of 10 mg/l of P, which would result in
a reduction of 9.3 mg/l at the 0.7 mg/l.

But, since this would add another 0.7 mg/l to the River, this
would be subtracted from the 9.3 to result in 8.6 mg/l of P
removed in total.

    (X flow) (8.6 mg/l) (8.345) = 0.75 lbs/day

        X = 10,450 GPD.

This would result in a total flow of about 53,000 GPD, which the
facility could handle.

If the effluent limit for phosphorus was determined to be 0.5
mg/l, then the coresponding flow which the permittee must treat
to achieve the
3:1 "performance standard" would be about 7200 GPD, or 50,000 GPD
total facility flow.

I will have a draft permit ready by this Friday.