

WSR 15-11-095

DEPARTMENT OF ECOLOGY

[Filed May 20, 2015, 9:14 a.m.]

**Announcing a Draft Fisheries Resource Management
General Permit for Review and Comment**

Proposed Permit: The Washington state department of ecology (ecology) is proposing a new general permit to regulate the use of rotenone and potassium permanganate for management of fish populations in surface waters of Washington state.

Washington's water quality statutes and regulations do not allow the discharge of pollutants to waters of the state without permit coverage. The piscicide rotenone and the detoxification agent potassium permanganate are potential pollutants, and therefore require a discharge permit before application to surface waters. Ecology issues general permits in place of a series of individual permits when the permitted activities are similar.

Washington department of fish and wildlife (WDFW), the State Environmental Policy Act (SEPA) lead for this permit, has determined that this proposal is likely to have significant adverse impacts on the environment. WDFW has made the environmental documents, adopted as part of the SEPA determination, available for review and comment at http://wdfw.wa.gov/licensing/sepa/sepa_final_docs_2015.html.

Purpose of the Permit: This permit would allow WDFW to manage fish populations in surface waters of Washington state. Coverage under the proposed general permit will be limited to WDFW only.

Copies of the Draft Permit: You may download copies of the draft permit and fact sheet beginning June 3, 2015, from the following web site

http://www.ecy.wa.gov/programs/wq/pesticides/final_pesticide_permits/fish/fish_index.html.

Ecology Contact: Nathan Lubliner, Washington State Department of Ecology, P.O. Box 47696, Olympia, WA 98504-7696, phone (360) 407-6563, e-mail nathan.lubliner@ecy.wa.gov.

Workshop and Public Hearing: Ecology will hold one workshop and public hearing on the draft NPDES general permit for fisheries resource management. The purpose of the workshop is to explain the general permit and answer questions in order to facilitate meaningful testimony during the hearing. The purpose of the hearing is to provide an opportunity for people to give formal oral testimony and comment on the proposed draft permit. Written comments will receive the same consideration as oral testimony. The workshop and public hearing will begin at 12:00 noon on July 8, 2015, and conclude when public testimony is complete, at the Moses Lake Fire Station 1, 701 East Third Avenue, Moses Lake, WA 98837.

Submitting Written Comments: Ecology will accept written comments on the draft permit and fact sheet until **5 p.m., July 17, 2015**. Ecology prefers comments be submitted by e-mail to nathan.lubliner@ecy.wa.gov. E-mailed comments must contain the commenter's name and postal address. Comments should reference specific permit text when possible.

Submit comments by e-mail to nathan.lubliner@ecy.wa.gov.

Submit written comments to Nathan Lubliner, Washington State Department of Ecology, P.O. Box 47696, Olympia, WA 98504-7696.

You must send e-mail comments before **5 p.m., July 17, 2015**. Written comments must be postmarked no later than **5 p.m., July 17, 2015**.

Issuing the Permit: The final decision on permit issuance will be made after ecology receives

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and considers all public comments. If public comments cause a substantial change in the permit conditions from the original draft permit, another public notice of draft and comment period may ensue. Ecology expects to issue the general permit in fall 2015.



Washington State Department of Ecology
Public Hearing
July 8, 2015
Moses Lake, Washington

I am Walter "Spike" Arlt the Manager Partner representing the Arlt Family Limited Partnership at this hearing.

The goals and objectives of the Ecology Department and the F&W NPDES permit requirement are in direct conflict whenever Fish and Wildlife implements the NPDES permit special exception.

These are the Primary Ecology 3 Mission Goals listed below from their website. Toxics Clean up and Water Quality along with Water Resources are a part of that.

In order to fulfil its mission and move Washington forward in a global economy, the Washington Dept. of Ecology has three goals:

- Prevent pollution
- Clean up pollution
- Support sustainable communities and natural resources

• TOXICS CLEANUP

Mission: To get and keep contaminants out of the environment.

• WATER QUALITY

Mission: To protect and restore Washington's waters.

• WATER RESOURCES

Mission: To manage water resources to meet the current and future needs of the natural environment and Washington's communities.

A new NPDES permit and the F&W usage of it, are in direct conflict of those items!

The Number 1 Goal of the Fish and Wildlife Department taken from the current website is this:

Department Goals

Goal 1:

Conserve and protect native fish and wildlife

The NPDES permit usage by Fish and Wildlife attempts to kill all native fish and most all large trophy fish. They replace all dead fish first in the early stages with fingerling trout. Later in the stream and lake rehab process, legally catchable sized trout are planted just before the opening day of fishing season. Many of these fish are genetically sterile large trout.

There is no need to kill all the native fish, or the large trophy fish of all species with toxic chemicals and especially in conflict of the number 1 Department Goal.

Fish and Wildlife does not make any rotenone applications in Western Washington. They have not for decades.

They don't need to make any rotenone applications in Eastern Washington either.

No Westside Applications . . . Why?

Only Eastside Applications . . . Why?

Is there a political discrimination of toxic pollution between the Westside and Eastside of the state?

Will a new NPDES Permit be just an edit of the old one? Will the rotenone powdered and liquid mixtures be tested for inert ingredients before applications are made? Will all toxic chemicals be identified as to pollutant discharge before applications are made?

Will domestic wells (adjacent to streams and lakes) be tested before and after rotenone applications for toxic chemicals?

"Washington's water quality statutes and regulations do not allow the discharge of pollutants to water of the state without permit coverage. " Why don't we just edit out the last 3 words?

We, The Arlt Family Limited Partnership, have been property owners on Park Lake (Sun Lakes) since 1968 and have experienced the Historical Aquatic Horrors of Stream and Lake Rehabilitation by the State of Washington Fish and Wildlife Department. There have been several applications since we acquired the Park Lake property.

Park lake historically has received this F&W Rotenone rehab program 9 times now.

The Arlt Family Limited Partnership filed an appeal to stop the rotenone application to the POLLUTION CONTROL HEARINGS BOARD FOR THE STATE OF WASHINGTON. The relevant permit then was the NPDES Permit.

In the appeal, we documented potential harm to our personal property and potential harm to members of the Arlt Family Limited Partnership with toxic chemicals and dead fish contamination to the lake, shoreline, property and domestic well.

A 13 page document was filed and dated November 6, 2006 for 2002 NPDES permit termination action to the POLLUTION CONTROL HEARING BOARD FOR THE STATE OF WASHINGTON before application of

powdered and liquid rotenone was applied to Park Lake in 2006. Documented facts support the appeal for termination of the NPDES permit.

After the Rotenone application to Park Lake by Fish and Wildlife, these potential harmful concerns became a reality.

On July 18th, 2008 members of the AFLP and a local concerned citizen met with Jeff Korth in the Ephrata, Washington F&W office to discuss the continued uses of rotenone mixture applications in lakes and streams in Eastern Washington.

Following that meeting on August 18th, a 21 page written document titled, "Aquatic Horror" was submitted to Fish and Wildlife requesting termination of the NPDES rotenone applications, due to violations of the permit with radical toxic chemicals.

Major problems still exist with the "Inert Ingredients" in the powdered and liquid rotenone products used in the applications. They are simply unknown while a few have been identified by special testing.

Respectfully yours,

Walter "Spike" Arlt
Managing Partner, Arlt Family Limited Partnership
2514 Judge Ronald Road
Ellensburg, Washington 98926

Phone: 509-925-2761



August 18, 2008

Letter for Comments to Fish and Wildlife Public Meeting July 18, 2008
Ephrata, Washington
Fish and Wildlife Building

On July 18, 2008 The Washington State Department of Fish and Wildlife conducted an advertised public meeting at their office located in Ephrata, Washington.

The purpose of the meeting was to present to the public the Pre-Rehabilitation Plan for 13 Eastern Washington geographical water bodies in the fall of 2008. These lakes and streams will receive the damaging, chemically toxic, fish killing, rotenone applications as has occurred in Eastern Washington for the last 40 years. The public meeting was scheduled by Fish and Wildlife as to present their information and take questions or comments from the public.

We (The Arlt Family Limited Partnership) submit this document titled "Aquatic Horror" as written comments under instructions given to us as an option to do so from this meeting.

Three public people attended the meeting, Carl Highland, John Arlt and Walter Arlt.

Since this meeting was small in attendance, approximately 2 hours was spent debating and discussing our many concerns with the use of rotenone applications that include combinations of powdered and liquid rotenone products. These rotenone products contain known and unidentified toxic chemicals (inert ingredients) that are a toxic chemical concern in these rotenone applications.

Fish and Wildlife has stated this information from this meeting will be available to the public in written form.

We request the written copy from Fish and Wildlife of this meeting discussion and information that is available to the public.

AQUATIC HORROR

This written document is submitted to insure an accurate record of our documented concerns and continuing debate with the Annual Eastern Washington Rehabilitation Fishing Plans that utilize rotenone applications. This F & W rehabilitation plan uses documented dangerous toxic chemicals harmful to human health and the environment. These destructive contaminating toxic chemicals are placed only in Eastern Washington public waters to improve trout fishing.

This current rotenone application process needs to be terminated based on the following new and relevant rotenone information that was not present at the time of the NPDES permit application by WSDFW.

The new information regards findings of cancer causing potential of rotenone as determined by the National Toxicology Program. This information is not reflected on the current rotenone product MSDS sheets. Refer to the following below.

POLLUTION CONTROL HEARINGS BOARD
FOR THE STATE OF WASHINGTON

ARLT FAMILY LIMITED)	
PARTNERSHIP,)	PCHB No. 06-102
)	
Appellant,)	
)	REBUTTAL DECLARATION OF
v.)	JOHN ARLT
)	
STATE OF WASHINGTON)	
DEPARTMENT OF ECOLOGY AND)	
DEPARTMENT OF FISH AND)	
WILDLIFE,)	
)	
Respondent.)	
_____)	

John J. Arlt declares:

- I am one of the partners in the Arlt Family Limited Partnership, appellant in this action. I am over the age of 18, am competent to testify to the matters stated below, and I have personal knowledge of those matters.

2. My educational background includes a Bachelor of Science degree in Biology from Central Washington University, and a Master of Science degree in Biology from Central Washington University (specialization in Cellular and Molecular Biology). I wrote my Master's Thesis on "LOCALIZATION OF THE CHIMERIC KEX2-FURTAIL PROTEIN IN YEAST BY *IN-VIVO* ASSAYS" which was published in 1998. In addition, I have been employed as a science instructor since 1990, worked as an Adjunct Professor for Central Washington University, and have been employed as a Summer Instructor with the Fred Hutchinson Cancer Research Center.

3. I am submitting this rebuttal declaration to reply to various statements made by the agency staff who submitted declarations to the Board. I reviewed each of the declarations and related attachments, as well as the agencies' briefs in preparing this response.

4. Information regarding the chronic health hazards of rotenone and MSDS forms are disputed by Ecology (pg 7 lines 11-20) and Fish and Wildlife (pg 7 lines 21-26, pg 8 lines 1-8). The dispute is based on the percent composition of rotenone listed on MSDS forms for piscicide use (5-10%) compared to technical grade rotenone (95%).

Declarants for Ecology and Fish and Wildlife have demonstrated little

understanding and a lack of knowledge in regards to chemical evaluation for

chronic health hazards as governed by the Occupational Safety and Health

Administration (OSHA) in the Hazard Communication Standards (HCS). In the

response by Sonia Wolfman of Ecology, she states "As such, the MSDS provided by Arlt on technical grade rotenone is not relevant to the product WDFW is permitted to use."

(pg 7 lines 15-16). In the response by Sheila Lynch of WDFW, she states "However, the

MSDS forms that do indicate such risks are not those that are applicable to the products WDFW uses.” (pg 8 lines 5-6). OSHA has established and set forth the following guidelines on this issue in 29 CFR 1910.1200 section D Hazard Determination as follows (see exhibit A):

1910.1200(d)(5)(ii)

If a mixture has not been tested as a whole to determine whether the mixture is a health hazard, the mixture shall be assumed to present the same health hazards as do the components which comprise one percent (by weight or volume) or greater of the mixture, except that the mixture shall be assumed to present a carcinogenic hazard if it contains a component in concentrations of 0.1 percent or greater which is considered to be a carcinogen under paragraph (d)(4) of this section;

The MSDS forms provided in the Anderson declaration for use by WDFW shows ALL formulations containing more than one percent rotenone. The formulations used by WDFW containing rotenone also have NOT been tested as a whole for chronic health hazards as is stated on the MSDS forms themselves. An example is for Product 655-422 Prentox® Prenfish™ Toxicant stating in Section 11: Toxicological Information under the chronic health categories **(The following data were developed with rotenone technical)**. Technical quality rotenone is a high purity sample, similar to the Sigma-Aldrich 95% rotenone as listed in the MSDS. No valid studies can be performed on the chronic health effects of individual chemicals found in mixtures when the mixture itself is used, due to the fact that one could not attribute ANY effect to just one chemical in the mixture. Thus, a study performed in the manner described above would not qualify as being statistically significant, nor in accordance with established scientific principles as stated in 29 CFR 1910.1200 section D Hazard Determination as follows (see exhibit A):

1910.1200(d)(2)

Chemical manufacturers, importers or employers evaluating chemicals shall identify and consider the available scientific evidence concerning such hazards. For health hazards, evidence which is statistically significant and which is based on at least one positive study conducted in accordance with established scientific principles is considered to be sufficient to establish a hazardous effect if the results of the study meet the definitions of health hazards in this section. Appendix A shall be consulted for the scope of health hazards covered, and Appendix B shall be consulted for the criteria to be followed with respect to the completeness of the evaluation, and the data to be reported.

5. New information not available at the time of permit issuance regarding the health impacts to humans is found in the 2006 MSDS for rotenone from Sigma-Aldrich. Three of the four MSDS forms (one does not list it) provided in the Anderson declaration state NO mutagenic effects, and **the MSDS for Powdered Cube Root (2004) specifically states rotenone was not mutagenic as shown through the Mouse Lymphoma Test (using rotenone, a technical grade)**. The National Toxicology Program (NTP), which is used to establish chronic effects of chemicals for MSDS forms regarding carcinogenicity and mutagenicity, **has found rotenone to be positive for the Mouse Lymphoma Test (updated 10/18/2006 – exhibit B)**. The Mouse Lymphoma Test is used to indicate the ability of a chemical to cause genetic mutations. This current information is reflected on the 2006 Sigma-Aldrich MSDS for rotenone, but not on those provided by WDFW for formulations containing greater than one percent rotenone.

6. Ecology and WDFW argue concentrations of rotenone to be used are well below those that have been shown to have any potential human health effects. This argument has been shown to be false from evidence already presented in my (John J. Arlt) declaration in Section D page 4. WDFW will be applying approximately **0.09 ppm actual rotenone** to Park Lake. Three studies referenced in Section D show adverse

cellular effects with concentrations as low as **0.0004 ppm actual rotenone** (over 200 times less than what will be applied to Park Lake). These studies were performed utilizing **technical grade rotenone, and diluting it down** to the concentrations reported in the studies.

Conclusion

The information presented on the MSDS from Sigma-Aldrich is RELEVANT and NEW in regards to permit issuance, and was not available at the time of permit issuance by Ecology. The concentrations of rotenone that will be applied to Park Lake, and thus expose members of the AFLP to, are over 200 times the concentration shown to negatively impact cell function(s) in peer reviewed studies.

I declare under penalty of perjury under the laws of the State of Washington that the foregoing is true.

SIGNED this 5th day of November, 2006, at Ellensburg, Washington.

John J. Arlt

I hereby certify that I served this document on counsel of record for the parties to this action on this date by fax, e-mail, and by First Class U.S. Mail, postage prepaid.

Richard A. Poulin

We have serious concerns with the rotenone applications that are used in these annual rehabilitation applications year after year in Eastern Washington and presented just some of them in detail at the meeting. They are presented again in this additional document.

We are not opposed to improved fishing in Eastern Washington for trout, bass, perch, sunfish, blue gill, walleye and any other species of fisherman interest.

We are opposed to the attempted and successful killing of all fish species in Eastern Washington lakes and streams with toxic chemicals such as those used in rotenone applications. These toxic chemicals contaminate surface and ground waters with known and unknown effects to humans and the environment.

These rotenone application product chemicals contain "inert ingredients". Certified laboratories using standard Environmental Protection Agency test protocols can only identify some of the individual chemicals contained in these products.

Environmental Protection Agency drinking water standards do not exist for specific individual chemicals detected by these certified laboratories in required VOC analysis. These identified chemicals detected in the rotenone application in Negro Creek in the fall of 2007 were: Naphthalene, n-Butylbenzene, Isopropyltoluene, sec-Butylbenzene, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene and n-Propylbenzene. They were found to be in high concentrations individually.

The "Aquatic Horror" is there are EPA drinking water standards for only some volatile chemicals. Usually these standards are below .005 part per billion on all the chemicals that are listed.

There are no drinking water standards for the chemicals identified above that were detected. Many chemicals cannot be identified individually by these certified laboratories conducting the required analysis for volatile chemicals. Additional toxic chemical data exists in collected water samples from lakes and streams on gas chromatograph charts used to identify toxic chemicals.

Figures 1 and 2 in the attached files identify some of these inert ingredients. Figure 2 also shows the peaks of toxic chemicals identified and not identified.

See Fig. 1 below for the identified Negro Creek chemicals in the attached file below.

Certified Laboratory
VOC Special Tests
Public Hearing Disclosure Act
Fig. 1

ESN SEATTLE CHEMISTRY LABORATORY
(425) 957-9872, fax (425) 957-9904

ESN Job Number: S71016.2
Client: Washington Department of Fish and Wildlife
Client Job Name: Negro Creek
Client Job Number:

Analytical Results 8260, µg/L	MTH BLK		LCS Negro Creek		MS	MSD	RPD
	Water	Water	Water	Water	Water	Water	
Matrix	Reporting Limits						
Data analyzed	Limits	10/17/07	10/17/07	10/17/07	10/17/07	10/17/07	
Dichlorodifluoromethane	1.0	nd		nd			
Chloromethane	1.0	nd		nd			
Vinyl chloride	0.2	nd		nd			
Bromomethane	1.0	nd		nd			
Chloroethane	1.0	nd		nd			
Trichlorofluoromethane	1.0	nd		nd			
Acetone	10.0	nd		nd			
1,1-Dichloroethene	1.0	nd	105%	nd	104%	100%	4%
Methylene chloride	10.0	nd		nd			
Methyl-t-butyl ether (MTBE)	1.0	nd		nd			
trans-1,2-Dichloroethane	1.0	nd		nd			
1,1-Dichloroethane	1.0	nd		nd			
n-Hexane	1.0	nd		nd			
2-Butanone (MEK)	10.0	nd		nd			
cis-1,2-Dichloroethane	1.0	nd		nd			
2,2-Dichloropropane	1.0	nd		nd			
Chloroform	1.0	nd		nd			
Bromochloromethane	1.0	nd		nd			
1,1,1-Trichloroethane	1.0	nd		nd			
1,2-Dichloroethane (EDC)	1.0	nd		nd			
1,1-Dichloropropene	1.0	nd		nd			
Carbon tetrachloride	1.0	nd		nd			
Benzene	1.0	nd	101%	nd	101%	100%	1%
Trichloroethane (TCE)	1.0	nd	101%	nd	102%	100%	2%
1,2-Dichloropropane	1.0	nd		nd			
Dibromomethane	1.0	nd		nd			
Bromodichloromethane	1.0	nd		nd			
4-Methyl-2-pentanone (MIBK)	1.0	nd		nd			
cis-1,3-Dichloropropene	1.0	nd		nd			
Toluene	1.0	nd	104%	nd	105%	108%	0%
trans-1,3-Dichloropropene	1.0	nd		nd			
1,1,2-Trichloroethane	1.0	nd		nd			
2-Hexanone	1.0	nd		nd			
1,3-Dichloropropane	1.0	nd		nd			
Dibromochloromethane	1.0	nd		nd			
Tetrachloroethane (PCE)	1.0	nd		nd			
1,2-Dibromoethane (EDB)	0.10	nd		nd			
Chlorobenzene	1.0	nd	110%	nd	114%	114%	0%
1,1,1,2-Tetrachloroethane	1.0	nd		nd			
Ethylbenzene	1.0	nd		nd			
Xylenes	1.0	nd		nd			
Styrene	1.0	nd		nd			
Bromoform	1.0	nd		nd			
1,1,2,2-Tetrachloroethane	1.0	nd		nd			
Isopropylbenzene	1.0	nd		nd			
1,2,3-Trichloropropane	1.0	nd		nd			
Bromobenzene	1.0	nd		nd			
Propylbenzene	1.0	nd		1.5			
2-Chlorotoluene	1.0	nd		nd			
4-Chlorotoluene	1.0	nd		nd			
1,3,5-Trimethylbenzene	1.0	nd		5.0			
tert-Butylbenzene	1.0	nd		nd			
1,2,4-Trimethylbenzene	1.0	nd		54			
sec-Butylbenzene	1.0	nd		2.3			
1,3-Dichlorobenzene	1.0	nd		nd			
1,4-Dichlorobenzene	1.0	nd		nd			
Isopropyltoluene	1.0	nd		3.0			
1,2-Dichlorobenzene	1.0	nd		nd			
n-Butylbenzene	1.0	nd		140			
1,2-Dibromo-3-Chloropropane	1.0	nd		nd			
1,2,4-Trichlorobenzene	1.0	nd		nd			
Naphthalene	1.0	nd		1,800			
Hexachloro-1,3-butadiene	1.0	nd		nd			
1,2,3-Trichlorobenzene	1.0	nd		nd			

*Instrument detection limits

See Fig. 2 below for the identified chemicals and base marker chemicals as well as the unidentified peaks of chemicals in the attached file.

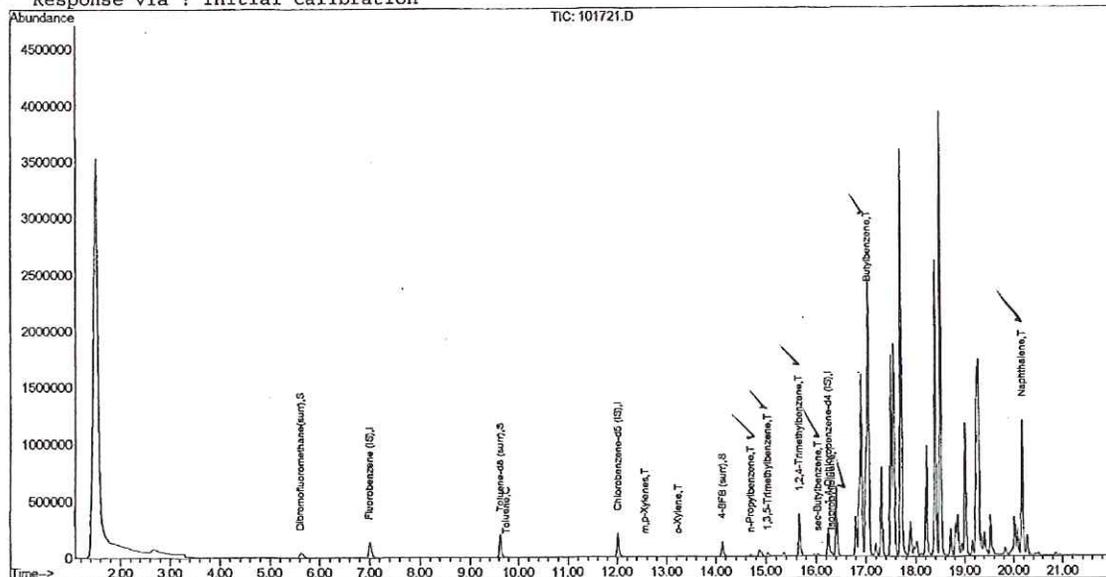
Figure 2 contains about 40 volatile chemical peaks. Of those 40 peaks 16 peaks are identified. 7 of these peaks are detected and identified chemicals in Fig. 1.

24 other peaks in Fig. 2 are not identified as to what chemicals they are. 7 of those unidentified chemical peaks are higher in concentration than the naphthalene which is recorded at an unheard high level of 1900 ppb.

Quantitation Report (QT Reviewed) Fig. 2

Data File : D:\DATA_2007\10172007\101721.D Vial: 9
 Acq On : 17 Oct 2007 6:58 pm Operator:
 Sample : negro lake Inst : msd #1
 Misc : wdfw Multiplr: 1.00
 MS Integration Params: GAS.P
 Quant Time: Oct 18 14:35 2007 Quant Results File: 8260B1-101207.RES

Method : C:\MSDCHEM\1\5973N\8260B1-101207.M (RTE Integrator)
 Title : 8260 - 10/12/07
 Last Update : Thu Oct 18 11:35:03 2007
 Response via : Initial Calibration



The “horror” continues as combinations of these individual toxic chemicals (in one water body) increase the human and environmental toxicity and have the ability to combine into new unknown chemicals that effect humans and the environment. This combined toxic effect has never been studied.

Note: The documents for Fig. 1 and Fig. 2 were obtained from Fish and Wildlife contracted certified laboratory analysis. They were obtained either by public disclosure or directly from the certified laboratory by request.

The paragraph below is quoted from the 2008 Annual Report.

“

A canoe and ATV were used to spray 20 gallons of liquid rotenone on Negro Creek from Fishtrap Lake to the area of Dixon's pond the first day. Dixon's Pond (actually an enlargement in Negro Creek) was treated the following day by pumper boats with a slurry of powdered rotenone (275 lbs) and liquid rotenone (20 gal). The canoe and ATV were also used to spray the shallows where emergent vegetation precluded the pumper boats. Another wide spot in the creek, with ponds on the Miller ranch, as well as the inlet and outlet portion of the creek were treated the third day by canoe and ATV with 24 gallons of liquid rotenone. Damage Creek, a tributary, was dry and not treated. The last flowing portion of Negro Creek was treated Oct 11 by canoe with 5 gallons of liquid rotenone. Negro Creek flows became subterranean several miles above the town of Sprague. Just below the town, Sprague Lake backed up into Negro Creek at its inlet for several hundred yards, and an ATV was used to treat this water with 7 gallons of liquid rotenone.

”

The documented evidence is clear and very difficult to dispute. These toxic chemicals in rotenone products (identified and unidentified) used in the Washington State Department of Fish and Wildlife rotenone applications are very dangerous. Product label warnings and required protective equipment for application prove this point.

The history of the rotenone application concerns were originally filed and documented with the Fish and Wildlife Department in June 2006. Later, a more official legal request was made to the Washington State Pollution Control Board in the late fall of 2006. Some 664+ pages of documented evidence was presented to the control board that included responses and challenges from the Washington State Attorney General Office in written depositions concerning our research review and statements.

The findings for this case is located on the web at:

<http://www.eho.wa.gov/searchdocuments/2006%20Archive/pchb%2006102%20stay.pdf>.

At the time we filed concern with the Pollution Control Board we had very limited knowledge and experience with rotenone applications and the destructive chemicals involved with powdered and liquid rotenone products.

The pollution control board judges approved and placed into effect a temporary “stay” preventing rotenone applications to Park Lake and the watershed area surrounding it in November of 2006.

Fish and Wildlife eventually maneuvered past the “stay” to pollute Park Lake with their rotenone application - wreaking havoc to the environment, aquatic creatures (killing most all fish) and injured one of the Arlt partners. This rotenone application caused a serious toxic chemical allergic poison reaction requiring immediate Emergency Medical Assistance. Quick recognition for poison reaction symptoms and superb EMT training prevented serious immediate life threatening problems.

The poison allergic reaction required transfer by ambulance to the emergency room at Good Samaritan Hospital in Moses Lake for treatment.

This rotenone application poisoning incident was investigated under required law by Ms. Barbara Morrissey and the Washington State Department of Health. The file obtained by me through a request for public records contains about 244 pages of investigation and does not include the actual toxic chemicals involved in the rotenone application causing the poison reaction. Rotenone was the only known poison at the time of the poison incident.

The rotenone applications were found to have toxic chemicals contained in inert ingredients that are applied with the powdered and liquid rotenone. These additional chemicals were all unknown at the time of the incident and just some of these chemicals have been recently identified through the required Ecology permit using certified laboratory VOC analysis.

2 years of VOC analysis on numerous water bodies in Eastern Washington for the years 2006 and 2007 VOC records have now been obtained by public disclosure requests for research and review purposes. The records demonstrate abnormal detection for problematic toxic chemicals.

Since the late fall of 2006 The Arlt Family Limited Partnership (property owners on Park Lake) have documented and attempted to correct the limitless problems created by the Department of Fish and Wildlife rotenone applications.

We have requested numerous times to the Ecology Department with documentation to terminate the NPDES permit. We requested permit termination to end numerous violations of the permit in the rotenone application processes, monitoring violations and annual reporting infractions.

We have requested numerous times to Dr. Jerry Koenig, Director of Fish and Wildlife, to place a moratorium on rotenone applications in Eastern Washington water bodies with no response or action.

It is important to note our research has found documents the Washington State Fish and Wildlife Department have not made any rotenone applications in Western Washington areas for over a decade. Rotenone applications annually take place only in Eastern Washington lakes and streams.

The history of the problems with Fish and Wildlife rotenone applications began for us in June of 2006. Jeff Korth, from Washington State Department of Fish and Wildlife, sent a letter to me requesting signature to an agreement for us to stop using our Ecology surface water permit from Park Lake. They stated they could not do the rotenone application in late October with out our signed agreement. The letter required a signature for agreement with a deadline to sign by the end of June.

We never signed or agreed to stop using Park Lake surface water and we never agreed or approved the rotenone applications. They later proceeded to notify us by letter they would complete the rotenone application in early November.

The letter also stated rotenone would not enter our domestic well. We objected to this possibility in the first response letter in June of 2006. The response said it would not happen. We objected to this probability with the Washington State Pollution Control Board again before the Park Lake rotenone application. The response said it would not happen in spite the fact that Lynn Maser from Ecology visited with us on our property and reviewed the well. He stated we more than likely had a hydraulic connection between our well and Park Lake surface waters. This did not stop Fish and Wildlife rotenone application to Park Lake.

This is disinformation about rotenone applications contaminating domestic water supplies. Labels on the rotenone products state they are not to be used within ½ mile of potable water sources. The NPDES permit has the same requirement. The Washington State Department of Fish and Wildlife contaminated our well with toxic chemicals.

Toxic chemicals from the rotenone applications did contaminate our well. The mixtures of toxic chemicals contained in the rotenone applications are most likely the volatile chemicals in the inert ingredients.

MitoScan ETr analysis compares water samples to pure laboratory rotenone. The water samples taken from Park Lake and our well on November 21 using this MitoScan analysis confirm a hydraulic connection between the well and Park Lake.

These water samples compare lake water and well water for rotenone or rotenone like substances. The continued analysis becomes more consistent over the next 31 days with nearly equal concentrations between the lake and the well a month later.

See the MitoScan ETr Graphic file below with figures 3 and 4.

(Figures 3 and 4).

Figure 3. The MitoScan bioassay utilizes sub-mitochondrial particles (SMP's) to assess toxicity of aquatic samples. Normal function of SMP's is indicated with a decrease in absorbance over time. Rotenone, a known mitochondrial poison acting on complex I of the electron transport chain, was run as an internal control at the indicated concentrations as added to the reaction mixture.

MitoScan Etr Toxicity Assessment of Park Lake Surface Water and Ground Water Samples Coinciding with Rotenone Application

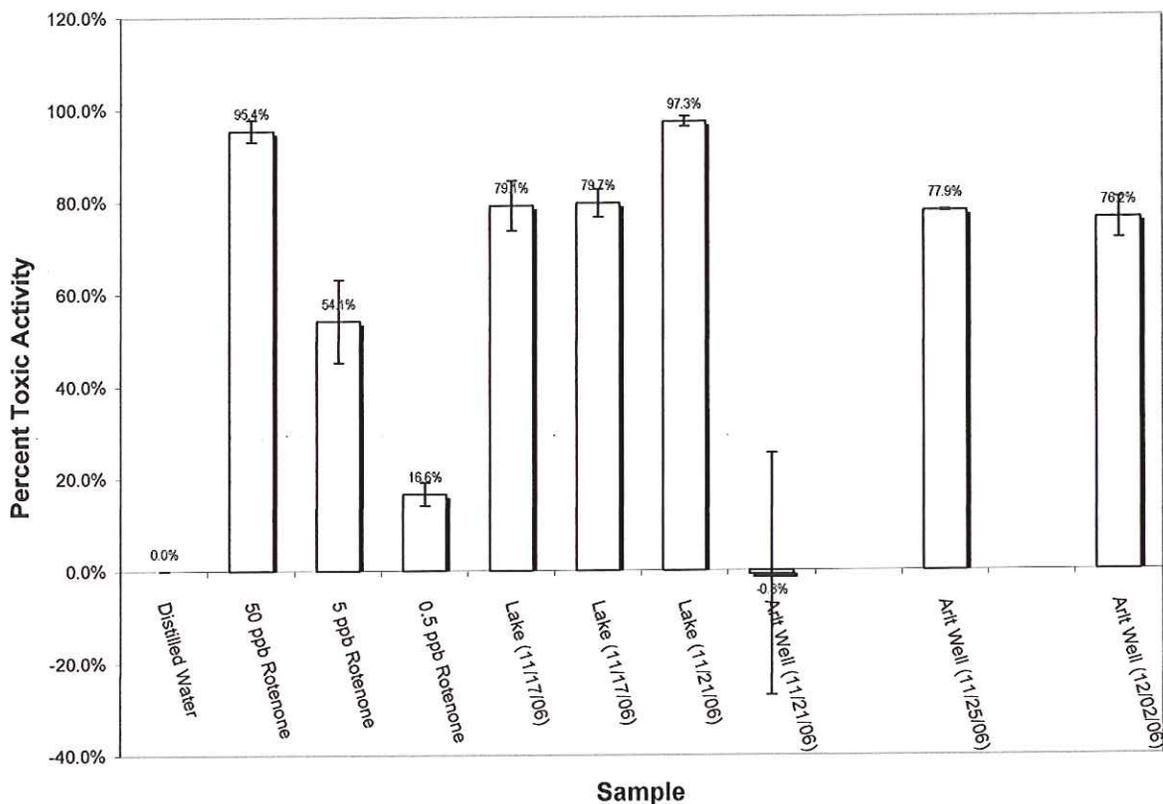


Figure 4. Percent toxic activity was determined as the ratio of the slope of the reaction rate of samples to distilled water. Data labels indicate the average value for trials for each sample. All reagents and samples were prepared independently for separate trials, and the assays were run independent of one another. Natural waters commonly show greater reaction rates compared to distilled water due to the mineral content (such as Well sample from 11/21).

On November 21, 2006 the fish and aquatic creatures of Park Lake that were going to die from the rotenone application were dead. Some did not die. This is also a concern to damaged poisoned fish. We believe the fish that died at that time in Park Lake would have died if put into the water taken from our well on November 25 or December 2 from the toxic chemicals levels later discovered in our well.

The Washington State Department of Agriculture collected water samples from our well and used an uncertified agriculture laboratory to determine No Detection for rotenone only in our well a few days after rotenone application to Park Lake. The analysis was done in parts per million (ppm) rather than the accepted standard of parts per billion (ppb). We requested numerous times for them to do (VOC) volatile chemical testing for our well water and they eventually admitted they do not have the capabilities to do that.

Rotenone Applications - Wind Storm Problems

In November 2006 the night before the rotenone application began on Park Lake a severe wind storm occurred on the 16th. This delayed rotenone application till late in the afternoon. These storms are typical of Eastern Washington. Wind speeds are known to reach over 80+ mph at Park Lake. The wind storm problem was a concern with the Washington State Pollution Control Board filing.

These windstorms create white cap waves and make a spray off wind spray carrying that spray major distances from water bodies onto land. This also is typical through out Eastern Washington.

A few days after a rotenone application was completed on Park Lake a severe wind storm occurred. Freshly treated rotenone and volatile chemicals in the inert ingredients were literally blown out of the lake and distributed to the surrounding shoreline area including Sun Lakes State Park picnic and swimming beaches. The spray also covered portions of State Highway 17 along Park and Blue Lakes. The wind spray froze that night on the shoreline areas and documented images were filed in a complaint to the Department of Ecology. Any shoreline down wind got a full dose of toxic chemicals including the Arlt Family Limited Partnership Property.

This spray contained unknown parts per billion of rotenone in Park and Blue Lakes. This spray contained in Park Lake 13 ppb Naphthalene, 21 ppb 1-Methynaphthalene and 43 ppb 2-Methylnaphthalene that were detected by a certified (VOC) laboratory under state contract. These individual detections and combinations of these toxic chemicals are problematic for human health and the environment.

CFT Legumine liquid rotenone was used in the rotenone applications to Park and Blue Lakes and consistently for decades by the Washington State Department of Fish and Wildlife. This product contains 5.12% Rotenone, .718% Rotenolone, 61.1% DEGEE, 17.1% Fennedefo 99TM and 9.8% Methyl Pyrrolidone. These are the averages found in 7 lots of analysis on the CFT Legumine product. Three additional substituted benzenes are consistently found in this product that include 1,2,4,5 tetramethylbenzene, 1,2,4 trimethylbenzene and 1,4 diethylbenzene.

These are dangerous toxic chemicals in water, in air and pose a problem for human health and the environment.

Numerous other toxic chemicals are found in the documents for the analysis on the CFT Legumine product and other rotenone application products we have obtained through public disclosure requests.

In the meeting on July 18, 2008, in Ephrata, Jeff Korth was asked if the Washington State Department of Fish and Wildlife did any rotenone application product analysis. His answer was no product testing has ever been done. They (fish and wildlife) only follow the labels on the containers of the products used in the applications.

Rotenone Applications - Dissipation Problems

Rotenone applications normally have a 4 to 6 week dissipation time period as advertised by the Washington State Department of Fish and Wildlife. This depends on the environmental conditions at the time of rotenone application. Water and air temperature have a colossal effect on the dissipation of rotenone (a 5% to 7% of a product mixture for either powdered or liquid or combinations of the two) and the inert ingredients in the mixture. It is documented the inert ingredients may take up to a year to dissipate and not all inert ingredients are known or can be analyzed for detection. It is suspected that some of these inert ingredients may become a permanent part of the sediment of a water body. We are in the process of collecting sediment lake bottom samples.

Dead Fish Problems and Bacteria Contamination

The dead fish from the rotenone applications have always been a human health and environmental concern and problem. Dead stinking fish float down wind to specific shorelines to collect in property areas to stink and rot. A majority of these dead fish go to the bottom of the treated water body never to be seen. These are the trout that sink to the bottom. The bass, sunfish, bluegill and perch float and eventually end up on the shoreline above the low water mark.

These fish die from rotenone and toxic chemicals in the rotenone products. The rotenone products are mixtures of chemicals and formulas in the rotenone application. Their effectiveness depends on the concentrations placed in the water bodies and the environmental conditions of the water bodies at the time of application. The methods for determining the amounts of rotenone products to be placed in each water body to make the proper concentration is controversial and not without error.

The second part of the "Aquatic Horror" is the combination of chemical problems and bacterial contamination to the surface water of Park Lake and those objects entering our hydraulic connection to our well.

On November 18, 2006 the Arlt Family Limited Partnership evacuated the property and home. At this time we also physically disconnected our home from the domestic water supply. This well was left disconnected until April of 2007. This is a time period of 3.5 months. The reason it was disconnected was fear of chemical contamination entering the home through the water system. We already had experienced one partner being exposed to rotenone application chemicals 2 days earlier that required emergency room treatment.

We continued to use the well for irrigation purposes and for chemical and bacteria testing.

In April 2007 we tested the lake for concentration of detectable rotenone before starting up the well for domestic use. No rotenone was detected but unusual spikes in the graphs of the rotenone analysis resulted and they were labeled unidentifiable or unknown.

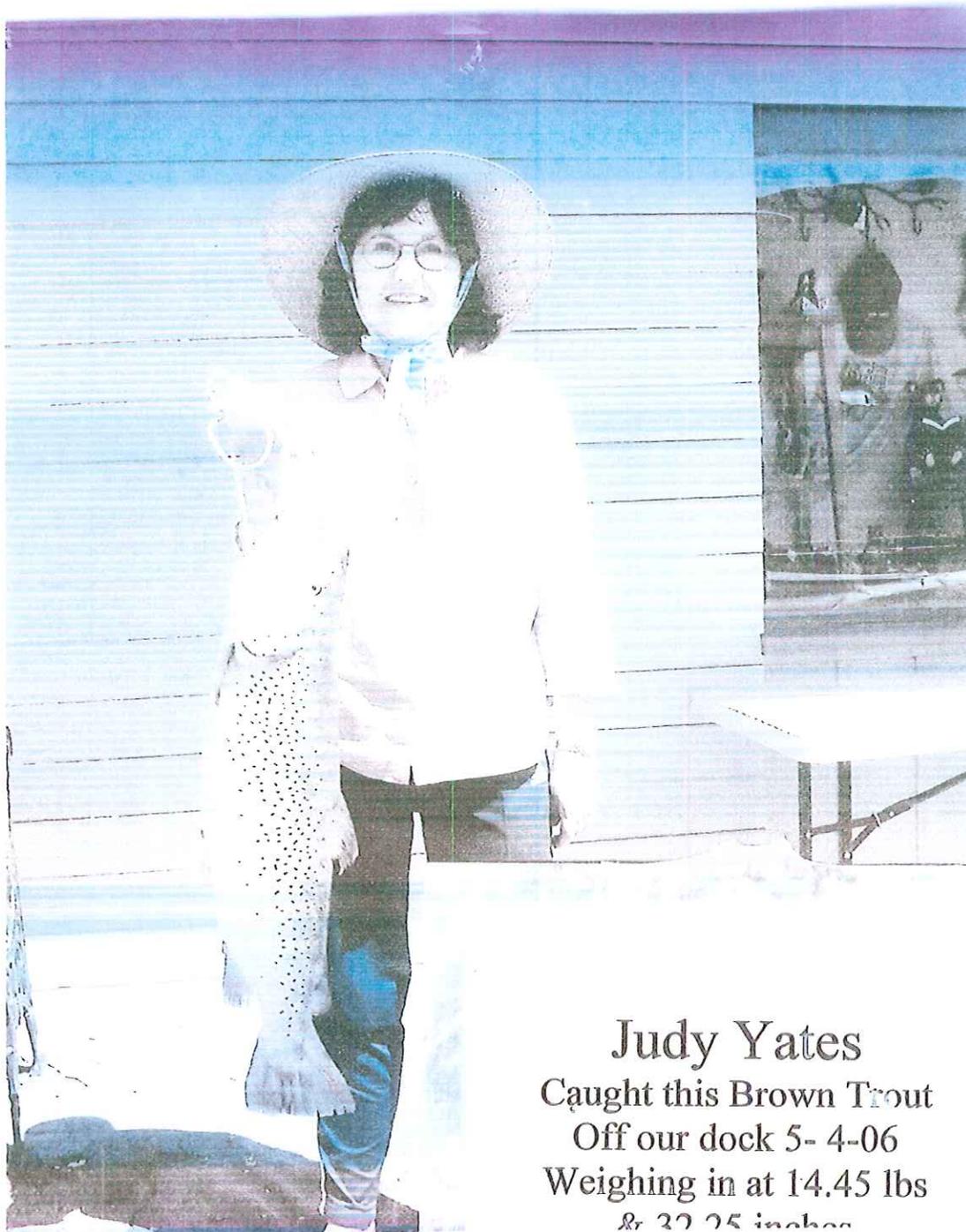
This resulted in the partnership acquiring professional services for domestic water quality management. We were then concerned about two items. Those were chemicals and bacteria. The water quality tests for the well failed several times. We were notified by Cascade Analytical that we had bacteria in our well samples and these matched with our lake samples taken at the same time. They notified us that our well needed a chlorine treatment. We followed the procedure several times and then retested. These tests continued to fail. We could not get the bacteria out of our well by normal health protocol.

We have never had this problem before. Based on professional recommendations to the problems we installed a Trojan UV, bacteria killer, in the domestic system and a reverse osmosis purifying system to take care of the chemicals that might remain. These two systems apparently have taken care of the chemicals and the bacteria in the home for domestic uses. We still continue to struggle with the problem emotionally and financially.

Fish and Wildlife presents to the public they only kill the large numbers of illegal scavenger fish. The reality is they kill huge numbers of big beautiful trophy German and Brown trout. We have documented pictures like the one in the attached file of Judy Yates. This Brown Trout caught off the dock at Sun Lakes Resort on Park Lake on June 4, 2006. It was 32.25 inches long and weighing 13.45 lbs.

This Judy Yates trophy trout was caught just a few months before the Washington State Fish and Wildlife rotenone application to Park Lake on November 16th – 18th, 2006. This took care of any other big trophy trout.

See the next page photo.



Judy Yates
Caught this Brown Trout
Off our dock 5- 4-06
Weighing in at 14.45 lbs
& 32.25 inches

We also have video of large trout dying during the 2006 Park Lake rotenone applications. We have pictures of the huge dead trout that have been found in the streams and on the shoreline from the 2006 Blue Lake rotenone application.

Unfortunately many more trophy size trout perished to become lake bottom carcasses contaminating water quality for human use and the environment.

2007 Rotenone Application Comparative Testing Results



VALLEY Environmental Laboratory
201 East D Street
Yakima, WA 98901
(509) 575 - 3999
Fax: (509) 575 - 3068

CASE NARRATIVE

Toxic chemical study – Eastern WA Lakes
VEL Sample Numbers – 15301701-15301704 ; 15303228-03230

November 15, 2007

Valley Environmental Laboratory (Valley Lab) is certified by the State of Washington through the Department of Ecology (Accredited Lab # C345) and the Department of Health (Certified Lab # 153) for the testing of microbiological, inorganic, organic and physical parameters regulated by the EPA for Drinking Water and other matrices.

Two sites at Sprague Lake and sites at Blythe and Corral Lakes were analyzed for Polynuclear Aromatic Hydrocarbons (PAH's). Initial sampling was conducted on 10/12/07 by Bennett K. Osborne. This was 1-day, post-application with various, fish-killing chemicals at Sprague Lake and prior to application at the latter two lakes. Three additional samples were taken at the same sites 3 weeks later to assess "before & after" levels of potentially toxic chemicals in these 3 lakes. Field samples were collected from each site and each container was properly labeled for date, time, sampler, sample location, preservative and field ID. Samples were placed on ice, properly preserved, sealed and hand-delivered to Valley Lab where they were tested for PAH's.

Samples tested at the lab indicate a fairly high level of Napthalene in Blythe and Corral Lakes only a few days after application of the toxic chemicals. No Napthalene or other toxic chemicals were detected in those lakes immediately prior to application. It should also be noted that there are unidentified, potentially toxic chemicals that can be seen at 14-16 minutes that only occur in lakes where there has been intentional fish-kill. These chemicals are not naturally occurring, as noted in Exhibits A and C, and have only been detected in surface waters after application of toxic chemicals by DFW.

Exhibit A – Park Lake

Exhibit B – Sprague Lake 10/12/07 (Postapplication 1-day)

Exhibit C – Blythe Lake 10/12/07 (Preapplication)

Exhibit D – Blythe Lake 11/01/07 (Postapplication)

Exhibit E – Corral Lake 11/01/07 (Postapplication)

Exhibit F – Sprague Lake 11/01/07 (3 weeks post app)

A handwritten signature in black ink, appearing to read 'B. Osborne', is written over a horizontal line.

Bennett K. Osborne, WDM, CCS
Laboratory Director
Valley Labs

Exhibit C is the pre-application status of Blythe Lake. Exhibit D is the post-application status of Blythe Lake. Notice the differences at the 14 to 16 minute time period as stated in the above letter for Exhibit D for unidentified toxic chemicals.

File : T:\DATA1\SEMIVOC2\2007BVOC\RGV\10225PAH\0201089.D
Operator : HMP
Acquired : 25 Nov 2007 10:05 AM using AcqMethod PAH5V2
Instrument : MSD2
Sample Name: 071000015-003
Misc Info :
Vial Number: 24

Ⓚ
C+D Overlay

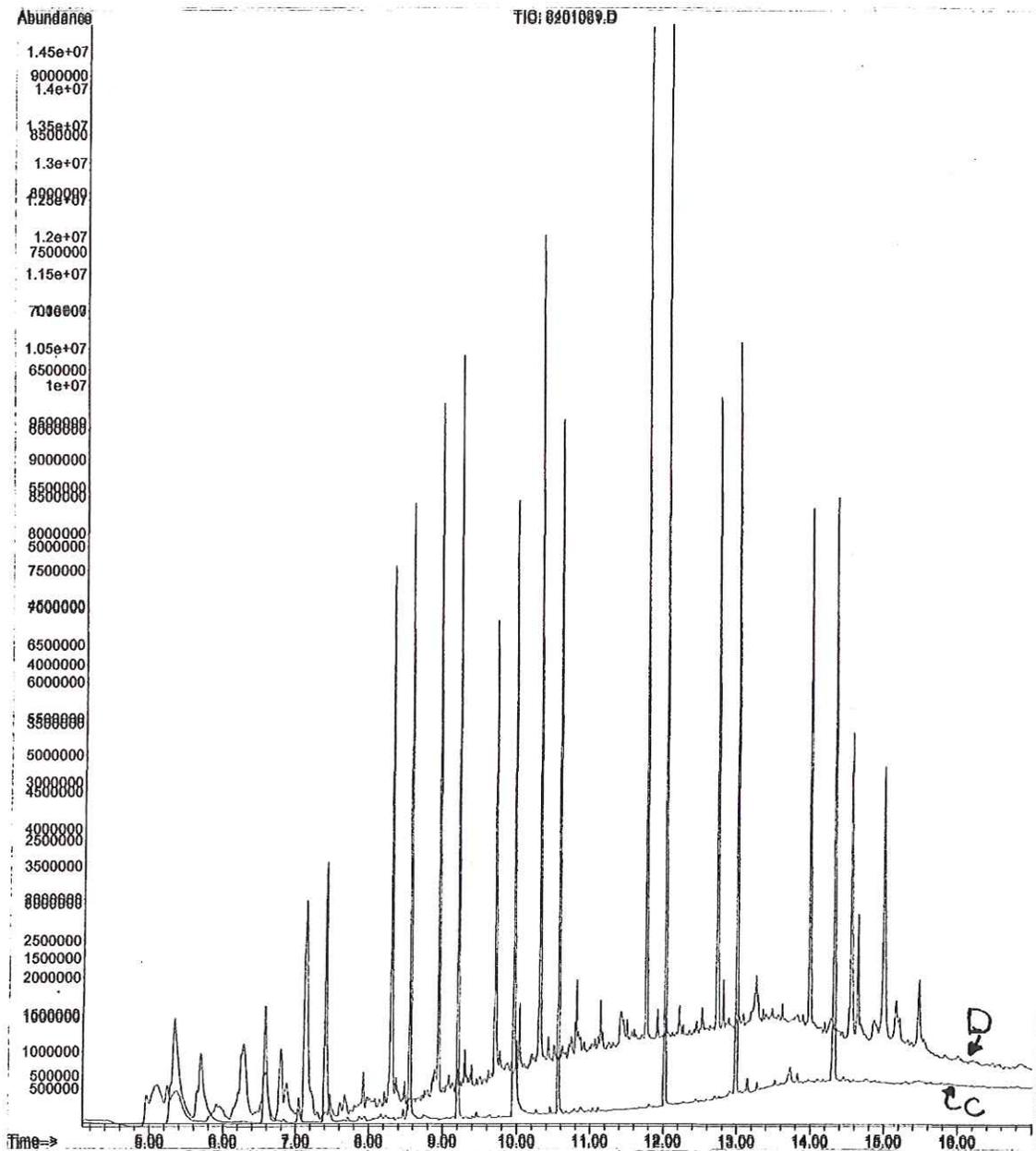
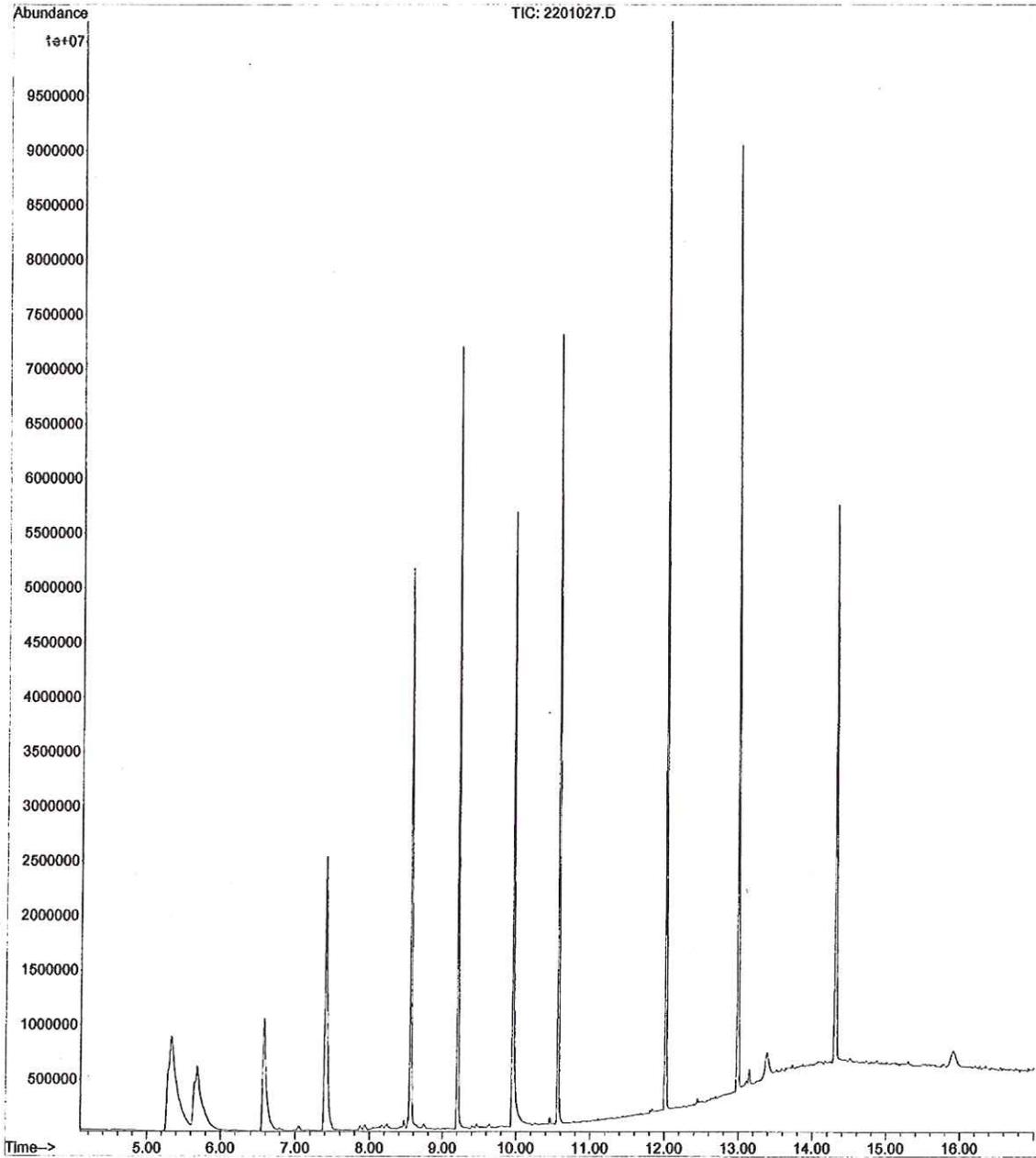


Exhibit A, Park Lake and the water quality similarities to Exhibit C in Blythe Lake.

A

File : T:\DATA1\SEMIVOC2\2007SVOC\OCT\1025PAH\2201027.D
Operator : EMP
Acquired : 25 Oct 2007 8:21 pm using AcqMethod PAHSV2
Instrument : MSD2
Sample Name: 071018015-001
Misc Info :
Vial Number: 22



Walter "Spike" Arlt
Managing Partner
Arlt Family Limited Partnership



Mission and Goals

Our Mission

To preserve, protect and perpetuate fish, wildlife and ecosystems while providing sustainable fish and wildlife recreational and commercial oppo

Vision

Conservation of Washington's fish and wildlife resources and ecosystems.

WDFW defines "Conservation" as:

Protection, preservation, management, or restoration of natural environments and the ecological communities that inhabit them; including mana use for public benefit and sustainable social and economic needs.

(Adapted from The American Heritage® Science Dictionary Copyright © 2005)

Department Goals

To achieve its mission, WDFW will continue to focus its activities on the following four goals:

Goal 1:

Conserve and protect native fish and wildlife

Goal 2:

Provide sustainable fishing, hunting, and other wildlife-related recreational and commercial experiences

Goal 3:

Promote a healthy economy, protect community character, maintain an overall high quality of life, and deliver high-quality customer servic

Goal 4:

Build an effective and efficient organization by supporting our workforce, improving business processes, and investing in technology



FISH AND WILDLIFE COMMISSION POLICY DECISION

POLICY TITLE: Lake and Stream
Rehabilitations

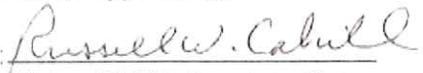
POLICY NUMBER: POL-C3010

Cancels:

Effective Date: February 8, 2002

Termination Date (if applicable):

See Also:

Approved by: 
Fish and Wildlife Commission Chair

GENERAL POLICIES:

The control of undesirable fish populations using chemical piscicides is a valuable and cost effective management tool for providing quality fishing opportunities and protecting native species in many waters of the state.

Specific policies:

1. **All lake and stream rehabilitations will follow state and federal laws.**
All proposed rehabilitations will adhere to state water quality requirements (WAC 173-201A), the Washington Pesticide Control Act (RCW 15.58), State Environmental Policy Act (SEPA) and federal Clean Water Act.
 - a. **All applicable environmental, health and safety regulations will be followed.**
All proposed rehabilitations will follow and adhere to chemical piscicides labeling restrictions and chemical materials safety data sheet requirements to ensure protection of the public, Department personnel and environment during rehabilitation treatments.
 2. **Waters will not be treated in ways which would cause significant negative impacts to fish or wildlife which are state or federally listed as Threatened, Endangered, Sensitive or Candidate Species.**
An exception may be granted in the case of a biological emergency.
 3. **The public will be part of the decision-making process.**
A public meeting will be held in the vicinity of the proposed rehabilitation(s) before a final decision is made.
 4. **An appropriate assessment of existing fish populations and associated risks will be undertaken for all natural bodies of water proposed for treatment if they have not been previously treated**
-

CAUTION

The Pesticide Rotenone was applied to
Park and Vic Meyers Lakes and
connecting drainages on
November 16-22, 2006
under permit to control fish.

WATER USE IS RESTRICTED

DO NOT USE DEAD FISH FOR FOOD OR FEED
DO NOT DRINK OR USE FOR IRRIGATION.
NO SWIMMING WHILE TREATMENT IS IN
PROGRESS.

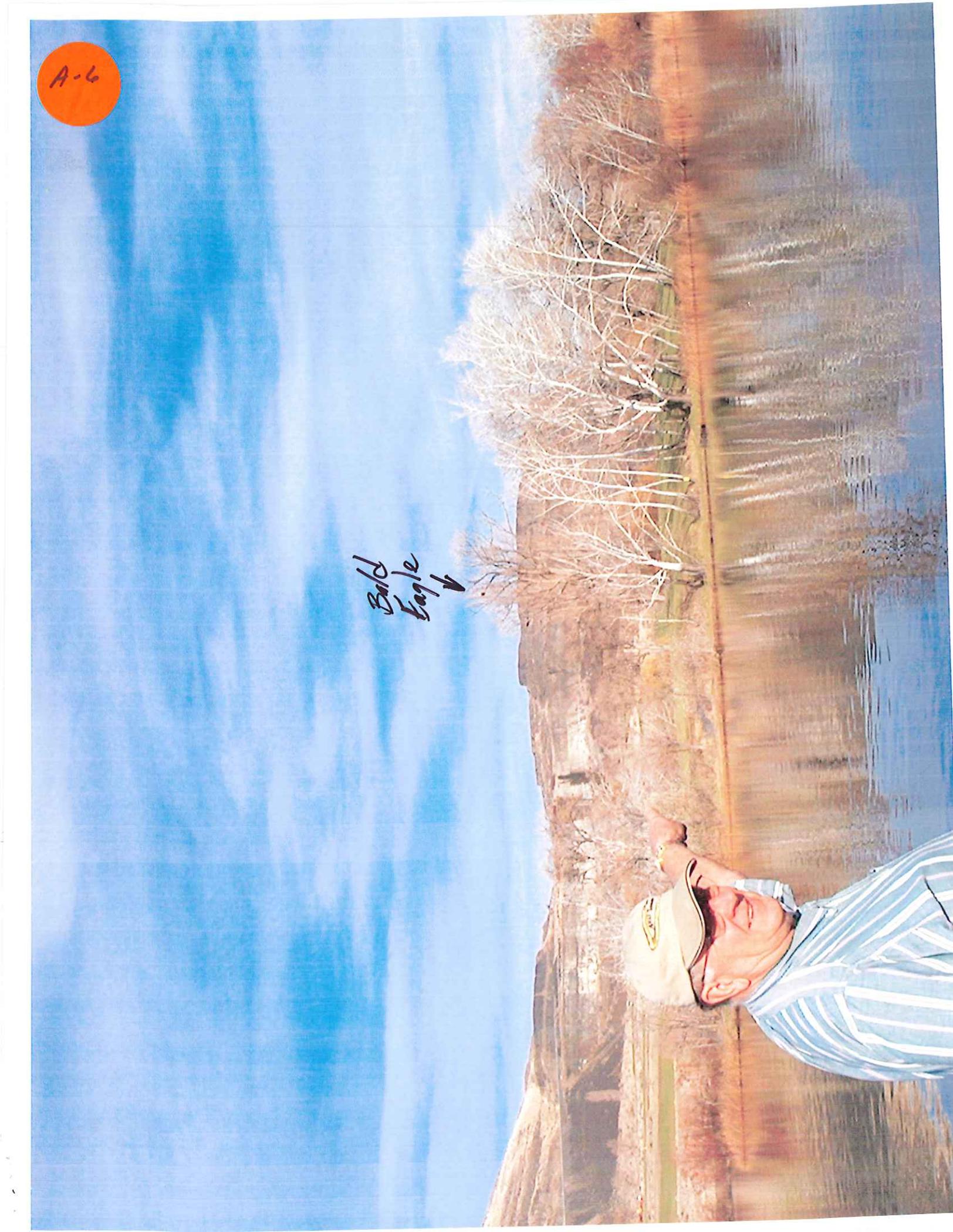
For More Information Contact The Applicator,
Department Of Fish And Wildlife At (509)754-4624
Or Department Of Ecology At (509) 329-3515.



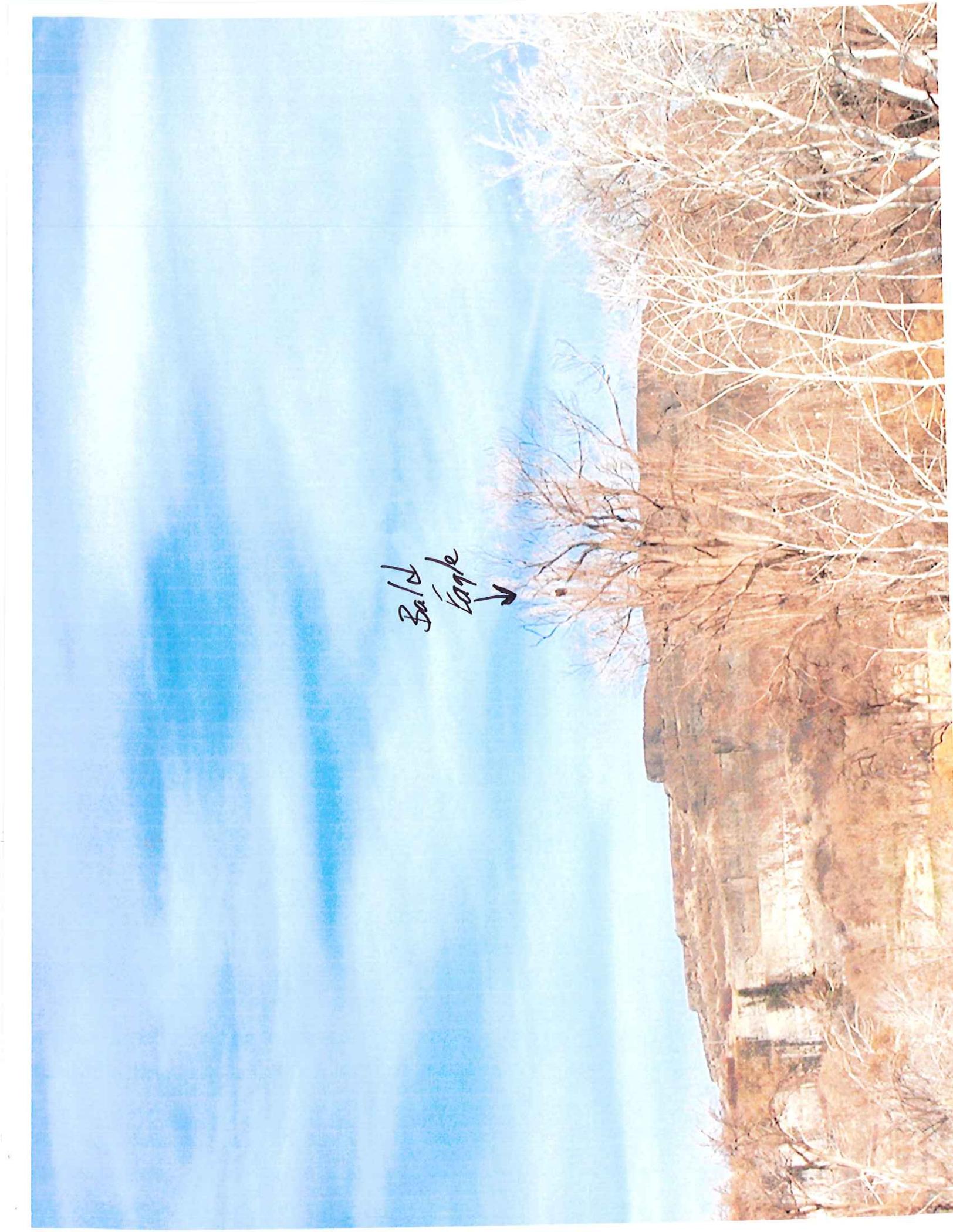
Please Do Not Remove This Sign For 30 Days
After Application Date.

A-6

Bald Eagle ↓



Bald Eagle




**KILL THE FISH
POISON OUR
EAGLES.
HELL YES I'M
MAD!**

**10 LB TROUT
ARE CAUGHT
IN PARK LAKE**

**AND YOU'RE
POISONING PARK
LAKE BECAUSE?**


**IF A 5% ROTENONE
SPRAY MIXTURE CAN
KILL A 100 # PIG...**
**How many pigs
can 35, 100 lbs
of Rotenone kill
at Park Lake?**


**ROTENONE...
KILLED ALL THE
FROGS IN PARK
LAKE IN 1996.
AND THEY'VE
NEVER RETURNED!**
**What's the
message here?**


ROTENONE
**A NO NO!
IN WESTERN
WASHINGTON**
**WHY IS IT OK
IN EASTERN
WASHINGTON?**


Rotenone
**BANNED IN
CALIFORNIA!**
**IN USE AT
PARK LAKE!**

OF
MAGAZINE



December 11, 2007,

Ms. Johnnie Landis
Ecology Department
Public Disclosure Coordinator
4601 N. Monroe
Spokane, WA 99205

Dear Ms. Landis,

I first want to thank you for finding, scanning and sending to us by e-mail the requested public disclosure documents of some 54 pages concerning the 1996 Fish and Wildlife Rotenone Applications to Park, Blue and Alkali Lakes. The historical information has been most valuable.

I am sending you one copy of a Jim Moore Copyrighted DVD titled "Rotenone Documentary". This DVD contains information that directly applies to the scanned public disclosure file "Park Lake.pdf" that you sent to me on 6/14/2007 by e-mail.

Both Mr. Moore and I agree this DVD shall be placed with the archived materials as a part of the permanent archive record as they historically support each other.

Mr. Moore has given me permission to send this DVD to you so it may be placed and reviewed with the archived hardcopy or the scanned computer file: Park Lake.pdf. The DVD may be viewed either on a computer system or a DVD player and TV, whichever is appropriate for the user from this DVD copy only.

Since the DVD is has a Copyright of 1996, by Jim Moore, new DVD disks or additional copies **may not be duplicated to computer hard disk files or other formatted discs/media devices from this original without his written permission.** Violation of written permission is subject to Piracy penalties and Federal Law.

For public disclosure requests or interagency use of this DVD "Rotenone Documentary", Mr. Moore's written permission is required for each individual request.

His permission contact information is:

Mr. Jim Moore
Blue Lake, 32456 Moore Rd. N.E.
Coulee City, WA 99115-9633

Or phone at: 509-632-5237

If you have any concerns or questions please contact Mr. Jim Moore or myself.

Thank you,

Walter "Spike" Arlt
Managing Partner
Arlt Family Limited Partnership
2514 Judge Ronald Road
Ellensburg, WA 98926

Phone: 509-925-2761