

The background is a light blue gradient with several realistic water droplets of various sizes scattered across it. The droplets have highlights and shadows, giving them a three-dimensional appearance.

BOWMAN DAM HYDROELECTRIC PROJECT

FERC PROJECT NO. P-14791



BOWMAN DAM HYDROELECTRIC PROJECT

**THIS MEETING WILL BE RECORDED AND SUBMITTED TO THE
FEDERAL ENERGY REGULATORY COMMISSION AS PART OF THE
PROJECT RECORD**



PURPOSE OF MEETING

THE PURPOSE OF THIS MEETING IS TO INITIATE CONSULTATION WITH STATE AND FEDERAL AGENCIES, NATIVE AMERICAN TRIBES, AND INTERESTED PUBLIC TO IDENTIFY ISSUES OR CONCERNS THAT MAY EXIST REGARDING THE DEVELOPMENT OF THE PROJECT.

PROJECT TEAM

- BRUCE SCANLON – MANAGER OCHOCO IRRIGATION DISTRICT
- BRIAN BARNEY – CROOK COUNTY OREGON
- ERIC KLANN – CITY OF PRINEVILLE
- STEVE FORRESTER – CITY OF PRINEVILLE
- KEVIN CREW – BLACK ROCK CONSULTING, INC.
- MARTY VAUGHN – BIOTA PACIFIC CONSULTING
- JIM HOLEMAN – JRHOLEMAN CONSULTING

AGENDA

- **PROJECT HISTORY**
- **PROJECT DESCRIPTION**
- **AFFECTED RESOURCES AND RESOURCE ISSUES/CONCERNS**
- **PROJECT SCHEDULE**
- ***PROJECT WEBSITE***
- ***PROJECT CONTACTS***
- **SITE VISIT INSTRUCTIONS (TRANSPORTATION AND SAFETY)**

PROJECT HISTORY

- PGE PREVIOUSLY STUDIED THE DEVELOPING A HYDROPOWER PROJECT AT THE SITE
- OI D FILED FOR A PRELIMINARY PERMIT ON JULY 1, 2016, FOR A 4-MEGAWATT HYDROELECTRIC PROJECT ON THE OUTLET OF BOWMAN DAM.
- FERC ISSUED A PRELIMINARY PERMIT ON DECEMBER 22, 2016, ENDING ON DECEMBER 1, 2019
- OI D PLANS TO REQUEST A TWO YEAR EXTENSION OF THE PRELIMINARY PERMIT TO DECEMBER 1, 2021
- PURPOSE OF THE EXTENSION IS TO PERFORM ENVIRONMENTAL STUDIES AND PREPARE AN APPLICATION FOR LICENSE FOR MAJOR WATERPOWER PROJECT 5 MW OR LESS(CFR 18 § 4.60)

PROJECT HISTORY (CONTINUED)

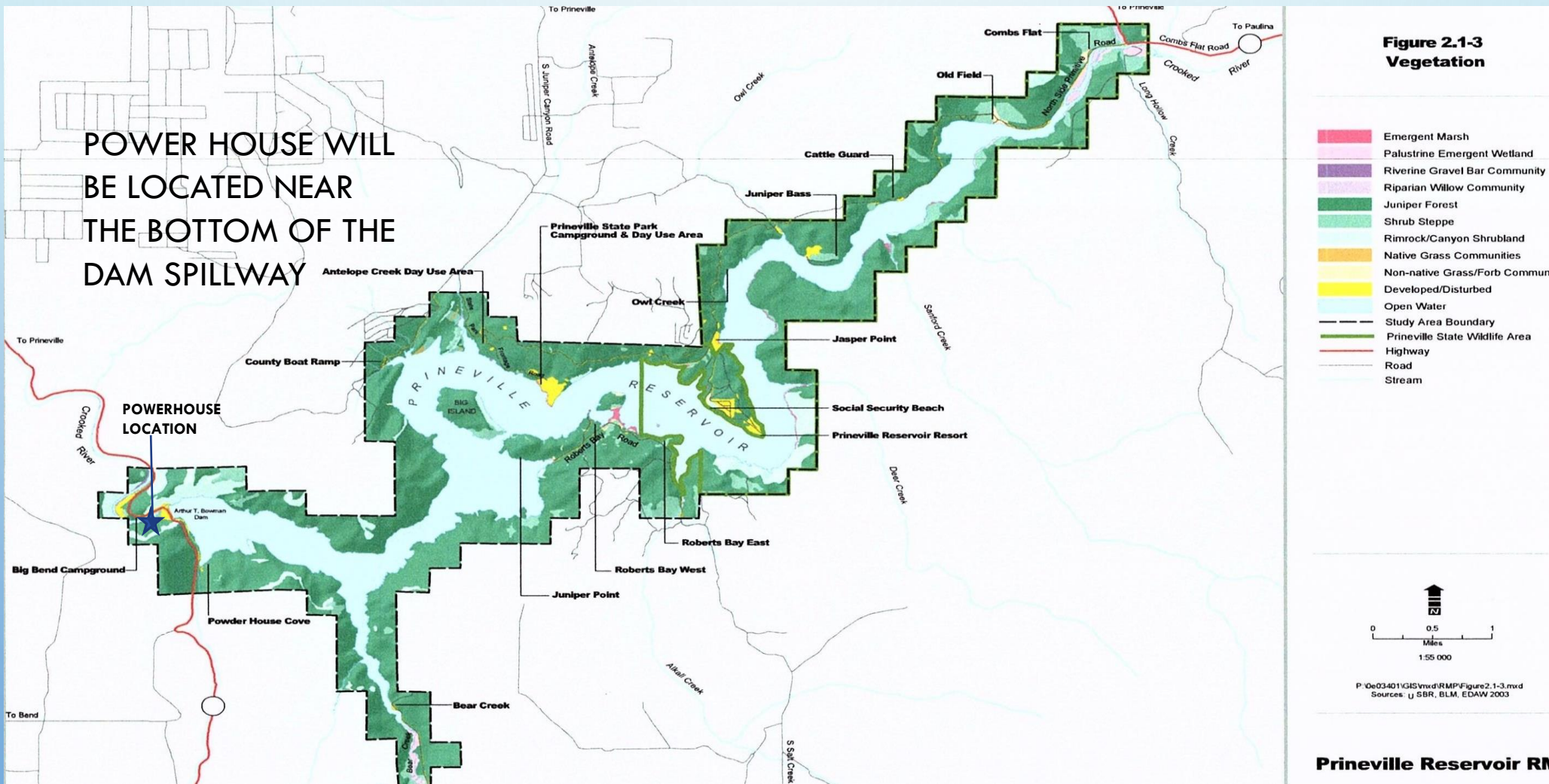
ON OCTOBER 28, 2018, OID DISTRIBUTED:

- A PRE-APPLICATION DOCUMENT (PAD)
- A NOTICE OF INTENT TO FILE AN APPLICATION FOR LICENSE
- REQUEST TO USE THE TRADITIONAL LICENSING PROCESS
- REQUEST FOR AUTHORIZATION TO CONSULT WITH U.S. FISH AND WILDLIFE SERVICE AND NATIONAL MARINE FISHERIES SERVICE REGARDING ENDANGERED SPECIES ACT SECTION 7
- REQUEST FOR AUTHORIZATION TO CONSULT WITH THE STATE HISTORIC PRESERVATION OFFICER REGARDING THE NATIONAL HISTORIC PRESERVATION ACT

FEDERAL ENERGY REGULATORY COMMISSION ORDERS AND APPROVALS

- FEBRUARY 5, 2019, FERC ISSUED AN ORDER APPROVING THE USE OF THE TRADITIONAL LICENSING PROCESS
- FEBRUARY 6, 2019, FERC AUTHORIZED OID AS THE NON-FEDERAL REPRESENTATIVE TO CONDUCT INFORMAL CONSULTATION WITH FISH AND WILDLIFE SERVICE AND WITH NATIONAL MARINE FISHERIES SERVICE ON FEBRUARY 22, 2019, REGARDING ENDANGERED SPECIES ACT SECTION 7
- FEBRUARY 6, 2019, FERC AUTHORIZED OID AS THE NON-FEDERAL REPRESENTATIVE TO CONSULT WITH THE SHPO REGARDING THE NATIONAL HISTORIC PRESERVATION ACT

PROJECT DESCRIPTION



EXISTING FEATURES

BOWMAN DAM

- ZONED EARTH EMBANKMENT WITH CREST ELEVATION OF 3,264 FEET
- 35-FOOT WIDE CREST 800 FEET LONG
- MAXIMUM DAM HEIGHT OF 240 FEET
- UNREGULATED SPILLWAY WITH A CAPACITY OF UP TO 8,120 CUBIC FEET PER SECOND



EXISTING FEATURES (CONTINUED)

INTAKE STRUCTURE

- PROTECTED BY A TRASHRACK AT THE UPSTREAM TOE OF THE DAM ON THE NORTH SIDE OF THE ORIGINAL RIVER CHANNEL
- A 20-FOOT HIGH HEXAGONAL INTAKE STRUCTURE AT ELEVATION 3,112 FEET
- A RESERVOIR LEVEL GAUGE PIPE IS EMBEDDED IN THE INTAKE STRUCTURE
- THE INTAKE SITS ON TOP OF A 9-FOOT DIAMETER, 15-FOOT HIGH VERTICAL SHAFT AND A 90 DEGREE ELBOW THAT TRANSITIONS TO THE 11- FOOT DIAMETER TUNNEL AT ELEVATION 3,080 FEET

EXISTING FEATURES (CONTINUED)

OUTLET WORKS

- 11-FOOT DIAMETER CIRCULAR TUNNEL UPSTREAM OF A GATE CHAMBER
- 11-FOOT MODIFIED HORSESHOE TUNNEL DOWNSTREAM OF THE GATE CHAMBER
- A STILLING BASIN SHARED WITH THE SPILLWAY
- THE CAPACITY OF THE OUTLET WORKS IS 3,300 CUBIC FEET PER SECOND



EXISTING FEATURES (CONTINUED)

STILLING BASIN

- SHARED WITH THE OUTLET WORKS AND SPILLWAY
- DESIGNED TO PROVIDE A HYDRAULIC JUMP
- DIVIDED INTO THREE LONGITUDINAL SECTIONS BY CONCRETE DIVIDER WALLS
- THE CENTER SECTION PROVIDES THE BAY FOR THE FLOW FROM THE OUTLET RELEASES



CURRENT DAM OPERATIONS

- CURRENT OPERATIONS ARE GOVERNED BY THE CROOKED RIVER COLLABORATIVE WATER SECURITY AND JOBS ACT OF 2014
 - ESTABLISHED THE UPSTREAM BOUNDARY OF THE WILD AND SCENIC RIVER REACH $\frac{1}{4}$ MILE BELOW THE CENTER CREST OF THE DAM
 - SPECIFIES THAT HYDROPOWER DEVELOPMENT SHALL NOT IMPEDE THE FREE FLOWING NATURE OF THE RIVER BELOW THE DAM
 - REQUIRES ANY HYDROPOWER DEVELOPMENT TO ANALYZE PROJECT IMPACTS IN THE $\frac{1}{4}$ MILE REACH BELOW THE DAM.

CURRENT DAM OPERATIONS

- BOWMAN DAM RELEASES WATER TO MEET DOWNSTREAM WATER RIGHTS AND IRRIGATION DEMANDS
- A MINIMUM INSTREAM FLOW IS PROVIDED TO MAINTAIN AQUATIC RESOURCES
- RELEASES ARE ESTABLISHED BY THE ACT AND TO MEET WATER DELIVERY OBLIGATIONS

PROPOSED PROJECT FEATURES

- RESTORE THE ACCESS ROAD LOCATED AT THE SOUTHERN END OF THE DAM
- INSTALL A VALVE CHAMBER
- INSTALL A 10-FOOT DIAMETER PENSTOCK
- POWERHOUSE CONTAINING A 2 MW UNIT AND A 1 MW UNIT LOCATED ON THE SOUTH SIDE OF THE SPILLWAY
- ENERGY DISSIPATION VALVE OR VALVES
- CONNECTION TO THE EXISTING CEC CIRCUIT WITH A DISTRIBUTION TAP

PROJECT OPERATIONS

- THE PROJECT WILL OPERATE AS A RUN-OF-RELEASE PROJECT
- THIS MEANS THE PROJECT WILL NOT CONTROL RESERVOIR LEVELS OR DAM RELEASE RATES

NEED FOR POWER

- CROOK COUNTY ECONOMIC GROWTH IS BASED ON TECH INDUSTRY
- GROWTH HAS INCREASED THE DEMAND FOR CLEAN RENEWABLE ENERGY
- THE PROJECT WOULD PROVIDE APPROXIMATELY 15 GWH ANNUALLY OF CLEAN RENEWABLE ENERGY

AFFECTED RESOURCES

- **GEOLOGY AND SOILS**
- **WATER QUANTITY**
- **WATER QUALITY**
- **FISHERY RESOURCES**
- **VEGETATION COVER**
- **WILDLIFE RESOURCES**
- **THREATENED AND ENDANGERED SPECIES**
- **RECREATION**
- **HISTORIC AND ARCHAEOLOGICAL RESOURCES**
- **VISUAL AND AESTHETIC RESOURCES**
- **SOCIOECONOMIC RESOURCES**

IDENTIFIED RESOURCE ISSUES

- EROSION AND SEDIMENTATION
- TOTAL DISSOLVED GASES IN CROOKED RIVER BELOW BOWMAN DAM
- INTRODUCTION ON NON-NATIVE INVASIVE PLANTS
- TRAFFIC CONTROLS DURING CONSTRUCTION

IDENTIFIED NON-PROJECT ISSUES

- FISH PASSAGE AT BOWMAN DAM
- FLOW RELEASES FROM BOWMAN DAM
- TOTAL DISSOLVED GASES IN CROOKED RIVER BELOW BOWMAN DAM
- STEELHEAD, CHINOOK SALMON, AND BULL TROUT IN CROOKED RIVER

PLANNED PROJECT SCHEDULE

- COMMENTS ON PAD DUE 6/3/2019
- IDENTIFY AND DESCRIBE NEEDED STUDIES (USE TEMPLATE PROVIDED ON WEBSITE) 6/3/2019
- RESOLVE DIFFERENCES REGARDING STUDIES BETWEEN 6/3/2019 AND 7/15/2019
- IMPLEMENT STUDIES APRIL 1, 2019 TO 8/1/2020
- DRAFT APPLICATION BY 4/1/2021
- FINAL APPLICATION BY 12/1/2021

REQUESTS FOR STUDIES

REQUESTED STUDY PLANS SHOULD ADDRESS THE CRITERIA OUTLINED IN CFR 18 § 5.9(b)

- 18 CFR §5.9(b)(1): DESCRIBE THE GOALS AND OBJECTIVES OF EACH STUDY PROPOSAL AND THE INFORMATION TO BE OBTAINED;
- 18 CFR §5.9(b)(2): EXPLAIN THE RELEVANT RESOURCE MANAGEMENT GOALS OF THE AGENCY OR INDIAN TRIBE WITH JURISDICTION OVER THE RESOURCE TO BE STUDIED;
- 18 CFR §5.9(b)(3): IF THE REQUESTER IS NOT A RESOURCES AGENCY, EXPLAIN ANY RELEVANT PUBLIC INTEREST CONSIDERATIONS IN REGARD TO THE PROPOSED STUDY;
- 18 CFR §5.9(b)(4): DESCRIBE THE EXISTING INFORMATION CONCERNING THE SUBJECT OF THE STUDY PROPOSAL, AND THE NEED FOR ADDITIONAL INFORMATION;

REQUESTS FOR STUDIES

- *18 CFR §5.9(b)(5): EXPLAIN ANY NEXUS BETWEEN THE PROJECT OPERATIONS AND EFFECTS (DIRECT, INDIRECT, AND/OR CUMULATIVE) ON THE RESOURCE TO BE STUDIED, AND HOW THE STUDY RESULTS WOULD INFORM THE DEVELOPMENT OF LICENSE REQUIREMENTS.*
- *18 CFR §5.9(b)(6): EXPLAIN HOW ANY PROPOSED STUDY METHODOLOGY (INCLUDE ANY PREFERRED DATA COLLECTION AND ANALYSIS TECHNIQUES, OR OBJECTIVELY QUANTIFIED INFORMATION, AND A SCHEDULE INCLUDING APPROPRIATE FIELD SEASON(S) AND THE DURATION) IS CONSISTENT WITH GENERALLY ACCEPTED PRACTICE IN THE SCIENTIFIC COMMUNITY OR, AS APPROPRIATE, CONSIDERS RELEVANT TRIBAL VALUES AND KNOWLEDGE; AND*
- *18 CFR §5.9(b)(7): DESCRIBE CONSIDERATIONS OF LEVEL OF EFFORT AND COST, AS APPLICABLE, AND WHY ANY PROPOSED ALTERNATIVE STUDIES WOULD NOT BE SUFFICIENT TO MEET THE STATED INFORMATION NEEDS.*

COMMUNICATIONS

- BRUCE SCANLON, MANAGER, OCHOCO IRRIGATION DISTRICT, (bruceoid@crestviewcable.com)
- PROJECT WEBSITE: <https://www.cityofprineville.com/publicworks>
- FERC E-LIBRARY: (ferc.gov) (Docket P-14791)
- SUBSCRIPTION TO FERC LIBRARY: (Docket P-14791)