	Form Approved OMB No. 2040-0057					
Water Co	mpliance Inspec	tion Report				
Section A: National Data System Coding (i.e., PCS)						
Transaction Code         NPDES           1 N          2 5          3 W A 0 0 4 5 1	yr/mc   <u>4 4 </u> 11 12  <u>1 4 /</u>  5 Remarks	/day Inspection _//22_17 18 C	n Type Inspector Fac Type 2  19  <u>A</u>   20  <u>1</u>			
21		66				
Inspection Work Days Facility Self-Monitoring Ev	aluation Rating BI	QA	Reserved			
	Section B: Facility Da	<sup>72</sup>   <u>1</u>   73   74	75 _ _      80			
Name and Location of Facility Inspected (For industr	ial users discharging to POTW,	Entry Time/Date	Permit Effective Date			
also include POTW name and NPDES permit number	er)	9 am, 5/22/14	7/01/2011			
Liberty Lake Sewer and Water District		Exit Time/Date	Permit Expiration Date			
1926 N. Harvard Road Liberty Lake, WA S	99019	11:45, 5/22/14	6/30/2016			
Name(s) of On-Site Representative(s)/Title(s)/Phone Dan Grogg, Chief Operator 509-922-5443	and Fax Number(s)	Other Facility Data Also known as LLSWD Water Reclamation Facility				
		Operator II – Darrell Gamble, Class IV				
Name, Address of Responsible Official/Title/Phone a	nd Fax Number.	-				
Bijay Adams, General Manager, Liberty Lake Sewer and Water District 509-922-9016 [x] Yes [] No						
Section C: Areas E	valuated During Inspection (Che	eck only those areas eval	uated)			
X       Permit       X       Flow Measur         X       Records/Reports       X       Self-Monitoring         X       Facility Site Review       X       Compliance	ement X Operation ng Program X Sludge H Schedules Pretro	ions & Maintenance       CSO/SSO (Sewer Overflow)       Handling/Disposal       Pollution Prevention       treatment       Multimedia				
X Effluent/Receiving Waters X Laboratory	Storn	n Water	Other:			
Section D: Summary of Findings/	comments (Attach additional sh	rmit requirements	ckilists as necessary)			
procedures, record keeping and overall management of the facility. No violations found during inspection. Narrative Attached						
Name(s) and Signature(s) of Inspector(s)	Agency/Office/Phone and Fax Numbers		Date			
Eleanor Key, P.E.	Department of Ecology/E					
Kim Prisock, P.E.	Department of Ecology/E	RO 509-329-3450				
Міке Нерр	Department of Ecology/E	RO 509-329-3536				
Signature of Management Q A Reviewer Diana Washington, P.E.	Agency/Office/Phone and Fax Department of Ecology/E	Date				

EPA Form 3560-3 (Rev. 9-94) Previous editions are obsolete.

Form Approved OMB No. 158-R0073

Sections F thru L: Complete on all inspections, as appropriate. N/A = Not Applicable			PERMIT NO. WA0045144			
SECTION E - Facility and Permit Background		117004314	т			
ADDRESS OF PERMITTEE IF DIFFERENT FROM FACILITY	DATE OF LAST PREVIOUS INVES	STIGATION BY F	PA/STAT	F		
(Including City, County and ZIP code)	Unknown			-		
22510 E. Mission Ave.	FINDINGS					
Liberty Lake, WA 99019						
SECTION G - Records and Reports						
RECORDS AND REPORTS MAINTAINED AS REQUIRED BY PER	MIT. [X] YES [] NO [] N/A (Fu	urther explanation	attached	)		
(i) SAMPLING DATE TIME EXACT LOCATION		[x] YES	[] NO	[] N/A		
(ii) ANALYSES DATES. TIMES		[x] YES	[] NO	[] N/A		
(iii) INDIVIDUAL PERFORMING ANALYSIS		[x] YES	[] NO	[] N/A		
(iv) ANALYTICAL METHODS/TECHNIQUES USED	(iv) ANALYTICAL METHODS/TECHNIQUES USED			[] N/A		
(v) ANALYTICAL RESULTS (e.g., consistent with self-monitor	oring report data)	[ <u>x</u> ] YES	[] NO	[_] N/A		
(b) MONITORING RECORDS (e.g., flow, pH, D.O., etc.) MAINTAI	NED FOR A MINIMUM OF THREE YEARS	S [x] YES	[_] NO	[_] N/A		
INCLUDING ALL ORIGINAL STRIP CHART RECORDINGS (e	e.g., continuous monitoring instrumentation,					
calibration and maintenance records).			[]]]	[] NI/A		
UNIT. – Quite extensive documentation	ATING LOGS FOR EACH TREATMENT		[] NO	[] N/A		
(e) QUALITY ASSURANCE RECORDS KEPT.		[x] YES	[] NO	[] N/A		
(f) RECORDS MAINTAINED OF MAJOR CONTRIBUTING INDUS	STRIES (and their compliance status)	[] YES	[] NO	[ <u>x]</u> N/A		
USING PUBLICLY OWNED TREATMENT WORKS. No indust	rial contributions, only commercial					
SECTION H - Permit Verification						
INSPECTION OBSERVATIONS VERIFY THE PERMIT.	[x] YES [] NO [] N/A (Further expl	anation attached		)		
(a) CORRECT NAME AND MAILING ADDRESS OF PERMITTEE		[x ] YES	[1NO	[] N/A		
(b) FACILITY IS AS DESCRIBED IN PERMIT.	-	[x] YES	[] NO	[] N/A		
(c) PRINCIPAL PRODUCT(S) AND PRODUCTION RATES CONF	FORM WITH THOSE SET FORTH IN	[ <u>x]</u> YES		[_] N/A		
PERMIT APPLICATION.						
(d) TREATMENT PROCESSES ARE AS DESCRIBED IN PERMIT	T APPLICATION.	[ <u>x</u> ] YES	[_] NO	[ <u>]</u> N/A		
NOTIFICATION GIVEN TO EPA/STATE OF NEW, DIFFERENT OR INCREASED DISCHARGES.			[] NO	[ <u>x</u> ] N/A		
f) ACCURATE RECORDS OF RAW WATER VOLUME MAINTAINED.				[] N/A		
(g) NUMBER AND LOCATION OF DISCHARGE POINTS ARE AS				[] N/A		
(i) ALL DISCHARGES ARE DEDMITTED						
(I) ALL DISCHARGES ARE PERMITTED.						
TREATMENT FACILITY PROPERLY OPERATED AND MAINTAINE		uther explanation	attached	)		
DETAILS: Two very dedicated operators keep extensive record	ds and keep the facility maintained.		anaonoa	/		
(a) STANDBY POWER OR OTHER EQUIVALENT PROVISIONS	PROVIDED.	[x_] YES	[] NO	[_] N/A		
(b) ADEQUATE ALARM SYSTEM FOR POWER OR EQUIPMENT	T FAILURES AVAILABLE.	[ <u>x</u> ] YES	[_] NO	[_] N/A		
(c) REPORTS ON ALTERNATIVES SOURCE OF POWER SENT	TO EPA/STATE AS REQUIRED BY	[ <u>x]</u> YES	[_] NO	[_] N/A		
			[]]]	[] NI/A		
(a) SLUDGES AND SOLIDS ADEQUATELY DISPOSED.						
(f) CONSULTING ENGINEER RETAINED OR AVAILABLE FOR (	CONSULTATION ON OPERATION AND			[] N/A		
MAINTENANCE PROBLEMS.			U NO			
(g) QUALIFIED OPERATING STAFF PROVIDED.		[ <u>x</u> ] YES	[_] NO	[_] N/A		
(h) ESTABLISHED PROCEDURES AVAILABLE FOR TRAINING	NEW OPERATORS.	[] YES	[_] NO	[ <u>x]</u> N/A		
(i) FILES MAINTAINED ON SPARE PARTS INVENTORY, MAJO PARTS AND EQUIPMENT SUPPLIERS.	R EQUIPMENT SPECIFICATIONS, AND	[ <u>x</u> ] YES	[] NO	[_] N/A		
(j) INSTRUCTIONS FILES KEPT FOR OPERATION AND MAINT EQUIPMENT.	ENANCE OF EACH ITEM OF MAJOR	[ <u>x</u> ] YES	[] NO	[_] N/A		
(k) OPERATION AND MAINTENANCE MANUAL MAINTAINED.		[x_] YES	[] NO	[_] N/A		
(I) SPCC PLAN AVAILABLE.		[] YES	[] NO	[ <u>x]</u> N/A		
(m) REGULATORY AGENCY NOTIFIED OF BY PASSING. (Dates	no dates for process bypass	[] YES	[_] NO	[ <u>x]</u> N/A		
(n) ANY BY-PASSING SINCE LAST INSPECTION.	,,,	[_] YES	[ <u>x</u> ] NO	[_] N/A		
(o) ANY HYDRAULIC AND/OR ORGANIC OVERLOADS EXPERI	ENCED.	[_] YES	[x_] NO	[_] N/A		

		PERMIT NO. WA0045144					
SEC	SECTION J - Compliance Schedules						
PERMITTEE IS MEETING COMPLIANCE SCHEDUILE IVIVES [1NO [1N/A (Eurther evaluation attached )							
CH	CHECK APPROPRIATE PHASE(S):						
	[] (a) THE PERMITTEE HAS OBTAINED THE NECESSARY APPROVALS FROM THE APPROPRIATE	E AUTHORITIES	TO BEG	IN			
	<ul> <li>b) PROPER ARRANGEMENT HAS BEEN MADE FOR FINANCING (mortgage commitments, grants)</li> </ul>	. etc.).					
	[x] (c) CONTRACTS FOR ENGINEERING SERVICES HAVE BEEN EXECUTED.	,,-					
	(d) DESIGN PLANS AND SPECIFICATIONS HAVE BEEN COMPLETED.     (d) CONSTRUCTION HAS COMMENCED.						
	<ul> <li>(i) CONSTRUCTION HAS COMMENCED.</li> <li>(i) CONSTRUCTION AND/OR EQUIPMENT ACQUISITION IS ON SCHEDULE.</li> </ul>						
	(g) CONSTRUCTION HAS BEEN COMPLETED.						
	() (h) START-UP HAS COMMENCED.						
SEC							
Part	1 - Flow measurement (Further explanation attached						
PER	MITTEE FLOW MEASUREMENT MEETS THE RECUIREMENTS AND INTENT OF THE PERMIT			Γ1Ν/Δ			
	DETAILS:		Пио				
(a)	PRIMARY MEASURING DEVICE PROPERLY INSTALLED.	[ <u>x]</u> YES	[_] NO	[_] N/A			
	TYPE OF DEVICE: [] WEIR [X] PARSHALL FLUME [] MAGMETER [] VENTURI METER [] OT	HER: (Specify)					
(b)	CALIBRATION FREQUENCY ADEQUATE. (Date of last calibration) continuous calibration of	[ <u>x]</u> YES	[_] NO	[_] N/A			
	influent/effluent						
(c)	PRIMARY FLOW MEASURING DEVICE PROPERLY OPERATED AND MAINTAINED.	[ <u>x]</u> YES	[_] NO	[_] N/A			
(d)	SECONDARY INSTRUMENTS (totalizers, recorders, etc.) PROPERLY OPERATED AND MAINTAINED.	[ <u>x]</u> YES	[_] NO	[_] N/A			
(e)	FLOW MEASUREMENT EQUIPMENT ADEQUATE TO HANDLE EXPECTED RANGES OF FLOW RATES.	[ <u>x</u> ] YES	[_] NO	[_] N/A			
Part	2 - Sampling (Further explanation attached)						
PER	MITTEE SAMPLING MEETS THE REQUIREMENTS AND INTENT OF THE PERMIT. DETAILS:	[ <u>x]</u> YES	[_] NO	[_] N/A			
(a)	LOCATIONS ADEQUATE FOR REPRESENTATIVE SAMPLES.	[ <u>x]</u> YES	[_] NO	[_] N/A			
(b)	PARAMETERS AND SAMPLING FREQUENCY AGREE WITH PERMIT.	[ <u>x]</u> YES	[] NO	[_] N/A			
(C)	PERMITTEE IS USING METHOD OF SAMPLE COLLECTION REQUIRED BY PERMIT.	[] YES	[_] NO	[_] N/A			
	IF NO, [x] GRAB [] MANUAL COMPOSITE [x] AUTOMATIC COMPOSITE FREQUENCY As	described in per	mit + proo	cess control			
(d)	SAMPLE COLLECTION PROCEDURES ARE ADEQUATE	[ <u>x]</u> YES	[_] NO	[_] N/A			
	(i) SAMPLES REFRIGERATED DURING COMPOSITING	[ <u>x]</u> YES	[_] NO	[_] N/A			
	(ii) PROPER PRESERVATION TECHNIQUES USED	[ <u>x]</u> YES	[_] NO	[_] N/A			
	(iii) FLOW PROPORTIONED SAMPLES OBTAINED WHERE REQUIRED BY PERMIT	[] YES	[_] NO	[ <u>x]</u> N/A			
	(iv) SAMPLE HOLDING TIMES PRIOR TO ANALYSES IN CONFORMANCE WITH 40 CFR 136.3	[x_] YES	[] NO	[_] N/A			
(e)	MONITORING AND ANALYSES BEING PERFORMED MORE FREQUENTLY THAN REQUIRED BY PERMIT. Process monitoring	[ <u>x</u> ] YES	[_] NO	[_] N/A			
(f)	IF (e) IF YES, RESULTS ARE REPORTED IN PERMITTEE'S SELF-MONITORING REPORT. If additional compliance monitoring is conducted.	[ <u>x]</u> YES	[_] NO	[_] N/A			
Part	3 - Laboratory (Further explanation attached)						
PER	MITTEE LABORATORY PROCEDURES MEETS THE REQUIREMENTS AND INTENT OF THE PERMIT. DETAILS:	[ <u>x</u> ] YES	[] NO	[_] N/A			
(a)	EPA APPROVED ANALYTICAL TESTING PROCEDURES USED. (40 CFR 136.6)	[ <u>x]</u> YES	[_] NO	[_] N/A			
(b)	IF ALTERNATE ANALYTICAL PROCEDURES ARE USED, PROPER APPROVAL HAS BEEN OBTAINED.	[ <u>x]</u> YES	[_] NO	[ <u>]</u> N/A			
(c)	PARAMETERS OTHER THAN THOSE REQUIRED BY THE PERMIT ARE ANALYZED.	[x_] YES	[] NO	[_] N/A			
(d)	SATISFACTORY CALIBRATION AND MAINTENANCE OF INSTRUMENTS AND EQUIPMENT.	[ <u>x]</u> YES	[_] NO	[_] N/A			
(e)	QUALITY CONTROL PROCEDURES USED.	x] YES	[_] NO	[_] N/A			
(f)	DUPLICATE SAMPLES ARE ANALYZED% OF TIME	[] YES	[_] NO	[_] N/A			
(g)	SPIKED SAMPLES ARE USED % OF TIME	[] YES	[_] NO	[_] N/A			
(h)	COMMERCIAL LABORATORY USED.	[ <u>x]</u> YES	[_] NO	[_] N/A			
(i)	COMMERCIAL LABORATORY STATE CERTIFIED.	[x_] YES	[_] NO	[_] N/A			
<u> </u>							

LAB NAME Accurate testing in CD'A is used for a few parameters; Anatek Labs in Spokane conducts Priority pollutant scans.

LAB ADDRESS

EPA FORM 3560-3 (9-77)

						PERMIT NO. WA0045144		
SECTION L - Eff	uent/Receiving W	ater Observations	s (Further explanati	on attached				
OUTFALL NO.	OIL SHEEN	GREASE	TURBIDITY	VISIBLE FOAM	VISIBLE FLOAT SOL	COLOR	OTHER	
001	no	no	no	no	no	no	no	
SECTION M - Sa	mpling Inspection	(Sections M and Procedures and	N: Complete as ap Observations (Fur	opropriate for sample opropriate for sample opropriate for sample for the sample	ing inspections) ached	)		
COMPOSITE OBTAINED     FLOW PROPORTIONED SAMPLE     AUTOMATIC SAMPLER USED     SAMPLE SPLIT WITH PERMITTEE     CHAIN OF CUSTODY EMPLOYED     SAMPLE OBTAINED FROM FACILITY SAMPLING DEVICE     COMPOSITING FREQUENCY PRESERVATION SAMPLE REFRIGERATED DURING COMPOSITING: [] YES [] NO     SAMPLE REPRESENTATIVE OF VOLUME AND NATURE OF DISCHARGE								
SECTION N - Analytical Results (Attach report if necessary)								

## Inspection Narrative:

Michael Hepp, Kim Prisock, and Eleanor Key arrived on site at the operations building on May 22, 2014 at 8:55 am. Ecology met representatives from the Liberty Lake Sewer and Water District for the inspection: BiJay Adams, General Manager; Dan Grogg, Supervising Operator; and Darrell Gamble, Operator II.

Ecology conducted a review of records kept at the facility. The operators keep online logs for all processes including maintenance schedules. Records were spot checked for retention – all data since the most recent upgrade is readily available. Mike discussed violations that occurred during this permit cycle including missing submittals. The facility experience DMR violations for missing DO on weekends and low pH values. Ecology reviewed the issue and modified the permit on October 30, 2013. They have not had any additional violation for these parameters. The District turned in all submittals on time and now Ecology has logged all of them into PARIS. Dan Grogg also provided the most recent WET testing results in paper format. Dan will work with the lab to have the results delivered electronically in a CETIS format.

The lab has all test results for process and compliance monitoring available. They keep calibration records and daily process testing results on bench sheets. The facility monitors per the requirements in Permit Section S2 and conducts daily testing for process control. Ecology discussed flow meter calibration with Darrell. The facility uses a parshall flume with a Milltronics ultrasonic flow meter for both influent and effluent flow measurement. The operators run a continuous calibration on both flow meters using the SCADA system. They look for <1% difference between the influent/effluent meters and contract with a specialist to recalibrate once the drift exceeds 1%.

Ecology walked the facility with the representatives from the district. The Hycor influent screen requires regular maintenance to replace internal components. Dan and Darrell can perform the maintenance and they try to schedule the maintenance during periods of low flow to minimize flow bypass through the 2" bar screen. Both Dan and Darrell indicated that there is a need for a new fine screen. The City plans to include these in the next phase of upgrades. Ecology expects construction document submittal in September 2014. These upgrades will also replace the ultrasonic/parshall flume influent meter with a magmeter. They rotate grit channels at the headworks every couple of months so that they can remove debris accumulated in the channels.

The treatment facility uses the old concrete clarifiers as equalization basins (EQ). Use of these EQ basins prevents the District from experiencing hydraulic and organic overloading. Flow enters the EQ basin from the headworks. Pumping from the EQ basins to the selector tanks ahead of the aeration basin (AB) delivers equalized flow, for continuous treatment. These pumps can transfer up to 1 MGD.

Ahead of the ABs are anaerobic and anoxic selectors that aid in the biological nutrient removal process. The do not use tanks on site for fermenting the influent (which increase volatile fatty acids). Some of the lift stations in the collection system have high detention times, which facilitate some fermentation prior to entering the treatment plant. In the ABs, the operators keep the mixed liquor suspended solids (MLSS) between 1,500 -2,000 mg/L. They can't increase MLSS above 2,500 mg/L and maintain effluent quality. The operators keep the mean cell residence time (MCRT) to around 18 days. The treatment plant does a great job of removing phosphorus biologically. The issue that concerns the operator is nitrate removal. The ABs had light brown foam on the surface due to a daphnia bloom that occurs seasonally for 4-6 weeks – this foam normally goes away once temperatures are consistently warmer. They use 150 horse power blowers to feed the fine bubble diffusers in the Abs. mixed liquor from the ABs recycles back to the anoxic selector. Recently, the facility had to replace seals on the mixed liquor return pumps. On average, they maintain a 4:1 ratio for recycle flow back to anoxic selector for biological nutrient removal from the AB. The rest of the flow from the AB discharges to the secondary clarifiers.

Secondary clarifiers are run in parallel. The return activated sludge pumps pull on average 250 gpm from the secondary clarifier to the anaerobic selector (MLSS ~ 3,000 mg/L) and can increase to 1,800 gpm if needed. Waste activated sludge (WAS) from the secondary clarifiers enters an aerated solids holding tank with a 6-day retention time. This prevents nutrient release into the side stream.

Prior to discharge to the Spokane River, they disinfect the secondary clarifier effluent. In 2002, the Liberty Lake Water and Sewer District (LLWSD) upgraded from chlorine disinfection to a low intensity, low pressure, UV disinfection system. The EQ basins allow a continuous flow preventing the cycling on and off of the UV bulbs. This increases the bulb life at the facility. We did not conduct a visual inspection of the facility's outfall due to restricted access and distance from the effluent flow meter to the outfall discharge location. We observed a colorless, clear effluent with minimal solids downstream of UV disinfection at the effluent flow meter.

Course bubble diffusers keep the wasted sludge aerated and in suspension. The facility dewaters waste sludge weekly with an Andritz belt filter press. Pumps draw approximately 150 gpm from the sludge-holding tank to the belt filter press for dewatering. After dewatering, they transport the biosolids off site using an outside contractor and land apply them in Mansfield, WA.

The operators maintain good housekeeping and O/M practices. They are both familiar with permit requirements and individual process needs. Ecology found no violations during the inspection.

Left site at 11:45am.