

JOHN R. KROGER
Attorney General



MARY H. WILLIAMS
Deputy Attorney General

DEPARTMENT OF JUSTICE
GENERAL COUNSEL DIVISION

May 26, 2010

Public Utility Commission
Attn: Filing Center
550 Capitol St. NE #215
P.O. Box 2148
Salem, OR 97308

Re: Docket No. UE-219; Testimony

Enclosed for filing in this matter is the Direct Testimony of Chris Stine by the Oregon Department of Environmental Quality.

Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read "Kurt Burkholder".

Kurt Burkholder
Assistant Attorney General
Of Attorneys for Intervenor

kbb:lal/2064494

Encl. & one copy
Cc w/ encl.: Service list

CERTIFICATE OF SERVICE

I certify that, on May 26, 2010, I served the foregoing Direct Testimony of Chris Stine on behalf of the Oregon Department of Environmental Quality upon the parties on the service list, by U.S. Mail, and by electronic mail where paper service has been waived.

/s/ Kurt Burkholder

Kurt Burkholder

	(W denotes waiver of paper service)		
W	AMERICAN RIVERS STEVE ROTHERT 432 Broad St Nevada City, CA 95959 srothert@americanrivers.org	W	S CRAIG TUCKER PO Box 282 Oreleans CA 95556 ctucker@karuk.us
W	AMERICAN RIVERS BRETT SWIFT 320 SW Stark St – Ste 418 Portland OR 97204 bswift@amrivers.org	W	KLAMATH WATER USERS ASSN J LAURENCE CABLE 1001 SW 5 th Ave Ste 2000 Portland OR 97204 lcable@cablehuston.com
	ICNU MELINDA J DAVISON 333 SW Taylor – Suite 400 Portland OR 97204 mjd@dvclaw.com	W	KLAMATH WATER USERS ASSN RICHARD LORENZ 1001 SW 5 th Ave Ste 2000 Portland OR 97204 rlorenz@cablehuston.com
W	KLAMATH TRIBES AND KLAMATH WATER PROJECT CARL ULLMAN PO Box 957 Chiloquin OR 97624 bullman3@earthlink.net		DEPARTMENT OF JUSTICE DAVID HATTON 1162 Court St NE Salem OR 97301 david.hatton@state.or.us
W	NCCFFF MARK C ROCKWELL 19737 Wildwood West Dr Penn Valley CA 95946 summerhillfarmvp@aol.com		KATHERINE A MCDOWELL 520 SW Sixth Ave – Suite 830 Portland OR 97204 katherine@mcd-law.com

W	OREGON DEPARTMENT OF FISH AND WILDLIFE KEN HOMOLKA 3406 Cherry Ave NE Salem OR 97303 ken.homolka@state.or.us	W	OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY CHRIS STINE 165 E 7 th Ave – Suite 100 Eugene OR 97401 chris.stine@state.or.us
W	OREGON DEPARTMENT OF FISH AND WILDLIFE RICK KEPLER 3406 Cherry Ave NE Salem OR 97303 rick.j.kepler@state.or.us	W	OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY STEVE KIRK 475 NE Bellevue Dr Bend OR 97701 steve.kirk@state.or.us
	OREGON PUBLIC UTILITY COMMISSION ED DURRENBERGER PO Box 2148 Salem OR 97308 ed.durrenberger@state.or.us	W	OREGON WATER RESOURCES DEPARTMENT MARY GRAINEY 725 Summer St NE – Suite A Salem OR 97301 mary.s.grainey@wrđ.state.or.us
W	PACIFIC COAST FEDERATION OF FISHERMEN'S ASSOC GLEN H SPAIN PO Box 11170 Eugene OR 97440 fishlifr@aol.com	W	OREGON WATER RESOURCES DEPARTMENT RON C KOHANEK 725 Summer St NE – Suite A Salem OR 97301 ron.c.kohaneck@wrđ.state.or.us
	PACIFICORP OREGON DOCKETS 825 NE Multnomah St – Suite 2000 Portland OR 97232 oregondockets@pacificorp.com		RANDALL J FALKENBERG RFI CONSULTING INC PMB 362 8343 Roswell Rd Sandy Springs GA 30350 consultrfi@aol.com
W	SALMON RIVER RESTORATION COUNCIL PETER BRUCKER HCR 4 BOX 1089 Sawyers Bar CA 06027 ptb92day@gmail.com	W	TROUT UNLIMITED CHARLTON H BONHAM 828 San Pablo Ave – Suite 208 Albany CA 94706 cbonham@tu.org

W	WATERWATCH OF OREGON LISA BROWN 213 SW Ash St – Suite 208 Portland OR 97204 lisa@waterwatch.org	W	TROUT UNLIMITED KATE MILLER 227 SW Pine Street – Suite 200 Portland OR 97204 kmiller@tu.org
W	YUROK TRIBE JOHN CORBETT PO Box 1027 Klamath CA 95548 jcorbett@yuroktribe.nsn.us	W	NATURAL HERITAGE INSTITUTE RICHARD ROOS-COLLINS 100 Pine St – Suite 1550 San Francisco CA 94111 rrolins@n-h-i.org
W	CITIZENS' UTILITY BOARD OF OREGON GORDON FEIGHNER 610 SW Broadway – Suite 308 Portland OR 97205 gordon@oregoncub.org	W	CITIZENS' UTILITY BOARD OF OREGON ROBERT JENKS 610 SW Broadway – Suite 308 Portland OR 97205 bob@oregoncub.org
W	CITIZENS' UTILITY BOARD OF OREGON G CATRIONA MCCrackEN 610 SW Broadway – Suite 308 Portland OR 97205 catriona@oregoncub.org	W	CITIZENS' UTILITY BOARD OF OREGON RAYMOND MYERS 610 SW Broadway – Suite 308 Portland OR 97205 ray@oregoncub.org
W	CITIZENS' UTILITY BOARD OF OREGON KEVIN ELLIOTT PARKS 610 SW Broadway – Suite 308 Portland OR 97205 kevin@oregoncub.org		

Docket No. UE-219
Exhibit DEQ/1
Witness: Chris Stine

BEFORE THE PUBLIC UTILITY COMMISSION
OF THE STATE OF OREGON

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY

Direct Testimony of Chris Stine

May 2010

1 **Introduction**

2 **Q: Please state your name, office address, and present position with the Oregon**
3 **Department of Environmental Quality (“DEQ”).**

4
5 A. My name is Chris Stine. My office address is 165 E. 7th Avenue, Suite 100, Eugene,
6 Oregon 97401. My present position is Hydroelectric Specialist.

7 **Qualifications**

8 **Q: Briefly describe your educational background and professional experience.**

9
10 A: I graduated from Rutgers University with BS and MS degrees in Agricultural
11 Engineering. I’ve been a registered professional engineer in civil engineering since 1996.
12 I worked for 15 years as a private consultant conducting remedial investigations at soil
13 and groundwater cleanup sites. I joined ODEQ in 2007.

14 **Q: Briefly describe the scope of your duties with DEQ.**

15 A: My principal role with DEQ is to evaluate whether the operation of proposed
16 hydroelectric projects will comply with Oregon water quality standards and other
17 appropriate requirements of state law. I develop certification decisions which may
18 contain certain conditions on the operation of the proposed project to provide the
19 Department with reasonable assurance that water quality standards will be met. I also
20 evaluate § 401 certification applications for removal-fill projects pursuant to Section 404
21 of the Clean Water Act. I provide project management and engineering technical
22 assistance to the cleanup and underground storage tank programs.

23 **Purpose of Testimony**

24 **Q: What is the purpose of your testimony?**

25

26

1 A: I will describe: the role of water quality certification in relicensing of hydroelectric
2 projects; water quality issues associated with the Klamath River Hydroelectric Project;
3 and possible water quality measures that would be required for any relicensing of the
4 project.

5 **Water Quality Certification of Hydroelectric Projects**

6 **Q: Please describe the role of water quality certification in the relicensing of**
7 **hydroelectric projects.**

8
9 A: Under Section 401 of the federal Clean Water Act (33 U.S.C. §1341), an applicant for a
10 federal license for any activity that might result in a discharge to navigable waters must
11 obtain a certification from the state that the discharge will comply with state water quality
12 standards. In Oregon, DEQ is the state agency authorized to provide § 401 certifications
13 for hydroelectric projects requiring a new FERC license. ORS 468B.040. After receiving
14 a § 401 application, DEQ will evaluate the water quality impacts of the project, then issue
15 a proposed certification decision for public comment. If DEQ determines to grant a §
16 401 certification, it will include conditions to the certification ensuring that the project
17 will comply with state water quality standards and other appropriate requirements of state
18 law. FERC must include those conditions in any new license for the hydroelectric
19 project. 33 U.S.C. § 1341(d).

20 **Q: What is the status of water quality certification for the Klamath River Hydroelectric**
21 **Project?**

22
23 A: PacifiCorp last submitted to DEQ a § 401 application for relicensing of the project on
24 January 20, 2010. In accordance with Section 6.5 of the KHSA, DEQ's review of that
25 application is being held in abeyance during the time period required for federal studies,
26 environmental review, and the Secretarial Determination under the KHSA.

1 This process is in addition to the § 401 certification required from the State of California
2 for impacts to California waters. That § 401 process is also being held in abeyance.

3 **Water Quality Issues Posed by the Project**

4 **Q: Please describe water quality issues in Oregon waters associated with the Klamath**
5 **River Hydroelectric Project.**

6
7 A: Project operations alter the hydrologic regime of Klamath River and negatively impact
8 water quality in several ways. Project impoundments can increase water temperature and
9 decrease dissolved oxygen levels. Diversions to power canals reduce the volume of
10 water remaining in bypassed reaches. Rapid changes in river stage below JC Boyle
11 powerhouse can cause bank erosion, fish stranding, and adversely affect benthic
12 communities.

13 Portions of the Klamath River within the project boundary currently do not meet Oregon
14 water quality standards for temperature, dissolved oxygen, ammonia, pH, and
15 chlorophyll-a. Recently, Oregon DEQ completed a Draft Total Maximum Daily Load
16 (“TMDL”) for portions of the Upper Klamath and Lost River in the Klamath Basin. The
17 Draft TMDL proposes to assign PacifiCorp Load

18
19 Allocations for dissolved oxygen (“DO”) and temperature impacts associated with the
20 Keno and JC Boyle developments.

21 **Water Quality Measures for Relicensing of the Project**

22 **Q: Please describe water quality measures in Oregon waters that might be required for**
23 **any relicensing of the Klamath River Hydroelectric Project.**

24
25 A: Since a § 401 evaluation has not been completed on PacifiCorp’s relicensing application,
26 it would be premature to conclusively state what water quality measures would be

1 required. However, at a minimum any § 401 certification would require measures to
2 avoid the Project's water quality impacts described above, as well as measures providing
3 compliance with other appropriate requirements of state law.

4 DEQ would also require PacifiCorp to implement pollutant reduction measures as
5 necessary to comply with current or future TMDL load allocations assigned to the
6 Project. PacifiCorp's Reservoir Management Plan (February 2008) proposed to evaluate
7 and design an air injection infusion system to promote water column mixing and DO
8 augmentation in JC Boyle Reservoir. PacifiCorp would also need to perform nutrient
9 reduction measures to reduce Project-related biochemical demand. PacifiCorp proposed
10 to complete a study evaluating the feasibility of using constructed wetlands as a means of
11 reducing nutrient loads in Project reservoirs.

12 **Q: Are these measures discussed in the direct testimony of Corey E. Scott (Exhibit**
13 **PPL/300) or shown in PacifiCorp's "Costs of FERC Relicensing Scenario"**
14 **(Confidential Exhibit PPI/301)?**

15
16 **A:** Mr. Scott testified that since the Section 401 water quality certification process is not yet
17 complete, the water quality measures necessary to obtain a new license remain uncertain.
18 Under a relicensing scenario, he indicated PacifiCorp anticipated the need to commit
19 resources for water quality enhancement projects to address elevated temperature,
20 dissolved oxygen deficits, and nutrient reduction to control harmful algal blooms.
21 However, his testimony does not identify specific measures to achieve these objectives.
22 Confidential Exhibit PPL/301 identifies aeration in JC Boyle as the only water quality
23 measure considered for Project developments in Oregon.

24 **Q: Does this conclude your testimony?**

25 **A:** Yes.