

ALLOWABLE EFFLUENT CONCENTRATION/LOADING FOR CONSERVATIVE SUBSTANCES

Date of Analysis: 6/19/2020

This Calculates the Allowable Effluent Concentration/Loading for Conservative Substances in a Receiving Water

Discharge 001

Conservative Substance:	Nitrate Nitrogen
Acute or Chronic Standard	Chronic
Discharger:	Ensign Bickford
Receiving Water:	Spanish Fork River
Classification:	2B, 3B, 3D, 4
For the Season / Year	Yearly Average

Assumptions:

- 1) Conservative Substance
- 2) Complete mixing
- 3) Background Flow 7Q10 =0 mg/l
- 4) Background Concentration 1 mg/l
- 5) Calculation utilizes 100% of mixed assimilative capacity

Receiving Water Information - Spanish Fork River

Flow, cfs	0.000
Flow, cfs (Acute)	0.000
Nitrate Nitrogen, mg/l	1.00000
Nitrate Nitrogen Load, lbs/day	0.00

Stream Standard

Nitrate Nitrogen, mg/l	10.0000
Allowable Loading Before Mix:	0.00 lbs/day
Acute / Chronic Standard [Toxics]	Chronic

Combined Effluent/Receiving Water Information

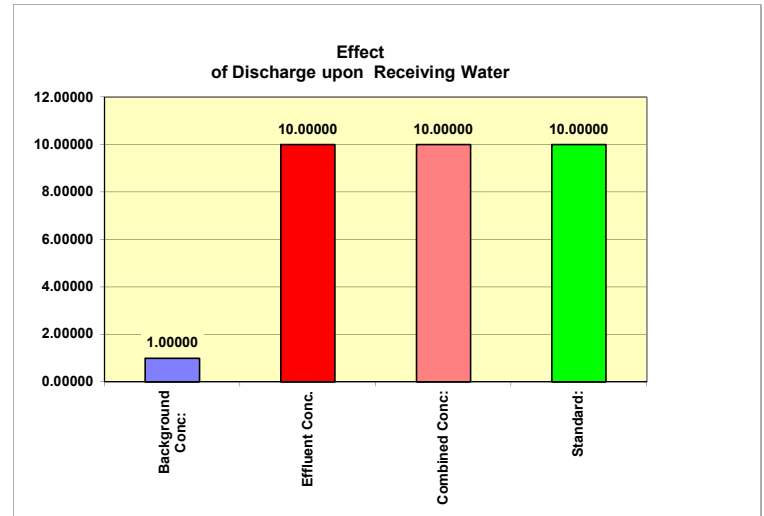
Flow, cfs	3.340 cfs
Nitrate Nitrogen, mg/l	10.00000 mg/l
Concentration Delta Increase, mg/l	9.00000 mg/l [Delta]
Percent Increase:	9.00

Summary

Background Conc:	1.00000 mg/l
Effluent Conc.	10.00000 mg/l
Combined Conc:	10.00000 mg/l
Standard:	10.00000 mg/l
Percent Change	9.00

Effluent Information [Proposed] Ensign Bickford

Flow, cfs	3.3400
Flow, MGD	
Flow, cfs	3.340
Nitrate Nitrogen, mg/l	10.00000
Nitrate Nitrogen Load, lbs/day	180.03
Nitrate Nitrogen Load, kg/day	81.66
Nitrate Nitrogen Load, lbs/year	65,709.49
Nitrate Nitrogen Load, kg/year	29,805.82
Nitrate Nitrogen Load, tons/day	0.0900
Nitrate Nitrogen Load, tons/year	32.9
Dilution Ratio: (background:discharge)	0.00
Percent of Stream Flow Used in Calc.	100%



Flow Range Dependent Nitrate Nitrogen Effluent Limits

Flow (cfs)	Nitrate N
0.00 -0.56	10.0000
0.57 -1.11	10.0000
1.12-1.67	10.0000
1.68-2.23	10.0000
2.24-2.79	10.0000
2.8-3.34	10.0000