pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

SOUTHCENTRAL REGIONAL OFFICE
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0037141**
Facility Type	**Industrial**	APS ID	**329677**
Major / Minor	**Minor**	Authorization ID	**834171**

NPDES PERMIT FACT SHEET ADDENDUM

Applicant and Facility Information

Applicant Name	**PA Fish & Boat Commission**	Facility Name	**Huntsdale Fish Hatchery**
Applicant Address	1735 Shiloh Road	Facility Address	195 Lebo Road
	State College, PA 16801-8495		Carlisle, PA 17015-9362
Applicant Contact	Mindy Mcclenahan	Facility Contact	James Wetherill
Applicant Phone	(814) 353-2229	Facility Phone	(717) 486-3419
Client ID	135455	Site ID	251142
SIC Code	0921	Municipality	Penn Township
SIC Description	Agriculture - Fish Hatcheries And Preserves	County	Cumberland
Date Published in PA Bulletin	November 16, 2019	EPA Waived?	Yes
Comment Period End Date	December 16, 2019	If No, Reason	
Purpose of Application	NPDES Renewal		

Internal Review and Recommendations

A revised draft permit was prepared on October 31, 2019 in response to the comments provided by the permittee. This revised draft permit was then published in the *Pennsylvania Bulletin* on November 16, 2019 for public comments for 30 days. The permittee indicated via a letter dated December 10, 2019 that the permittee does not have any comments on the draft permit. University Area Joint Authority (UAJA) has provided the comments via a letter dated December 16, 2019.

DEP has decided to revisit permit requirements specified in the October 31, 2019 draft permit given that the draft permit was prepared more than 6 months ago. Based on the review, the following changes will be made to the October 31, 2019 revised draft permit:

1. Part A & B Standard Conditions
   The October 31, 2019 draft permit needs to be revised to include latest standard conditions in Part A and B of the permit.

2. Temperature
   According to the December 16, 2019 letter, UAJA indicated that temperature limits based on the Chapter 93.7 temperature standard should apply and if not, a scientific basis for not imposing those limits need to be explained in the fact sheet. DEP has determined that ample datasets are required for a further analysis to determine whether the existing discharge from this facility is considered a heated waste source under 26 Pa Code §§93.7 and 96.6 before DEP develops appropriate permit requirements, if necessary. Therefore, it is recommended that the October 31, 2019 draft permit be revised to include a daily effluent temperature monitoring requirement. DEP has started to include the same requirement to other individual Concentrated Aquatic Animal Protection (CAAP) permits. A long-term temperature data collected from these facilities would demonstrate if temperature is truly a parameter of concern for CAAP facilities.

Approve	Return	Deny	Signatures	Date
X			Jinsu Kim Jinsu Kim / Environmental Engineering Specialist	October 29, 2021
			Daniel W. Martin, P.E. / Environmental Engineer Manager	
			Maria D. Bebenek, P.E. / Program Manager	

Internal Review and Recommendations

3. Therapeutic Drugs/Chemicals
   The usage rates of therapeutic drugs/chemicals from CAAP facilities will now be reviewed in a manner similar to the analysis performed to review chemical additives. This approach, guided by DEP Bureau of Clean Water, is different from those previously taken by DEP which was based on either bioassays results or the INAD/VMD levels. DEP determined that this new approach is more appropriate and has therefore begun (or will begin) to apply it to CAAP facilities throughout the state. The usage rates of all existing drugs/chemicals are reviewed using DEP's Toxic Screening Management Spreadsheet (TMS). The results are as follows:

Chemical	Proposed Usage Rate (lbs/day)	Maximum Allowable, lbs/day (Outfall 001); 10.5464 MGD	Maximum Allowable, lbs/day (Outfall 002); 0.72MGD
Parasite-S	39.65*	5.10	0.372
Hydrogen Peroxide	388.48*	1.58	0.1140912
Chloramine-T	24.00	8.79	0.660528
Terramycin TM 200	10.00	111	8.10648
Lysol	8.92*	0.079	0.00540432
Diquat Dibromide	10.73*	1.49	0.1080864
Romet-TC	2.60	45.7	3.30264
Sodium Chloride	500.00	667	48.218544
Aquaflor (Florfenicol)	0.67	409	29.543616
Aquashade	Approved under the NPDES Permit for the application of pesticides (no. PA0270784)		
Slimy Grimy	8	Not Allowed (no Ecological Information Available)	Not Allowed (no Ecological Information Available)
Terramycin 343 (or Pennox 343)	3.6	Not Allowed (no Ecological Information Available)	Not Allowed (no Ecological Information Available)

*Usage Rates for some chemicals have been converted from gal/day to lbs/day based on the given specific density.

Based on the table above, the lowest value between the proposed usage rate and maximum allowable usage rate will be specified in Part C of the permit. According to PFBC, the use of a chemical product called aqua shade is currently authorized under a state-wide pesticide permit issued under 25 Pa Code §91.38 (PA0270784). Also, Slimy Grimy and Terramycin 343 will not be included in Part C as they are currently not approved. A further analysis would be required for Slimy Grimy and Pennox 343 as no ecological toxicity data is available to review at this time. DEP notified this to PFBC via email dated October 12, 2021. DEP may reopen this permit once complete ecological information is obtained to review the usage rates.

PFBC provided effluent data for Parasite-S which were consistently non-detected at 0.02 mg/L. A review of the data shows the maximum effluent mass load could be 2.08 lbs/day which is lower than the maximum allowable usage rates for Outfall 001. In lieu of including the usage rate in lbs/day, the permit will include the proposed usage rate (gal/day) with effluent concentrations (WQBEL) recommended by DEP's TMS.

DEP is still working with PFBC regarding the proposed rate vs. maximum allowable usage rate as the proposed rates for some of these chemicals are much higher than the calculated allowable rates. Any additional information provided by PFBC during the draft permit public comment period will be considered in making the final determinations.

Given that the last draft permit was prepared over 6 months ago and the above-mentioned changes made to the draft permit, it is recommended that the permit be redrafted and republished in the *Pennsylvania Bulletin* once again for another 30 days for public comments. All other permit requirements will remain the same as those specified in the October 31, 2019 draft permit.

UNIVERSITY AREA JOINT AUTHORITY
1576 Spring Valley Road
State College, PA 16801

VIA EMAIL: Kim, Jin Su jikim@pa.gov December 16, 2019

VIA REGULAR MAIL
Jin Su Kim, Permits Section
Department of Environmental Protection Clean Water Program
Southcentral Regional Office
909 Elmerton Avenue Harrisburg, Pa 17110-8200

Re: Draft NPDES Permit – PA Fish & Boat Commission Huntsdale Fish Hatchery PA0037141;
Penn Township, Cumberland County, Pennsylvania

Dear Mr. Kim:

The University Area Joint Authority ("Authority" or "UAJA") has reviewed the draft NPDES permit and Fact Sheet prepared by the Department of Environmental Protection (the "Department" or "DEP") dated October 31, 2019. Public Notice of the draft permit was published in the Pennsylvania Bulletin on November 16, 2019. As a discharger to a HQ-CWF stream in Centre County, PA, UAJA wants to be able to assure our rate payers that PA DEP is uniformly applying water quality standards across the State. In particular, since UAJA has significant additional expense associated with temperature limits in our NPDES permit, UAJA would like to know that other dischargers are being held to the same standards. The Authority has the following comments regarding the draft permit.

1. **The draft permit does not include temperature limits.**

   The receiving stream is classified HQ-CWF. According to Chapter 93.7 Table 3, instream temperature standards apply. Once added to the permit, the permittee may, of course, apply for a 316(a) variance.

2. **The Fact Sheet does not provide a scientific basis for not imposing temperature limits.**

   IF PA DEP is not imposing temperature limits, then the fact sheet should clearly explain why PA DEP has determined that temperature limits are not justified. The justification should be based on extensive temperature date from both the discharge and receiving stream.

Sincerely,

Cory R Miller
Executive Director

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DEP SOUTHCENTRAL OFFICE
CLEAN WATER PROGRAM

Phone: (814) 238-5361 Fax: (814) 238-1531

Pennsylvania Fish & Boat Commission

established 1866

Bureau of Hatcheries
Division of Fish Production Services
1735 Shiloh Road
State College, PA 16801
Phone: (814) 355-4837
FAX: (814) 355-8264

Jinsu Kim
Environmental Engineering Specialist, Clean Water Program
Pennsylvania Department of Environmental Protection
Southcentral Regional Office
909 Elmerton Avenue
Harrisburg, PA 17110-8200

December 10, 2019

Re: Industrial Waste-NPDES Permit
Huntsdale State Fish Hatchery
Application No. PA0037141
Authorization ID No. 834171
Penn Township, Cumberland County

Dear Mr. Kim;

We have reviewed the National Pollutant Discharge Elimination System (NPDES) draft permit for the Huntsdale State Fish Hatchery (SFH) and have no comments on this draft permit.

As always, we appreciate the opportunity to provide comments on NPDES permits in the draft stage.

Sincerely,

Mindy L. McClenahan, Chemist 3
Fish Production Services

Cc: B. Wisner
B. Niewinski
T. Cochran
A. Wagner

	Outfall 001	Outfall 002			
Qd (MGD)	10.5464	0.72			

1 cm3 =	1	mL	
1 gal =	3.785	L	
1 lbs =	453.6	g	

Outfall 001

				Aquatic Life Effect Levels									
				mg/L		ug/L							
Drugs	Proposed Usage	Proposed Usage Units	% Solution	Acute	Chronic	Acute	Chronic	Governing WQBEL, mg/L	Maximum Allowable, lbs/day	Density	Units	Proposed Usage in lbs/day (whole)	Proposed Usage in lbs/day (% solution only)
Parasite-S	4.359	gal/day	37	0.2963	0.0329	296.3	32.9	0.058	5.101504608	1.09	?	39.64662335	14.66925064 *units for density not clear;
Hydrogen Peroxide	41.2	gal/day	35	0.0923	0.0103	92.3	10.3	0.018	1.583225568	1.13	g/cm3	388.4798501	135.9679475
Chloramine-T	24	lbs/day		0.5251	0.0583	525.1	58.3	0.1	8.7956976			24	N/A
Terramycine 200	10	lbs/day		6.4557	0.7173	6455.7	717.3	1.27	111.7053595			10	N/A
Lysol	1.08	gal/day	10	0.0041	0.0005	4.1	0.5	0.0009	0.079161278	0.99	g/cm3	8.921785714	0.892178571
Diquat Dibromide	1.07	gal/day	37.3	0.085	0.0094	85	9.4	0.017	1.495268592	1.202	g/ml	10.73201036	4.003039865
Romet-TC	2.6	lbs/day		2.6469	0.2941	2646.9	294.1	0.52	45.73762752			2.6	N/A
Sodium Chloride	500	lbs/day		38.462	4.2736	38462	4273.6	7.59	667.5934478			500	N/A
Aquaflor (Florfenicol)	0.67	lbs/day		23.571	2.6191	23571	2619.1	4.65	408.9999384			0.67	N/A
Slimy Grimy	8	lbs/day										8	N/A
Terramycin 343 (or Pennox 343)	3.6	lbs/day										3.6	N/A

Outfall 002

				Aquatic Life Effect Levels									
				mg/L		ug/L							
Drugs	Proposed Usage	Proposed Usage Units	% Solution	Acute	Chronic	Acute	Chronic	Governing WQBEL, mg/L	Maximum Allowable, lbs/day	Density	Units	Proposed Usage in lbs/day (whole)	Proposed Usage in lbs/day (% solution only)
Parasite-S			37	0.2963	0.0329	296.3	32.9	0.062	0.3722976	1.09		N/A	#VALUE!
Hydrogen Peroxide			35	0.0923	0.0103	92.3	10.3	0.019	0.1140912	1.13	g/cm3	N/A	#VALUE!
Chloramine-T				0.5251	0.0583	525.1	58.3	0.11	0.660528			N/A	N/A
Terramycine 200				6.4557	0.7173	6455.7	717.3	1.35	8.10648			N/A	N/A
Lysol			10	0.0041	0.0005	4.1	0.5	0.0009	0.00540432	0.99	g/cm3	N/A	#VALUE!
Diquat Dibromide			37.3	0.085	0.0094	85	9.4	0.018	0.1080864	1.202	g/ml	N/A	#VALUE!
Romet-TC				2.6469	0.2941	2646.9	294.1	0.55	3.30264			N/A	N/A
Sodium Chloride				38.462	4.2736	38462	4273.6	8.03	48.218544			N/A	N/A
Aquaflor (Florfenicol)				23.571	2.6191	23571	2619.1	4.92	29.543616			N/A	N/A
Slimy Grimy												N/A	N/A
Terramycin 343 (or Pennox 343)												N/A	N/A

Drugs	Proposed Usage, lbs/day, whole	Proposed Usage, lbs/day, %solution	Allowable Usage lbs/day	PERMIT LIMITS
Parasite-S	39.65	14.6692506	5.102	5.101504608
Hydrogen Peroxide	388.48	135.967948	1.583	1.583225568
Chloramine-T	24.00	N/A	8.796	8.7956976
Terramycine 200	10.00	N/A	111.705	10
Lysol	8.92	0.89217857	0.079	0.079161278
Diquat Dibromide	10.73	4.00303986	1.495	1.495268592
Romet-TC	2.60	N/A	45.738	2.6
Sodium Chloride	500.00	N/A	667.593	500
Aquaflor (Florfenicol)	0.67	N/A	409.000	0.67
Slimy Grimy	8.00	N/A	0.000	0
Terramycin 343 (or Pennox 343)	3.60	N/A	0.000	0

Discharge Information

Instructions | Discharge | Stream

Facility: Huntsdale Fish Hatchery NPDES Permit No.: PA0037141 Outfall No.: 001

Evaluation Type: Custom / Additives Wastewater Description: CAAP Discharge

Discharge Characteristics								
Design Flow (MGD)*	Hardness (mg/l)*	pH (SU)*	Partial Mix Factors (PMFs)				Complete Mix Times (min)	
			AFC	CFC	THH	CRL	Q_{7-10}	Q_h
10.5464	100	7.5						

				0 if left blank		*0.5 if left blank*		*0 if left blank*			*1 if left blank*	
Discharge Pollutant	Units	Max Discharge Conc		Trib Conc	Stream Conc	Daily CV	Hourly CV	Stream CV	Fate Coeff	FOS	Criteria Mod	Chem Transl
Parasite-S	mg/L		1000									
Hydrogen Peroxide	mg/L		1000									
Chloramine-T	mg/L		1000									
Terramycine 200	mg/L		1000									
Lysol	mg/L		1000									
Diquat Dibromide	mg/L		1000									
Romet-TC	mg/L		1000									
Sodium Chloride	mg/L		1000									
Aquaflor	mg/L		1000									

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Toxics Management Spreadsheet
Version 1.3, March 2021

Stream / Surface Water Information

Huntsdale Fish Hatchery, NPDES Permit No. PA0037141, Outfall 001

Instructions | Discharge | *Stream*

Receiving Surface Water Name: Yellow Breeches Creek

No. Reaches to Model: 1

- (●) Statewide Criteria
- ( ) Great Lakes Criteria
- ( ) ORSANCO Criteria

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi^2)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	010121	40.75	601	40.4			Yes
End of Reach 1	010121	39.75	578	43			Yes

Q_{7-10}

Location	RMI	LFY (cfs/mi^2)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	40.75	0.313				32	1.4					100	7.78		
End of Reach 1	39.75	0.313													

Q_h

Location	RMI	LFY (cfs/mi^2)	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	40.75														
End of Reach 1	39.75														

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Toxics Management Spreadsheet
Version 1.3, March 2021

Model Results

Huntsdale Fish Hatchery, NPDES Permit No. PA0037141, Outfall 001

Instructions | Results | RETURN TO INPUTS | SAVE AS PDF | PRINT | (•) All | ( ) Inputs | ( ) Results | ( ) Limits

☐ *Hydrodynamics*

☑ *Wasteload Allocations*

☑ *AFC* CCT (min): 2.448 PMF: 1 Analysis Hardness (mg/l): 100 Analysis pH: 7.60

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Parasite-S	0	0		0	296.3	296	526	
Hydrogen Peroxide	0	0		0	92.3	92.3	164	
Chloramine-T	0	0		0	525.1	525	932	
Terramycine 200	0	0		0	6455.7	6,456	11,459	
Lysol	0	0		0	4.1	4.1	7.28	
Diquat Dibromide	0	0		0	85	85.0	151	
Romet-TC	0	0		0	2464.9	2,465	4,375	
Sodium Chloride	0	0		0	38,462	38,462	68,272	
Aquaflor	0	0		0	23,571	23,571	41,840	

☑ *CFC* CCT (min): 2.448 PMF: 1 Analysis Hardness (mg/l): 100 Analysis pH: 7.60

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Parasite-S	0	0		0	32.9	32.9	58.4	
Hydrogen Peroxide	0	0		0	10.3	10.3	18.3	
Chloramine-T	0	0		0	58.3	58.3	103	
Terramycine 200	0	0		0	717.3	717	1,273	
Lysol	0	0		0	0.5	0.5	0.89	
Diquat Dibromide	0	0		0	9.4	9.4	16.7	
Romet-TC	0	0		0	294.1	294	522	
Sodium Chloride	0	0		0	4273.6	4,274	7,586	
Aquaflor	0	0		0	2619.1	2,619	4,649	

☑ *THH* CCT (min): 2.448 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Parasite-S	0	0		0	N/A	N/A	N/A	
Hydrogen Peroxide	0	0		0	N/A	N/A	N/A	
Chloramine-T	0	0		0	N/A	N/A	N/A	
Terramycine 200	0	0		0	N/A	N/A	N/A	
Lysol	0	0		0	N/A	N/A	N/A	
Diquat Dibromide	0	0		0	N/A	N/A	N/A	
Romet-TC	0	0		0	N/A	N/A	N/A	
Sodium Chloride	0	0		0	N/A	N/A	N/A	
Aquaflor	0	0		0	N/A	N/A	N/A	

☑ *CRL* CCT (min): 4.122 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Parasite-S	0	0		0	N/A	N/A	N/A	
Hydrogen Peroxide	0	0		0	N/A	N/A	N/A	
Chloramine-T	0	0		0	N/A	N/A	N/A	
Terramycine 200	0	0		0	N/A	N/A	N/A	
Lysol	0	0		0	N/A	N/A	N/A	
Diquat Dibromide	0	0		0	N/A	N/A	N/A	
Romet-TC	0	0		0	N/A	N/A	N/A	
Sodium Chloride	0	0		0	N/A	N/A	N/A	
Aquaflor	0	0		0	N/A	N/A	N/A	

☑ ***Recommended WQBELs & Monitoring Requirements***

No. Samples/Month: 4

	Mass Limits		*Concentration Limits*						
Pollutants	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units	Governing WQBEL	WQBEL Basis	Comments
Parasite-S	5.14	8.01	0.058	0.091	0.15	mg/L	0.058	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Hydrogen Peroxide	1.61	2.51	0.018	0.029	0.046	mg/L	0.018	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Chloramine-T	9.1	14.2	0.1	0.16	0.26	mg/L	0.1	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Terramycine 200	112	175	1.27	1.99	3.18	mg/L	1.27	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Lysol	0.078	0.12	0.0009	0.001	0.002	mg/L	0.0009	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Diquat Dibromide	1.47	2.29	0.017	0.026	0.042	mg/L	0.017	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Romet-TC	45.9	71.6	0.52	0.81	1.31	mg/L	0.52	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Sodium Chloride	667	1,041	7.59	11.8	19.0	mg/L	7.59	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Aquaflor	409	638	4.65	7.25	11.6	mg/L	4.65	CFC	Discharge Conc ≥ 50% WQBEL (RP)

☑ ***Other Pollutants without Limits or Monitoring***

The following pollutants do not require effluent limits or monitoring based on water quality because reasonable potential to exceed water quality criteria was not determined and the discharge concentration was less than thresholds for monitoring, or the pollutant was not detected and a sufficiently sensitive analytical method was used (e.g., <= Target QL).

Pollutants	Governing WQBEL	Units	Comments

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Toxics Management Spreadsheet
Version 1.3, March 2021

Discharge Information

Instructions | Discharge | Stream

Facility: **Huntsdale Fish Hatchery** NPDES Permit No.: **PA0037141** Outfall No.: **002**

Evaluation Type: **Custom / Additives** Wastewater Description: **CAAP Discharge**

Discharge Characteristics								
Design Flow (MGD)*	Hardness (mg/l)*	pH (SU)*	Partial Mix Factors (PMFs)				Complete Mix Times (min)	
			AFC	CFC	THH	CRL	Q_{7-10}	Q_h
0.72	100	7						

				0 if left blank		0.6 if left blank		0 if left blank			1 if left blank	
Discharge Pollutant	Units	Max Discharge Conc		Trib Conc	Stream Conc	Daily CV	Hourly CV	Stream CV	Fate Coeff	FOS	Criteria Mod	Chem Transl
Parasite-S	mg/L		1000									
Hydrogen Peroxide	mg/L		1000									
Chloramine-T	mg/L		1000									
Terramycine 200	mg/L		1000									
Lysol	mg/L		1000									
Diquat Dibromide	mg/L		1000									
Romet-TC	mg/L		1000									
Sodium Chloride	mg/L		1000									
Aquaflor	mg/L		1000									

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Toxics Management Spreadsheet
Version 1.3, March 2021

Stream / Surface Water Information

Huntsdale Fish Hatchery, NPDES Permit No. PA0037141, Outfall 002

Instructions | Discharge | *Stream*

Receiving Surface Water Name: **UNT to Yellow Breeches Creek**

No. Reaches to Model: **1**

- (●) Statewide Criteria
- ( ) Great Lakes Criteria
- ( ) ORSANCO Criteria

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi^2)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	063210	0.23	607	3.13			Yes
End of Reach 1	063210	0	604	3.31			Yes

$Q_{7\text{-}10}$

Location	RMI	LFY (cfs/mi^2)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	0.23	0.313										100	7		
End of Reach 1	0	0.313													

Q_h

Location	RMI	LFY (cfs/mi^2)	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	0.23														
End of Reach 1	0														

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Toxics Management Spreadsheet
Version 1.3, March 2021

Model Results

Huntsdale Fish Hatchery, NPDES Permit No. PA0037141, Outfall 002

Instructions | Results | RETURN TO INPUTS | SAVE AS PDF | PRINT | ◉ All ○ Inputs ○ Results ○ Limits

☐ ***Hydrodynamics***

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 3.492 PMF: 1 Analysis Hardness (mg/l): 100 Analysis pH: 7.00

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Parasite-S	0	0		0	296.3	296	557	
Hydrogen Peroxide	0	0		0	92.3	92.3	173	
Chloramine-T	0	0		0	525.1	525	987	
Terramycine 200	0	0		0	6455.7	6,456	12,134	
Lysol	0	0		0	4.1	4.1	7.71	
Diquat Dibromide	0	0		0	85	85.0	160	
Romet-TC	0	0		0	2464.9	2,465	4,633	
Sodium Chloride	0	0		0	38,462	38,462	72,292	
Aquaflor	0	0		0	23,571	23,571	44,303	

☑ ***CFC*** CCT (min): 3.492 PMF: 1 Analysis Hardness (mg/l): 100 Analysis pH: 7.00

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Parasite-S	0	0		0	32.9	32.9	61.8	
Hydrogen Peroxide	0	0		0	10.3	10.3	19.4	
Chloramine-T	0	0		0	58.3	58.3	110	
Terramycine 200	0	0		0	717.3	717	1,348	
Lysol	0	0		0	0.5	0.5	0.94	
Diquat Dibromide	0	0		0	9.4	9.4	17.7	
Romet-TC	0	0		0	294.1	294	553	
Sodium Chloride	0	0		0	4273.6	4,274	8,032	
Aquaflor	0	0		0	2619.1	2,619	4,923	

☑ ***THH*** CCT (min): 3.492 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Parasite-S	0	0		0	N/A	N/A	N/A	
Hydrogen Peroxide	0	0		0	N/A	N/A	N/A	
Chloramine-T	0	0		0	N/A	N/A	N/A	
Terramycine 200	0	0		0	N/A	N/A	N/A	
Lysol	0	0		0	N/A	N/A	N/A	
Diquat Dibromide	0	0		0	N/A	N/A	N/A	
Romet-TC	0	0		0	N/A	N/A	N/A	
Sodium Chloride	0	0		0	N/A	N/A	N/A	
Aquaflor	0	0		0	N/A	N/A	N/A	

☑ ***CRL*** CCT (min): 4.794 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Parasite-S	0	0		0	N/A	N/A	N/A	
Hydrogen Peroxide	0	0		0	N/A	N/A	N/A	
Chloramine-T	0	0		0	N/A	N/A	N/A	
Terramycine 200	0	0		0	N/A	N/A	N/A	
Lysol	0	0		0	N/A	N/A	N/A	
Diquat Dibromide	0	0		0	N/A	N/A	N/A	
Romet-TC	0	0		0	N/A	N/A	N/A	
Sodium Chloride	0	0		0	N/A	N/A	N/A	
Aquaflor	0	0		0	N/A	N/A	N/A	

☑ ***Recommended WQBELs & Monitoring Requirements***

No. Samples/Month: 4

	Mass Limits		*Concentration Limits*						
Pollutants	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units	Governing WQBEL	WQBEL Basis	Comments
Parasite-S	0.37	0.58	0.062	0.096	0.15	mg/L	0.062	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Hydrogen Peroxide	0.12	0.18	0.019	0.03	0.048	mg/L	0.019	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Chloramine-T	0.66	1.03	0.11	0.17	0.27	mg/L	0.11	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Terramycine 200	8.1	12.6	1.35	2.1	3.37	mg/L	1.35	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Lysol	0.006	0.009	0.0009	0.001	0.002	mg/L	0.0009	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Diquat Dibromide	0.11	0.17	0.018	0.028	0.044	mg/L	0.018	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Romet-TC	3.32	5.18	0.55	0.86	1.38	mg/L	0.55	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Sodium Chloride	48.2	75.3	8.03	12.5	20.1	mg/L	8.03	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Aquaflor	29.6	46.1	4.92	7.68	12.3	mg/L	4.92	CFC	Discharge Conc ≥ 50% WQBEL (RP)

☑ ***Other Pollutants without Limits or Monitoring***

The following pollutants do not require effluent limits or monitoring based on water quality because reasonable potential to exceed water quality criteria was not determined and the discharge concentration was less than thresholds for monitoring, or the pollutant was not detected and a sufficiently sensitive analytical method was used (e.g., <= Target QL).

Pollutants	Governing WQBEL	Units	Comments