



US Army Corps of Engineers ® Portland District

U.S. Army Corps of Engineers Portland District

Willamette Valley System Operations and Maintenance Environmental Impact Statement

Public Scoping Report

Appendices

December 2019

Appendix A: Notice of Intent

U.S.C., Appendix, as amended), the Government in the Sunshine Act of 1976 (5 U.S.C. 552b, as amended), and 41 CFR 102–3.140 and 102–3.150.

Purpose of the Meeting: The mission of the DIB is to examine and provide the Secretary of Defense and the Deputy Secretary of Defense independent advice and recommendations on innovative means to address future challenges in terms of integrated change to organizational structure and processes, business and functional concepts, and technology applications. The DIB focuses on (a) technology and capabilities, (b) practices and operations, and (c) people and culture.

¹Agenda: During the meeting, the DIB will deliberate and vote on the unclassified portion of the 5G Study. See below for additional information on how to sign up to provide public comments. Oral comments will be accepted at the public meeting if time permits.

Meeting Accessibility: Pursuant to Federal statutes and regulations (the FACA, the Sunshine Act, and 41 CFR 102–3.140 through 102–3.165), the meeting is open to the public via webcast and conference call from 3:00 p.m. to 4:00 p.m. EDT. Members who plan to attend via webcast or phone should register on the DIB website, http://innovation.defense.gov, no later than April 1, 2019.

Special Accommodations: Individuals requiring special accommodations to access the public meeting should contact the Designated Federal Officer (DFO), see FOR FURTHER INFORMATION CONTACT section for contact information, no later than March 25, 2019, so that appropriate arrangements can be made.

Written Statements: Pursuant to section 10(a)(3) of the FACA and 41 CFR 102-3.140, the public or interested organizations may submit written comments to the DIB about its approved agenda pertaining to this meeting or at any time regarding the DIB's mission. Individuals submitting a written statement must submit their statement to the DFO (see FOR FURTHER **INFORMATION CONTACT** section for contact information). Written comments that do not pertain to a scheduled meeting may be submitted at any time. However, if individual comments pertain to a specific topic being discussed at the planned meeting, then such comments must be received in writing not later than April 1, 2019. The DFO will compile all written submissions and provide them to DIB members for consideration.

Oral Presentations: Individuals wishing to make an oral statement to the DIB at the public meeting may be

permitted to speak for up to two minutes, time permitting, and will need microphone access enabled on the device from which they are participating in the meeting. Anyone wishing to speak to the DIB should submit a request by email at osd.innovation@mail.mil not later than April 1, 2019 for planning. Requests for oral comments should include a copy or summary of planned remarks for archival purposes. Individuals may also be permitted to submit a comment request at the public meeting; however, depending on the number of individuals requesting to speak, the schedule may limit participation. Webcast attendees will be provided instructions with the live stream link if they wish to submit comments during the open meeting. Dial-in attendees must submit written statements prior to the meeting (see "Written Statements" section for instructions).

Dated: March 27, 2019.

Shelly E. Finke,

Alternate OSD Federal Register Liaison Officer, Department of Defense. [FR Doc. 2019–06273 Filed 3–29–19; 8:45 am] BILLING CODE 5001–06–P

DEPARTMENT OF DEFENSE

Department of the Army, Army Corps of Engineers

Notice of Intent To Prepare an Environmental Impact Statement for the Willamette Valley System Operations and Maintenance

AGENCY: Department of the Army, U.S. Army Corps of Engineers, DoD. **ACTION:** Notice of intent.

SUMMARY: The Portland District, U.S. Army Corps of Engineers (Corps) intends to prepare an Environmental Impact Statement (EIS) to address the continued operations and maintenance of the Willamette Valley System (WVS) in accordance with authorized project purposes; while meeting Endangered Species Act (ESA) obligations to avoid jeopardizing the continued existence of listed species.

The Corps will serve as the lead federal agency for purposes of the National Environmental Policy Act (NEPA).

DATES: Written comments for consideration in the development of the scope of the NEPA EIS are due to the addresses below no later than June 28, 2019.

ADDRESSES: Mailed comments may be sent to: U.S. Army Corps of Engineers, Portland District, P.O. Box 2946, Attn:

CENWP–PME–E, Portland, OR 97208– 2946. Email comments to: *willamette.eis@usace.army.mil*. All comments and materials received, including names and addresses, will become part of the administrative record and may be released to the public.

FOR FURTHER INFORMATION CONTACT: For questions regarding the EIS, or special accommodations for scoping process participation, please contact Suzanne Hill, Environmental Resources Specialist, (503) 808–4767.

SUPPLEMENTARY INFORMATION:

Background. The WVS consists of 13 multipurpose dams and reservoirs, riverbank protection projects in the Willamette River Basin in Oregon, and hatchery programs to mitigate for effects of the project on fish habitat. The most recent NEPA evaluation for the overall WVS operations and maintenance was an EIS completed in 1980. Since 1980, operations have been modified and structural improvements for fish passage and temperature control have been implemented to address effects of the WVS on ESA-listed fish. NEPA evaluations since the 1980 EIS have been project-specific. There is also new information relevant to the environmental impacts of operating the WVS. This EIS will evaluate the impacts of continued operations and maintenance of the WVS. The EIS will be prepared in accordance with NEPA, the Council on Environmental Quality's (CEQ) NEPA regulations (40 CFR parts 1500-1508), and the Corps' NEPA regulations (33 CFR part 230). The Corps has reinitiated formal consultation under Section 7 of the ESA on the National Marine Fisheries Service's 2008 Biological Opinion for the Willamette River Basin Flood Control Project. This NEPA process will inform the ESA Section 7 consultation process. Additionally, the Corps intends to initiate consultation under Section 106 of the National Historic Preservation Act. The Corps anticipates that the draft EIS will be made available for public comment in Fall/Winter 2020.

The Corps has invited the following Tribes and federal and state agencies to participate as cooperating agencies for the EIS: Confederated Tribes of Warm Springs, Confederated Tribes of Grand Ronde, Confederated Tribes of Siletz Indians, Cow Creek Band of Umpqua Tribe of Indians, Bonneville Power Administration, U.S. Bureau of Land Management, National Marine Fisheries Service, U.S. Bureau of Reclamation, U.S. Forest Service, U.S. Fish and Wildlife Service, Oregon Department of Fish and Wildlife, Oregon Water Resources Department, Oregon Parks and Recreation Department, Oregon Department of Environmental Quality, Oregon Department of Land Conservation and Development, Oregon Department of State Lands, and Oregon Department of Agriculture.

Alternatives. The EIS will evaluate a no action alternative and action alternatives. The no action alternative is the current management direction for the WVS. Action alternatives will be composed of various measures for continued operations and maintenance of the WVS, as well as measures that will be developed to meet ESA obligations to avoid jeopardizing the continued existence of listed species. Comments received during the scoping comment period will inform the development of action alternatives.

Scoping Process/Public Involvement. The Corps invites all affected federal, state, and local agencies, affected Native American Tribes, other interested parties, and the general public to participate in the NEPA process during development of the EIS. The purpose of the public scoping process is to provide information to the public, narrow the scope of analysis to significant environmental issues, serve as a mechanism to solicit agency and public input on alternatives and issues of concern, and ensure full and open participation in scoping for the Draft EIS. Numerous public scoping meetings will be held during the scoping period. The specific dates, times, and locations of the meetings will be published on the Corps' project website: https:// www.mwp.usace.armv.mil/Locations/ Willamette-Valley/Evaluation/.

This is not a notice for the public comment periods for the Cougar Downstream Passage and Detroit Downstream Passage projects; public comment periods for those projects will be noticed separately.

Documents and other important information related to the EIS will be available for review on the Corps' project website.

Aaron L. Dorf,

Colonel, Corps of Engineers, District Commander. [FR Doc. 2019–06258 Filed 3–29–19; 8:45 am] BILLING CODE 3720–58–P

DEPARTMENT OF DEFENSE

Department of the Navy

Notice of Availability of Government-Owned Inventions; Available for Licensing

AGENCY: Department of the Navy, DoD.

ACTION: Notice.

SUMMARY: The Department of the Navy (DoN) announces the availability of the inventions listed below, assigned to the United States Government, as represented by the Secretary of the Navy, for domestic and foreign licensing by the Department of the Navy.

ADDRESSES: Requests for copies of the patents cited should be directed to Naval Surface Warfare Center, Crane Div, Code OOL, Bldg 2, 300 Highway 361, Crane, IN 47522–5001.

FOR FURTHER INFORMATION CONTACT: Mr. Christopher Monsey, Naval Surface Warfare Center, Crane Div, Code OOL, Bldg 2, 300 Highway 361, Crane, IN 47522–5001, Email Christopher.Monsey@navy.mil, 812–

854–2777.

SUPPLEMENTARY INFORMATION: The following patents are available for licensing: Patent No. 10,200,081 (Navy Case No. 200348): SYSTEMS AND METHODS FOR SIGNAL DETECTION AND DIGITAL BANDWIDTH REDUCTION IN DIGITAL PHASED ARRAYS// Patent No. 10,204,875 (Navy Case No. 200421): SYSTEMS AND METHODS FOR INHIBITING BACKEND ACCESS TO INTEGRATED CIRCUITS BY INTEGRATING PHOTON AND ELECTRON SENSING LATCH-UP CIRCUITS// Patent No. 10,209,342 (Navy Case No. 200479): ELECTROMAGNETIC RADIATION SOURCE LOCATING SYSTEM// and Patent No. 10,215,531 (Navy Case No. 200357): TESTING SYSTEM FOR OPTICAL AIMING SYSTEMS WITH LIGHT EMITTER SYSTEMS INCLUDING TESTING SYSTEM FOR THERMAL DRIFT AND RELATED METHODS.

Authority: 35 U.S.C. 207, 37 CFR part 404. Dated: March 26, 2019.

M.S. Werner,

Commander, Judge Advocate General's Corps, U.S. Navy, Federal Register Liaison Officer. [FR Doc. 2019–06163 Filed 3–29–19; 8:45 am] BILLING CODE 3810–FF–P

DEPARTMENT OF DEFENSE

Department of the Navy

Notice of Extension of Public Comment Period for the Draft Supplemental Environmental Impact Statement/Overseas Environmental Impact Statement for Mariana Islands Training and Testing

AGENCY: Department of the Navy, DoD. **ACTION:** Notice.

SUMMARY: A notice of public meetings was published in the **Federal Register** by the U.S. Environmental Protection Agency on January 31, 2019 and March 8, 2019 for the Department of the Navy's (DoN) Draft Supplemental Environmental Impact Statement/ Overseas Environmental Impact Statement (EIS/OEIS) for the Mariana Islands Training and Testing (MITT) Study Area.

DATES: This notice announces a 15-day extension of the public comment period from April 2, 2019, to April 17, 2019.

ADDRESSES: Comments may be mailed to Naval Facilities Engineering Command Pacific, Attention: MITT Supplemental EIS/OEIS Project Manager, 258 Makalapa Drive, Suite 100, Pearl Harbor, HI 96860-3134, or electronically via the project website at www.MITT-EIS.com. All comments submitted during the public comment period will become part of the public record and substantive comments will be addressed in the Final Supplemental EIS/OEIS. All comments must be postmarked or received online by April 17, 2019, Chamorro Standard Time, for consideration in the Final Supplemental EIS/OEIS.

Naval Facilities Engineering Command Pacific, Attention: MITT Supplemental EIS/OEIS Project Manager, 258 Makalapa Drive, Suite 100, Pearl Harbor, HI 96860–3134.

SUPPLEMENTARY INFORMATION: The Draft Supplemental EIS/OEIS is available electronically for public viewing at *www.MITT-EIS.com* and at the following public libraries:

1. Robert F. Kennedy Memorial Library, University of Guam, UOG Station, Mangilao, GU 96923–1871.

2. Nieves M. Flores Memorial Library, 254 Martyr St., Hagåtña, GU 96910– 5141.

3. Tinian Public Library, San Jose Village, Tinian, MP 96952–9997.

4. Antonio C. Atalig Memorial Library (Rota Public Library), Rota, MP 96951– 9997.

5. Joeten-Kiyu Public Library, Beach Road and Insatto St., Saipan, MP 96950– 9996.

Dated: March 25, 2019.

M.S. Werner,

Commander, Judge Advocate General's Corps, U.S. Navy, Federal Register Liaison Officer. [FR Doc. 2019–06028 Filed 3–29–19; 8:45 am] BILLING CODE 3810–FF–P

Appendix B: Public Scoping Meeting Advertisements

> PUBLIC NOTICES GENERAL > PUBLIC NOTICES GENERAL

Superior Court of Washington, County of Spokane • No. 18-5-00464-6 In re parentage: Petitioner: Faith Colt, And Respondent Christopher Colt Jr. Summons: Notice about Parentage To the Respondent: The Petitioner started a case about parentage of children. You must respond in writing for the court to consider your side. Deadline! Your Response must be served on the Petitioner within 20 days of the date you were served this Summons (60 days if you were served outside of the date you were served this Summons (60 days if you were served outside of the case, addline. If you do not serve and file your Response or a Notice of Appearance by the deadline: • No one has to notify you about other hearings in the case, and • The court may approve the Petitioner's requests without hearing your side (called a default judgment). Follow these steps: 1. Read the Petition and any other documents you receive with this Summons. These documents ex-plain what the Petitions is asking for. 2. Fill out the response form the Petition Response to Petition to: • Disprove Parentage of Presumed Parent (FL Parent-age 356). You can get the Response and other forms at: • The Washington State Courts - call: (360) 705-5328 • Washington LawHelp: www.washingtonla whelp.org, or • The Superior Court Clerk's office or county law library (for a fee). 3. Serve (give) a copy of your Response to the Petitioner at he address below and to any other Respondents. You may use certified mail with return receipt requested. For more information on how to serve, read Superior Court civil Rule 5. 4. File your original Response with the court clerk at this address below and to any other respondents. You may use certified main with return receipt requested. For more information on how to serve, read Superior Court Civil Rule 5. 4. File your original Response with the court clerk at this address: Superior Court Clerk, Spokane County, 1116 W. Broadway Ave., Spokane, WA 99260, 5, Lawyer not required: It's a good idea to talk to a lawyer, but you may file your response without one. Petitioner: /s/ Faith Colt 9/4/18. Petitioner agrees to accept legal papers for this case at: PO Box 1711, Omak,WA 98841.

DISTRICT COURT OF GUAM, TERRITORY OF GUAM, BANKRUPTCY DIVISION

In re: The Archbishop of Agaña, a Corporation Sole (Archbishop of Agaña) Case No. 19-00010

YOU MAY HAVE A SEXUAL ABUSE CLAIM OR GENERAL CLAIM AGAINST THE ARCHBISHOP OF AGAÑA

On January 16, 2019, The Archbishop of Agaña ("Debtor" filed for protection under Chapter 11 of Title 11 of the United States Code.

THE LAST DAY TO FILE A SEXUAL ABUSE CLAIM OR GENER-AL CLAIM AGAINST THE DEBTOR IS August 15, 2019 AT 5:00 P.M. (PREVAILING CHST-CHAMORRO STANDARD TIME).

IF YOU WERE SEXUALLY ABUSED BY ANY PERSON CON NECTED WITH THE DEBTOR OR HAVE AN UNSECURED CLAIM AGAINST THE DEBTOR, YOU MUST FILE A CLAIM BY AUGUST 15, 2019 AT 5:00 P.M. (PREVAILING CHST-CHAMORRO STANDARD TIME).

For more information on how to obtain and file a proof of claim for and associated documents please (a) visit the Debtor's website at **https://aganaarch.org**; (b) call the Debtor's hotline at 1-800-571-0657 or (c) call the Official Committee of Unsecured Creditors appointed in this case at 1-800-484-3513.

Notice of Public Hearing

Before the Insurance Commissioner of the State of Oregon Department of Consumer and Business Services In the matter of the Acquisition of Control of ATRIO Health Plans, Inc., by Atrio

Holding Company, LLC c/o Chicago Pacific Founders 6:00 PM Wednesday May 29, 2019

Holiday Inn Express Roseburg, 375 W Harvard Ave, Roseburg, OR 97470

ATRIO Health Plans, Inc. (the "Domestic Insurer") is an Oregon-domiciled insur-ance company and is engaged in the business of providing Medicare Advant-age plans as an insurer to individuals located in Douglas, Josephine, Jackson, Klamath, Marion and Polk counties in the State of Oregon. Atrio Holding Com-pany, LLC ("Parent") is a Delaware limited liability company formed by Chica-go Pacific Capital, L.P. (the "Sponsor") to be an indirect holding company of the Domestic Insurer. Parent formed, as its wholly-owned subsidiary, Atrio Acquisition Corporation, a Delaware corporation ("Buyer"), for the purpose of acquiring 100% of the equi-ty interests of the Domestic Insurer pursuant to a Stock Purchase Agreement, dated as of December 6, 2018 (the "Purchase Agreement"), by and among the Domestic Insurer, Buyer, and the current shareholders of the Domestic Insurer, (i) Cascade Comprehensive Care, Inc., an Oregon corporation ("Cascade"), (ii) Marion Polk Community Health Plan Advantage, Inc., an Oregon corporation ("MPCHPA"), and (iii) Umpqua Health, LLC, an Oregon limited liability compa-ny ("Umpqua" and together with Cascade and MPCHPA, each a "Seller" and collectively, "Sellers").

Pursuant to the Purchase Agreement, each Seller will receive a combination of cash and/or equity in Parent. The purpose of the hearing is to to allow the public to learn more about the transaction and for the Department of Consumer and Business Services of the State of Oregon to accept public comment on the proposed transaction. A copy of the Form A filed by Atrio Holding Company, LLC describing the transaction is available on the Insurance Division's web site at the following link: https://dfr.oregon.gov/business/reg/insurer/mergers/Documents/atrio-cpf/at rio-atrioholding-chicagopacific-form-a.pdf If you wish to provide public comment, you may do so at the hearing or you may provide public comment in writing until 5:00 p.m. on Wednesday June 12, 2019. Written comments should be emailed to FormAATRIO.INS@oregon.gov or by mail to Oregon Department of Consumer and Business Services, Division of

by mail to Oregon Department of Consumer and Business Services, Division of Financial Regulation, ATTN: ATRIO Form A, P.O. Box 14480, Salem, OR 97309-

Today's New York Times **Crossword Puzzle Solved** O M N E D SPARE M B T T W I Э S O B E S A BE З ีย A T E L I K E A P 0 D 1|S|) ย Я З F|U|E|L E 0 RACHANGE A Ν | E | 1 | 0 E MEZO A G E I S T S Ν Я З S 0 **| N | O** | Э D A З E H 0|0|B|F D S В Э Π ۸ A Т 0 0 D S NO Ρ|Τ T E D R S 0 AA ARNHO L S Ξ С T. 0|0|D A NN С S D 0 W Ъ A Ν BI L З ٦ A **T** | N | I d N O Ν 0 | M S 0 S З S 0 В ย 0 Ν A Э Э A В A D A S Π В З В

> PUBLIC NOTICES GENERAL

CITY OF WILSONVILLE CITY COUNCIL NOTICE OF PUBLIC HEARING

PUBLIC NOTICE IS HEREBY GIVEN that The Wilsonville City Council will con-duct a public hearing on, May 20, 2019, 7 p.m. at City Hall, 29799 SW Town Center Loop, Wilsonville, OR. The purpose of this public hearing is to consider public testimony on the proposed ordinance entitled: Ordinance No. 816

Ordinance No. 816

Ordinance No. 816 An Ordinance Of The City Of Wilsonville Repealing And Replacing Wilsonville Code Chapter 11 - Fees. Copies of the proposed ordinances may be obtained at a cost of 25 cents per page, at City Hall or by calling the City Recorder at 503-570-1506 and requesting a copy to be mailed to you. Specific suggestions or questions concerning the proposed ordinance

Specific suggestions or questions concerning the proposed ordinance may be directed to Amanda Guile-Hinman, Assistant City Attorney at

Hinman, Assistant City Attorney at 503-570-1561 or guile@ci.wilsonville. or.us. Public testimony, both oral and written will be accepted at the public hearing. Written statements are encouraged and may be submitted to the City Recorder, 29799 SW Town Center Loop E, Wilsonville.or.us Assistive listening devices are available for persons with impaired hearing and can be scheduled for this meeting. The City will endeavor to provide qualified sign language Interpreters without cost if requested at least 48 hours prior to the meeting. To obtain such services call the office of the City Recorder at 503-570-1506. 570-1506.

> PUBLIC NOTICES GENERAL

NOTICE OF BUDGET

NOTICE OF BUDGET COMMITTEE MEETING A public meeting of the Budget Com-mittee of the Tualatin Valley Water District, Washington County, State of Oregon, to discuss the budget for the biennial period July 1, 2019 to June 30, 2021, will be heid at 1850 SW 170th Ave., Beaverton, OR. The meet-ing will take place on Thursday, May 30, 2019 at 6:00 p.m. The purpose of the meeting is to receive the budget message and receive comment from the public on the budget. A copy of the public on the budget. A copy of the budget document may be inthe budget document may be in-spected or obtained on or after Fri-day, May 24, 2019 at 1850 SW 170th Ave., Beaverton, OR, between the hours of 8:00 am and 4:30 pm. Effec-tive May 24th, the budget document can also be accessed on the Distric-t's website at **www.twwd.org**. This is a public meeting where deliberation of the Budget Committee will take place. Any person may appear at the meeting and discuss the proposed call Tod Burton at 503.848.3000.The meeting is_accessible to persons meeting is accessible to persons with disabilities. Requests for hear-With disabilities, requests for inca-ing devices, an interpreter or other accommodations for persons with disabilities should be made at least 48 hours prior to the meeting to Deb-bic Corners of 502,498,2000 bie Carper at 503-848-3000.

NOTICE OF DEATH OF UNCLAIMED BODY GRIER, Lynda E. died 05/11/19 at Leg-acy Emanuel Medical Center. Anyone with information about family is asked to contact Holly Stevens @ Legacy Emanuel Medical Center, 2801 N. Gantenbein Ave, Portland, OR 9727, Tol: 502/412-4327

97227. Tel: 503-413-4367

Signature 1990. Summons - Case No. 34-2015-00184048 Notice to Defendant: George Leroy Williams, III (as a Nominal Defendant) You Are Being Sued by Plaintiff MARCUS GURION, an Individual, MAXINE GURION, an Individual, ROBERT GURION, an Individual, and as Successors in in-terest to EVELYN GURION (Decedent). NOTICE: You have been sued. The court May decide against you without your being Heard unless you respond within 30 Days, You have 30 CALENDAR DAYS after the summons and legal papers are served on you to file a written response at this court and have a copy served on the plaintiffs. A letter or phone call will not protect you. Your writ-ten response must be in proper legal form if you want the court to hear your case. There may be a court form that you can use for your response. You can find these court forms and more information at the California courts online Self-Help Center (www.courtinfo.ca.gov/selfnelp). Your county law library or the court forthe awaring from the court. There are other legal requirements. You may want to call an attorney referral service. If you cannot afford an at-torney, you may be site (www.lawhelpcalifornia.org): the California Court Online Self-Help Center (www.courtinfo.ca.gov/Selfnelp): or contact your local court or county bar association. NOTE: The court has a statutory lien for waived fees and costs on any settlement or arbitration aware of \$10,000 or more in a civil case. The court's lien must be paid before the court will dismiss the case. The name & address of the court cA 95844. The name, address, & phone number name & address of the court is: Sacramento County Superior Court, of Califor-nia 720 Ninth St., Sacramento: CA 95814. The name, address, & phone number of plaintif's attorney: Wendy C. York, SBN 168684, York Law Corporation, 1111 Exposition Boulevard, Sacramento, CA 95815. 916-643-2200 916-643-4880 Deted: Society 0.0016 Dated: Sept. 9, 2015 May 15, 22, 29 & June 5, 2019

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> PUBLIC NOTICES GENERAL

U.S. Army Corps of Engineers Willamette Valley System

Operations and

Maintenance **Environmental Impact** Statement The Corps Needs Your Input! The Corps will be hosting public meetings to gather your input and share information about the project.

Meeting Format: A short presenta-tion will be given about 30 minutes after meeting start time, followed by open house format. For those who miss the presentation, it will be repeated again at the end of the meeting

Public Meeting Information

June 4 • 4 - 6:30 pm

Eugene Public Library 100 W 10th Ave, Eugene, OR 97401 Bascom – Tykeson Room

June 5 • 5 - 7:30 pm

South Salem High School Library 1910 Church St SE, Salem, OR 97302 Library – North Side Room

June 6 • 5 - 7:30 pm University Place Hotel & Conference Center* 310 SW Lincoln St, Portland, OR 97201 Willamette Room *Please visit our website for a coupon code for parking. You will need the code prior to parking.

June 12 • 5-7:30 pm Corvallis-Benton Public Library 645 NW Monroe Ave,

Corvallis, OR 97330 Main Meeting Room

June 13 • 4 - 6:30 pm Springfield City Hall 225 Fifth Street Springfield, OR 97477 Council Chambers

Scoping Comment Period

Ends June 28, 2019

For More Information and Additional

Ways to Comment Please Visit the Project Website: https://www.nwp.usace.army.mil/ Locations/Willamette-Valley/Evaluation

Valley View Water District

Valley View Water District Board Meeting Notice is hereby given: Board Com-missioners of the Valley View Water District will meet on Wednesday, May 22, at 7:30 p.m. at 3737 SW 50th Avenue, Portland, OR 97221. For agenda information, please contact Bill Richmond at 503-848-3072.

meeting.

> PUBLIC NOTICES GENERAL

NOTICE OF BUDGET

NOTICE OF BUDGET COMMITTEE MEETING A public meeting of the Budget Com-mittee of the North Clackamas Parks and Recreation District, State of Ore-gon, to discuss the budget for the fis-cal year July 1, 2019 to June 30, 2020, will be held at 150 Beavercreek Road, Room 115, Oregon City, Oregon 97045. The meeting will take place on the 3rd day of June 2019, begin-ning at 9:00 A.M. The purpose of the meeting is to receive the budget message and to receive comment from the public on the budget document may be

from the public on the budget. A copy of the budget document may be inspected or obtained on or after May 29, 2019, at 150 Beavercreek Road, Oregon City, Oregon 97045, between the hours of 7:00 A.M. and 6:00 P.M., Monday – Thursday. This is a public meeting where deliberation of the Budget Committee will take place. Any person may appear at this meeting and discuss the proposed programs with the Budget Committee. Committee. This notice is also posted on the web

in two locations: on the District's website at **ncprd.com/financial-information** and the County's website at www.clackamas.us/budget

Legal Notice

Legal Notice Notification is hereby given that JPMorgan Chase Bank, N.A., 1111 Po-laris Parkway, Columbus, Ohio 43240 has filed an application with the Office of the Comptroller of the Currency (the "OCC") on or about May 15, 2019, as specified in 12 CFR Part 5 for permission to establish a May 15, 2019, as specified in 12 CFR Part 5, for permission to establish a domestic branch at the northwest corner of the intersection of NE Broadway Street and NE 33rd Ave-nue, Portland, Multnomah County, OR 97212. Any person wishing to comment on this application may file comments in writing with the Li-censing Operations, 400 7th Street, SW, Washington, D.C. 20219 within 30 days of the date of this publica-tion. The public portion of the filing is available upon request from the OCC. The public may find informa-OCC. The public may find informa-tion about the filing (including the closing date of the comment period) in the OCC's Weekly Bulletin available at www.occ.gov.

Oregon Manufacturing Extension Oregon Manufacturing Extension Partnership, Inc. (OMEP) is seeking a PR firm to generate and pitch story ideas featuring OMEP staff, practice areas, partners, and clients to local media and industry specific publica-tions. OMEP is a not-for-profit team of manufacturing professionals. Applications due June 21. Details online at www.omep.org/RFP

BASELINE MINI STORAGE 18375 SW Baseline Rd Beaverton 97006 503-531-9388 STORAGE AUCTION WILL BE HELD ON

StorageTreaures.com Online Bidding starts May 15, 2019 Closes May 22, 2019 @ 10:00 AM 036 L McCain ; 433 L McCain

> SHERIFF'S SALES MULTNOMAH COUNTY

MULTNOMAH COUNTY

MULTNOMAH COUNTY SHERIFF'S OFFICE NOTICE OF SALE On June 11, 2019 at 12:00 PM at the Multnomah County Sheriff's Office, 4735 E Burnside St., Portland, OR, I will sell, subject to redemption, sub-ject property legally described as: 735 SE Rene Avenue Gresham, OR 7080. The court case number is 18CV32671. The case is entitled: CITIGROUP MORTGAGE LOAN TRUST INC. ASSET-BACKED PASS-THROUGH CERTIFICATES, SERIES 2007-AMC4, U.S. BANK NATIONALASSOCIATION, AS TRUSTEE, Plaintiff v DASHIA L. CHASTEEK; MIDLAND FUNDING, LLC; AND ALL OTHER PERSONS OR PAR-TIES UNKNOWN CLAIMING ANY RIGHT, TITLE, LIEN, OR INTEREST IN THE REAL PROPERTY COMMONLY KNOWN AS 735 SOUTHEAST RENE AVENUE, GRESHAM, OREGON 97080, Defendants. The sale is a public auc-tion to the highest bidder for cash or cashier's check, in hand, made paya-ble to Multnomah County Sheriff's Office. For more information on this sale go to: sale go to:

http://www.oregonsheriffs.org/ May 15, 22, 29 & June 5, 2019

May 15, 22, 29 & June 5, 2019 MULTNOMAH COUNTY SHERIFF'S OFFICE NOTICE OF SALE On June 11, 2019 at 12:00 PM at the Multnomah County Sheriff's Office, 4735 E Burnside St., Portland, OR, I will sell, subject to redemption, sub-ject property legally described as:, 735 SE Rene Avenue Gresham, OR 97080. The court case number is 18CV32671. The case is entitled: CITIGROUP MORTGAGE LOAN TRUST INC. ASSET-BACKED PASS-THROUGH CERTIFICATES, SERIES 2007-AMC4, U.S. BANK NATIONALASSOCIATION, AS TRUSTEE, Plaintiff v DASHIA L. AS TRUSTEE, Plaintiff v DASHIA L. CHASTEEN; MIDLAND FUNDING, LLC; AND ALL OTHER PERSONS OR PAR-TIES UNKNOWN CLAIMING ANY TIES UNKNOWN CLAIMING ANY RIGHT, TILE, LIEN, OR INTEREST IN THE REAL PROPERTY COMMONLY KNOWN AS 735 SOUTHEAST RENE AVENUE, GRESHAM, OREGON 97080, Defendants. The sale is a public auc-tion to the highest bidder for cash or cashier's check in band made nava-'s check, in hand, made paya ble to Multnomah County Sheriff's Office. For more information on this sale go to:

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U.S. Army Corps of Engineers Willamette Valley System Operations and Maintenance Environmental Impact Statement

The Corps Needs Your Input! The Corps will be hosting **public meetings** to gather your input and share information about the project.

Meeting Format: A short presentation will be given about 30 minutes after meeting start time, followed by open house format where you may interact with Corps staff. For those that miss the presentation, it will be repeated again at the end of the meeting.

Public Meeting Information

DATE	LOCATION	WEETING TIME
June 4, 2019	E ugene Public Library 100 W 10th Ave, Eugene, OR 9740 Bascom – T ykes on Room	4-6:30 pm I
June 5 2019	South Salem High School Library 1910 Church St SE, Salem, OR 9730 Library – North Side Room	•
June 6 2019	University Place Hotel & Conference Center** 310 SW Lincoln St, Portland, OR 97 Willamette Room	4-6:30 pm 201
June 12 2019	Corvallis-Benton Public Library 645 NW Monroe Ave, Corvallis, OR 9 Main Meeting Room	
June 13 2019	Springfield City Hall 225 Fifth Street Springfield, OR 97 Council Chambers	4-6:30 pm 477

**Please visit our website for a coupon code for parking at University Place Hotel and Conference Center. You will need the code prior to parking.

Scoping Comment Period Ends June 28, 2019

For More Information Please Visit the Project Website: www.nwp.usace.army.mil/Locations/ Willamette-Valley/Evaluation

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June 6 5-7:30 pm	University Place Hotel & Conference Center* 310 SW Lincoln St, Portland, OR 97201 Willamette Room
June 12 5-7:30 pm	Corvallis-Benton Public Library 645 NW Monroe Ave, Corvallis, OR 97330 Main Meeting Room
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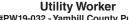
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To place your ad call 503-620-7355 or visit pamplinclassifieds.com

U.S. Army Corps of Engineers

Willamette Valley System Operations and Maintenance Environmental Impact Statement

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JUNE 5 5-7:30 PM	South Salem High School Library 1910 Church St SE, Salem, OR 97302 Library – North Side Room			
JUNE 6 5-7:30 PM	University Place Hotel & Conference Center* 310 SW Lincoln St, Portland, OR 97201 Willamette Room			
JUNE 12 5-7:30 PM	Corvallis-Benton Public Library 645 NW Monroe Ave, Corvallis, OR 97330 Main Meeting Room			
JUNE 13 4-6:30 PM	Springfield City Hall 225 Fifth Street Springfield, OR 97477 Council Chambers The New Era			

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Public Meeting Information:

Date/ Time 4-Jun 4-6:30 pm	<u>Location</u> Eugene Public Library 100 W 10th Ave, Eugene, OR 97401 Bascom – Tykeson Room
5-Jun 5-7:30 pm	South Salem High School Library 1910 Church St SE, Salem, OR 97302 Library – North Side Room
6-Jun 5-7:30 pm	University Place Hotel & Conference Center* 310 SW Lincoln St, Portland, OR 97201 Willamette Room
12-Jun 5-7:30 pm	Corvallis-Benton Public Library 645 NW Monroe Ave, Corvallis, OR 97330 Main Meeting Room
13-Jun 4-6:30 pm	Springfield City Hall 225 Fifth Street Springfield, OR 97477 Council Chambers

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Cottage Grove Sentiel

U.S. Army Corps of Engineers Suislaw Willamette Valley System Operations and Maintenance Environmental Impact Statement

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June 4	Eugene Public Library
4-6:30 pm	100 W 10th Ave,
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	Bascom – Tykeson Room
June 5	South Salem
5-7:30 pm	High School Library
	1910 Church St SE, Salem,
	OR 97302
	Library – North Side Room
June 6	University Place Hotel &
5-7:30 pm.	Conference Center*
	310 SW Lincoln St, Portland,
	OR 97201
	Willamette Room
June 12	Corvallis-Benton Public
5-7:30 pm	Library
	645 NW Monroe Ave,
	Corvallis, OR 97330
	Main Meeting Room
June 13	Springfield City Hall
4-6:30 pm	225 Fifth Street
	Springfield, OR 97477
	Council Chambers
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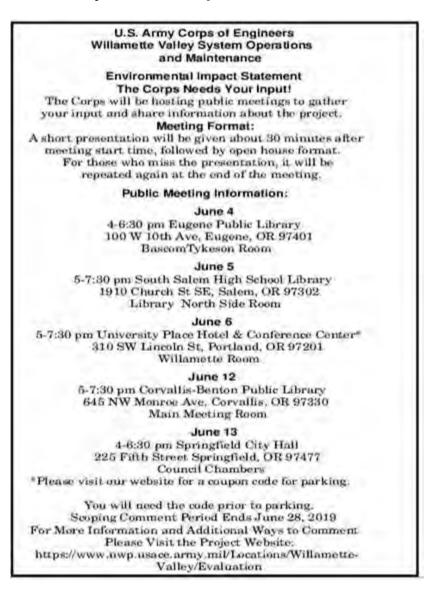
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Publication Date: May 22, 2019

Statesman Journal and Stayton Mail



U.S. Army Corps of Engineers

Willamette Valley System Operations and Maintenance

Environmental Impact Statement

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JUNE 5: 5-7:30 pm South Salem High School Library, 1910 Church St SE, Salem, OR 97302 Library – North Side Room

Hotel & Conference Center*,

310 SW Lincoln St, Portland, OR 97201, Willamette Room

JUNE 12: 5-7:30 pm Corvallis-Benton Public Library, 645 NW Monroe Ave, Corvallis, OR 97330, Main Meeting Room

JUNE 13: 4-6:30 pm Springfield City Hall, 225 Fifth Street , Springfield, OR 97477, Council Chambers

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usace.army.mil/Locations/Willamette-Valley/Evaluation

US Army Corps of Engineers JUNE 6: 5-7:30 pm University Place Environmental Impact

To be published: 5.23.19

Thank you, The Creswell Chronicle Eugene Weekly U.S. Army Corps of Engineers

Willamette Valley System Operations and Maintenance Environmental Impact Statement

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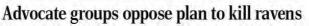
Arrest made in pair's disappearance



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Samaritan Health reports \$160.8M in benefit



Oregon have criticized a state plan to kill more than 1,000 ravens to kelp save the greater sage grouse, officials said. The Oregon Department of Pish and Wikilie applied for permits in 2018 to kill up to 500 ravens per year over a three-year period to reduce the number preying upon greater sage grouse eggs, The Oregonian/Oregoni/av reported Tuesday. The strategy of putting poissened chicken eggs in bailt boxes in northeasteru Oregon's Baker County is flaved, environmentalists said.

said

flaved, environmentals to said Environmental groups including Oregon Wild, The Humane Society and the Genter for Biological Diver-sity oppose the plan. The strategy is part of "an unfortunate pattern of wild-life agencies scapegoating one wildlife species for the decline of another" without addressing primary causes of decline, said Bob Sallinger, conservation director at the Portland Audubon Society. Population estimates show the sage grouse has

Population estimates show the sage grouse has declined by 30% across its native range, which includes 11 western states and parts of

II weeten states and parts of Canada. In Oregon wherem-ven are targeted the graves opulation hastallen by 75% since 2005. Studies showing tavens' difect on sage grouse neet-ing were conducted in Ne-vada, and Oregon "has not produced adequate science to support idling rayens," Sallinger wrote on the Pott-land Audhoor website. Environmentalists also sidd many more poisened

Environmentaists asso-said many more poisoned eggs need to be distributed than the number of favens , targeted, creating the po-tential to kill other species.

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Social equity questions arise over pot

35

'Legalization 2.0' efforts take aim at complex issues

JENNIFER PELTZ

NEW YORK (AP) - Advocates for legalizing marijuana have long argued it would strike a blow for social justice after a decades-long drug war that disproportionately targeted minority and poor com-munities.

targeted minority and poor com-munities. But social equity has been both a ticking point and selling point this year in New York and New Jeney, amongother states weigh-ing whether to join the 10 that al-low recreation other states weigh-ing whether to join the 10 that al-tow recreational use of pol. Complicating the lawmaking pupperters, are question about process, sometimes even among pupperters, are question about how best to exale marijuan con-victions and ensure that people who were arrested for pot benefit from legal marijuan amtets. Advocates are and fame enough to close who see an colemantian is also pot is even accelerating inequality as the drug become big punkness for companies generally runba with even.

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Woman checks skid marks, finds injured man

PORTLAND (AP) – An Oregon woman likely saved a man's life when she stopped to investigate skid marks on at monatur road and so at monatur responders said. Lawrie Bowers of Happy Campon Saturday morining stopped volc Road, a citru-tious route in the Sikkyou Mountains of southwest Oregon. Bowers spotted a red Jeep about 50 foet be-low. The Oregonian. Yote on Live Degonian. Yote on Live Degonian. Yote on Live Degonian. Yote Sulf Yoto alding down a roughly 40-degree slope, said Med Booth, publis in-formation officier at the II-linois Valley Fie District.

The vehicle otherwise likely would have plunged another 1,000 feet, Booth

said.

said. "It's a good thing she was traveling by," Booth said. Emergency responders found the driver suffering from hypothermia. He had a badly fractured leg and internal bleeding. He was aitilited to Asante Rogue Regional Medical Center in Mediord. The orthrotion of the

The extraction of the driver on the steep moun-tainside was perilous, Booth said. Booth said. The driver's name has not yet been released. Booth said the man was in

Booth said the man was in his 30 so creatly 40 s. The driver told rescuers he crashed at around 2 a.m. Saturday. Rescuers were dispatched shortly after 10 a.m. Search and rescue crews often take some time to reach rural parts of the Sis-klyou Mountains. However, a team of paramedics and rescue personnel were con-ducting a routine exercise

a team of parametics and rescue personnel were con-ducting a routine exercise in Cave Junction and were able to respond quickly, Booth said.

Booth said. "Everything just worked out real nice," he said.

OREGON NOTES

Study probes options for Hanford waste

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has proposed a national legal-ization measure that includes expungements and a community reinvestment? fund, and several of his fellow Democratic senators and 2020 presidential primary contenders have signed on. Some veterans of early state le-celeration experiment to the term

contenders have signed on. Some veterans of early statele-galization campaigns have reck-oned with their limitations. "We were overly cautious at the time, looking back' said Art Way, the Drug Policy Alliance's direc-tor in Colorado. "But it didn't feel that way" when legalizing marijuana and ending many ar-rests were unprecedented goals in themselves. He's been fighting to make Col-rada's camabis industry more accessible to people with drug convictions and entrepreneuts of modest means. Oppoments, too, are looking at how legalization has played out. They say it shows authorizing pot is no way to help minorities. "The mocial justice issues is abig froat' for states and big business

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Our Town



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June 6 5-7:30 pm	South Salem High School Library 1910 Church St SE, Salem, OR 97302 Library – North Side Room
June 8 5-7:30 am	University Place Hatel & Conference Center* 310 SW Lincoln St, Partiend, OR 97201 Willemette Pagen
June 12 5-7:30 pm	Corvall's Benton Public Library 645 NW Monroe Ave, Corvalis, OR 97330 Main Meeting Room
June 13 4-6:90 pm	Springleid City Hall 826 Filth Street Springtald, CR 97477 Council Cliambers

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DEBATE

From Page A1

statewide boundaries," Brown said.

wolves from the federal Endangered Species Act Her comments came across their range in the 48 at the end of 2018 - a 10% Blumenauer wrote. a day after she slapped down a stance by Curtis contiguous states," Brown Melcher, director of the wrote in a letter to U.S. Oregon Department of Interior Secretary David Fish and Wildlife. He Bernhardt. wrote to federal offi- A total of 6,500 wolves ing livestock losses. cials on May 9, saying are believed to roam his agency supports del- Minnesota, Wisconsin, cacy of federal delisting isting wolves because Michigan, Rocky of wolves brought howls the animals no longer Mountains and Pacific meet the definition of an Northwest. Additional endangered or threatened wolves inhabit Indiana,

Kentucky, Massachusetts. species. Blumenauer, an Oregon Brown said her office Maine, Missouri, Ohio, Democrat, told Melcher had not been informed Utah and Vermont. in a letter that he was

that Melcher would take

"The state of Oregon

support the delisting of books.

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vore conservation director

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In his letter, Melcher

increase over 2017. He also

said Oregon is committed

to ensuring the progress of

the species while minimiz-

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the brakes.

POT

From Page A1

legalization to, "which track should we make sure we head down?" Questions about conviction-clearing and other issues contributed to delaying legislative votes on legalizing recreational pot that had been expected earlier this spring in New York and New Jersey. The

states' Democratic goversupport legalization but confronted differences even within their own party. The New Jersey measure

fizzled this week, when and expunge low-level pot convictions. Meanwhile, some New

proposal to legalize pot and foster racial and economic

example. going to propel us, not Minority Cannabis Business what's going to hold us Association. back," said Kassandra director for the pro-legal- but now he hopes to ization Drug Policy Alliance. start a business if recreand black people use mari- lives. Peoples-Stokes, a Buffalo juana. But the arrest rate for Some states and cities Democrat, recently wrote

Democratic presidential candidate Sen. Corv Booker. D-N.J., answers questions last month during a presidential nors and legislative leaders forum on the Texas State University campus in Houston. Booker has proposed a national marijuana legalization measure that includes expungements of criminal records for marijuana offenses. [AP PHOTO/MICHAEL WYKE, FILE]

Some would-be minor- being used." the state Senate president ity entrepreneurs have He doesn't foresee pot said he'll aim for a 2020 been caught in a cannabis shops enhancing neighreferendum while pursu- Catch-22, unable to work in borhoods where drugs ing separate legislation to a legal pot business because have been a wellspring of expand medical marijuana of a past conviction. Others problems. And he's skeptistruggle to raise start-up cal that, even with special money in an expensive incentives, residents would industry that banks are leery reap the profits in an indus-York lawmakers said they'll about entering because of try already infused with big soon unveil an updated the federal government's money. prohibition on pot. New York "We're not going to Assemblywoman Crystal equity. Activists remain have much time to make Peoples-Stokes agrees hopeful the state can set an a space in the market for legalizing marijuana isn't ourselves," said Jason a panacea for minor-"Social justice is what's Ortiz, vice president of the ity communities. But the Assembly's first African-American majority leader Marijuana got Ortiz is championing a recre-Frederique, the New York arrested as a teenager, ational-pot proposal that's currently being revised. "It will not end racism. Federal data shows simi- ational pot becomes legal But it is a crucial step lar percentages of white in Connecticut, where he in the right direction,"

Collette Adkins, carni- "shocked and appalled." wolf recovery in Oregon "the conservation of gray "I am ashamed by your and expose the animals to wolves as required by willingness to throw an killing by the state." Oregon law while pro-Diversity, said more than a incredibly important The federal govern- tecting the social and ment has already delisted half-dozen states have no predator species under the economic interests of all bus in favor of a few priwolves in the eastern Oregonians." vate interests that clearly one-third of Washington Oregon removed wolves have a different mis- and Oregon, as well as from its state endansaid Oregon had 137 wolves sion than your agency," in Idaho, Montana and gered species list in 2015. Wyoming. It contends A prime objective of the Noah Greenwald, that gray wolves no longer draft plan is to promote endangered species proqualify for federal protec- a naturally reproducing gram director at the tion as an endangered or wolf population connected Center for Biological threatened species. to a larger population of Diversity, said: "Lifting Oregon officials have wolves and allowing for However, his advo- federal protections now drafted a new state wolf expansion into other areas would hamper further plan aimed at ensuring of the state.



Enter Nov

blacks is higher, according have started post-legaliza- in Newsweek. to reports by the American tion initiatives to expunge Civil Liberties Union and criminal records and open juana businessman in New York, Andrew Farrior is doors in the cannabis busiothers. Legalization of recre- ness for people with pot following the legalizaational pot in 10 states and convictions. California, for tion debate and its talk of the District of Columbia, instance, passed a sweeping social equity. and medical pot in two- expungement law last year thirds of the states, hasn't affecting hundreds of thoueliminated the gaps. In sands of drug offenders. Colorado, for instance, a New Jersey Sen. Cory state report found arrests Booker has proposed were fewer but the rate a national legalization remained higher among measure that includes blacks five years after a 2012 expungements and a comvote for legalization. munity "reinvestment" In Oregon, Portland fund, and several of his voters who approved a city fellow Democratic senamarijuana sales tax in 2016 tors and 2020 presidential aimed to devote proceeds primary contenders have partly to small businesses signed on. - especially minority - and Some veterans of early state legalization campaigns women-owned businesses – and economic have reckoned with their and education programs in limitations. communities where pot was "We were overly cautious at the time, looking back," heavily policed. A city auditor's report said Art Way, the Drug this month found 16% of Policy Alliance's director in the over \$8 million tax haul Colorado. "But it didn't feel so far has gone to those that way" when legalizing purposes. About 80% has marijuana and ending many gone to traffic safety initia- arrests were unprecedented tives, and the rest mainly to goals in themselves. services for drug and alcohol He's been fighting to make Colorado's cannabis users. "The limited money to industry more accessible to address the historical effects people with drug convicof cannabis prohibition may tions and entrepreneurs of not be" what voters who modest means. Opponents, too, are backed the tax expected, the auditors wrote. looking at how legalization Meanwhile, the emerghas played out. They say it ing marijuana industry is shows authorizing pot is no very white, according to the way to help minorities. limited data available. "The social justice issue "It's obviously a prob- is a big front" for states and lem," said Morgan Fox bigbusiness to make money of the National Cannabis off marijuana, said New Industry Association, which Jersey Legislative Black has helped craft suggestions Caucus Chairman Ronald for social equity legislation. Rice, a Democratic senator Another industry from Newark and former group, the Cannabis Trade police officer. He supports Federation, this week ending criminal penalties announced plans to craft a for marijuana but not legaldiversity and equity policy izing recreational use. in conjunction with national "I know what social jus-NAACP officials and other tice looks like," Rice says. "I civil-rights advocates. also know when people are



NO PURCHASE NECESSARY. Official rules available at www.150KGiveaway.com.

U.S. Army Corps of Engineers Willamette Valley System Operations and Maintenance **Environmental Impact Statement**

The Corps Needs Your Input!

The Corps will be hosting **public meetings** to gather your input and share information about the project.

Meeting Format: A short presentation will be given about 30 minutes after meeting start time, followed by open house format. For those who miss the presentation, it will be repeated again at the end of the meeting.

Public Meeting Information

Date/ Time	Location
June 4 4-6:30 pm	Eugene Public Library 100 W 10th Ave, Eugene, OR 97401 Bascom – Tykeson Room
June 5 5-7:30 pm	South Salem High School Library 1910 Church St SE, Salem, OR 97302 Library – North Side Room
June 6 5-7:30 pm	University Place Hotel & Conference Center* 310 SW Lincoln St, Portland, OR 97201 Willamette Room
June 12 5-7:30 pm	Corvallis-Benton Public Library 645 NW Monroe Ave, Corvallis, OR 97330 Main Meeting Room
June 13 4-6:30 pm	Springfield City Hall 225 Fifth Street Springfield, OR 97477 Council Chambers

*Please visit our website for a coupon code for parking. You will need the code prior to parking.

Scoping Comment Period Ends June 28, 2019

For More Information and Additional Ways to Comment Please Visit the Project Website: https HYPERLINK "https://www.nwp.usace.army.mil/Locations/Willamette-Valley/Evaluation/":// www.nwp.usace.army.mil/Locations/Willamette-Valley/Evaluation

Appendix C: Public Scoping Meeting Sign-In Sheets

Date: June 4, 2019 Location: Eugene Public Library



US Army Corps of Engineers® Portland District



Name and Organization	City, State	E-Mail	How did you hear about the meeting?		
Coy Sipher	Spizfield	COTY S. phe - @ & gmail. com Please check if you would like to receive email notifications.	 Newspaper Ad Project Website Flyer B Other 		
Andrew Jamos	Engene,08	Andrew. Janos & EWERORG Please check if you would like to receive email notifications.	□ Newspaper Ad ☑ Project Website □ Flyer □ Other		
Ryan Thompson	Dorena, OR	r y an @ mtnaireng.com Please check if you would like to receive email notifications.	□ Newspaper Ad □ Project Website □ Flyer ⊉ Other		
KRISMIN KESSLER	ELGENE, OR	RZ-1S-NN IESSIERS 78 C gmail.c □ Please check if you would like to receive email notifications.	□ Newspaper Ad An□ Project Website □ Flyer 1 Other		
Maruel Coren	Veneta, Oa	Please check if you would like to receive email notifications.	 Newspaper Ad Project Website Flyer Ø0ther 		
CarolineServert	Veneta, OR	Please check if you would like to receive email notifications.	□ Newspaper Ad □ Project Website □ Flyer ፬ Other		

Date: June 4, 2019 Location: Eugene Public Library



US Army Corps of Engineers
Portland District



Name and Organization	City, State	E-Mail	How did you hear about the meeting?
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Rich Aaring E92	Eyene OR	clubmanagen @eugene yacht club, ors » Please check if you would like to receive email notifications.	 □ Newspaper Ad □ Project Website □ Flyer Ø Other
Kelly Reis, ODFW	Springfield	Kelly.e. reise State ev. NS	 Newspaper Ad Project Website Flyer Other
Mike BRINKley	Eugenel	MbrixHelecomentsTurT Please check if you would like to receive email notifications.	 Newspaper Ad Project Website Flyer Other
Judith Callens	Salemor	jcallens & oda. Stall- Or. US Please check if you would like to receive email notifications.	□ Newspaper Ad □ Project Website □ Flyer □ Other
Doug Heiken	Eugere OR	dhe orgenwild. Oig Please check if you would like to receive email notifications.	 Newspaper Ad Project Website Flyer C Other

Date: June 4, 2019 Location: Eugene Public Library



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Shelley Reed RANCO	JC, OR	Sized P @ MSn. Ciam Please check if you would like to receive email notifications.	 Newspaper Ad Project Website Flyer Other
Jack Loboy ODEQ	Eugene, OR	loboy. Zach@ deg. State. or . us Please check if you would like to receive email notifications.	 Newspaper Ad Project Website Flyer Other
BALLES	EUGENE	Please check if you would like to receive email notifications.	 Newspaper Ad Project Website Flyer Other
Dave Thomas	Zujehe	Derse thomas 1939 D Smul, Con Please check if you would like to receive email notifications.	□ Newspaper Ad □ Project Website □ Flyer □ Other
BRYAN HARPER	JUNICTION	Please check if you would like to receive email notifications.	 Newspaper Ad Project Website Flyer Other
Andy Hamilton	Expent	Please check if you would like to receive email notifications.	□ Newspaper Ad □ Project Website □ Flyer ♀ Other

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Date: June 5, 2019

Location: South Salem High School Library





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ð C	Sala		Project Website
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	Salen, OR		Newspaper Ad
Betsy Verhoeven		betsy. Verhoeven Coregonstate	🖞 🗆 Project Website
Betsy Verhoeven OSU Extension		Please check if you would like to receive email notifications.	Elver Dother Farm Burean
			Newspaper Ad
Chad Ball	Salem OR	chall@co. novion.or.us	Project Website
Mourism County		Please check if you would like to receive email notifications.	Flyer Other
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INICA (OV) STATE		Dicy Q AutomnHcreck Pmptons.	🗆 Flyer 🔏 Other
Karin Stutzman	Dallas	manager@polkswcb.com	Newspaper Ad
	/	U	Project Website
POLK Soil & Water Conserv. District	OR	Please check if you would like to receive email notifications.	□ Flyer AQOther

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Anne Martan	Partlend or	Please check if you would like to receive email notifications.	 Newspaper Ad Project Website Flyer - Cother
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John Zielinski Marion County Farm Bureau	salem	Derector chards, com	 Newspaper Ad Project Website Flyer TOther
GARY Pullman NESCA	Salem	gary. pull man Qgmail. rom Please check if you would like to receive email notifications.	□ Newspaper Ad □ Project Website □ Flyer □ Other : □ Email
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Date: June 5, 2019 Location: South Salem High School Library

Date: June 5, 2019

Location: South Salem High School Library





How did you hear Name and Organization City, State E-Mail about the meeting? Alvin Klousen Newspaper Ad Salem Project Website Office of Congressman Schruder □ Please check if you would like □ Flyer ⊠ Other OR to receive email notifications. Mongoath Newspaper Ad scare 19.97 Project Website Flyer D Other Please chec to receive email notifications. Mike McCord Salem Newspaper Ad Project Website OR. □ Flyer I Other Please check if you would like to receive email notifications. JOHN STOCKFLETH Newspaper Ad ST PANZ stockfleth 71@ gmailicom □ Project Website STOCKFLETH FARMS Please check if you would like OR □ Flyer ☑ Other to receive email notifications. Chad woods (1000ds @windermere Newspaper Ad Dullas . Com Project Website Polk county Sweeney Prz D.Please check if you would like Flyer Other to receive email notifications. Newspaper Ad buten Sweeney Farm & aol. Com Project Website Kemphill SINCD Please check if you would like □ Flyer □ Other 210 to receive email notifications.

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Judith Callens Dept. & Agrigulture	Salin OR	Please check if you would like to receive email notifications.	 Newspaper Ad Project Website Flyer Cother
Jenni for Fairbrother Native Fish Society	Camby, OR	Please check if you would like to receive email notifications.	☑ Newspaper Ad ☑ Project Website ☑ Flyer ☑ Other
Chandra Ferrar: Trout Unlimited	Salam, OK	Cferrario tv.org Dease check if you would like to receive email notifications.	 Newspäper Ad Project Website Flyer Other
Brent Stevenson Sontian water Control Dist	stayton	SFELS & Santum water & Please check if you would like , com to receive email notifications.	□ Newspaper Ad □ Project Website □ Flyer □ Other: □ Email
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Date: June 5, 2019 Location: South Salem High School Library

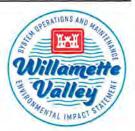
Date: June 6, 2019

Location: Portland State University Conference Center



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Mary Anne Coger Oragon Furn Burcau	Salen OR	Delease check if you would like to receive email notifications.	 Newspaper Ad Project Website Flyer D Other
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Date: June 6, 2019 Location: Portland State University Conference Center

Willamette US Army Corps Date: June 12, 2019 of Engineers . Portland District Location: Corvallis-Benton Public Library How did you hear Name and Organization City, State E-Mail about the meeting? Kob Bignof 11 Withcuste Solune Shervo & Newspaper Ad VOW. bignall@ grind, con Project Website Please check if you would like to receive email notifications. □ Flyer □ Other: Northwest Guides A D Email ConAnin Plathers Newspaper Ad Enger Officert U.S. Senator Project Website □ Flyer □ Other: Please check if you would like to receive email notifications. Jeff Merkelin A Email toby.a. lewis @ co.benton. Dr. Us Corvallis, Do Toby Lewis Newspaper Ad Project Website Benton County Please check if you would like Flyer Other: to receive email notifications. Email Kaven Rosenberg Benton Counties Krister Lusion Conallis. Lauren MR76 □ Newspaper Ad □ Project Website □ Flyer Other: Please check if you would like to receive email notifications. DEMail Luckiamete Watersterl Counil Newspaper Ad diretore luckinmutelwe. Ory □ Project Website Rease check if you would like □ Flyer □ Other: o receive email notifications. DEMail ANNE BRET biophilic 1089 at qmcil. com □ Newspaper Ad □ Project Website D Flyer & Other; Walking Please check if you would like to receive email notifications. DEMAL

Willamette Valley System Operations & **Maintenance Environmental Impact Statement**



Date: June 12, 2019

Location: Corvallis-Benton Public Library



Portland District



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Date: June 12, 2019 Location: Corvallis-Benton Public Library



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Date: June 13, 2019 Location: Springfield City Hall



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Phil BRO BROZEK&A	ZEK SSOCIATES/LOCAL	EUG. OR	Phil. brozekegmail.com	Project Website Flyer Other
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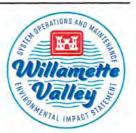
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Date: June 13, 2019 Location: Springfield City Hall



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Jo Morgan	Sulem	JNDrgm Quda. State . or. 45 Please check if you would like to receive email notifications.	□ Newspaper Ad □ Project Website □ Flyer □ Other - explain ☑ Email
Charlie Beard	Eugene OR	Please check if you would like to receive email notifications.	□ Newspaper Ad □ Project Website □ Flyer □ Other - e×Plaw □ Email
Charlie Convael	Lane County	Please check if you would like to receive email notifications.	□ Newspaper Ad □ Project Website □ Flyer □ Other - explain ☑ Email
Sarah Dyrdahf	hugene, OR	Please check if you would like to receive email notifications.	□ Newspaper Ad □ Project Website □ Flyer □ Other ~ e×plaiv ☆ Email
Ryan Thompson	Dorena, or	Please check if you would like to receive email notifications.	□ Newspaper Ad □ Project Website From PS □ Flyer
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Clayton Metachern Engineer city of Springfield	Spring field, OK	CMC eqchern@ Spring for Id-or.go	□ Newspaper Ad □ Project Website □ Flyer □ Other - ⓓ Email
Ken Vageney Springfield Emerge og Manager	Springfield	KVogersyespring Gell-Or. 30V Please check if you would like to receive email notifications.	Newspaper Ad Project Website Flyer Flyer Command
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Appendix D: Public Scoping Meeting Poster Boards



Willamette Valley System Operations and Maintenance Environmental Impact Statement

Public Scoping Meeting Boards

June 2019



- How do the operations of the Willamette Valley System impact you or resources that are important to you?
- What resources should be evaluated in the EIS?
- What are some of the challenges that you see with system operations?
- What opportunities are there for improving system operations?
- Propose an idea for a solution/measure for improvements to system operations.
- What issue or challenge would your proposed opportunity/solution address?

WAYS TO COMMENT

Mailed comments may be sent to: U.S. Army Corps of Engineers, CENWP-PME-E ATTN: Suzanne Hill P.O. Box 2946 Portland, OR 97208-2946

Emailed comments may be sent to: willamette.eis@usace.army.mil

Online comments may be made through the Public Comment Portal. The Public Comment Portal can be found on the project website: https://www.nwp.usace.army.mil/ Locations/Willamette-Valley/System-Evaluation-EIS/

COMMENT PERIOD CLOSES: JUNE 28, 2019

What is NEPA?

THE NATIONAL ENVIRONMENTAL POLICY ACT OF 1969

NEPA Overview

- NEPA requires all federal agencies to analyze potential environmental, social, and economic impacts of their proposed actions as well as to identify and consider reasonable alternatives to those actions
- NEPA encourages **public involvement** at multiple stages throughout the process to help inform decision makers on how the impacts of proposed actions might affect citizens and communities
- Early outreach in the NEPA process is particularly important to allow the public to meaningfully comment and help to shape the analysis

The public can participate in the **NEPA** process by:

- □ Commenting on the proposed actions
- considered
- Helping formulate alternatives based \square on purpose and need

□ Providing information

Where are we in this process?

Scoping Period

PURPOSES OF **SCOPING:**

- Provide information to the public
- Narrow the scope of the EIS to resources of concern
- Solicit public input on alternatives and issues of concern
- Ensure full and open participation in scoping for the Draft EIS

NEPA **Process**

Step 1: **Project Initiation**

- Develop Purpose and Need
- Develop preliminary scope of the EIS

Stakeholder/

Engagement

Public

ESA

Process

Spring/ Summer 2019

Step 2: Scoping

- Publish Notice of Intent
- Hold Public Meetings
- Solicit input regarding:
 - Scope of analysis
- Issues to consider
- Alternative development

Concludes June 28, 2019



Public Scoping (req) Scoping Report (April 1- June 28, 2019)

Step 1: Develop Biological Assessment

- Description of listed species and critical habitat
- Description of action area

- \square Helping identify the issues to be

The NEPA process for the Willamette Valley System involves:

- A system-wide evaluation of the environmental impacts of how USACE operates and maintains the Willamette Valley System (WVS)
- Incorporating measures to meet Endangered Species Act (ESA) obligations into operations and maintenance of the WVS

WE ARE HERE

Fall/Winter 2019

Step 3: Alternatives Development

- Develop alternatives screening criteria
- Develop alternatives by combining remaining measures
- Screen alternatives to a reasonable array



Public Outreach Information Sharing

Public Comment: Winter 2021

Step 4: Analyze

- Describe affected environment
- Assess impacts of reasonable array of alternatives
- →• Identify preferred alternative/proposed action
- Draft EIS documenting natural, cultural, and socioeconomic impacts



Public Comment (req) Release Draft EIS (45-day comment period)

Step 2: Draft BA

- ➡ Proposed Action Description
- Effects analysis and determination
- Transmit to the Services

Spring/Summer 2023

Step 5: Decision

- Review and develop responses to comments on Draft EIS
- Incorporate information from BiOp into the EIS
- Provide final EIS for public review
- Prepare and Publish Record of Decision

Public Review (req) Release Final EIS (30-day review)



- How do the operations of the Willamette Valley System impact you or resources that are important to you?
- What resources should be evaluated in the EIS?
- What are some of the challenges that you see with system operations?
- What opportunities are there for improving system operations?
- Propose an idea for a solution/measure for improvements to system operations.
- What issue or challenge would your proposed opportunity/solution address?

WAYS TO COMMENT

Mailed comments may be sent to: U.S. Army Corps of Engineers, CENWP-PME-E ATTN: Suzanne Hill P.O. Box 2946 Portland, OR 97208-2946

Emailed comments may be sent to: willamette.eis@usace.army.mil

Online comments may be made through the Public Comment Portal. The Public Comment Portal can be found on the project website: https://www.nwp.usace.army.mil/ Locations/Willamette-Valley/System-Evaluation-EIS/

COMMENT PERIOD CLOSES: JUNE 28, 2019

Project Background

The U.S. Army Corps of Engineers (USACE), Portland District manages a complex system of 13 interrelated dams and reservoirs, riverbank protection projects, and hatchery programs within the Willamette Valley System (WVS) to balance the priorities of the region as a whole. Together, the dams in the system are operated for the following purposes, which vary depending on the dam: flood risk management, hydroelectric power, irrigation, navigation, water quality, fish and wildlife, industrial and municipal water supply, and recreation.

The most recent NEPA evaluation for **operations and maintenance (O&M)** in the Willamette Valley System was an Environmental Impact Statement (EIS) completed in 1980. USACE is developing a new EIS because:

- Operations have been modified
- Several Willamette Valley fish species have been listed as threatened under the Endangered Species Act (ESA), requiring structural improvements for fish passage and temperature control
- New information on environmental impacts in the WVS has become available

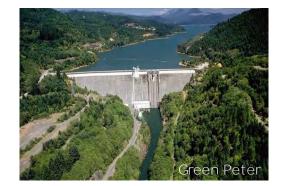
The **benefits and trade-offs** will be analyzed through the development of alternatives and analysis of potential environmental impacts of continued O&M of the WVS.

Authorized Project Purposes

Dam & Reservoir	Flood Control	Irrigation	Navigation	Hydropower	Fish & Wildlife	Water Quality	Recreation	Water Supply
Detroit	✓	√	✓	✓	~	~	✓	~
Big Cliff				✓			✓	~
Green Peter	~	✓	✓	~	~	~	~	✓
Foster	 ✓ 	✓	✓	✓	~	~	✓	✓
Cougar	 ✓ 	✓	✓	✓	~	~	~	✓
Blue River	✓	✓	✓	√*	~	~	✓	✓
Hills Creek	✓	✓	✓	✓	~	~	~	✓
Lookout Point	~	~	✓	~	~	~	~	~
Dexter				~			~	~
Fall Creek	✓	✓	✓		~	~	✓	✓
Dorena	✓	✓	✓		~	~	✓	✓
Cottage Grove	✓	✓	✓		~	~	~	✓
Fern Ridge	~	~	~		✓	✓	~	~

*Although hydropower is an authorized purpose of Blue River Dam & Reservoir, hydropower facilities have not been developed there to date.





Purpose and Need

"The purpose and need is continued operations and maintenance of the Willamette Valley System (WVS) in accordance with authorized project purposes; while meeting Endangered Species Act (ESA) obligations to avoid jeopardizing the continued existence of listed species."

EXAMPLES OF AREAS THAT WILL BE EVALUATED IN THE EIS FOR THE PROPOSED ACTION AND **ALTERNATIVES INCLUDE:**

- Air Quality
- Cultural Resources
- Economics
- Environmental Justice
- Fish and Wildlife

- Recreation
- Social Considerations
- Tribal Interests
- Vegetation
- Wetlands
- Water Quality





- How do the operations of the Willamette Valley System impact you or resources that are important to you?
- What resources should be evaluated in the EIS?
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COMMENT PERIOD

CLOSES: JUNE 28, 2019

Alternatives Development

NEPA requires federal agencies to study, develop, and describe a reasonable range of alternatives for their proposed actions.

- The EIS will evaluate the environmental impacts from a range of alternatives and provide a comparative analysis of the alternatives
- Only the alternatives that will achieve the purpose and need for the proposed action will be evaluated

What is an alternative?

One or more measures, strategies, or programs functioning together to address the purpose and need statement.

What is a measure?

A feature or activity that addresses one or more objectives.

Measures are:

- **Temporal** activity may happen at a specific time and/or over a specific duration
- Dimensional can come in different sizes, scales, designs, or materials
- Location-based can be implemented at one or more geographic sites

Measures are:

- **Non-structural activity:** such as a change in operations, a policy, practice or (a different) way of doing something or managing resources that does not require construction but has a measurable impact
- Structural feature: requires construction or assembly on-site

As the proposed action is O&M of the system, **alternatives will be** primarily composed of non-structural measures.

Example Measures:

- Modification of flow targets based on new research •
- Modification of operations for changing temperatures to meet temperature targets
- Expansion of Control Points improve measurement of unregulated flow and improve real time flood management

How will the Corps screen measures?

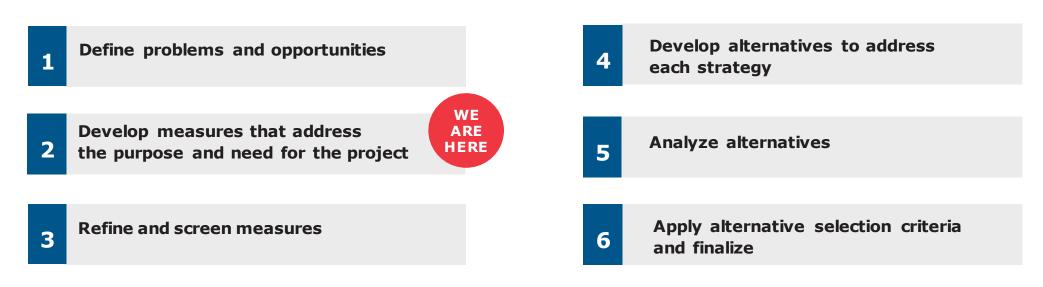
Does the measure meet purpose and need?

Does the measure meet project objectives?

Other screening criteria:

- Technical feasibility
- Unacceptable environmental impacts
- Implementation risk
- Dam safety

How will the Corps develop alternatives for this project?



PROJECT PL

Flood Risk Mana

Hydropower

Bank Protection

ESA-listed F&W

Non-ESA F&W

Harvest Hatcher Mitigation

Conservation Ha Support

Recreation

Instream Water

Water supply (A

URPOSE	PRELIMINARY OBJECTIVES
agement	 Maintain current flood risk level Bank Revetments - Maintain current levels of erosion reduction and flood risk management
	 Maintain operational flexibility & opportunity to produce hydropower Maintain emergency power pools until they are needed
ו	 Continued O&M of WVS bank protection projects Modify to improve habitat attributes for F&W
I	 Reduce project effects sufficiently to avoid jeopardizing ESA-listed species or adversely modifying critical habitat
	 Provide benefits as part of a balanced operational strategy across authorized purposes and to address national Corps environmental stewardship goals
ery	 Meet mitigation commitments, reduced as mitigation purpose addressed with improved fish access to habitat above dams
latchery	 Produce and release hatchery Chinook to meet ESA goals for reintroduction and to provide a ESA-species safety net
	 Provide recreational opportunity as part of balanced operational strategy across authorized purposes Prioritize Detroit, Foster, and Fern Ridge reservoir elevations
r Quality	 Provide instream water quality for attainment of State water quality standards as part of balanced operational strategy across authorized purposes Operate to provide flows for ESA-listed fish Operate to meet minimum flow targets Operate to meet water temperature targets Operate to meet TDG targets
Ag, M&I)	 Manage reservoir storage and releases during the conservation season to meet authorized purposes for water supply



- How do the operations of the Willamette Valley System impact you or resources that are important to you?
- What resources should be evaluated in the EIS?
- What are some of the challenges that you see with system operations?
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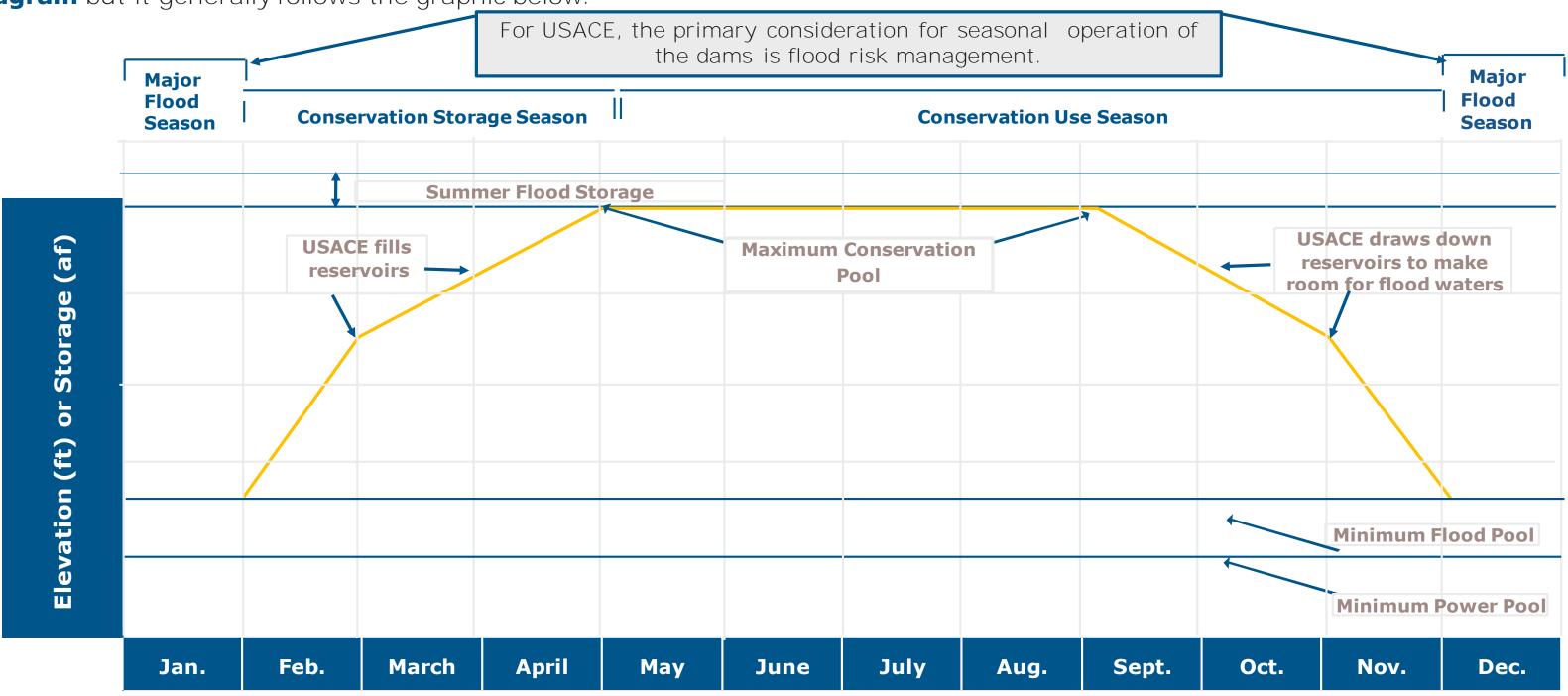
COMMENT PERIOD CLOSES: JUNE 28, 2019

Operating the Willamette Valley System

USACE developed a **water control diagram** for the operation of each dam, reflecting the balancing of project purposes when operating the various dams.

USACE releases river flows from the reservoirs to meet a variety of purposes, including water quality, water supply, and fish and wildlife needs (including flow requirements for endangered species).

Typical seasonal operations are shown in the **rule curve**, which is the maximum elevation USACE should keep a reservoir at during the year. Each reservoir has its own specific **water control diagram** but it generally follows the graphic below. Seaso Major



Typical Seasonal Operations

son	Timing	Operation
r Flood	Nov/Dec-Jan	Reservoirs are maintained at minimum flood poo l elevation to provide storage capacity for flood risk management.
	Feb- May	Conservation filling period is February through early May. During the refill period, space in the reservoirs is filled gradually and typically reach maximum conservation pool by mid-April to mid-May
		Reservoirs are maintained at maximum conservation pool elevation to provide for: irrigation, recreation, power production, and meeting minimum flow for fish. In late summer, reservoirs are gradually drafted (drawn down) to regain capacity for flood risk management.



- What resources should be evaluated in the EIS?
- What challenges do you see with system operations?
- What ideas do you have to improve system operations for:

-ESA-listed species, -other native fish and wildlife, -hatchery management?

WAYS TO COMMENT

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COMMENT PERIOD CLOSES: JUNE 28, 2019

ESA and NEPA

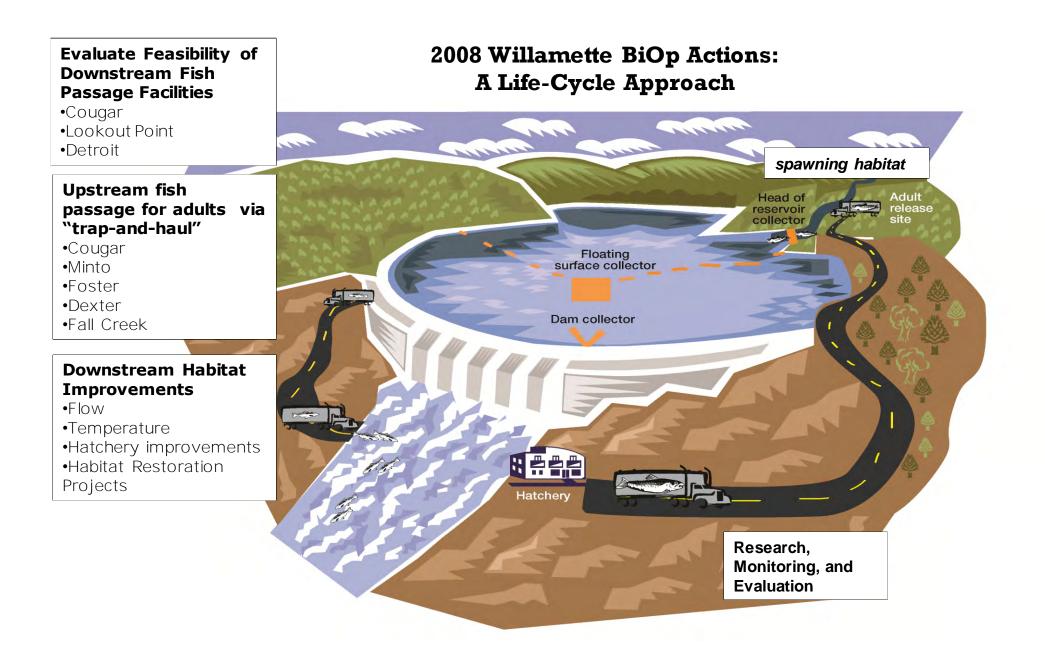
Under the **Endangered Species Act (ESA)**, federal agencies like USACE are required to consider effects of their proposed actions on **threatened and endangered species** in a project area.

The US Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS) administers the ESA and lists threatened and endangered species. FWS and NMFS (collectively, the Services) work with other federal agencies to protect threatened and endangered species and their habitats.

Under **NEPA**, federal agencies are required to consider the potential impacts of their proposed actions. This includes impacts on **ESA-listed species** and their habitats.

Since the last consultation with the **Services** in 2008, USACE has been actively taking steps to address impacts on **ESAlisted species**. Building on this progress, USACE will consider additional actions to address effects of operations and maintenance of the Willamette System on endangered species through this new EIS.

Once a draft EIS is completed, and the preferred alternative is identified, USACE will consult with the **Services** as required by the **ESA**. USACE will submit a biological assessment describing the proposed federal action based on the draft EIS preferred alternative, and effects on **ESA-listed species** and their habitat. The **Services** will prepare biological opinions for species affected by the proposed action. Results of the consultation will be incorporated into the final EIS.



Aquatic T&E Species in the Willamette River Basin

- Bull trout
- Upper Willamette River spring chinook salmon
- Upper Willamette River winter steelhead



Bull Trout



Upper Willamette River spring Chinook salmon



The four dams pictured are primary locations identified for fish passage improvements. These dams are located in the North and South Santiam, McKenzie and Middle Fork Willamette River sub-basins.



- What resources should be evaluated in the EIS?
- What challenges do you see with system operations?
- What ideas do you have to improve system operations for:
- -ESA-listed species, -other native fish and wildlife, -hatchery management?

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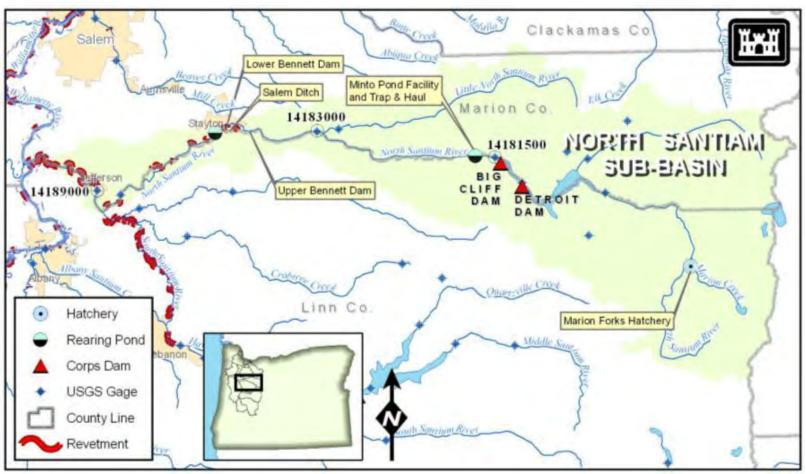
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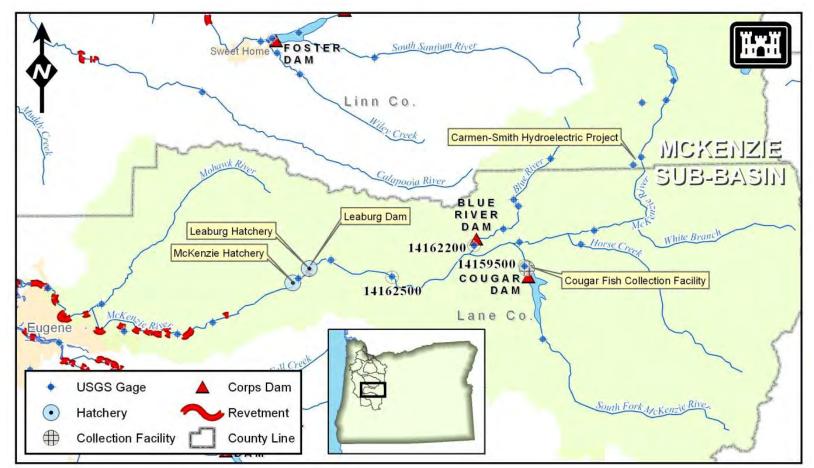
COMMENT PERIOD CLOSES: JUNE 28, 2019

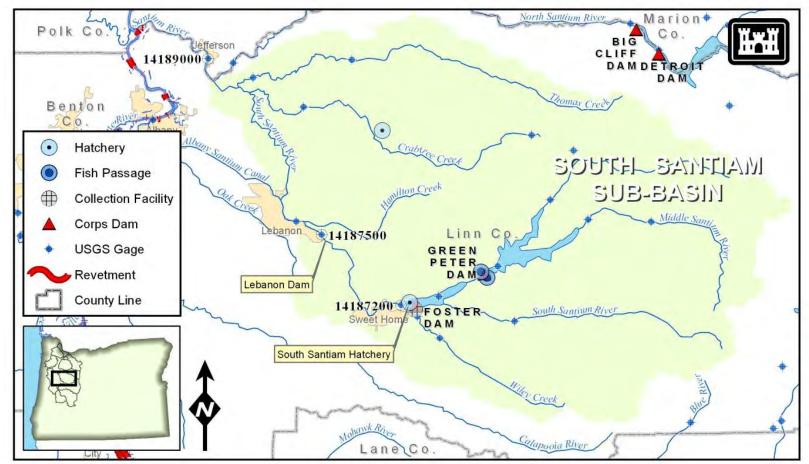
ESA and NEPA

North Santiam Subbasin



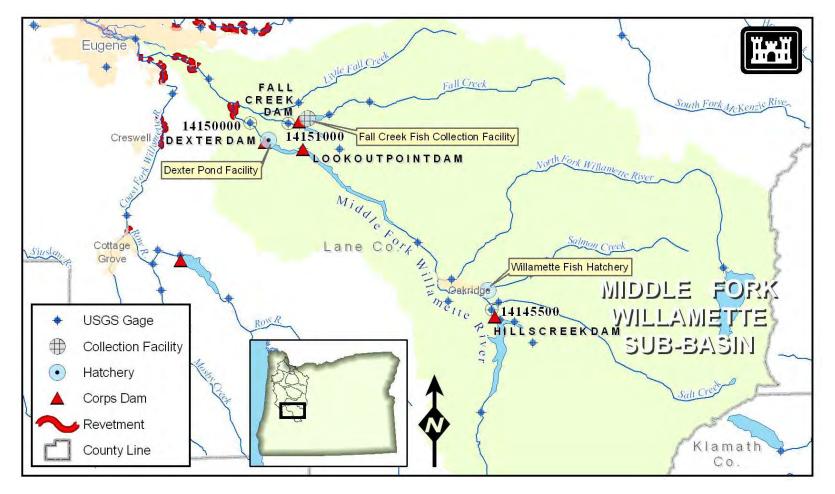
McKenzie Subbasin





South Santiam Subbasin

Middle Fork Willamette Subbasin



Appendix E: Public Scoping Meeting Presentation

WILLAMETTE VALLEY SYSTEM OPERATIONS AND MAINTENANCE ENVIRONMENTAL IMPACT STATEMENT



Public Scoping Meeting Presentation

Mike Turaski, Project Manager Dustin Bengtson, Deputy Operations Project Manager Rich Piaskowski, Fish Biologist Suzanne Hill, Environmental Resources Specialist

June 2019



OBJECTIVE OF THE PUBLIC SCOPING MEETINGS

Provide information about:

- Willamette Valley System Operations
- Development of the EIS
- Integration of the NEPA and ESA consultation processes
- Public Engagement Opportunities

Provide an opportunity for the public to:

- Interact with Corps Staff
- Comment on the Scope of the EIS
- Get engaged at the earliest opportunity in the development of the EIS





WELCOME AND PRESENTATION OVERVIEW

- Welcome
- Overview of the Willamette Valley System Operations

- Endangered Species Act Consultation Overview
- Willamette Valley System Operations and Maintenance Environmental Impact Statement (EIS) Overview



WILLAMETTE VALLEY SYSTEM OVERVIEW





WILLAMETTE VALLEY HISTORY

1936- Congress passed Flood Control Act authorizing Corps to survey flood problems in the Willamette Basin

1938- Flood Control Act provided for the first seven dams and storage reservoirs

1940- Corps began construction of Fern Ridge and Cottage Grove dams

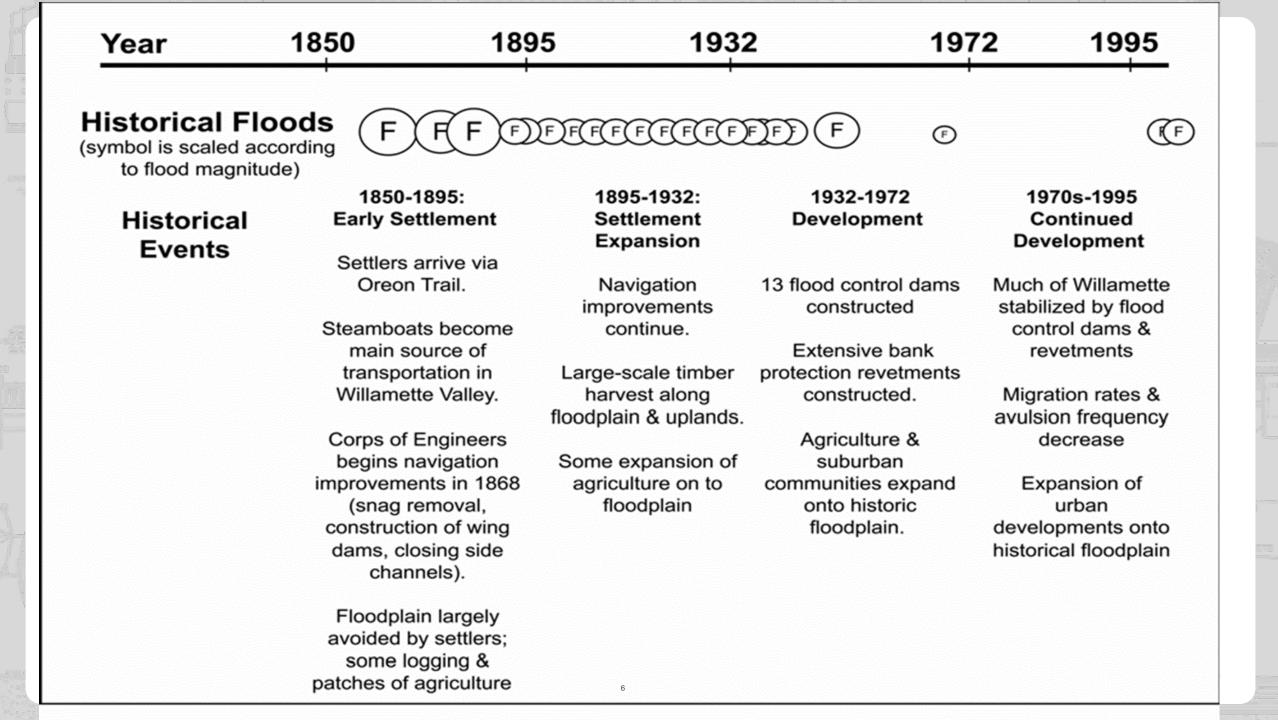
1950 and **1962** Flood Control Acts authorized additional structures

1969- Blue River Dam was completed









WILLAMETTE VALLEY PROJECT – 13 MULTI-PURPOSE DAMS



The Willamette River Basin

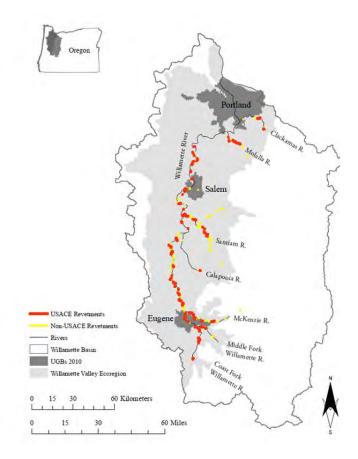


WILLAMETTE VALLEY PROJECT

- 13 Reservoirs
 - 11 Multiple-purpose2 Re-regulating8 hydropower
- **5** Fish Hatcheries

Willamette Bank Protection Program

100 miles of revetments Mainstem and tributaries

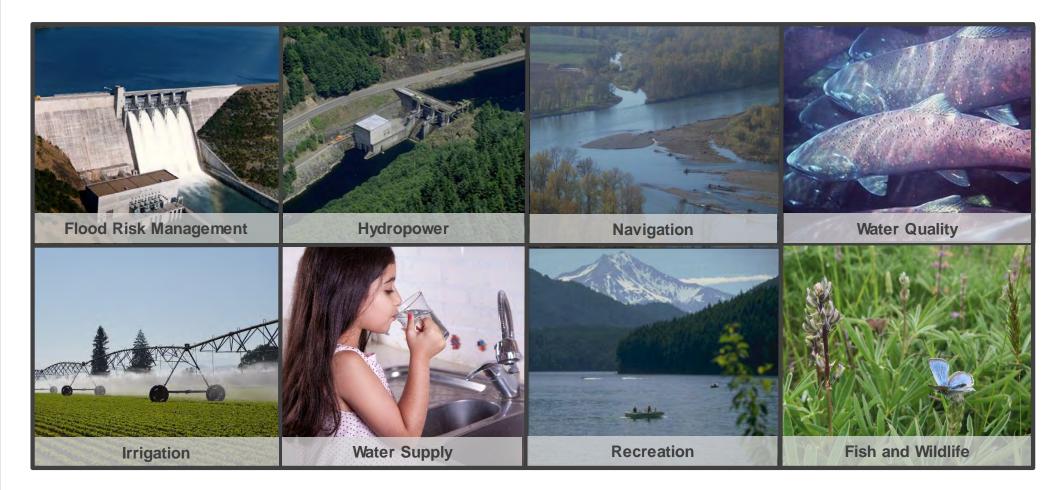






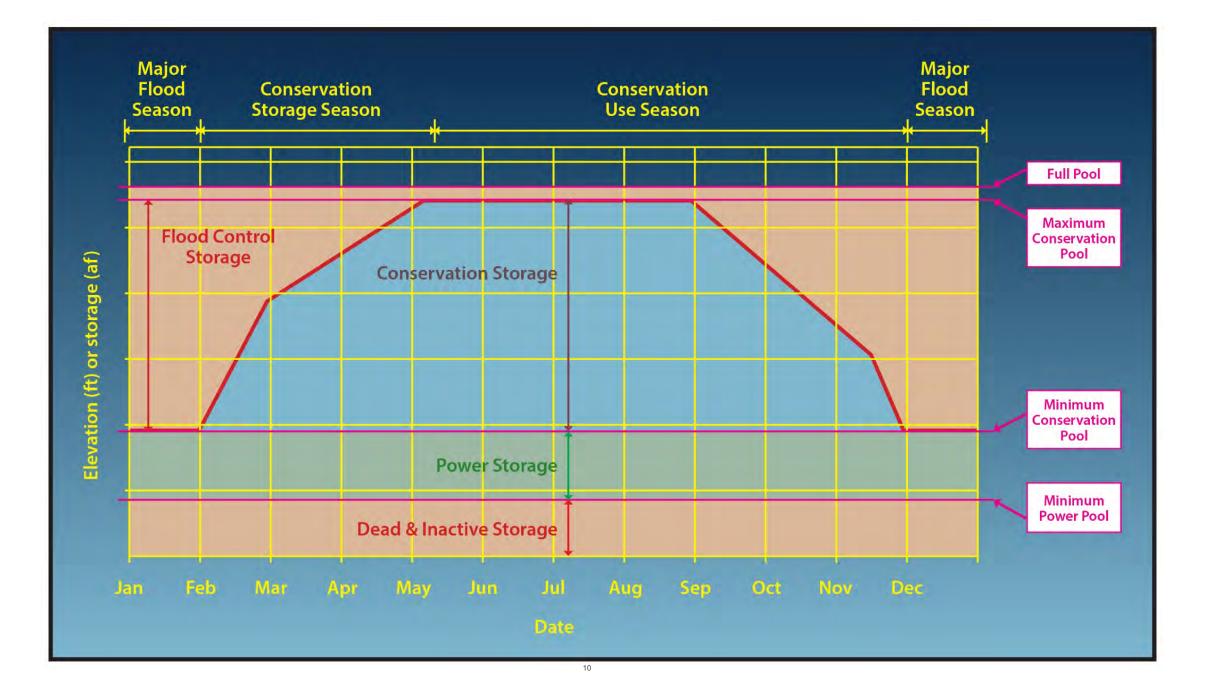
US Army Corps of Engineers ®

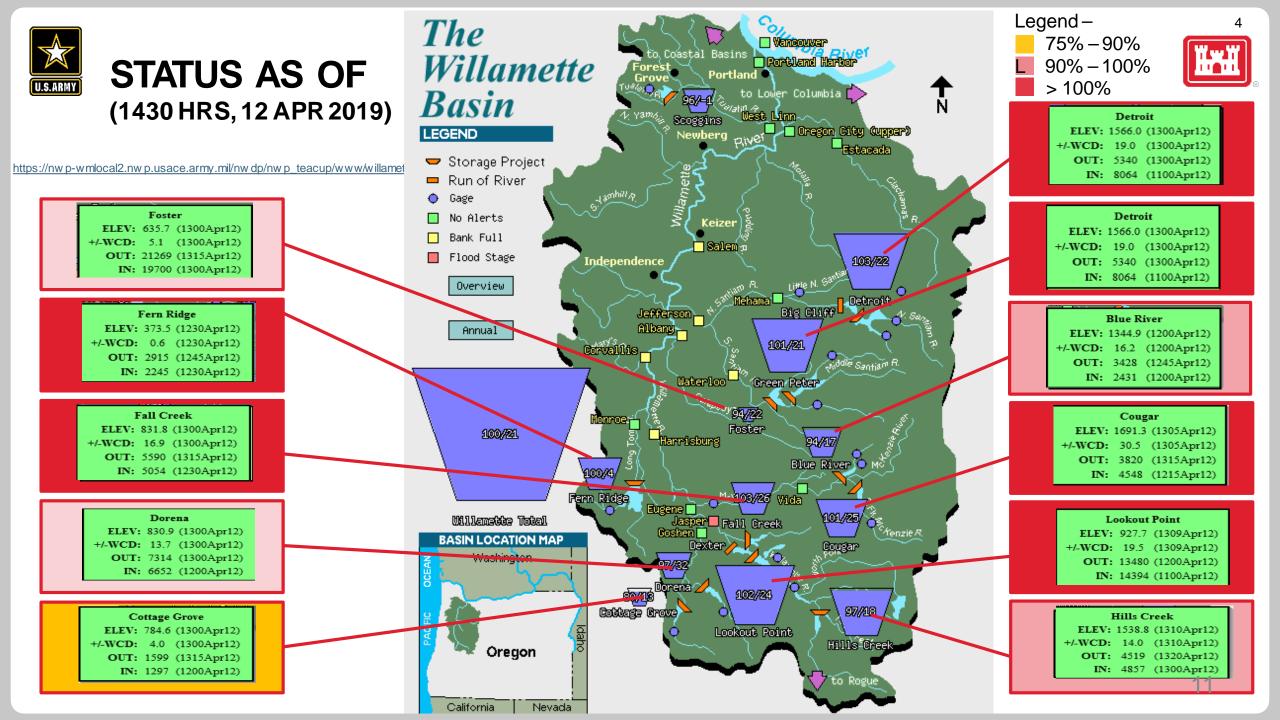
AUTHORIZED PURPOSES





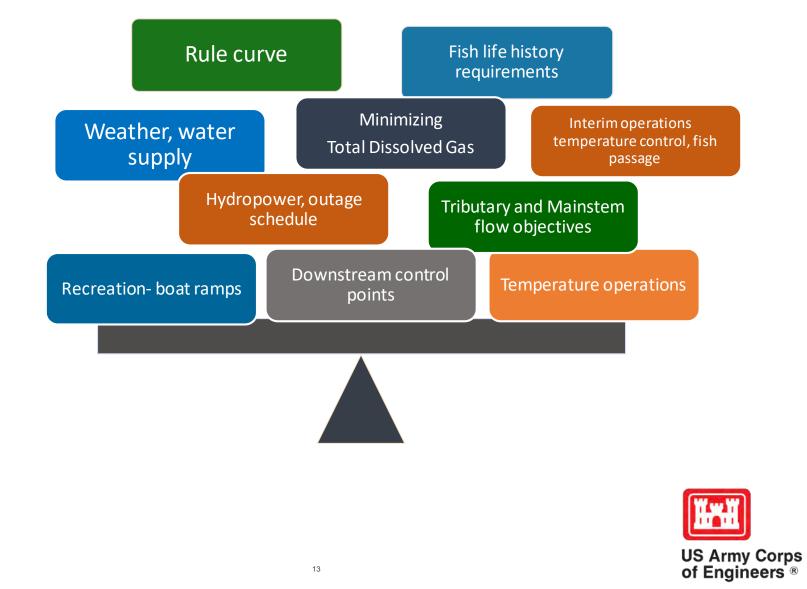
US Army Corps of Engineers ®







BALANCING DEMANDS



U.S.AR

ENDANGERED SPECIES ACT OVERVIEW

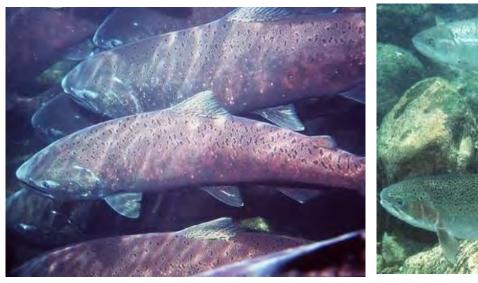




ESA- LISTED FISH IN THE WILLAMETTE BASIN

Anadromous Species

National Marine Fisheries Service



Upper Willamette River Spring Chinook salmon

Upper Willamette River winter steelhead

Resident Species

U.S. Fish and Wildlife Services



Bull trout

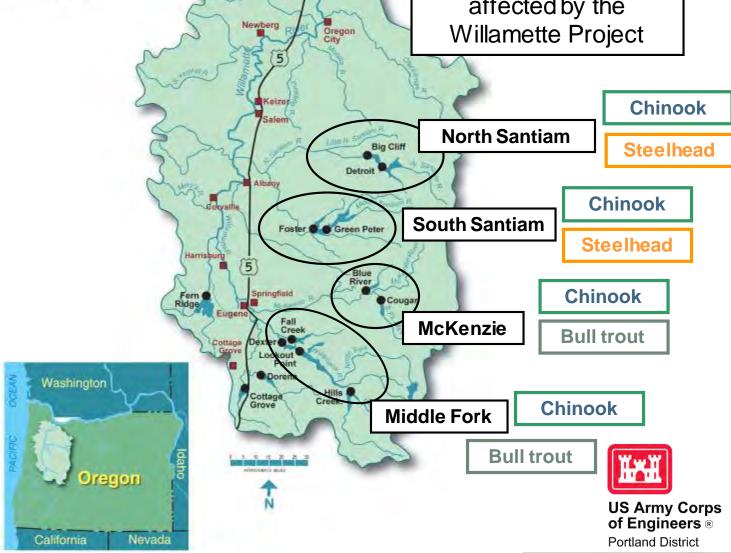
Resident fish spend entire lifecycle in fresh water





Adults spawn in tributaries of Willamette River
Juveniles migrate to ocean for part of their life
Return to same stream where they were born







PRIMARY EFFECTS OF WILLAMETTE PROJECT ON FISH

Habitat isolation/disconnectivity

-Dams blocked access to spawning habitat (i.e., no fish passage)

• In some basins 90% of spawning habitat upstream of dams

Effects on remaining spawning and rearing habitat located downstream of dams –flow availability and physical habitat

- -hatchery fish interacting with wild fish
- -Water quality (temperature, dissolved gas)







WILLAMETTE PROJECT BIOLOGICAL OPINIONS: HISTORY OF CONSULTATION UNDER THE ESA

Federal Action Agencies prepare Biological Assessments (BA) describing effects of actions on ESA-listed fish

NMFS and USFWS issue Biological Opinions ("BiOps") that tell Action Agencies how to reduce impacts

Two biological opinions (NMFS and USFWS) issued on July 11, 2008

-2008 Biological Opinions cover through 2023

ESA coverage will be updated as part of this BiOp





FISH PASSAGE AND FLOW MANAGEMENT IMPROVEMENTS

Adult Fish Collection Facilities improvements: Cougar, Detroit, Foster, and Fall Creek Dams Juvenile Fish Passage improved: spill at Foster and Fall Creek dams Flow management: ramping rates, minimum flow targets, temperature operations Hatchery reforms and Hatchery Genetic Management Plans (HGMPs)



Minto Adult Fish Collection Facility - 2013



Foster Spill Weir for downstream fish passage - 2018



Operations to improve downstream flows and water quality - 2000





US Army Corps of Engineers ®

ENVIRONMENTAL IMPACT STATEMENT OVERVIEW

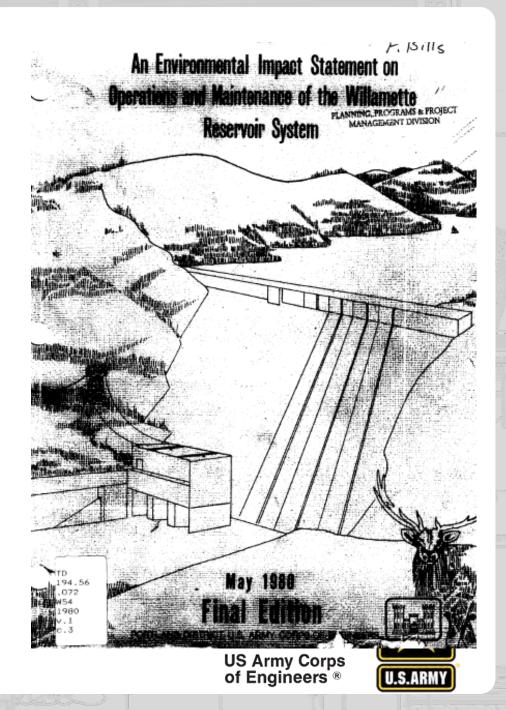




WHY IS THE CORPS PREPARING AN ENVIRONMENTAL IMPACT STATEMENT ?

System-wide evaluation of environmental impacts from operation and maintenance was last conducted in 1980. Since 1980:

- Operations have been modified and structural improvements have been made.
- New information available on the environmental impacts of operating and maintaining the system
- Large amount of new information gained regarding Endangered Species Act (ESA) listed species since the 2008 biological opinion, primarily obtained from the research, monitoring, and evaluation (RM&E) program that the Corps has implemented.

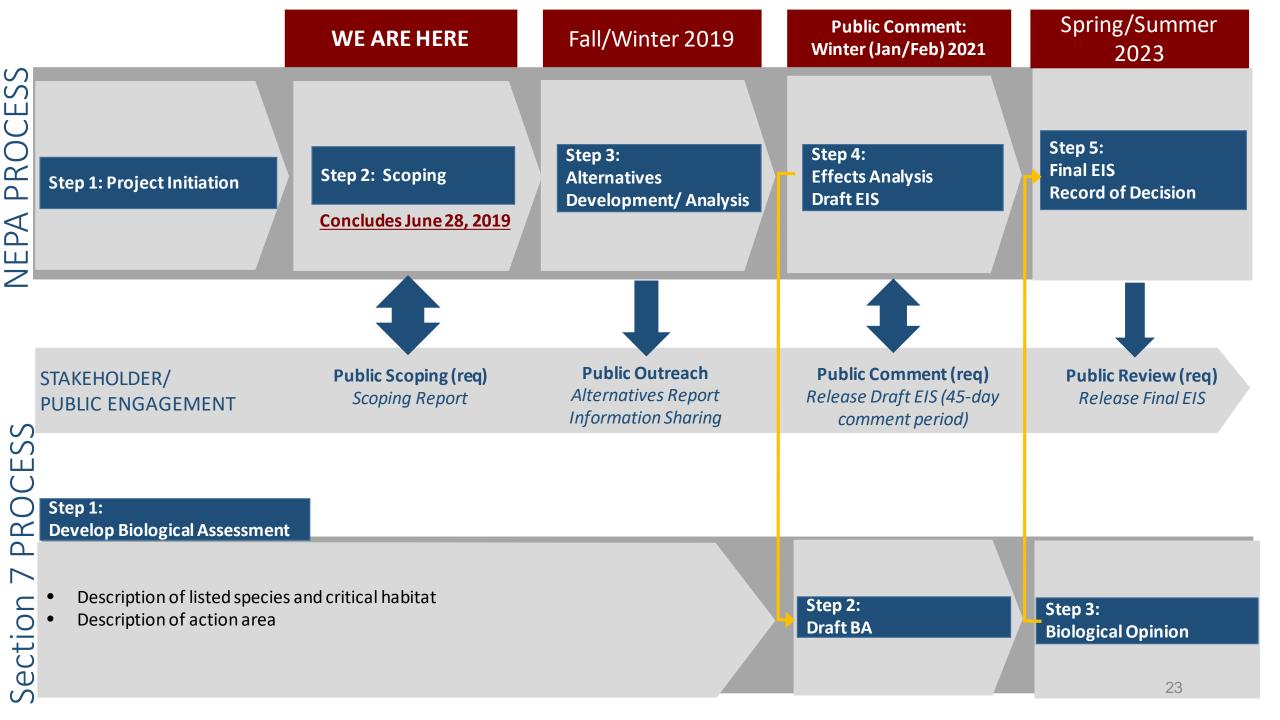


PURPOSE AND NEED

"The purpose and need is continued operations and maintenance of the Willamette Valley System (WVS) in accordance with authorized project purposes; while meeting Endangered Species Act (ESA) obligations to avoid jeopardizing the continued existence of listed species."







HOW DOES THIS EIS RELATE TO OTHER ONGOING CORPS ACTIONS IN THE WILLAMETTE VALLEY?

The Corps has a few proposed actions that are currently under review in the NEPA process:

- Willamette Basin Review Feasibility Study and Environmental Assessment, evaluating reallocation of conservation storage
- Cougar Downstream Passage Environmental Assessment
- Detroit Downstream Passage and Temperature Control Environmental Impact Statement
- These proposed actions will continue to move forward on their current timeline
- May be included in the "no action" alternative in the WVS EIS.





HOW TO COMMENT

At a scoping meeting, like today

- Map Your Comment
- Comment Brochure

Email: willamette.eis@usace.army.mil

Mail: U.S. Army Corps of Engineers, CENWP-PME-E ATTN: Suzanne Hill P.O. Box 2946 Portland, OR 97208-2946

Public Comment Portal (geographic based online comment tool). Link on project website:

https://www.nwp.usace.army.mil/Locations/Willamette-Valley/Evaluation/

Comment Period Ends June 28, 2019



US Army Corps of Engineers ®



PUBLIC COMMENT PORTAL

Willamette Valley System Environmental Impact Statement

Related Links

Willamette Valley Biological Opinions (BiOp) continued operations and maintenance of the Willamette Valley System in accordance with authorized project purposes; while meeting Endangered Species Act obligations to avoid jeopardizing the continued existence of listed species.

The Portland District, U.S. Army Corps of Engineers intends to prepare an Environmental Impact Statement to address the

The Corps will serve as the lead federal agency for purposes of the National Environmental Policy Act. Read an article about the project here.

External Links

Federal Register Notice of Intent Endangered Species Act National Marine Fisheries Service Citizen's Guide to NEPA

Submit comment:

U.S. Army Corps of Engineers, CENWP-PME-E ATTN: Suzanne Hill P.O. Box 2946

na, OR 97208-2946

Public Comment Portal (Optimized for Firefox)

willamette.eis@usace.army.mil

added to our distribution list for updates.

Comments are due by June 28, 2019.

Click on the **PUBLIC COMMENT PORTAL** link on the project website



Cottage Grove Dam and Reservoir sits on the Coast Fork of the Willamette River, south of Eugene, Oregon. Cottage Grove is one 13 dams and reservoirs in the Willamette Valley System and the Corps' continued operations and maintenance of the facility will be evaluated in the systemwide Environmental Impact Statement slated to kick-off this spring.

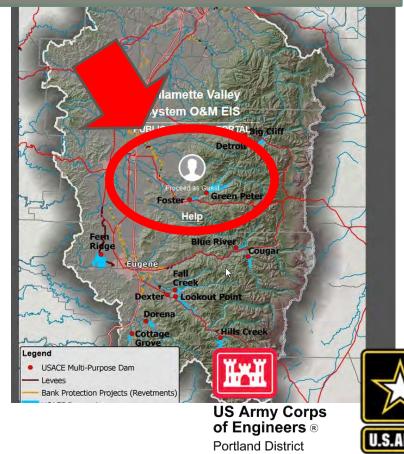
Background

The Corps operates and maintains 13 multipurpose dams and reservoirs in the Willamette River Basin in Oregon, and hatchery programs.





Click on the Proceed as Guest



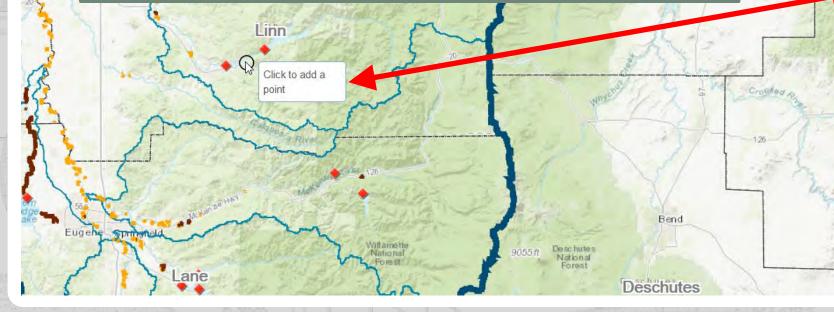
PUBLIC COMMENT PORTAL

son

Clicking on a point automatically
 completes location sections of the
 comment form

Clackamas

Salem



Comments COMMENTS Comment Name (required) Give your comment a name Location for Comment (required) General geographic location for your comment 44800-44898 Old Hufford Dr, Foster, Oregon, 97345 Project Purpose (required) Choose the Corps' Project Purpose for your comment Select... Organization If affiliated with an organization Name (Will Not Be Publicly Viewable) Your name

Portiand District

PUBLIC COMMENT PORTAL

You may add attachment, photos, studies, etc.... Attachments Click "Report It" Browse to submit your Location comment Click the map to draw the location. Search location by name Report It Cancel

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FOR MORE INFORMATION

EIS Website: https://www.nwp.usace.army.mil/Locations/Willamette-Valley/Evaluation/

Willamette Valley Website: https://www.nwp.usace.army.mil/Locations/Willamette-Valley/

About the Corps (Portland District web site): www.nwp.usace.army.mil

Portland District Water Management Reservoir Regulation and Water Quality Section http://www.nwdwc.usace.army.mil/nwp/wm/

Videos of the Willamette system: http://www.youtube.com/user/PortlandCorps

Water Data (DBQuery): http://www.nwd-wc.usace.army.mil/dd/common/dataquery/www/

River Flow (real time and forecasted) water.weather.gov and https://www.nwrfc.noaa.gov/rfc/





Thank You!

Please visit the stations to learn about: NEPA Process Alternatives Development System Operations Endangered Species Act Consultation





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- Comment Brochure

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Comment Period Ends June 28, 2019



of Engineers



Appendix F: Public Comment Brochure Name (First, Last)

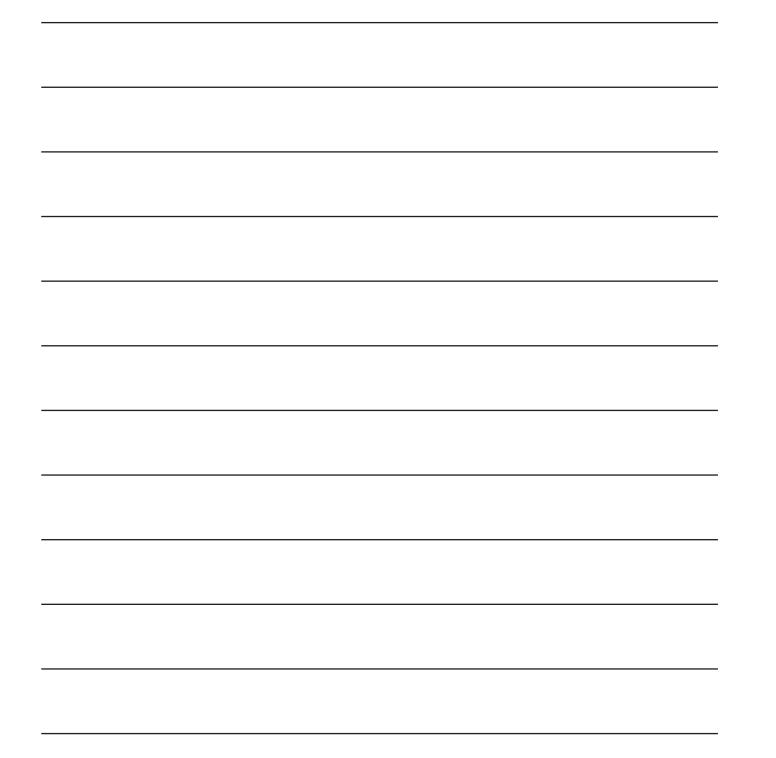
Organization

City, State

Email

□ Please check if you would like to receive email notifications about this project.

Comment. Please use this space to provide comments to the Corps.





US Army Corps of Engineers® Portland District

The Willamette Valley System Operations and Maintenance

PUBLIC COMMENT PERIOD CLOSING DATE: JUNE 28, 2019

PUBLIC COMMENT PERIOD CLOSING DATE: JUNE 28, 2019



Environmental Impact Statement (EIS) Public Comment Brochure

The Portland District, U.S. Army Corps of Engineers intends to prepare an Environmental Impact Statement to address the continued operations and maintenance of the Willamette Valley System in accordance with authorized project purposes; while meeting Endangered Species Act obligations to avoid jeopardizing the continued existence of listed species.

Visit the project website to find the link to submit a comment through the **Public** Comment Portal. You can also submit a comment by filling out this brochure, or by sending your comment via mail or e-mail.

Where We Are in the NEPA Process

Scoping Public Comment Period

Scoping is the earliest opportunity for the public to provide input regarding the "scope" of the issues to be evaluated in the EIS. The Corps is seeking input on:

- How does the system impact you?
- What challenges do you see with system operations?
- What opportunities/solutions are there for improvement?
- What resources are you concerned about, natural, cultural, socioeconomic...?

Please use this brochure to provide your input. Other ways to comment are:

Email

willamette.eis@usace.army.mil

Public Comment Portal

located on the project website at: https://www.nwp.usace.army.mil/ Locations/Willamette-Valley/ System-Evaluation-EIS/

Mail

U.S. Army Corps of Engineers, CENWP-PME-E ATTN: Suzanne Hill P.O. Box 2946 Portland, OR 97208-2946

What Are You Interested in?

Is your comment about a:

- □ Challenge/Issue
- □ Opportunity/Solution
- Resource (e.g. water quality, biological resource, economic, socioeconomic?)
- □ Other

Please choose the Corps' project purpose(s) that is the closest fit for the topic of your comment.

Project Purpose:

- □ Flood Risk Management
- □ Fish and Wildlife
- □ Water Supply (Irrigation)
- □ Water Supply (M&I)
- □ Hydropower
- □ Water Quality
- □ Recreation
- □ Navigation

Questions to Consider When Filling Out the Comment Form

If your comment is about a Challenge or Issue, please consider the following questions:

- Please provide a description of the challenge/issue.
- How does this issue/challenge affect you or resources that you care about?
- Are the specific details or information about the challenge that you would like share with the Corps?
- What suggestions might you have for the Corps to address the challenge/issue?
- Other comments on the challenge or issue?
- Are there studies/data/ resources that you can share with the Corps regarding your challenge/issue? If so, please list or attach.

If your comment about an **Opportunity or Solution for** the Corps, please consider the following questions:

- What issue or challenge would your proposed opportunity/ solution address?
- Please provide a general description of your proposed solution.
- Does the proposed solution involve an operational change? Please Describe.

Does the proposed solution involve or a structural change? Please Describe.

- Describe how to implement your proposed solution. Include information about, timing, frequency, and duration.
- Other comments on the purpose of the proposed solution and/or its intended benefits?
- Are there studies/data/resources that you can share with the Corps regarding your proposed solution? If so, please list or attach.

If your comment is about a Resource that should be considered in the EIS, please consider the questions below:

- Provide a general description of the resource.
- What are your concerns related to the resource?
- Where does the resource occur? Basin-wide? Or specific location(s), please list?
- What information should the Corps be aware of related to this resource?
- Other comments regarding the resource?
- Are there studies/data/resources that you can share with the Corps regarding the resource? If so, please list.

Appendix G: Public Scoping Meeting Handout on Using the Public Comment Portal



Using the Public Comment Portal Step 1: Click on the link on the project website

https://www.nwp.usace.army.mil/Locations/Willamette-Valley/System-Evaluation-EIS/

Willamette Valley System Environmental Impact Statement

The Portland District, U.S. Army Corps of Engineers intends to prepare an Environmental Impact Statement to address the **Related Links** continued operations and maintenance of the Willamette Valley System in accordance with authorized project purposes; while Willamette Valley meeting Endangered Species Act obligations to avoid jeopardizing the continued existence of listed species. **Biological Opinions (BiOp)** The Corps will serve as the lead federal agency for purposes of the National Environmental Policy Act. Read an article about the project here. External Links Federal Register Notice of Intent Endangered Species Act National Marine Fisheries Click on the PUBLIC COMMENT PORTAL Citizen's Guide to NEPA link on the project website Submit comment: U.S. Army Corps of ers.

U.S. Army Corps of Jonates, CENWP-PME-ES ATTN: Suzanne A P.O. Box 2046 Portland, OR 97208-2946 Public Comment Portal (Optimized for Firefox) When the sin Optimized, army.mill

> E-mail us if you would like to be added to our distribution list for updates.

Comments are due by June 28, 2019.



Cottage Grove Dam and Reservoir sits on the Coast Fork of the Willamette River, south of Eugene, Oregon. Cottage Grove is one 13 dams and reservoirs in the Willamette Valley System and the Corps' continued operations and maintenance of the facility will be evaluated in the systemwide Environmental Impact Statement slated to kick-off this spring.

Background

The Corps operates and maintains 13 multipurpose dams and reservoirs in the Willamette River Basin in Oregon, and hatchery programs.



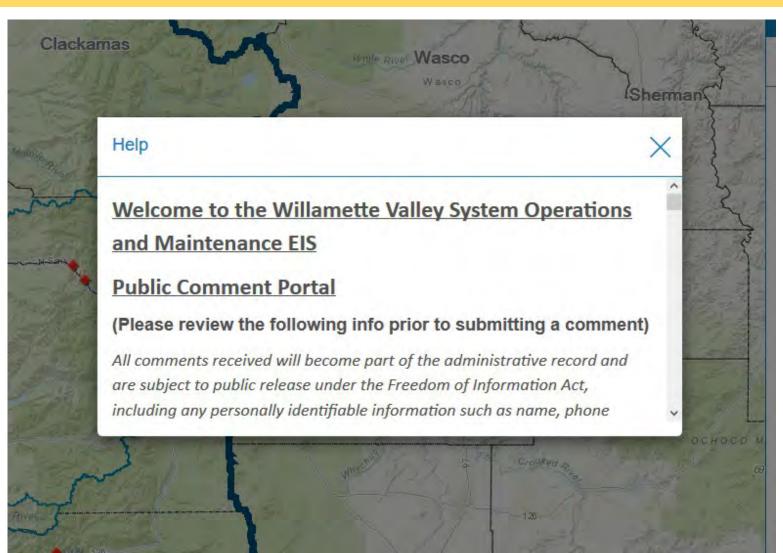


Using the Public Comment Portal Step 2: Click on "Proceed as Guest"



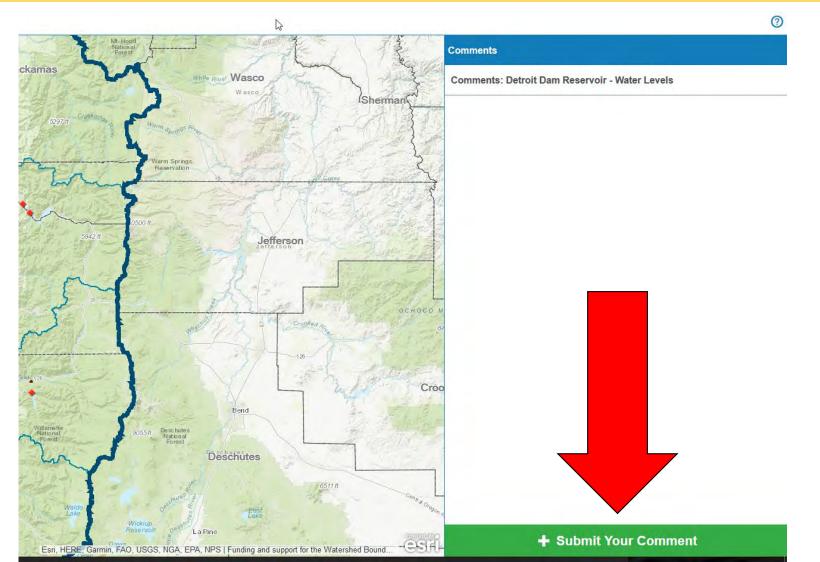


Using the Public Comment Portal Step 3: Review the information in the Help Box





Using the Public Comment Portal Step 4:Click on Submit Your Comment



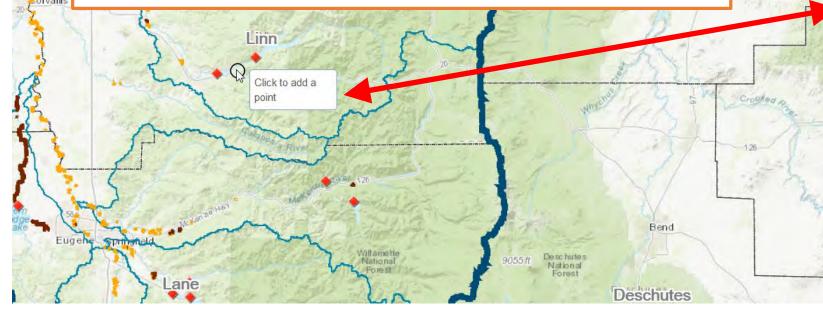


Using the Public Comment Portal Step 5:Complete the Form

son

Clicking on a point automatically completes location sections of the comment form

Clackamas

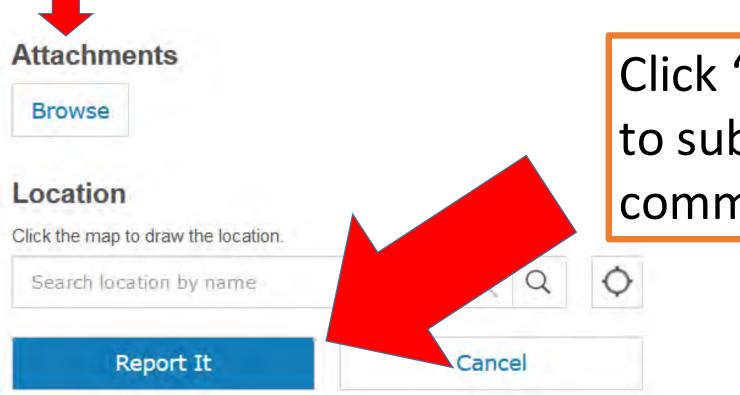


Comments COMMENTS Comment Name (required) Give your comment a name Location for Comment (required) General geographic location for your comment 44800-44898 Old Hufford Dr, Foster, Oregon, 97345 Project Purpose (required) Choose the Corps' Project Purpose for your comment Select... Organization If affiliated with an organization Name (Will Not Be Publicly Viewable) Your name



Using the Public Comment Portal Step 5:Complete the Form

You may add attachment, photos, studies, etc....



Click "Report It" to submit your comment

Appendix H: Scoping Informational Brochure



US Army Corps of Engineers ® Portland District



Willamette Valley System Operations and Maintenance Environmental Impact Statement (EIS)

Scoping Informational Brochure

June 2019

National Environmental Policy Act (NEPA) Overview

The Corps is initiating the preparation of an Environmental Impact Statement (EIS) to address the continued operations and maintenance of the Willamette Valley System (WVS). The WVS consists of 13 multipurpose dams and reservoirs, riverbank protection projects, and hatchery programs in the Willamette River Basin in Oregon.

The EIS will be prepared in accordance with the National Environmental Policy Act (NEPA). NEPA requires federal agencies to prepare an EIS for any major federal action that may significantly affect the human environment. The most recent system-wide evaluation for the operations and maintenance of the WVS was an EIS completed in 1980. Since 1980:

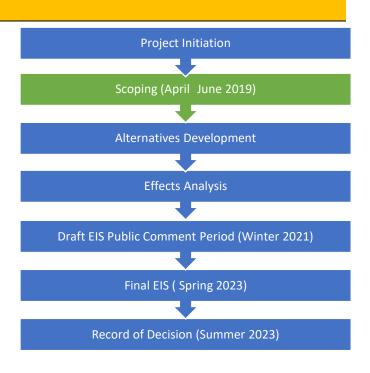
- Operations have been modified and structural improvements for fish passage and temperature control have been implemented to address effects of the WVS on Endangered Species Act (ESA) listed species.
- There is new information relevant to the environmental impacts of operating the WVS, specifically information related to impacts to ESA-listed species.

We are Here: Scoping

Scoping is the earliest opportunity for the public to provide input regarding the "scope" of the issues to be evaluated in the EIS. The Corps is seeking input on:

- How does the system impact you?
- What challenges do you see with system operations?
- What opportunities/solutions are there for improvement?
- What resources are you concerned about: natural, cultural, socioeconomic...?

Comments received during scoping will help the Corps focus the scope of issues evaluated in the EIS and define/refine action alternatives to be evaluated in the EIS. Attachment 1 is a figure that describes how the Corps will make decisions regarding the scope of this EIS.



Public Comment Period Closes June 28, 2019

Purpose and Need for the Proposed Action

The purpose and need is continued operations and maintenance of the Willamette Valley System (WVS) in accordance with authorized project purposes; while meeting Endangered Species Act (ESA) obligations to avoid jeopardizing the continued existence of listed species.

Dam & Reservoir	Detroit	Big Cliff	Green Peter	Foster	Cougar	Blue River	Hills Creek	Lookout Point	Dexter	Fall Creek	Dorena	Cottage Grove	Fern Ridge
Flood Control	~		✓	~	~	~	~	~		~	~	~	~
Irrigation	✓		✓	✓	✓	✓	✓	✓		✓	✓	\checkmark	✓
Navigation	✓		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓
Hydropower	✓	✓	✓	✓	✓	✓	✓	✓	✓				
Fish & Wildlife	~		✓	~	~	~	✓	~		~	~	~	~
Water Quality	~		✓	~	~	~	✓	~		~	~	~	~
Recreation	✓	~	✓	✓	✓	~	✓	✓	✓	~	✓	✓	✓
Water Supply	✓	~	✓	~	~	~	~	~	√	~	~	~	~

TABLE 1. AUTHORIZED PROJECT PURPOSES

Alternatives

As part of the NEPA process, the Corps will be developing alternatives that meet the purpose and need for the proposed action. Components of the proposed action and alternatives may include:

- Dam and reservoir operations and maintenance
- Water control manual updates
- Refinement and implementation of 2015 Configuration/Operation Plan (COP) recommendations. The COP is an alternatives study for implementation of the 2008 Biological Opinion.
- Hatchery program commensurate with fish passage conditions and to address effects on ESAlisted species.

NEPA requires that a no action alternative be evaluated in the EIS. For this EIS, "no action" is represented by "no change" from current management direction or level of management intensity. Within the Willamette Valley System, the Corps has a few proposed actions that are currently under review in the NEPA process:

- Willamette Basin Review Feasibility Study and Environmental Assessment, evaluating reallocation of conservation storage
- Cougar Downstream Passage Environmental Assessment

• Detroit Downstream Passage and Temperature Control Environmental Impact Statement

It is anticipated that the Corps will have completed review under NEPA for these actions at the writing of the draft EIS, in which case these proposed actions would represent the no action alternative. Attachment 1 is a figure that describes how the Corps will make decisions regarding what activities will be included in the scope of this EIS.

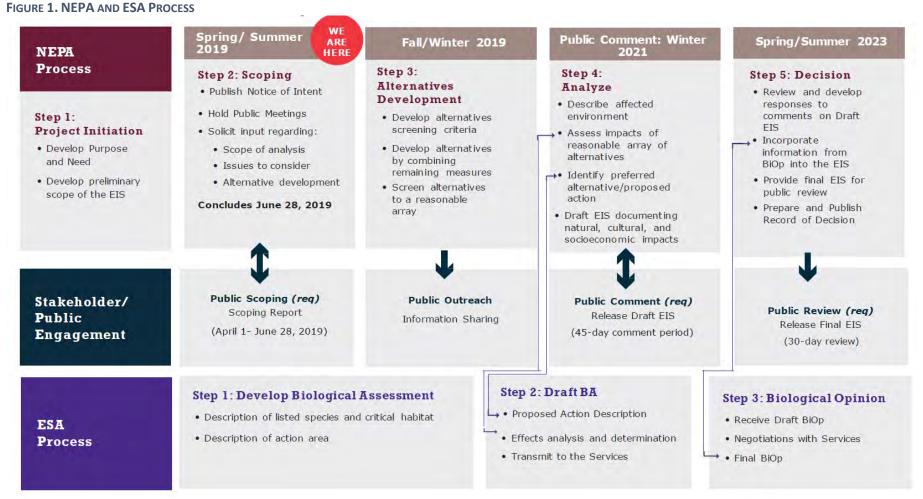
Cooperating Agencies

The Corps has invited Tribal, Federal, and State agencies to participate as cooperating agencies in the preparation of the EIS. Agencies are invited to participate because they have special expertise with respect to an environmental issue, and/or they have jurisdiction by law. The following tribes, federal and state agencies have accepted the Corps' invitation to participate as a cooperating agency:

- Confederated Tribes of the Grand Ronde
- National Marine Fisheries Service
- U.S. Fish and Wildlife Service
- Bureau of Reclamation
- Bonneville Power Administration
- Oregon Department of Fish and Wildlife
- Oregon Department of Agriculture
- Oregon Department of Environmental Quality
- Oregon Water Resources Department

NEPA and ESA Consultation Process

The Corps will be integrating the NEPA process and the ESA consultation processes, which will provide multiple opportunities for public input on the proposed action through the NEPA process.



Willamette Valley System

The Willamette Valley System is comprised of thirteen (13) multipurpose dams and reservoirs, riverbank protection projects in the Oregon's Willamette River Basin, and hatchery programs. Each individual dam plays a specific role in synchronized water management system that provides flood risk management, hydropower generation, irrigation, navigation, recreation, fish and wildlife, water supply, and water quality on the Willamette River Basin and many of its tributaries as far north as Portland, Oregon. Authorized project purposes of each of the multipurpose dams are provided in Table 1.

Water Control Diagram

The Corps developed a water control diagram for the operation of each dam and reservoir. The water control diagram is a water year based depiction of the authorized or allocated space in the reservoir and a multi-purpose rule curve that balances flood risk management with conservations needs. The diagram includes specific elevation levels such as maximum pool, full pool, and the flood pool levels, filling rates to reach maximum conservation pool, and fall draft rates to meet the winter flood pool. Storage components are identified, such as power pools, conservation pool, flood storage, exclusive summer flood storage. It also specifies primary and secondary flood pools where applicable.

The water control diagram and the associated operational goals, limitations and requirements are outlined in the individual dams' **water control manuals**.

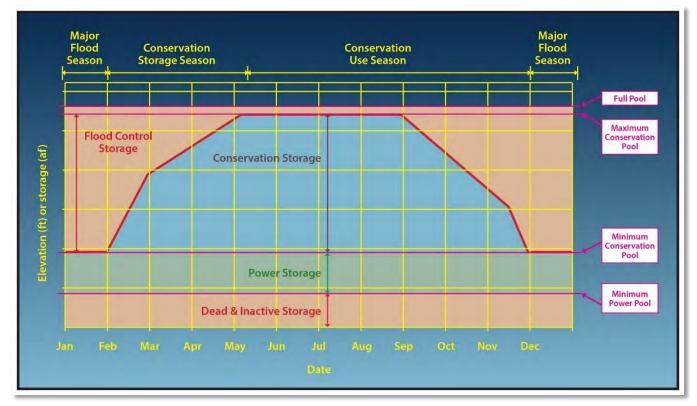


FIGURE 2. TYPICAL WATER CONTROL DIAGRAM

Flood Risk Management

The Corps' flood risk management mission is to reduce economic and environmental damage and prevent loss of life from flooding. The Willamette Valley system utilizes storage dams and reservoirs, operated to balance inflow and outflow to meet project authorized purposes. System water managers operate the system to make the best use of flood space (capacity in the reservoirs for inflows), and flood storage (the actual volume of water stored in a reservoir) over the **major flood season**. The system is generally operated in a coordinated manner to minimize flood risk in the lower Willamette Basin, as well as the tributaries below the dams. The dams are operated during flood events to meet flood regulation goals at control points. The furthest downstream control point in the Willamette System is at Salem. Control points are shown in Attachment 2.

In addition to the storage reservoirs, the system includes riverbank protection structures in the middle and lower basin. These structures were congressionally authorized and federally constructed for the control of floods or the prevention of erosion at various locations along the Willamette River and its tributaries. These structures include rip rap revetments, steel pile bulkheads, timber bulkheads, drift barriers, and earthen embankments.

Fish and Wildlife

The WVS affects native fish and wildlife in several ways. Construction and operation of dams, reservoirs, and revetments altered river hydrology, reduced sediment movement, simplified river channels, changed downstream water temperatures, and blocked access to habitat for migrating fish. Creation of reservoirs also provides new habitat for some species, and release of reservoir stored water during summer increases summer aquatic habitat downstream for many species.

ESA Consultation - The National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS) provided Biological Opinions (BiOps) in 2008 on the effects of continued operations and maintenance of the WVS on ESA-listed species. The NMFS BiOp concluded that the proposed action would cause jeopardy to the Upper Willamette River Chinook and winter-run steelhead, and therefore included a "reasonable and prudent alternative" (RPA). The USFWS BiOp concluded that the proposed action did not cause jeopardy to the ESA-listed bull trout and Oregon chub (formerly ESA-listed) as long as the RPA from the NMFS BiOp was implemented. Measures in the RPA included improving flow and water quality, fish passage, hatchery management, and habitat restoration. Currently, complex actions at two dams are part of separate NEPA review: downstream fish passage at Cougar, and temperature control as well as downstream fish passage at Detroit Dam. Additionally, fish passage at Lookout Point is part of an ongoing research effort.

Fish Passage - The NMFS 2008 RPA included the following specific priority actions for implementation, with dates shown for those which have been completed:

- Upstream Passage Improvements (complete Cougar adult trap facility (2010), replace/improve Minto (2013), Foster (2014), Dexter, and Fall Creek adult fish collection facilities (2018).
- Downstream Fish Passage (Cougar, Detroit, and Lookout Point).
- Temperature Control (Detroit).

Hatcheries –When the WVS was planned and constructed during the 1940-60s, state and federal fisheries managers preferred implementation of hatcheries to maintain fish for harvest, as fish passage was deemed infeasible for WVS high head dams. Hatchery practices have impacted the wild productivity and health of native fish in the Willamette Basin. The NMFS 2008 RPA included several actions to reduce these effects, including preparation of Hatchery Genetic Management Plans, recently approved by NMFS. In addition to providing harvest opportunity, WVS hatcheries now also aide in the reintroduction of spring Chinook salmon above WVS dams.

Water Quality

Historically, severe water quality problems, caused by sewage and industrial discharges created anoxic conditions and bacterial loads unsuitable for aquatic biota and contact recreation. The Flood Control Act of 1950 authorized water quality as a purpose of the dams and reservoirs in the Willamette Valley. Historically, flow releases during the conservation season provided a pollution abatement benefit downstream of the reservoirs, and this benefit continues today.

Since 1950 laws such as the Clean Water Act have been passed and water quality concerns have evolved. Current water quality challenges related to the operation of the dams are primarily related to temperature and total dissolved gas. In-stream flow targets for fish were addressed as part of the NMFS 2008 BiOp.

Temperature

Water temperature is an important water quality parameter, as it affects the chemical and biological characteristics of water, metabolic rates of aquatic organisms, and the sensitivity of these organisms to pollution, parasites and disease. The typical operation of the Willamette Valley dams has created downstream water temperatures that are unnatural; cooler than normal throughout the summer and warmer than normal throughout the fall. Altered water temperatures below the dams have been identified as one of the limiting factors preventing the recovery of ESA-listed spring Chinook salmon and winter steelhead in the Willamette Basin.

The 2008 Biological Opinions from NMFS and USFWS identified measures for addressing temperature in the Willamette Basin. The Corps in coordination with NMFS, USFWS and the Oregon Department of Environmental Quality (ODEQ), have set temperature targets in select sub-basins. Operational temperature management strategies have been developed for for Cougar, Detroit/Big Cliff, Lookout Point/Dexter, and Fall Creek:

• **Cougar Dam** was retrofitted with a selective withdrawal tower to aid in meeting downstream water temperature goals for the purpose of ESA listed species. Cougar Dam is the only project in the Willamette Valley Project with selective withdrawal capabilities to manage downstream water temperatures.

- **Detroit Dam** discharge is reregulated by Big Cliff Dam, which is located just downstream. As a multipurpose dam, Detroit is operated to provide downstream temperature control by blending flow released over the spillway with flow released through deep outlets, the turbines or regulating outlets. Mixing takes place in Big Cliff Reservoir before water is passed downstream through Big Cliff Dam.
 - Structural temperature control management at Detroit is currently being evaluated in a separate EIS.
- Lookout Point Dam is operated to provide interim temperature control by blending flow released over the spillway with flow released through the deep outlets, the turbines or regulating outlets. Mixing takes place in Dexter Reservoir before water is passed downstream through Dexter Dam.
- Operational water temperature is informally conducted at **Fall Creek Dam** using a combination of the fish horns and regulating outlets. The main objective for the Fall Creek temperature management is to attract adult fish back to the fish facility located at the base of Fall Creek Dam.

Total Dissolved Gas

Past water quality monitoring indicates that the operation of Willamette Valley Project dams can produce Total Dissolved Gas (TDG) that exceed Oregon water quality standards under certain operating ranges. Elevated levels of TDG are created by the entrainment of air in spill releases (either through regulating outlets or spillways) that plunge deep into the stilling basin and river channel downstream of a dam. An increase in TDG supersaturation can be harmful to fish. For this reason, ODEQ has established water quality standards for TDG.

The amount of TDG generated through dam operations is highly dependent on the amount of water discharged, the dam outlets used to pass water, and the water temperatures observed during a particular operation. To reduce high levels of TDG, the general operating guidance is as follows:

- Discharge water through the powerhouse to reduce/dilute the TDG generated from use of the spillways or regulating outlets.
- Under high flows, distribute the discharge over as many spillbays as possible with a uniform pattern, rather than putting all discharge through one bay.
- TDG generated at the high-head peaking projects may be reduced when passed through the downstream re-regulating dam. Using the powerhouse to further reduce/limit TDG from being passed downstream is possible, unless maintenance limits turbine use. Whenever possible, maintenance is timed so as to be least harmful to ESA-listed fish below the projects.

Hydropower

Of the 13 dams in the Willamette system, eight produce hydropower. The operation of these dams for power can be classified as either base load, peaking, or reregulation. The eight hydropower dams are:

- Detroit (peak) and Big Cliff (reregulation) on the North Santiam River
- Green Peter (peak) and Foster (reregulation) on the South Santiam River
- Cougar (base) on the South Fork McKenzie River
- Lookout Point (peak), Dexter (reregulation), and Hills Creek (base) on the Middle Fork Willamette River.

Hills Creek and Cougar Dams are base load projects and are typically on-line all of the time and are not used for peaking. During line interruptions and transmission maintenance outages, Hills Creek Dam can become the sole source of power for residents in the community of Oakridge, Oregon.

Lookout Point, Detroit, and Green Peter are used for peaking purposes with their respective reregulation dams run similar to base load projects. Generation from peaking projects is generally meant to correspond with incidences of high energy use in the mornings and early evenings. The generation at the reregulation project is more uniform. The reregulation reservoirs are used to absorb the fluctuations in flows from their upstream storage projects and release flows at a more uniform level. Table 2 includes the project type, location and the nameplate capacity of each project. The nameplate capacity is the maximum rated output of the generator and is commonly expressed in megawatts (MW).

All projects with hydropower facilities include exclusive **storage** space for power generation during critical power production periods. This storage is relatively small, and is between the **minimum conservation pool** and the **minimum power pool** elevations. Drafting into this storage is limited to special power requirements and is generally kept full to increase the hydraulic head for power generation.

Project Name	Туре	Location	Total Nameplate Capacity (MW)
Detroit	Peaking	North Santiam River	115
Big Cliff	Re-Regulation	North Santiam River	18
Green Peter	Peaking	South Santiam River	92
Foster	Re-Regulation	South Santiam River	23
Lookout Point	Peaking	Middle Fork Willamette River	120
Dexter	Re-Regulation	Middle Fork Willamette River	17.3
Hills Creek	Baseload	Middle Fork Willamette River	30
Cougar	Baseload	McKenzie River	28.8
		Total	444.1

TABLE 2. TOTAL NAMEPLATE CAPACITY (MW) FOR THE 13 WVS POWER PROJECTS

Bonneville Power Administration (BPA) markets and transmits the power produced by the Corps' hydropower plants. Operation of the power facilities at the projects is a highly coordinated effort between the Corps and BPA. Daily generation schedules are made by the Corps, after discussions with the head scheduler for BPA. The close coordination between the Corps and BPA allows for additional flexibility in project operations when the need arises for power and non-power emergency operations.

Recreation

Within the Willamette Valley System, the Corps cooperates with the U.S. Forest Service, Oregon State Parks, **Oregon Department of Fish and Wildlife**, Bureau of Land Management, and counties including Linn, Lane, and Marion, to build and manage a system of water-related recreation facilities. Recreation is a project purpose at all of the Corps' reservoirs and along most of the reaches downstream of the dams. The **conservation pool** is largely used to fulfill the Corps' recreation mission as a number of the reservoirs are heavily used for recreational purposes during the **conservation season**.

Water Supply

The Willamette Valley System has a combined conservation storage capacity of approximately 1,590,000 acre-feet, which is currently allocated to Joint Use.

In the state of Oregon, water law distinguishes between diverting water for storage, and releasing water from storage for use; each requires a different water right. In Oregon, the right to store water conveys ownership of the stored water. The **U.S. Bureau of Reclamation** (Reclamation) has held two Oregon water storage rights on behalf of the federal government for all conservation storage since construction of the 13 dams was completed. These state water rights that allow the federal government to store water are designated exclusively for irrigation. Of the 1,590,000 acre-feet of conservation storage, approximately 77,000 acre-feet of stored water (roughly five percent of total conservation storage) is currently contracted through Reclamation for irrigation. Reclamation may enter into irrigation contracts up to 95,000 acre-feet of stored water per year as established under the 2008 BiOp.

Willamette Basin Review Feasibility Study

The Willamette Basin Review Feasibility Study was re-initiated in 2015 with the goal of reallocating conservation storage for the benefit of ESA-listed fish (F&W), agricultural irrigation (AI), and municipal and industrial (M&I) water supply, while continuing to fulfill other project purposes. The study analyzed current water uses in the basin for F&W, M&I, and AI and proposed a combined conservation storage reallocation and water management plan that would provide the most public benefit within the policies and regulations of the Corps and the state of Oregon. The non-federal sponsor for the feasibility study is the Oregon Water Resources Department (OWRD).

The feasibility study is an ongoing effort and the Corps is currently in ESA consultation with NMFS on the proposed reallocation. If completed and approved prior to the drafting of this EIS, it would be represented in the No Action Alternative (i.e. current management direction).

Navigation

While currently there is no commercial navigation traffic in the upper Willamette River, navigation is an authorized purpose of the system. The original authorization by Congress for navigation stipulated a minimum flow of 5,000 cubic feet per second (cfs) between Albany and the Santiam River, and 6,500 cfs downstream to Salem to provide navigation depths of 6 feet and 5 feet respectively. These authorized flows are maintained during the conservation season by releasing water stored in the Corps' reservoirs. Augmenting downstream flows at Albany and Salem will continue to be important in the future for water quality and fishery purposes. The water quality and fishery strategies for the Willamette River were based on the navigation flow requirements originally established at Albany and Salem.

How To Comment:

Mail	Email	Online
U.S. Army Corps of Engineers, CENWP-PME-E ATTN: Suzanne Hill P.O. Box 2946 Portland, OR 97208-2946	willamette.eis@usace.army.mil	Public Comment Portal (link on project website): https://cenwp.maps.arcgis.c om/apps/CrowdsourceRepor ter/index.html?appid=62723 471dc7444f8a7256aa59f799 26a

All comments received will become part of the administrative record and are subject to public release under the Freedom of Information Act, including any personally identifiable information such as name, phone numbers, and addresses.

Comment Period Closes June 28, 2019

For More Information:

Willamette Valley: https://www.nwp.usace.army.mil/Locations/Willamette-Valley/

Willamette Valley System Operations and Maintenance EIS: https://www.nwp.usace.army.mil/Locations/Willamette-Valley/Evaluation/

Cougar Downstream Passage EA: https://www.nwp.usace.army.mil/Locations/Willamette-Valley/Cougar/

Detroit Downstream Passage and Temperature Control EIS: https://www.nwp.usace.army.mil/Willamette/Detroit/fish-passage/

Willamette Basin Review Feasibility Study: https://www.nwp.usace.army.mil/willamette/basin-review/

About the Corps (Portland District website): https://www.nwp.usace.army.mil

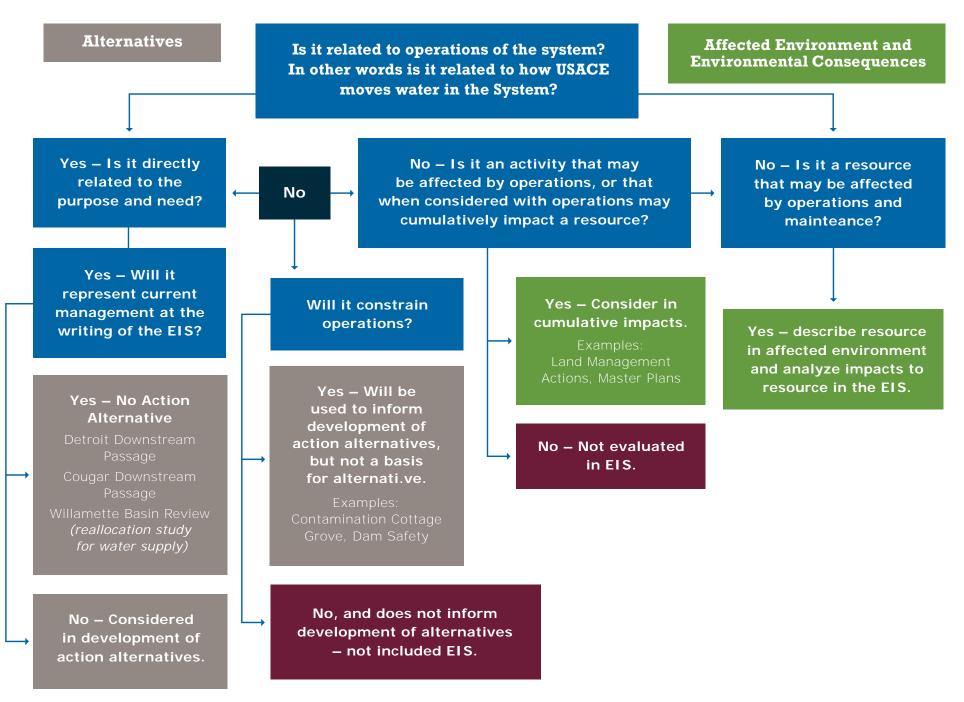
Portland District Water Management Reservoir Regulation and Water Quality Section http://www.nwd-wc.usace.army.mil/nwp/wm/

Videos of the Willamette system: http://www.youtube.com/user/PortlandCorps

Water Data (DBQuery): http://www.nwd-wc.usace.army.mil/dd/common/dataquery/www/

River Flow (real time and forecasted): https://water.weather.gov and https://www.nwrfcoaa.gov/rfc/ Attachment 1: EIS Decision Tree





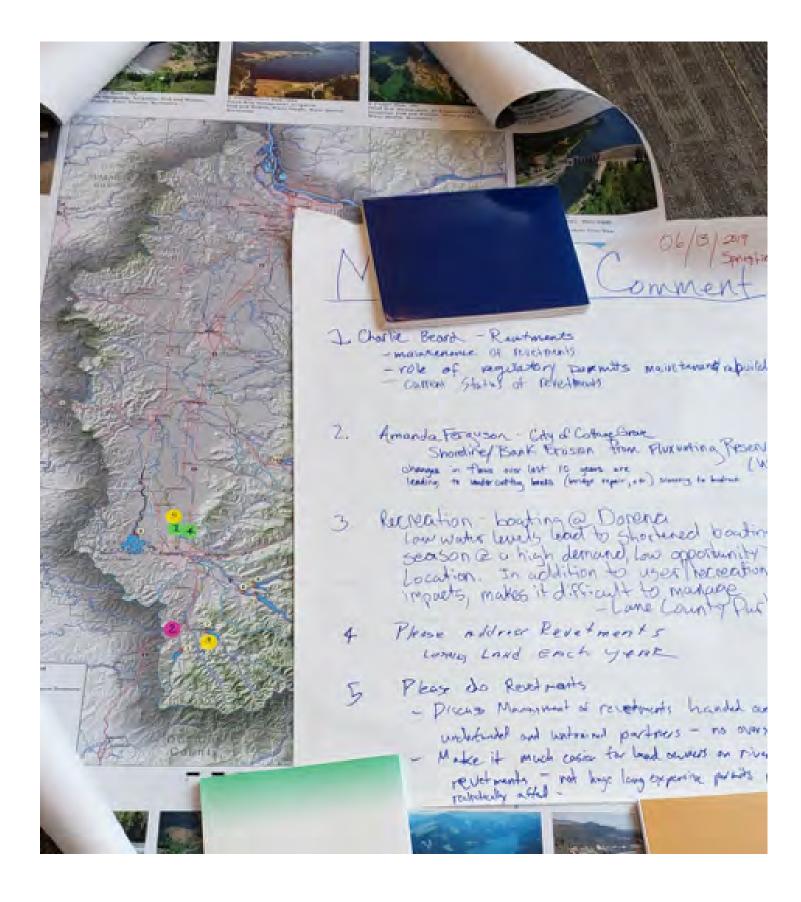
Attachment 2: Willamette Valley System Overview Map

The Willamette River Basin

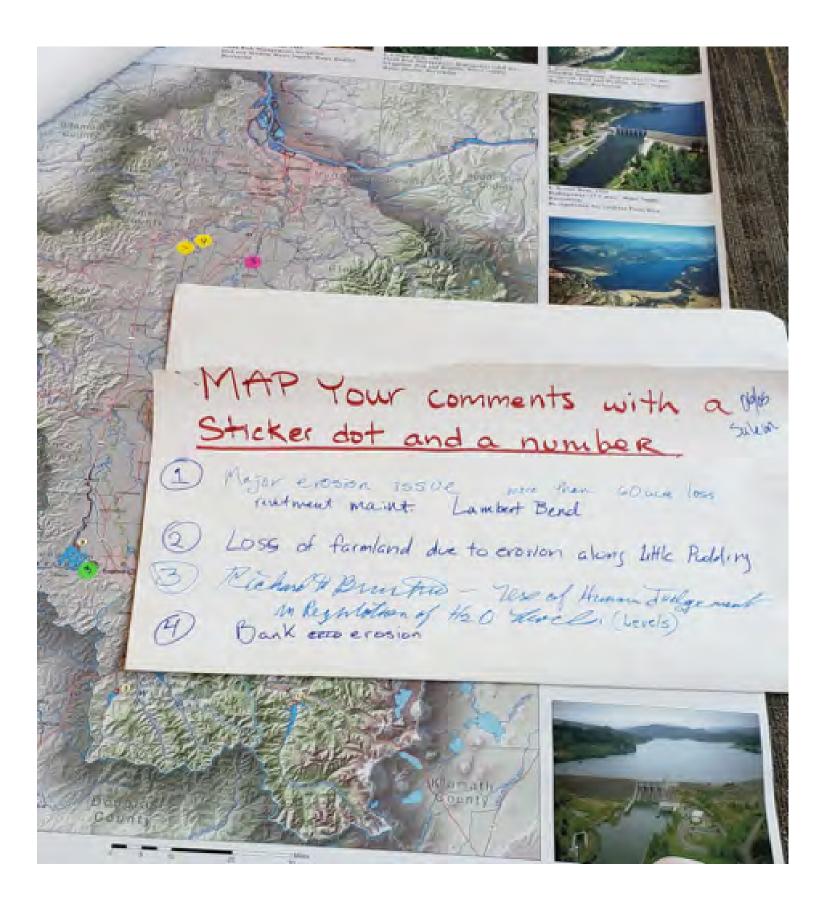


Appendix I: Public Scoping Meeting Comments Received via Map

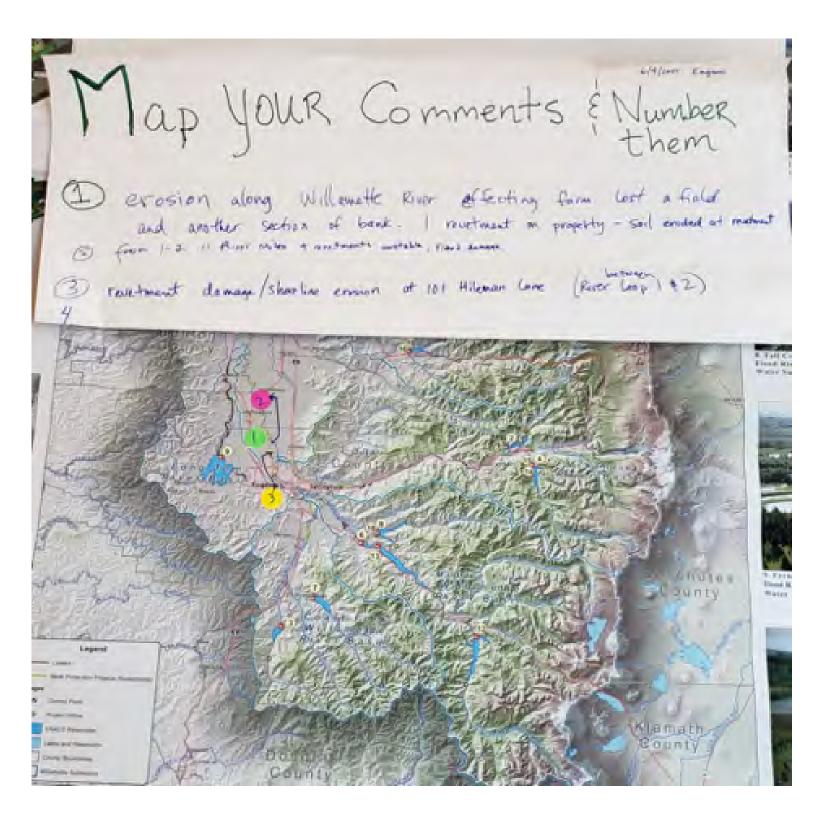
Springfield



Salem



Eugene



Portland

Place dot on map w/number. Write Corresponding comment here. Thanks! 1 Visual dictionary, terminology, the saurus of terms, context in which terms exist, describe location in basin to neighborhood. Concern about floodplain conceptual fill plan.

- The Salt Creek (Yamhill) in stream dams make it difficult to grow streamside regetation (flooded in winner/dryin summer) Bik SWCD 2054 Ext are working to figure out how to address.
- @ Monroe > fishpassage t improved water quality
- 3. Analyze draw-downs of more reservoirs where possible to bandit Out-migroting ESA-listed fish. Analyze how the seservoirs impact built trout where they are present. Look at operations to benefit fish thu could impact the rule curves, including placing fish flow needs as a priority after flood control.



Appendix J: Public Comments Received To: Suzanne Hill, CIV US Army CENWP(USA)

6/3/2019

RE: U.S. Army Corps of Engineers-Willamette Valley Systems Operation and Maintenance EIS

Greetings:

It is my understanding that your agency is seeking input on how to better manage our stored water supply in the West. Having lived some 60 years of my adult life on a farm bordered by the Willamette River at Irish Bend in Linn County, OR, I have seen the effects of a number of floods and releases of stored water. In my opinion, the needs listed below are things I hope you will petition the U.S. Congress to authorize action on. If you succeed, you will have solved several important issues.

Oregon needs more major water storage capacity to save more of the spring snowmelt and the winter rains. The plus side of catching more of this precious liquid is multiple:

- reduce flooding, soil erosion and other damages;
- mitigate the annual contest over who gets water in the summer and fall:
 - the cities for their multiple needs
 - farmers --the producers of our food and fiber
 - the fish
 - the water recreationalists

Increased major water storage is also a real plus because of the opportunity for increased non-polluting electricity.

In addition to major water storage, the US Corps needs to authorize and do channel maintenance in the rivers which have been listed as navigable so they actually are

navigable. Channel maintenance would also address the serious problem of eroding banks due to gravel and debris that have blocked or partially blocked the main channel.

Why do I think my opinion is viable? Because I am a farmer and producer who has been involved in Oregon natural resource policy for many years. I also served from 1981 to 1999 (18 years) as Linn County's elected State Representative to the Oregon Legislature. Since then I have been repeatedly elected to the Linn County Soil and Water Conservation District Board. I am an active and long term Farm Bureau member.

I respectively ask you to seriously consider this appeal not only on my behalf but for many of the people I have represented over the years.

Liz (Elizabeth) VanLeeuwen

27070 Irish Bend Lp., Halsey, OR 97348 541-369-2544

Sent from Mail for Windows 10

[Non-DoD Source] Willamette EIS CENWP-PME-E

SEVERSON Joe * OSMB < Joe.Severson@oregon.gov>

Tue 6/25/2019 1:53 PM

Cc:BELLEQUE Janine * OSMB < Janine.BELLEQUE@oregon.gov>;

Suzanne Hill Attn: CENWP-PME-E

Thank you for the opportunity to participate in the development of the scope of the National Environmental Policy Act (NEPA) Environmental Impact Statement (EIS) for the Willamette Valley System (WVS).

The Oregon State Marine Board (OSMB) is an advocate for recreational boating safety, navigation and access pursuant to Oregon Revised Statues chapter 830 and Oregon Administrative Rules chapter 250. The Boating Facilities Program provides engineering services, technical assistance and grant funding for public recreational boating access facilities.

The Oregon State Marine Board comments are made in part based on a comprehensive review of the cumulative impact on recreational boating activities, public boating facilities, waterway rules, safety, conflict and congestion within the WVS. Additionally, our comments will focus on the impacts to floating structures and boat ramps in the WVS in relation to modifications to flow for temperature control operations by the Corps.

According to National Marine Manufacturing Association boating in Oregon is a \$1.7 billion industry (2016). The Willamette Valley System (WVS) offers numerous recreational boating opportunities and a wide variety of recreational boating activities. Many recreational boating activities have historical use in the WVS. Recreational boating facilities in the WVS are relatively older and not designed for low flow or lowered water elevations. Modifications to operations that impact flow would have the potential to expose boat ramp toe. The toe of the boat ramp is the lower end of the ramp and extends below the design low water elevation to provide a hard surface for the trailer to travel on during launch and retrieval. Toe elevations of a launch ramp have a direct effect on the period of serviceability of the launch ramp for boaters. It is important to carefully evaluate any changes or modifications to the historic water fluctuations for the water body to ensure usability of the launch ramp. Please note that many boat ramps are old and design low water elevation was different 20-50 years ago. Many ramp toes have been significantly damaged by power loading. OSMB asks that the Corps evaluate how modifications to operations, including flow, sedimentation accumulation, and scour will impact public boating facilities, economic impacts to local areas, and recreational boating activities on the rivers, reservoirs and lakes within the WVS.

Floating structures are increasing on rivers in the WVS. The Willamette River between river mile 30 and river mile 50 is commonly known as the Newberg Pool. In the past 20 years, for example; the number of floating structures in the Newberg Pool has doubled, growing to over 375 floating structures. Floating structures were permitted and designed with specific water depths, flow and elevations in part to address ESA permitting requirements. Modifications to operations that impact flow would have the potential to have adverse impacts on existing and future floating structures. Existing floating structures may not comply with current ESA dock

To:CENWP-PME-Williamette-Valley-System-EIS <willamette.eis@usace.army.mil>; Hill, Suzanne CIV USARMY CENWP (USA) <Suzanne.Hill@usace.army.mil>;

guidelines and future floating structures would be expected to be located into deeper water, extending them farther out into the river. This would create an extreme impact to public use of that waterway for navigation, safety and recreation. As an example; the National Marine Fisheries is requiring floating structures to be located in 15 feet of water at ordinary low water elevations in the lower Willamette River section. In some cases this would place a floating structure 400 feet from shore and further into the river. This is a very serious concern for safety, navigation and the public use of the waterway. OSMB asks that the Corps evaluate how modifications to operations that determine flow, temperature control and water elevations will impact existing permitted and future permitted floating structures in the WVS.

The public waters in the Willamette Valley System are heavily used by all recreational boaters. As a result OSMB recommends that the Corps carefully evaluate how any modifications to operations and maintenance of the WVS will impact boating facilities and floating structures; including the historical and current recreational boating activities for safety, navigation and future ability to permit, repair, or replace boating facilities and floating structures. The Oregon State Marine Board would like to remain informed on this planning process.

Thank you for this opportunity to comment.

Joe Severson, GISP Oregon State Marine Board

Planning and GIS Coordinator Boating Facilities Program 503.378.2629



Rob Bignall	Willamette Salmon Steelhead Recovery Coalition
Sherwood, Oregon	Northwest Guides and Anglers Association
Rob.bignall@gmail.com	X Please send email notifications about this project

1. Mitigation:

- a. Given the constraints to hatchery production identified in the draft HGMPs, what is the Corps' mitigation obligation at present?b. How does the Corps expect this obligation to change over the timeframe for the
- analysis period?

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1. **Research & Monitoring:** Funding of R&M has been unpredictable in the recent past. Will the Corps commit to requesting and allocating the funds necessary to sustain sufficient R&M needs?

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- Volitional vs. Non-Volitional Downstream Passage: With the exception of Fall Creek and the Lookout Point drawdown proposal (which was not implemented), the Corps has only proposed or proceeded with non-volitional downstream passage projects.
 - a. Given the difficulties with similar fish collection projects including the Pelton Round Butte project on the Deschutes River and the Lewis River project, why does the Corps expect the proposed fish collection projects will be successful?
 - b. Has the Corps analyzed whether the flows and effective forebay sizes of Detriot and Cougar will yield sufficient collection efficiencies to support the agency's claims?
 - c. Has the Corps analyzed the impact of copepod-related morbidity of volitional vs. non-volitional passage routes?
 - d. Why did the Corps exclude the volitional bypass pipe proposal from the NEPA analysis of the Cougar project?
 - e. Non-volitional proposals require continued funding for maintenance and operations. What are the projected ongoing costs associated with these proposals?

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- Cougar Downstream Passage: A prototype fish collector was evaluated at Cougar with results indicating that the collection efficiency of juvenile downstream migrants was quite low.
 - a. Why does the Corps expect the current design to be more successful?
 - b. What are the expected collection efficiencies?
 - c. Will the collection rate be significantly superior to volitional routes via reservoir drawdowns that have been evaluated in the past?
 - d. The Corps noted that drawdowns and passage through the diversion tunnel may not be feasible due to structural issues. Could these infrastructural issues be resolved through redesign or engineering?

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- 1. Lookout Point Downstream Passage: The Corps previously proposed and analyzed through NEPA drawdown operations at Lookout Point to assist in juvenile downstream passage, and this proposal was strongly supported by the wildlife management agencies.
 - a. Why did the Corps fail to proceed with implementation of the proposed action?b. Will drawdown operations at Lookout Point be analyzed?

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1. Flows:

- a. How will flow targets be defined? (We need to consider more than the minimum needs of listed fish and look at all flow needs for all species of fish and wildlife.)
- b. How will the ongoing reallocation process inform the development of alternatives in this process? (The biological and habitat needs of all fish and wildlife species need to be defined first before dividing up the reservoir storage space. Also, fish shouldn't be part of a "share the pain" approach in shortage years - at least not the ESA-listed fish.
 - i. If it will be integrated, then how does the fact that NMFS determined the proposed reallocation would result in jeopardy get resolved in advance of the Systems analysis without derailing the proposed timeline for this process and the formulation of the next BiOp?
 - ii. Will flow targets for fish (or at least the listed fish) be met even in shortage years?
- c. Doesn't it make more sense to postpone reallocation and make it part of the new BiOp/EIS process? The EIS/BiOp process is bound to consider and produce significant new information that will inform reallocation, including an updated flow dataset for flow modeling (v. the dataset ending in 2008). The EIS/BiOp process also could result in changes to some of the fixed constraints assumed in reallocation, including rule curves and available storage pools.
- d. Will the EIS consider and propose administrative structures for contracts to protect water released for fish from diversion downstream under "live" flow water rights?

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1. Rule Curves:

- a. In the O&M analysis, will the Corps review and/or remodel the rule curves?
- b. Will the analysis include consideration of run of the river, delayed refill, or drawdowns to facilitate juvenile downstream passage and support recovery efforts?

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- 1. **Hydropower:** At the February 22, 2019 event, Corps and BPA representatives indicated that the agencies are considering alternatives for hydropower production at Cougar dam and for the Willamette Project to assist in downstream passage and necessary recovery measures.
 - a. What modifications to hydropower operations are the agencies evaluating?
 - b. Are the agencies considering eliminating peaking power?
 - c. Are the agencies considering modifying power operations to provide downstream volitional passage routes for listed fish (i.e. turning turbines off and performing drawdowns during peak migratory periods)?
 - d. Will the Corps consider operational changes or removal for the non-flood control reregulating dams (Big Cliff and Dexter) in order to assist with fish passage and recovery efforts?

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- 1. Authority: The 2008 Biological Opinion RPA required the Corps to identify where the agency lacks the authority to accomplish the required measures and to seek Congressional authorization where necessary to complete the mandated actions. The Corps has made previous claims that the agency lacks the legal authority or authorization to fully and substantively evaluate and/or implement specific measures or recovery actions.
 - a. How will the Corps address the different authorities that often result in operational conflicts for the projects in its analysis?
 - b. Will the Corps consider operational and maintenance changes that may impact the fulfillment of authorized purposes (other than flood control and human health/safety) if such operations will assist with meeting ESA recovery obligations?
 - c. Please identify the specific recovery actions that the Corps may implement, but where the agency lacks sufficient legal authority. Does the agency intend to seek Congressional authorization to complete the actions identified? What is the agency's anticipated timeline for doing so?

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- 1. **Timeline:** The Corps is significantly behind in initiating and completing the recovery measures identified in the 2008 BiOp, especially as they relate to downstream passage.
 - a. Why has the agency failed to meet the timelines outlined?
 - b. Why has the agency failed to initiate the required actions relating to downstream passage in the Middle Fork Willamette as required?
 - c. How can the agency assure Congress and the public that future timelines will be met?

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- 1. Interim actions undertaken during the formulation of the Systems EIS and new Biological Opinion:
 - a. The Corps has stated that a new BiOp will not be finalized until at least 2023. What specific actions from the 2008 BiOp RPA will the Corps undertake in the interim?

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1. COP II

a. How will the COP II report inform the alternative development and NEPA analysis?



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 10 1200 Sixth Avenue, Suite 155 Seattle, WA 98101-3123 JUN 2 7 2019

REGIONAL ADMINISTRATOR'S DIVISON

U.S. Army Corps of Engineers, CENWP-PME-E Attn: Suzanne Hill P.O. Box 2946 Portland, Oregon 97208-2946

Dear Ms. Hill:

The U.S. Environmental Protection Agency has reviewed the U.S. Army Corps of Engineers Notice of Intent to Prepare an Environmental Impact Statement for the Willamette Valley System Operations and Maintenance (EPA Project Number 19-0023-COE). Our review of the NOI was conducted in accordance with our responsibilities under the National Environmental Policy Act and Section 309 of the Clean Air Act.

The Willamette Valley System consists of 13 multipurpose dams and reservoirs, riverbank protection projects in the Willamette River Basin in Oregon and hatchery programs to mitigate for effects of the project on fish habitat. The EIS will evaluate the impacts of continued operations and maintenance of the Willamette Valley System.

Our attached comments and recommendations include the topics and issues we believe warrant consideration and analysis during the development of the EIS. Overall, the EPA encourages the development of an EIS that evaluates and compares a full range of reasonable alternatives and discusses the direct, indirect, and cumulative impacts of the proposed action.

Thank you for this opportunity to comment. If you have questions about our comments, I can be reached at (206) 553-6322 or peterson.erik@epa.gov.

Sincerely,

This Ph

Erik Peterson, NEPA Reviewer Policy and Environmental Review Branch

Enclosure

U.S. Environmental Protection Agency Scoping Comments for the Willamette Valley System Operations and Maintenance Environmental Impact Statement

U.S. Environmental Protection Agency Scoping Comments for the Willamette Valley System Operations and Maintenance Environmental Impact Statement

Purpose and Need

We recommend the EIS include a statement of the purpose and need for the proposed project, consistent with the implementing regulations for NEPA.¹ We encourage the Corps to involve interested agencies and stakeholders in the development of the purpose and need statement to the extent possible.

Range of Alternatives

Consistent with the purpose of the NEPA,² the EPA encourages selection of alternatives that protect, restore and enhance the environment. We support lead agencies' efforts to identify and select alternatives which maximize environmental benefits, and, avoid, minimize, and/or otherwise mitigate environmental impacts. We further note our support for actions that restore natural processes and recommend that you consider an EIS alternative which maximizes opportunities to restore natural hydrologic, geomorphic, and, biological processes.

Toxics

Common toxic contaminants found in river systems include pollutants like polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), polybrominated diphenyl ethers (PBDEs, or flame retardants), dichloro-diphenyl-trichloroethane (DDT) and other legacy pesticides, mercury, current use pesticides, pharmaceuticals and personal care products and trace elements. Contaminants can impair water quality, affect aquatic organisms like insects and salmon and resident fish and impair environmental and human health.

We recommend that the EIS include impacts of reservoir operations and management on the mobilization and transformation of inorganic mercury and methylmercury in the planning area. Such an analysis could include the impact of reservoir stratification, food web dynamics/fish stocking, vegetation management, nutrient loading and water-level fluctuations on methylmercury production and bioaccumulation. We also recommend the EIS analyze how reservoir operations might be altered to potentially reduce methylmercury production and bioaccumulation.

Water Quality

Water quality standards

We recommend that the EIS disclose relevant water quality standards, including the State's numeric standards, narrative standards, designated uses and antidegradation provisions. We also recommend that the EIS identify and disclose the current water quality of water bodies likely to be impacted by the project, the nature of the potential impacts, and the specific discharges and pollutants likely to impact those waterbodies.

¹ 40 CFR 1502.13

² 40 CFR 1500.1

We recommend analysis of the potential effects of current and proposed system operations and maintenance on surface water temperatures; total dissolved gas; pH, dissolved oxygen, sediment quantity (sediment transport throughout the basin) and quality, nuisance algae and related parameters and the potential for the alteration to the fate and transport of toxics, such as inorganic mercury and methylmercury.³

We recommend using models to analyze temperature, dissolved oxygen and nuisance algae dynamics in reservoir and downstream waters.

Impaired waters and Total Maximum Daily Loads

Section 303(d) of the Clean Water Act requires states to identify waterbodies that do not meet water quality standards and to develop Total Maximum Daily Loads for those waters to meet established water quality criteria and associated beneficial uses.

We recommend the EIS describe relevant Total Maximum Daily Load allocations, the water bodies to which they apply, and associated water quality standards and pollutants of concern. Water bodies with approved TMDLs that remain impaired should be identified.

We recommend the EIS identify waterbodies potentially affected by the project that are listed as impaired on the State of Oregon's most current EPA-approved 303(d) list. If additional pollutant loading is predicted to occur to a 303(d)-listed stream because of the project, we recommend that the EIS include measures to control existing sources of pollution to offset additional loading. We recommend the EIS describe existing restoration and enhancement efforts for those impaired waters, how the proposed project will coordinate with on-going protection efforts, and any mitigation measures that will be implemented to avoid further degradation of impaired waters.

The revision to the 2006 Willamette River Basin Mercury TMDL includes consideration of how reservoir operation and management can influence mercury cycling. We recommend that the Corps utilize information from the Willamette River Basin Mercury TMDL revision process in the EIS, including for example, the Mercury TMDL Development for the Willamette River Basin (Oregon) Technical Support Document.⁴

Anti-degradation

Anti-degradation provisions of the Clean Water Act apply to those waterbodies where water quality standards are currently being met. In certain high-quality waters, the anti-degradation provisions prohibit degrading water quality unless it is determined that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In high quality waters that constitute an outstanding national resource, water quality must be maintained and protected.⁵ We recommend that the EIS describe how the Clean Water Act antidegradation requirements will be met.

³ For a list of all WQS and designated uses that apply to the Willamette Basin, please see Oregon Administrative Rules Section 340 Subsection 041, including statewide and basin-specific WQS, designated use tables and maps, and toxics tables in that Subsection.

⁴ Accessed online 6/26/19 at: https://www.oregon.gov/deq/FilterDocs/wbmtmdl042019mm.pdf

⁵ 40 CFR Section 131.12

Drinking water

Since dam operations and maintenance may impact drinking water, we recommend that the EIS identify any public or private drinking water sources for communities within the project area, activities that could potentially affect drinking water wells or source water areas, potential contaminants that may result from the proposed project and mitigation measures that would be taken to protect drinking water sources. We further recommend that the EIS include an analysis of the different project alternatives' influence on harmful algal blooms in drinking water (cyanobacteria and cyanotoxins).

Water temperature

We recommend that the EIS analyze the effects of current system operation on temperature regimes and include alternatives that allow for the exploration of different dam operations and maintenance scenarios and their effects on current and predicted future water temperature in the basin.

Within the water temperature analysis, we recommend that the EIS address how dams and their reservoirs can affect thermal patterns in the following ways:

- Dams can increase maximum temperatures by holding waters in reservoirs, especially in shallow areas near shore;
- Reservoirs, due to their increased volume of water, can be more resistant to temperature changes resulting in reduced diurnal temperature variations and prolonged periods of warm water. In this way, dams can reduce temperature variation from summertime cold fronts and delay the natural cooling that takes place in the late summer-early fall, thereby potentially harming summer and late summer-fall salmonid migration runs;
- Reservoirs can inundate alluvial river segments, thereby diminishing the groundwater exchange between the river and the riverbed (i.e., hyporheic flow) that cools the river and provides cold water refugia during the summer; and
- Dams can significantly reduce the river flow rate, thereby causing juvenile migrants to be exposed to high temperatures for a much longer time than they would under a natural flow regime.

We note that the EPA has developed a methodology to help identify cold-water refugia within riverine landscapes and this may be a good resource during EIS development.⁶

Total dissolved gas

Given the potential for elevated levels of total dissolved gas to harm fish, we recommend that the EIS consider measures to reduce high levels of TDG. We support the Corps' inclusion of the following methods for reducing TDG levels in the scoping informational brochure and recommend the EIS evaluate the each of the alternatives relative ability to effectively implement TDG impact reduction methods, including but not limited to the following:

• Discharging water through the powerhouse to reduce/dilute the TDG generated from use of the spillways or regulating outlets;

⁶ Torgersen et al. 2012. Primer for Identifying Cold-Water Refuges to Protect and Restore Thermal Diversity in Riverine Landscapes. EPA 910-C-12-001

- Under high flows, distributing the discharge over as many spillways as possible with a uniform pattern, rather than putting all discharge through one bay; and
- Understanding that TDG generated at the high-head peaking projects may be reduced when passed through the downstream re-regulating dam. Using the powerhouse to further reduce/limit TDG from being passed downstream, unless maintenance limits turbine use. Whenever possible, timing maintenance to be least harmful to fish listed as threatened or endangered under the Endangered Species Act downstream of the projects.

Sediment

We recommend the EIS describe the alternatives' effects on sediment loads in the reservoirs, including sediment characteristics and location, and, transport of sediment throughout the affected watershed. Sediment analysis should include assessment of physical characteristics (e.g., grain size) and chemical characteristics (e.g., contaminants).

Aquatic Resources, Wetlands and Riparian Areas

The Clean Water Act Section 404(b)(1) Guidelines are applicable to the specification of disposal sites for discharges of dredged or fill material into waters of the United States through the civil works program of the U.S. Army Corps of Engineers.⁷ The Guidelines are the substantive environmental criteria used to review proposed discharges of dredged or fill material into navigable waters inside the territorial sea baseline, and proposed discharges of fill material into the territorial sea.⁸ Though no Clean Water Act 404 permit is issued for discharges associated with Corps civil works projects, we recommend that the administrative record for the project demonstrate and document compliance with the Guidelines.

Under the Section 404(b)(1) Guidelines, "no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences."⁹ Identification of the Least Environmentally Damaging Practicable Alternative (LEDPA) is achieved by performing an alternatives analysis that estimates the direct, secondary, and cumulative impacts to jurisdictional waters resulting from each alternative considered. Project alternatives that are not practicable and do not meet the project purpose are eliminated from the analysis. An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in the context of the overall project purpose.¹⁰ The administrative record should be sufficiently detailed to identify the LEDPA.

Under the Section 404(b)(1) Guidelines, discharges of dredged or fill material are not permitted if they will cause or contribute to significant degradation of the waters of the United States.¹¹ The potential for significant degradation is evaluated through multiple factual determinations that assess the severity of direct, secondary, and cumulative impacts.

The Guidelines establish specific approaches to evaluate effects on:

⁹ 40 C.F.R. § 230.10(a)

⁷ 40 C.F.R. § 230.2(a)(2)

⁸ 40 C.F.R. § 230.2(b)

¹⁰ 40 C.F.R. § 230.10(a)(2)

¹¹ 40 C.F.R. § 230.10(c)

- human health or welfare, including but not limited to effects on municipal water supplies, plankton, fish, shellfish, wildlife, and special aquatic sites;
- the life stages of aquatic life, other wildlife dependent on aquatic environment including the transfer, concentration, and spread of pollutants or their byproducts outside of the disposal site through biological, physical, and chemical processes;
- aquatic ecosystem diversity, productivity and stability. Such effects may include, but are not limited to, loss of fish and wildlife habitat or loss of the capacity of a wetland to assimilate nutrients, purify water, or reduce wave energy; and
- recreational, aesthetic, and economic values.

Geomorphology and Hydrologic Connectivity

We recommend that the EIS discuss, and – the extent possible – estimate, the potential for reduced ecosystem functions from a potentially less dynamic floodplain downstream. Consider for example, the alternatives' influence on future side-channel habitat and organic material/nutrient transport.

Tribal Interests

To demonstrate consistency with Executive Order 13175 - Consultation and Coordination with Indian Tribal Governments, we recommend the EIS include information on tribal consultation. We recommend describing tribal consultation in terms of four general phases: identifying affected tribes, notification, tribal input, and follow-up.

Public Involvement

The EIS should show evidence that the basic steps for effective public involvement have been taken. These steps include the following:

- Plan and budget for public involvement activities;
- Identify the interested and affected public;
- Consider providing technical or financial assistance to the public to facilitate involvement;
- Provide information and outreach to the public;
- Conduct public consultation and involvement activities;
- Review and use input and provide feedback to the public; and
- Evaluate public involvement activities

For more information, we recommend resources from the International Association for Public Participation.¹²

Air Quality

We recommend the EIS evaluate and disclose the following air quality related topics:

• Air quality implications from power production. Each alternative will fit differently into the energy production portfolio of the Northwest. The EIS should consider the emissions associated

¹² Accessed online 6/25/19: http://www.lap2.org/

with the various configurations, and articulate assumptions about how and from where power would be sourced in the absence of hydropower production;

- Air quality implications from transportation;
- Air emissions associated with maintenance dredging operations at the dams; and
- Air emissions associated with internal combustion engines used in conjunction with operation and maintenance.

Changes in Climate

We recommend that the EIS include a discussion of reasonably foreseeable effects that changes in the climate may have on the proposed project and the project area, including its effects on long-term infrastructure. Such an analysis could help inform the development of measures to improve the resiliency of the proposed project. If projected climatic changes could notably exacerbate the environmental impacts of the project, EPA recommends these impacts also be considered as part of the NEPA analysis.

Environmental Justice

The EPA has developed a website with considerations and key references for environmental justice and the NEPA.¹³ We encourage your use of this website and note Section VIII, Disproportionately High and Adverse Impacts, in the March 2016 Report of the Federal Interagency Working Group on Environmental Justice and NEPA Committee, "Promising Practices for EJ Methodologies in NEPA Reviews."¹⁴ We further highlight use of the following conditions¹⁵ to help in the consideration of whether the project may contribute to adverse and disproportionate impacts to minority and low-income populations:

- Exposure
 - exposure by minority populations and low-income populations to an environmental hazard that appreciably exceeds or is likely to appreciably exceed the risk or rate to the appropriate comparison group;
- Human health or environmental impact
 - o to minority populations and low-income populations is above generally accepted norms;¹⁶
 - to minority populations and low-income populations exceeds or is likely to appreciably exceed the impact to an appropriate comparison group;
 - o predominantly borne by minority populations or low-income populations;
 - occurs in minority populations and low-income populations affected by cumulative or multiple adverse exposures from environmental hazards; and
 - o to minority populations and low-income populations is significant and adverse.

¹³ Accessed online 6/24/19 at: https://www.epa.gov/environmentaljustice/environmental-justice-and-national-environmental-policy-act

¹⁴ Accessed online 6/21/19 at: https://www.epa.gov/sites/production/files/2016-

^{08/}documents/nepa_promising_practices_document_2016.pdf

¹⁵ Quoted from p. 45-46 of the Promising Practices report. Accessed online 6/24/19 at:

https://www.epa.gov/sites/production/files/2016-08/documents/nepa_promising_practices_document_2016.pdf

¹⁶ 'Generally accepted norms' is used in "Appendix A, Text of Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, Annotated with Proposed Guidance on Terms" which is attached to CEQ's Environmental Justice Guidance Under the National Environmental Policy Act (1997).

Ecosystem Services

Salmon produce highly valued food products harvested in various commercial, subsistence, and personal-use fisheries across the North Pacific. Salmon are also a principle focus of the spiritual and cultural lives of diverse native communities throughout the planning area. Salmon and steelhead also provide many ecosystem supporting services. Salmon are the principal food item of many terrestrial and marine species and a source of marine-derived nutrients to lakes and streams. They also act as watershed engineers that structure streambed habitats and alter sediment composition during spawning. We recommend that these services be acknowledged in the EIS, accounted for using quantitative (where feasible) or qualitative means, and fully considered in decision making.

We encourage the assessment and integration of ecosystem services into agency decision making and that discussion in the EIS include the following elements:

- Identify and classify key ecosystem services in the location of interest, i.e., the affected environment;
- Assess the impact of the Federal action on ecosystem services relative to baseline;
- Assess the effect of the changes in ecosystem services associated with the Federal action; and
- Integrate ecosystem services analyses into decision making.

Cumulative Effects

Cumulative impacts result when the effects of an action are added to other effects on a resource at a place and within a time. The combination of these effects, and any resulting environmental degradation, should be the focus of the cumulative impact analysis. While impacts can be differentiated by direct, indirect, and cumulative, the concept of cumulative impacts accounts for all relevant disturbances since cumulative impacts result from compounding the effects of actions over time. Resources, ecosystems and communities should be characterized in terms of their response to change and capacity to withstand stresses. We recommend focusing on resources that are "at risk" or have the potential to be significantly impacted by the proposed project.

We recommend the EIS delineate and explain the reasoning behind geographic boundary decisions. We recommend using natural ecological boundaries to the extent possible. For example, for cumulative wetland impacts, a natural boundary such as a watershed or sub-watershed could be identified for the spatial scope, although an analysis at multiple geographic scales may also be appropriate. The EIS should also include a determination and explanation for the analyses' temporal scope. Trend data, where available, should be used to establish a baseline for the affected resources, project a reasonably foreseeable cumulative baseline for the affected resources, and to predict the environmental effects of the project when added to this baseline.

The EPA's Consideration of Cumulative Impacts in EPA Review of NEPA Documents provides guidance on the assessment of cumulative impacts.¹⁷ The guidance states that to assess the adequacy of the cumulative impacts assessment, five key areas should be considered. In our review of the Draft EIS, we will assess whether the cumulative effects analysis adequately:

• identifies resources, if any, that are being cumulatively impacted

¹⁷ Accessed online 6/21/19 at: https://www.epa.gov/sites/production/files/2014-08/documents/cumulative.pdf

- determines the appropriate geographic (within natural ecological boundaries) area and the timeperiod over which the effects have occurred and will occur
- looks at all past, present, and reasonably foreseeable future actions that have affected, are affecting, or would affect resources of concern
- describes a benchmark or baseline
- includes scientifically defensible threshold levels

Level of Impact Indicators

To focus analysis on potentially significant environmental impacts, we suggest that it is helpful to utilize project-specific thresholds for level of impact. These thresholds can be applied to the EIS's analysis of environmental impacts. This style of analysis can be an effective strategy for meeting the intent of the Council on Environmental Quality NEPA regulations found at 40 CFR Part 1502.

We note that Washington State's Chehalis Basic Strategy SEPA Draft EIS Appendix I provides a potentially useful example of adverse long-term impact indicators.¹⁸

¹⁸ Accessed online 6/14/19 at: http://chehalisbasinstrategy.com/wp-content/uploads/2016/09/Appendix-I-Adverse-Long-term-Impact-Indicators.pdf



COLUMBIA RIVER INTER-TRIBAL FISH COMMISSION

700 NE Multnomah Street, Suite 1200 Portland, Oregon 97232 (503) 238-0667 F (503) 235-4228 www.critfc.org

June 28, 2019

Colonel Aaron L. Dorf Commander and District Engineer of the Portland District U.S. Army Corps of Engineers, CENWP-PME-E P.O. Box 2946 Portland, OR 97208-2946

RE: National Environmental Policy Act Scoping for the Willamette River System Operations Environmental Impact Statement

Dear Colonel Aaron L. Dorf:

The Columbia River Inter-Tribal Fish Commission (CRITFC) hereby responds to your solicitation for scoping comments on development of the Willamette River System Operations (WRSO) environmental impact statement (EIS).

CRITFC was created by and provides technical and policy coordination services to the Confederated Tribes of the Warm Springs Reservation of Oregon, the Confederated Tribes of the Umatilla Indian Reservation, the Confederated Tribes and Bands of the Yakama Nation, and the Nez Perce Tribe. These four tribes possess rights they reserved by treaties with the federal government to take a fair share of those fish destined to pass their usual and accustomed fishing places in the interior Columbia River basin and its tributaries. Inherent in the right to take fish is the conservation and protection of the fishery resource. These reserved rights are not geographically limited to lands ceded to the United States. *See e.g., Seufert Bros. vs. United States,* 249 U.S. 194, *State v James,* 72 Wn.2d 746, 435 P.2d 521 (1967).

The treaties between the federal government and tribes create a federal trust responsibility under which the federal government maintains an affirmative obligation to safeguard the subject matter of federal treaties. Thus, federal agencies must use their authorities in a manner that will protect and enhance – not degrade – the fish species that underlie treaty fishing rights. This duty does not cease once a fish run becomes viable.

The U.S. v. Oregon and U.S. v. Washington cases also affirmed that Northwest tribes, by virtue of their treaties with the U.S. government, have co-management status on fisheries resources. In reserving the right to fish at all usual and accustomed places, tribes retained their authority to regulate the tribal fishery. State and federal government co-managers are therefore required to have meaningful consultation on actions that affect the treaty-protected fisheries resources. These actions include non-tribal fisheries, hatchery production, protection of the natural spawning environment, and protection on the downstream and upstream migration through the river.

At the direction and on behalf of its member tribes, CRITFC offers the following comments to help identify actions to be included in the suite of programmatic alternatives to avoid and minimize impacts on the tribal fishery resource and issues that must be considered in the impact analysis of those alternatives.

Cumulative Impact Requirement

The National Environmental Policy Act (NEPA) requires federal agencies to look at the cumulative impact of their action. 40 C.F.R. § 1508.25, 40 C.F.R.§1508.27.

Cumulative impact is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. 40 CFR § 1508.7 2019.

The U.S. Army Corps of Engineers (USACE) needs to look at the cumulative impact of this and other on-going projects in the Willamette Basin to satisfy NEPA requirements. Since impacts to Pacific lamprey were not assessed in the current Willamette Basin Water Reallocation Environmental Assessment (EA), that project should be suspended and instead be subsumed into this EIS to fully address the effects of storage allocation and operations on lamprey and other aquatic species. The storage allocation and operations decisions are thoroughly intertwined and, currently, the Willamette Basin Water Reallocation EA is in violation of CEQ requirements by not evaluating the cumulative impact on lamprey.

An EIS for the Willamette Basin Water Reallocation Project is needed to better understand the impacts of that action, particularly on Pacific lamprey that are not even mentioned in that EA. Additional planning at the state level is needed before the federal approval of either storage allocation or storage operations decisions. The two matters should be considered together since operational limitations will affect storage allocation and vice versa. The EA is clear that allocation and operations affect one another. What is not clear is how these effects will occur and how they will be managed.

At the State level the unknowns of how enforcement will work, when and where the water will be drawn from, distribution of the drought plan, and distribution of instream flows is also unclear. There is the uncertainty of how the implementation of instream flow protections for fish and wildlife will work. Incorporating this project into the Willamette River System Operations EIS would present the opportunity to address the mitigation needs for lamprey and the opportunity to satisfy NEPA's cumulative impacts requirements.

Pacific Lamprey

Since 2008, the Columbia Basin Fish Accords lamprey projects, with guidance from the Tribal Pacific Lamprey Restoration Plan, have worked to address a variety of issues for Pacific lamprey in the Columbia Basin (CBFWA 2005; USFWS 2011; CRITFC 2011) including improving mainstem and tributary passage, providing regional abundance and distribution information, conducting

supplementation research (e.g. adult translocation and artificial propagation), describing lamprey population substructure, identifying high-value habitat types (e.g. migration, spawning, and rearing), providing tributary escapement estimates, and guiding contaminant and water quality research.

One of our greatest concerns is the impact the project will have on the Pacific lamprey in the Willamette Valley. Lamprey provide an important source of food for the tribes in the basin. The Commission's member tribes have harvested lamprey at Willamette Falls for millennia. Due to the near extirpation of lamprey in many locations within the Columbia River Basin upstream of dams and impediments to passage, Willamette Falls is one of the few remaining traditional harvest locations for the CRITFC member tribes. The cultural and traditional significance of Willamette Falls can not be overstated to maintaining ties to Pacific lamprey and providing lamprey for subsistence and ceremonial purposes. Some of the work CRITFC and its member tribes have conducted to conserve Willamette Basin lamprey populations can be found in The Tribal Pacific Lamprey Restoration Plan for the Columbia River Basin.¹ The Willamette Basin is one of the most prominent habitats for lamprey, with Willamette Falls as a significant historical fishing site. Additionally, within the basin, the largest proportion of lamprey in the Willamette Basin inhabit the Santiam River, a tributary that will be affected by this project. Diminished in the Columbia River, the Willamette is one of the last few basins for lamprey to thrive. It's also important to add that there has been a number of restoration projects done for the lamprey in the basin and without enough flow they may be all for naught.

There is ample information that can be considered about lamprey populations in USACE's study effort. Chapter 13 of the USFWS' Lamprey Assessment is dedicated to lamprey populations in the Willamette Valley and states:

Water diversions and impoundments alter the quantity and timing of flow events, which may impact adult and juvenile lamprey migration cues, decrease spawning habitat availability, prevent access to backwater or side channel habitats, create low water barriers, and contribute to mortality if incubating eggs or burrowing larvae are dewatered or exposed to a high temperature or low oxygen environment (Clemens et al. 2017b). Some improvements to flow regimes have occurred in the Willamette Basin.²

Improving the passage environment for Pacific lamprey, at all life history stages, remains the highest priority for restoration within the Willamette Basin.

- *Improvements to passage by adult lamprey:* Increase focus on addressing known adult lamprey passage bottlenecks in fishway sections that are upstream of entrances (i.e. transition pools, serpentine weirs). Evaluation of historic telemetry data suggests this will enhance likelihood of improving overall dam passage efficiency and conversion to upriver dams (Keefer et al. 2013).
- *Development of alternative forms of passage:* Efforts to develop and improve alternative forms of passage should continue in parallel with passage improvements. This would include

¹ <u>https://critfc.org/wp-content/uploads/2012/12/lamprey_plan.pdf.</u>

² https://www.fws.gov/pacificlamprey/Documents/PacificLamprey 2018Assessment final 02282019.pdf at page 165.

expansion of adult translocation efforts that aim to bypass the difficult migration corridor and release adults into high-value spawning habitat in strategic locations within the Willamette Basin.

• *Implementation of RM&E plan for larval/juvenile lamprey:* Strongly consider multiple approaches (e.g. PIT and acoustic tagging) to inform management decisions regarding juvenile lamprey passage improvements, in addition to the current strategy of developing a juvenile lamprey acoustic transmitter.

Pacific lamprey migration timing is influenced by a number of factors including water temperature and flow (Clemens et al. 2011, 2012). As temperatures increased, lamprey were observed holding overwinter in the mainstem Willamette River prior to resuming the spawning migration the following spring (Clemens et al. 2012). Testicular atresia of male lamprey has been observed in lamprey collected at Willamette Falls when temperatures exceeded 20°C. Lamprey may also respond to chemical cues from larval lamprey to guide their spawning migrations (Moser et al. 2015). Thus it is important that habitat and water quantity and quality are maintained in upstream tributaries where larval lamprey are observed to reside.

Water Quality

Another concern is how changes in Willamette River System Operations will affect water quality in the Willamette Basin. Shifting water flow will affect the water quality of the basin from dilution of pollutants to affecting water temperature and availability of dissolved oxygen for aquatic species. The quality of water disproportionately impacts juvenile lamprey, which spend up to seven years filter feeding in the silt and gravel of stream beds, making them particularly susceptible to toxics that settle in and out of the water. ESA-listed steelhead and chinook salmon are also vulnerable to water quality degradation and rely on flow objectives to dilute concentrations of toxics from municipalities, industry, and agricultural runoff.

Climate Change

Thoroughly considering the likely effects of climate change is essential to an accurate Willamette River System Operation EIS. Climate change was not thoroughly taken into consideration in the Willamette River Basin EA, which provides this EIS an opportunity to assess the impacts to the Willamete River Basin. The EIS should contend with the possibility that reservoirs may not adequately fill since tributaries, such as the North Santiam, are snowpack driven, which may be affected by climate change differently than rain-driven tributaries. Additionally, climate change will affect the local flows, including timing of flows, that are relied upon in the data to meet the BiOp objectives. The temperature of the water will also be affected by climate change and lamprey, steelhead and chinook salmon may require more live flow to keep Willamette tributaries at a habitable temperature. Overall, the inevitability of climate change impacts must be factored into this EIS.

Adequate Flows for Fish and Wildlife

Perhaps the greatest concern is that there is not enough live flow to sustain fish and wildlife to meet BiOp requirements year-round. Models from the Willamette River Reallocation EA show that BiOp flow requirements are not consistently met, and in years of deficit and insufficient water availability, they are missed significantly. It would be wrong to assume that a water allocation decision in an EA that does not mention lamprey will in anyway override the needs of this species.

Tribal Cultural Resources

Archaeological and cultural sites are the evidence tribes and tribal members have to connect themselves to the past of their tribe and their ancestors. The National Historic Preservation Act recognizes historic properties of religious and cultural significance to tribes, 54 USC § 302706(a), those sites that may not have an archaeological component but possess deep tribal connections through use from time immemorial. Sometimes they are called Traditional Cultural Properties, however TCPs can be recognized for any cultural group whereas historic properties of religious and cultural significance can only be recognized relating to tribes. The Archaeological Resources Protection Act also recognizes these areas as sites that have religious or cultural importance, 16 USC § 470cc. These sites are often related to the gathering of the First Foods, those foods tribes have relied upon for their survival since the beginning of time and have deep cultural meanings. Hunting, fishing, gathering, and other cultural sites contribute to and connect the tribes to their homelands and their cultures which are based on this place.

The interests of tribes in the protection of cultural resources associated with the Willamette River are not limited to the information contained in the archaeological sites. Salmon and lamprey are tribal cultural resources that play an integral part of tribal religion, culture, and physical sustenance. Salmon and lamprey shaped the lives of the people who have lived here since time immemorial. The cultures, intertribal interactions, fishing technologies, and very religions of the Pacific Northwest tribes were all impacted and influenced by salmon and lamprey. These fish have been an important part of the economies of the region for thousands of years, from the ancient Indian trade routes to modern commercial fishing.

Specifically, salmon also play an important role in the ecosystem of the region, returning ocean nutrients to the rivers and streams where they were born, feeding wildlife and even the forests with their bodies. *Wy-Kan-Ush-Mi Wa-Kish-Wit*, the salmon's spirit, is sacred life. The salmon was provided a perfect world in which to thrive. For thousands of years the salmon unselfishly gave of itself for the physical and spiritual sustenance of humans.³

USACE will need to work closely with the member tribes of CRITFC and their cultural resources departments during their analysis of cultural resources. CRITFC may be able to assist in coordination with the tribes.

Hydro System Operations

The EIS should consider a range of system operations and improvements with the goal of improving fish passage and maximizing system survival. Alternatives should include the following operation changes:

³ <u>http://plan.critfc.org/2013/spirit-of-the-salmon-plan/about-spirit-of-the-salmon/</u>.

- A spill/flow program optimized for salmon survival under existing water quality waivers; set spill/flow at optimal levels based on individual project characteristics to maximize juvenile survival. Such spill may be greater than current spill, but may not necessarily require spill to the gas caps.
- Modified reservoir operating elevations at specific projects for either permanent drawdown or seasonal drawdown.
- Use spill/flow operations during the summer to deal with downstream water quality issues.
- Altered flood control operations in low- and mid-range water years to guarantee flows downstream of projects.

Hydro System Structural Modifications

Alternatives reviewed under the EIS should include structural modifications to again improve fish passage and system survival. The modifications for lamprey passage measures discussed above should be considered.

- Install additional temperature structures at appropriate projects to reduce summertime thermal issues.
- Install surface passage structures/collectors at designated projects such as outlined at Detroit and Cougar dams.
- Improve adult passage at existing ladders. Add trap-and-haul facilities if adult ladders are infeasible or not cost-effective options
- Evaluate different smolt transport options of trucking or long distance piping to move fish around dams.

Off-site Mitigation

Inclusion of mitigation actions, such as those implemented through actions in the estuary and tributaries, as well as hatchery actions, is a requirement of the Northwest Power Act and must be included as part of the WRSO action so long as there are dams on the rivers; there is no system operation alternative that can alleviate the mitigation requirement. The alternatives in the EIS must therefore include an appropriate suite of tributary and estuary mitigation actions.

Mitigation funding plays a significant role in the economics of interior basin communities. Therefore, when analyzing the effects of tributary actions, the agencies will need to include analysis of the socio-economic benefit that mitigation funded tributary actions have on local communities, both tribal and non-tribal, and how those benefits change under the various alternatives.

Reservoir Ecology

The EIS will need to consider the effects of the existence and operation of the federal hydropower system on reservoir ecology. Before the dams, the Willamette River was just that – a river of free flowing water. The Willamette River system has turned these rivers into a system of connected reservoirs, bringing with it changes to the natural ecological river system, including invasive species, algae, seaweed, altered flood dynamics, sequestration of sediment, sand bars, water quality issues, and changes in temperature, to name a few. The WRSO EIS will need to evaluate the change in reservoir ecology associated with each alternative and how these changes affect fish and wildlife

resources. We encourage the agencies to consider alternative actions – including system operation and restoration actions – to address reservoir ecology and its impacts on the fishery resource.

Data and Metrics

The EIS should review and include a range of fish metrics and data, including project survival, reach survival, and delayed mortality. Alternative development and analysis in the EIS should consider at least reach, project, and SAR survival metrics. In addition to these metrics, the analysis should look to using various models and tools and not be completely dependent on the COMPASS model.

Conclusion

Thank you for the opportunity to comment. We look forward to working with USACE in carrying out the WRSO EIS processes.

Mitta

Executive Director



WaterWatch of Oregon Protecting Natural Flows in Oregon Rivers

June 27, 2019

VIA EMAIL

U.S. Army Corps of Engineers, CENWP-PME-E ATTN: Suzanne Hill P.O. Box 2946 Portland, OR 97208-2946 Email: willamette.eis@usace.army.mil

Re: Willamette Valley System Evaluation EIS

Dear Ms. Hill:

WaterWatch of Oregon ("WaterWatch") is a nonprofit river conservation organization dedicated to protecting and restoring streamflow in Oregon for the benefit of fish, wildlife and people who depend on healthy rivers. Thank you for the chance to comment in the "scoping" phase of the above evaluation. We expect to join with a number of other conservation groups in submitting joint comments. We submit these brief additional comments to emphasize certain points and to make some additional comments that may be unique to our perspective.

1. Relationship to Willamette Basin Review. The so-called Willamette Basin Review (WBR) to "reallocate" storage space in reservoirs managed by the Corps should be delayed and merged into this process for further consideration. It does not make sense to allocate storage space in the reservoirs now when the Corps is about to embark on a comprehensive environmental review of the Willamette Valley Project (WVP) and when the National Marine Fisheries Service (NMFS) is about to prepare a new Biological Opinion regarding impacts of the WVP on salmon and steelhead listed as threatened under the federal Endangered Species Act (ESA). The anticipated additional analysis is almost certain to better inform how reservoir storage capacity should be allocated and managed. Reallocation should wait for that new information and analysis. The additional delay would be minimal relative to the overall timeline for reallocation (including time already invested) and could be used to implement important actions in anticipation of reallocation, such as creation of mechanisms to protect stored water released for fish from downstream diversions. Allowing reservoir reallocation to proceed on a separate and prior track also would represent an irreversible and irretrievable commitment of resources foreclosing formulation and/or implementation of reasonable and prudent alternatives

WaterWatch of Oregon Main Office: 213 SW Ash St. Suite 208 Portland, OR 97204 Southern Oregon Office: PO Box 261, Ashland, OR, 97520

www.waterwatch.org Main Office: 503.295.4039 S. OR Office: 541.708.0048 to be developed in the re-consultation with NMFS, which would violate a rule for implementing the ESA.

2. <u>Species Considered</u>. The system evaluation should consider impacts of the WVP on all specifies of fish, wildlife and plants, not just those already in trouble and therefore listed as threatened under the ESA. Operation of the WVP clearly impacts threatened Upper Willamette River Winter Steelhead and Upper Willamette River Spring Chinook. It also affects numerous other species, including cutthroat trout, Coho salmon (thought to be non-native to the area above Willamette falls but now naturally producing), lamprey, various species of amphibians and numerous species of plants. The National Environmental Policy Act (NEPA) requires consideration of impacts to all species.

3. <u>Flow Modeling</u>. The system analysis should include flow modeling using the most recent flow data and expected future impacts of climate change. (Our understanding is that modeling to date uses a flow dataset ending in 2008 and that a new dataset including flow data through 2018 is, or should soon be, available.) The modeling should evaluate flows under numerous different scenarios for operation of the reservoirs, including operations assuming full contracting of proposed reservoir allocations to agricultural irrigation and municipal and industrial use, and assuming all plausible scenarios for timing of releases to satisfy those contracts and all plausible scenarios for general locations of diversions and return flows.

4. Flow Scenarios. Our understanding is that the WVP has substantially altered flows below the dams relative to historic natural flows – winter and spring flows are reduced to prevent flooding and to store water for summer and fall; and summer and fall flows are increased because stored winter and spring flows are released then for use downstream and to empty the reservoirs for winter storage. The system analysis should examine the extent to which regulated flows could be shifted more toward the historic natural hydrograph and, if so, what impacts that would have - on fish and wildlife as well as flood risk. For example, we understand that summer flows may not be critical for fish and that the primary issue is water temperature for rearing. Thus, the analysis could examine the temperature impacts of reduced summer flows and whether those could be addressed by other means (more shading of a smaller stream channel, for example). Also for example, the EIS should look at the extent to which high winter and spring flows, and the variability of those flows, could be increased without unacceptable risk of harm downstream. This analysis should include an analysis for fish migration and population data to determine whether there is any correlation with variations from expected unregulated flow as opposed to just particular flow levels.

5. <u>Rule Curves</u>. To accommodate consideration of additional flow scenarios, the Corps should be willing to consider modifications to the rule curves for the dams. The rules curves are necessarily based on certain priorities and flow assumptions. The system analysis

should examine those priorities and flow assumptions. Thus, it should also reexamine the rule curves. Doing that would help ensure that a full range of alternatives is considered.

6. <u>FEMA Flood Insurance</u>. The Corps should consider how future flood control needs will be impacted by the 2016 biological opinion of NMFS regarding the Federal Emergency Management Agency's flood insurance program in Oregon. This analysis should be reflected in analysis of potential flow scenarios and rule curves – because flood risks at different flow levels may change in the future if flood insurance policies change.

7. <u>Minimum Storage and Power Pools</u>. The system analysis should evaluate alternatives that do not reserve water in reservoirs for power pools and minimum storage. That could make more water available to meet downstream flow needs and better allow reservoir "drawdown" to aid fish migration.

8. <u>Impacts of Fish Hatcheries</u>. The Corp and its partners fund and/or operate fish hatcheries to make up for impacts of the dams. The potential detrimental impacts of these hatcheries on wild fish and the natural ecosystem should be analyzed along with expected benefits. If the hatcheries are found to have significant negative impacts, proposed alternatives should include measures to prevent those impacts from exceeding benefits.

9. <u>Guidance for Other Regulatory Authority</u>. The system analysis should consider whether the Corps has regulatory authority that could be used to help mitigate for impacts of the Corps' dams in the Willamette Basin. For example, the Corps has regulatory authority over removal from, and fill of, waterways. The Corps should consider whether that authority could be better used to prevent removal-fill activities that exacerbate impacts of the Corps' dams – activities such as new dams (large and small) that block access to fish habitat or detrimentally impact flows and/or water quality. The authority could be used anywhere in the basin, not just on tributaries below the Corps' dams.

10. <u>Protecting Instream Flows</u>. The system analysis should consider alternatives for protecting stream flows for the benefit of fish and wildlife. For example, the Corps could consider transferring portions of its water-storage rights to instream water rights. (Note: this is different from creating instream water rights for the use of stored water.) The system analysis also should consider strategies for protecting stored water released for instream use from being diverted downstream.

11. <u>Impacts of Other Infrastructure</u>. Our understanding is that the WVP included infrastructure in addition to dams to attempt to control flooding – "revetments" and the like. The environmental impact of these structures should be considered in the analysis and proposed

alternatives should consider ways to reduce any detrimental impacts from these structures on fish and wildlife.

12. <u>Impacts of Recreational Fishing</u>. The system analysis should consider impacts of recreational fishing on listed fish and whether the Corps should regulate fishing at its reservoirs and other property in a way that better protects listed fish.

Thank you for considering our comments.

Very truly yours,

Brian Posewitz

Brian Posewitz Staff Attorney

[Non-DoD Source] Willamette System EIS Public Comment

Chione, Andrew <chionea@oregonstate.edu>

Sat 6/15/2019 4:16 PM

To:CENWP-PME-Williamette-Valley-System-EIS <willamette.eis@usace.army.mil>;

To whom it may concern,

Thank you for the opportunity to comment on the EIS for the ACOE project in the Willamette River watershed.

The current operation of the dams run by ACOE in the Willamette Watershed is not working to keep wild, native spring chinook and winter steelhead from plummeting towards extinction.

After the required purpose of flood control, fish conservation should be prioritized with flow management. Consider altering the rule curves to benefit needed flows for ESA-listed fish. Consider more than the minimum required flows for fish, especially in low water years. When the spring chinook spawn, their redds can be dessicated by further reductions in flows. Please reduce the possibility of this happening as much as possible. Consider drawdowns on more reservoirs to flush native, juvenile fish downstream rather than sending them through turbines. Consider using both reservoir drawdowns and fish collectors to preserve the diverse life-history timing of native fish species. With the decline of hydropower value and the dire situation of ESA-listed fish species in the Willamette watershed, native fish conservation should be prioritized over hydropower.

Look into doing habitat mitigation in Willamette tributaries like the Yamhill River that provide habitat for winter steelhead and spring chinook and are not blocked by ACOE operated dams.

Eliminate hatchery production as much as possible to eliminate hatchery fish spawning with wild, native spring chinook and winter steelhead. As an angler, I believe that the best form of fish production is a healthy river. Hatchery fish cannot replace the loss of wild, native fish and only contribute to their decline.

Please coordinate with the relevant state agencies to conduct water quality sampling on reservoirs in the Willamette system, especially those that have drinking water intakes downstream. The water crisis in Salem last year should be a wake-up call to better monitor cyanobacteria blooms for public safety.

Sincerely,

Andrew Chione Corvallis, OR

[Non-DoD Source] Willamette Valley System Environmental Impact Statement

Arne Goddik <goddik@frontier.com>

Mon 6/10/2019 2:30 PM

To:CENWP-PME-Williamette-Valley-System-EIS < willamette.eis@usace.army.mil>;

Dear Envt Resources Specialist Hill,

Thank you for the opportunity to comment on the Willamette Valley System Evaluation. I am a farmer in the Willamette Valley, and am writing to express the importance of continuing to maintain the system for flood control and irrigation storage.

We had about 20 acres of farm land flooded this year, and we had about 5 acres of crops die from being under water for to long.

These dams are critical to protecting farms, homes, and communities from growing flood risk, and we all saw first-hand this spring the impact releases from the dams can have on communities. We need to ensure that the dams retain their primary function of flood control, and that any adjustments made to system operations don't reduce or alter flood mitigation capacity.

Similarly, I oppose reducing the water storage capacity behind the dams. This water is critical for future irrigation and community needs, particularly as we trend toward having longer, hotter summers.

Thank you for the opportunity to comment.

Sincerely,

Arne Goddik 18265 SE Neck Rd Dayton, OR 97114 goddik@frontier.com June 28, 2019

Col. Aaron L. Dorf U.S. Army Corps of Engineers, Portland District P.O. Box 2946 Attn: CENWP-PME-E Portland, OR 97208 *Comments submitted via email to: <u>willamette.eis@usace.army.mil</u>*

Re: Notice of Intent to Prepare and Environmental Impact Statement for the Willamette Valley System Operations and Maintenance (84 FR 12237)

Dear Col. Dorf,

On behalf of the undersigned groups, we are submitting these comments for consideration in the development of the Environmental Impact Statement (EIS) for continued operation and maintenance of the Willamette Valley System (WVS) in the Willamette River watershed. The U.S. Army Corps of Engineers (USACE) is required by law to meet obligations under the Endangered Species Act (ESA) to ensure that the operation of the WVS does not jeopardize listed species. We request that the EIS consider not only the survival of ESA-listed salmon in the Willamette Valley, but also endangered species that depend on those salmon as a vital prey source, specifically the Southern Resident killer whale (orca) population.

Section 7(a)(2) of the ESA requires federal agencies to "insure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the adverse modification of habitat of such species . . . determined . . . to be critical" 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(a). To accomplish this goal, agencies must consult with the National Marine Fisheries Service (NMFS) or the U.S. Fish and Wildlife Service (FWS), depending on the species at issue, whenever their actions "may affect" a listed species. 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(a).

Consultation with NMFS regarding the effects of WVS operations and maintenance will provide vital information to inform the USACE's final decisions. A thorough review of the best available science on Southern Resident orcas, protected salmon, and any other affected species is vital to determine, for example, whether the proposed operations and maintenance should be modified and mitigated.

The Southern Resident orca Distinct Population Segment (DPS) has been listed as endangered under the ESA since 2005 and Canada's Species at Risk Act (SARA) since 2003¹. This community of orcas is genetically distinct from all other orca populations, does not interbreed and rarely interacts with other orcas, and is the only ESA-listed orca population. They are part of the fish-obligate "Resident" ecotype, and rely almost exclusively on salmon as their primary prey². They are the only Resident population to inhabit the California Current ecosystem and frequent the outer coasts of Washington, Oregon, and

¹ National Marine Fisheries Service, Endangered Status for Southern Resident killer whales. 70 FR 69903; DFO (Fisheries and Oceans Canada). Fisheries and Oceans Canada. *Action Plan for the Northern and Southern Resident Killer Whale (Orcinus orca) in Canada*. Species at Risk Act Action Plan Series. (Fisheries and Oceans Canada, Ottawa, 2017)

² *Ibid.*; Foote, A. D.et al.Genome-culture coevolution promotes rapid divergence of killer whale ecotypes.Nat. Commun.7:11693 doi: 10.1038/ncomms11693(2016)

Northern California³. Despite the research and conservation efforts initiated after their ESA listing, the Southern Residents have continued to decline and now number just 74 individuals, their lowest population abundance in over 30 years (this does not include the two new calves observed in the population since December 2018)⁴. The National Marine Fisheries Service has recognized them as one of eight marine species most at risk of extinction, and considers them a recovery priority #1: "a species whose extinction is almost certain in the immediate future because of a rapid population decline or habitat destruction."⁵

The top threats to their survival and recovery have been identified as prey depletion – particularly of their primary prey, Chinook salmon – toxic contamination, vessel effects, and increasing levels of ocean noise⁶. The Southern Resident orcas have survived on the Pacific Northwest's abundant salmon for millennia, but as salmon have declined throughout the region, the orcas have suffered from a lack of available prey. Research has established that Chinook comprises the majority – up to 79% – of the Southern Residents' diet in the summer months⁷, when they historically inhabit the inland waters of the Salish Sea between Washington and British Columbia. Coho and chum salmon are also seasonally important to Southern Resident orcas, and their diet appears to diversify and include greater amounts of these types of salmon during offshore coastal foraging periods in the winter and spring⁸.

A multi-year tagging and vessel-based survey project tracking the Southern Resident DPS in their coastal habitat established the coastal presence of the orcas, and collected prey and scat samples; analysis from these samples indicate that the orcas continue to target Chinook salmon in their coastal range, and consume fish from major watersheds including the Columbia Basin⁹. Mortality and birth rates are correlated with coast-wide salmon abundance¹⁰, and a high rate of pregnancy failure in the population has been linked to nutritional stress, with nearly 70% of detected pregnancies ultimately unsuccessful, severely impacting the Southern Resident orcas' ability to recover¹¹. The NMFS 2008 Recovery Plan for

³ Krahn, M.M. et al. 2004. 2004 status review of southern resident killer whales (Orcinus orca) under the Endangered Species Act. NOAA Technical Memorandum NMFS-NWFSC-62, U.S. Department of Commerce, Seattle, Washington; Reynolds, J.E. H. Marsh & T.J. Ragen. 2009. Marine Mammal Conservation. Endangered Species Research. 7:23-28

⁴ Population data from Center for Whale Research, <u>www.whaleresearch.com</u>

⁵ NOAA Fisheries. Species in the Spotlight: Southern Resident Killer Whale DPS

⁶ Fisheries and Oceans Canada. *Action Plan for the Northern and Southern Resident Killer Whale (Orcinus orca) in Canada*. Species at Risk Act Action Plan Series. (Fisheries and Oceans Canada, Ottawa, 2017); National Marine Fisheries Service (NMFS) 2008. Recovery Plan for Southern Resident Killer Whales (*Orcinus orca*). NMFS, Northwest Region, Seattle, Washington; NMFS. 2014. Southern Resident Killer Whales: 10 Years of Research & Conservation

⁷ Ford, M.J et al. 2016. Estimation of a Killer Whale (Orcinus orca) Population's Diet Using Sequencing Analysis of DNA from Feces. PLoS ONE 11(1): e0144956. doi:10.1371/journal.pone.0144956; Hanson, M.B. et al. 2010. Species and stock identification of prey consumed by endangered southern resident killer whales in their summer range." Endangered Species Research, 11(1):69-82

⁸ NOAĂ Fisheries Northwest Fisheries Science Center. Distribution and Diet of Southern Resident Killer Whales. Presentation by Brad Hanson, July 2015 Program Review; NMFS. 2014. Southern Resident Killer Whales: 10 Years of Research & Conservation

⁹NOAA Fisheries. 2014. Southern Resident Killer Whales: 10 Years of Research and Conservation.

¹⁰ Ford, J.K.B, G.M. Ellis, and P.F. Olesiuk. 2005. Linking prey and population dynamics: Did food limitation cause recent declines of 'resident' killer whales (*Orcinus orca*) in British Columbia. Fisheries and Oceans; Ford J.K.B et al. 2010b. Linking killer whale survival and prey abundance: food limitation in the oceans' apex predator? Biology Letters 6: 139–142; Ward E.J, E.E. Holmes, and K.C. Balcomb. 2009. Quantifying the effects of prey abundance on killer whale reproduction. *Journal of Applied Ecology*, 46: 632–640

¹¹ Wasser S.K. et al. 2017. Population growth is limited by nutritional impacts on pregnancy success in endangered Southern Resident killer whales (*Orcinus orca*). *PLoS ONE* 12(6): e0179824 https://doi.org/10.1371/journal.pone.0179824

the Southern Resident DPS notes that "[p]erhaps the single greatest change in food availability for resident killer whales since the late 1800s has been the decline of salmon in the Columbia River basin."¹²

Salmon from the Willamette River, part of the Columbia Basin, were likely a significant portion of the historical offshore diet of the Southern Resident orcas, and the decline of Willamette spring Chinook undoubtedly contributed to that change in food availability noted by NMFS. A recent review of priority Chinook stocks for the Southern Resident DPS noted the high spatio-temporal overlap of Willamette spring Chinook and Southern Resident orcas (given a rating of 2.25 out of 3)¹³. The return of these Chinook coincides with the presence of Southern Resident orcas off the Washington and Oregon coasts, outside the mouth of the Columbia River, which has been established as a hotspot for the orcas.¹⁴ As noted, the top threat to Southern Resident recovery is a lack of salmon. With so few salmon returning to Pacific Northwest watersheds in recent decades, the decline of Willamette salmon very likely contributes to coastwide prey depletion for Southern Resident orcas.

There is significantly more information available now on the coastal habitat use of Southern Resident orcas, their year-round diet composition, and priority prey stocks. The EIS should consider the historic abundance of Willamette spring Chinook and the overlap with Southern Resident orcas, and assess the potential for this run of salmon to contribute to overall prey availability for Southern Resident orcas. Recovering wild salmon populations throughout the range of the orcas will be vital for their immediate survival as well as long-term recovery, including runs such as the Willamette spring Chinook that were historically much more abundant. Any action that significantly impacts salmon needs to also analyze the effects on prey availability for Southern Resident orcas. The USACE must consider the consequences of maintaining status quo operations in the WVS, which has not led to recovery for Willamette River Chinook and contributes to prey depletion for orcas.

Salmon populations in the Northwest and California hover at fractions of their historic abundance, on average returning at less than 3% of their historic numbers each year¹⁵. The development and alteration of salmon-supporting watersheds is one of the primary causes of declining salmon abundance, and efforts to restore habitat simply cannot keep pace with the impacts of urbanization and development in coastal and watershed areas. Pacific salmon have now been extirpated from at least 40% of their historical habitat¹⁶, and spring-run salmon appear to be disproportionately impacted by human use and development of river systems¹⁷. The wild Upper Willamette spring Chinook evolutionarily significant unit (ESU) has been listed as Threatened under the ESA since 2005¹⁸. This run is estimated to have a

https://www.westcoast.fisheries.noaa.gov/publications/protected_species/marine_mammals/killer_whales/recovery/sr kw_priority_chinook_stocks_conceptual_model_report__list_22june2018.pdf ¹⁴ Hanson, M. B., E. J. Ward, C. K. Emmons, and M. M. Holt. (2018). *Modeling the occurrence of endangered killer*

¹² National Marine Fisheries Service (NMFS) 2008. Recovery Plan for Southern Resident Killer Whales (*Orcinus orca*), page II-82.

¹³ NOAA Fisheries West Coast Region and Washington Department of Fish and Wildlife. 2018. Southern Resident killer whale priority chinook stocks report. Available:

¹⁴ Hanson, M. B., E. J. Ward, C. K. Emmons, and M. M. Holt. (2018). Modeling the occurrence of endangered killer whales near a U.S. Navy Training Range in Washington State using satellite-tag locations to improve acoustic detection data. Seattle, WA: Northwest Fisheries Science Center.
¹⁵ Lackey, R.T. 2000. Restoring Wild Salmon to the Pacific Northwest: chasing an illusion? pp. 91-145 in "What We

¹⁵ Lackey, R.T. 2000. Restoring Wild Salmon to the Pacific Northwest: chasing an illusion? pp. 91-145 in "What We Don't Know about Pacific Northwest Fish Runs? An Inquiry into Decision-Making." P. Koss and M. Katz, editors. Portland State University, Portland, Oregon

¹⁶ Levin, P. and M. Schiewe. 2001. Preserving salmon biodiversity. *Am. Sci.* 89, 220-227.

¹⁷ Gustafson, R.S. et al. 2007. Pacific salmon extinctions: Quantifying lost and remaining diversity. *Conserv. Biol.* 21, 1009-1020; Levin, P. and M. Schiewe. 2001. Preserving salmon biodiversity. *Am. Sci.* 89, 220-227.

¹⁸ 70 FR 37160. June 28, 2005.

historic run size of 300,000 salmon annually, now approximately 5,000 wild spring Chinook return each vear¹⁹.

The WVS, 13 dams operated by the USACE, is part of a larger system of 25 major dams in the Willamette Basin. These dams block up to 90% of historic, high-quality habitat²⁰, with no functional fish ladders and extremely limited passage for both returning adults and out-migrating juvenile salmon. Collecting and moving fish is expensive and ineffective, and increases stress and mortality for juvenile salmon. Supplementing wild salmon with hatchery production is simply not sustainable, and has resulted in unexpected impacts to the native wild stock. The USACE has previously agreed to implement structural and operational changes required to benefit wild salmon in the WVS, as described and scheduled in the 2008 Biological Opinion, but has failed to follow the established timeline and has not carried out these necessary actions²¹. Status quo operations are failing to result in any recovery of the Willamette spring Chinook ESU²².

Dams in the Willamette Basin block access to historic habitat, create large reservoirs harboring invasive predators for juvenile salmon, degrade water quality and stream flow, and increase water temperatures in streams and reservoirs – all of which have negative impacts on salmon survival and therefore prey availability for Southern Resident orcas. Changes are necessary to address flow, temperature, and water quality issues, and provide adequate fish passage to the federally-protected, high-quality habitat that is blocked by dams. The EIS should include and analyze alternatives that allow for greater flexibility in hydropower system operations, include more options that benefit wild fish, and prioritize structural changes to help wild fish recover.

Although some dams in the WVS are used for flood control and are critical to human safety, modifications to dam operations can benefit wild salmon while maintaining flood control. Other dams are primarily used for hydropower or recreation, and the USACE must prioritize and analyze operational measures and structural changes that may impact these other authorized purposes in the WVS, but are necessary to recover wild Willamette salmon. Dams such as Dexter and Big Cliff are hydropower reregulation dams that do not serve flood control purposes. The USACE should include alternatives that consider modifying dams not vital for flood control to operate as run-of-river, or analyze the complete removal of these dams to support the recovery of ESA-listed salmon.

In addition to the duty to ensure against jeopardy, the USACE has an independent duty under ESA section 7(a)(1) to use its authorities to further the purpose of conserving threatened and endangered species. 16 U.S.C. § 1536(a)(1). Measures necessary to fulfill the USACE's duties to further listed species conservation and ensure that activities it authorizes or carries out are not likely to jeopardize the continued existence of those species are set forth in NMFS recovery plans for listed species. The recovery plan for Southern Resident orcas says that "[w]ild salmon have declined primarily due to degradation of aquatic ecosystems resulting from modern land use changes" including hydropower

¹⁹ Consultation on the "Willamette River Basin Flood Control Project" 2008. U.S. Army Corps of Engineers, Bonneville Power Administration, U.S. Bureau of Reclamation, NOAA National Marine Fisheries Service. NWR-2000-2117 ²⁰ *Ibid.*

²¹ Consultation on the "Willamette River Basin Flood Control Project" 2008. U.S. Army Corps of Engineers, Bonneville Power Administration, U.S. Bureau of Reclamation, NOAA National Marine Fisheries Service, NWR-2000-2117

²² NOAA Fisheries. 2016. 5-Year Review: Summary & Evaluation of Upper Willamette River Steelhead, Upper Willamette River Chinook. NMFS West Coast Region, Portland OR.

development²³. Therefore the USACE should review the recovery plan and use its authorities to rebuild depleted populations of salmon and other prey to ensure an adequate food base for recovery of the Southern Resident orcas.

Southern Resident orcas and Pacific salmon are facing an extinction crisis, and are not recovering after decades of ecosystem-wide changes to the habitats they evolved in. Without swift and immediate action to remedy the impacts of habitat loss and development throughout the range of both of these iconic species, we are at a greater risk than ever of losing them. **The USACE must consider how operations in the WVS impact both Willamette spring Chinook and the Southern Resident DPS, and include alternatives that will make real and significant progress to recovering wild salmon.** We request alternatives that include an expedited implementation timeline for near-term structural and operational changes in addition to longer-term solutions; provide greater flexibility in hydropower system operations; and include a full analysis of changes that give salmon recovery a high priority, including how different alternatives would impact the availability of Chinook salmon for Southern Resident orcas.

Thank you for your consideration of our input, and please do not hesitate to contact Colleen Weiler at Whale and Dolphin Conservation (<u>colleen.weiler@whales.org</u>) with any questions or for additional information.

Regards,

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²³ National Marine Fisheries Service (NMFS) 2008. Recovery Plan for Southern Resident Killer Whales (*Orcinus orca*). NMFS, Northwest Region, Seattle, Washington