## **Exhibit A – General Information**

#### Background:

PSE currently operates a 6" HP pipeline at 250 psig installed along the northern and eastern edges of Lake Tapps near Sumner, Washington. This pipeline feeds Bonney Lake and surrounding communities south of the lake. Actual winter pressures and system modeling show that present demand in the area will require that we reinforce the existing HP system. This HP reinforcement is required in order to maintain reliability to our current customers and to future significant housing developments scheduled in the area over the next 10 to 20 years. Installation of a new 12" HP pipeline that generally parallels the existing 6" will help to account for the current and future load growth, strengthening the HP system in this portion of our service territory.

#### **Project Description:**

The attached map pictured in Exhibit B illustrates the current route proposal for a new 12" steel reinforcement pipeline, as well as the location for a future gate station intended to serve subsequent pipeline phases. The project team explored multiple options for the 12" reinforcement and made a decision to construct a 1.75 mile route along Edwards Rd from 190<sup>th</sup> Ave E to 210<sup>th</sup> Ave E.

- <u>This project</u>: The new 12" steel pipeline will begin by tying into the existing 6" HP pipeline at the intersection of 190<sup>th</sup> Ave E and Edwards Rd. The pipeline will travel east and south along Edwards Rd to 210 Ave NE in Lake Tapps where it will tie back in with the 6" pipeline. This new pipeline will be designed, constructed, and tested for an MAOP of 500psig. Initially the line will operate along with the 6" at no more than 250 psig.
- <u>Subsequent Phases</u>: In the future, as growth in this area increases and the system requires reinforcement, additional phases will be completed. Eventually, the long range plan is to add additional 12" HP phases paralleling the existing 6" HP pipeline and install a gate station and limit station as needed.

#### Scope of this Request:

The scope of this request is to operate the new 12" pipeline at 500 psig. The new pipeline will begin by tying into an existing 6" pipeline at the intersection of 190<sup>th</sup> Ave E and Edwards Rd in Lake Tapps, running south and east along Edwards Road in excess of 1.75 miles to where it meets 210<sup>th</sup> Ave NE and ties back into the 6" pipeline.

#### MAOP:

The newly installed Bonney Lake HP main will be designed, constructed, and tested to account for an MAOP of 500 psig. Initially, the main will be operated at 250 psig. Eventually, a future gate station and limiting station will be installed. At that time, the system will undergo a pressure increase procedure to 500 psig.

#### **Pipe and Fitting Specifications:**

The proposed pipeline will be constructed from 12" x 0.312" API 5L-X52 steel pipe for the bulk of the route. There are three locations that may require directional drilling and these locations will utilize 12" x 0.312" API5L-X52 steel pipe with an abrasion resistant overlay (ARO) coating to minimize the potential for damage. Note that PSE plans to deplete its stock of the ARO coated pipe with this job, so there will be areas outside of the drill location that will use the ARO coated pipe. The pipe and fitting specifications with the corresponding percentage of specified minimum yield strength at MAOP and initial operating pressure for the supply main are shown in the table below.

Material Specification	% SMYS @ MAOP (500 psig)	% SMYS @ Normal Operating Pressure (250 psig)
12" x 0.312" w.t. API 5L-X52 wrapped pipe	19.65	9.83
12" x 0.375" w.t. WPHY-56 fittings ("piggable")	16.35	8.18

#### Damage Prevention:

Pipeline markers will be installed and monitored in accordance with PSE Gas Operating Standard 2525.2500 and 2575.1100. PSE is an active member in the local "One-Call" system and works closely with the local municipalities and permitting agencies prior to any construction starting in the vicinity of its facilities. Additionally, it is PSE's standard practice to monitor construction work taking place in the vicinity of its high pressure systems.

#### **Construction Details:**

All construction shall conform to Class 4 standards.

<u>Cover:</u> All buried mains will be installed with a minimum of 3 feet of cover; 4 feet of cover will be achieved whenever possible.

<u>Backfill:</u> All shading and bedding material will be free of sharp rocks with a maximum particle size of ½" unless an approved rock shield material is utilized in the installation of the pipeline. When rock shield material is used, the backfill material shall be free from sharp objects and large clods of foreign soil that could damage the pipeline.

<u>Clearance</u>: At least 12 inches of separation will be maintained between the proposed pipeline and other underground facilities. If 12 inches of separation is not possible or feasible, the pipeline will be protected from damage caused by proximity to the other structure in accordance with Gas Operating Standard 2525.1700, "Excavation, Underground Clearance, Cover, and Restoration."

#### **Cathodic Protection:**

The corrosion control program will be designed and installed in accordance with the requirements of section 2600 of the PSE Gas Operating Standards. The following standards are applicable to the new supply main:

2600.1000	Cathodic Protection Requirements
2600.1100	Coatings for Pipe and Fittings
2600.1200	Test Station Requirements
2600.1300	Designing and Installing Cathodic Protection Systems
2600.1400	Electrical Isolation and Grounding Requirements
2600.1500	Monitoring Cathodic Protection
2600.1700	Monitoring and Remedial Measures for Internal Corrosion
2600.1900	Remedial Measures for Corrosion Control
2600.2000	Galvanic Anode Installation Requirements

#### **Coating:**

As outlined in PSE Gas Operating Standard 2600.1100, an external protective coating shall be applied to the pipeline. Any field joints and fittings not supplied with protective coatings will have field-applied coating added. All above-ground piping will be painted in accordance with written specifications. Field-applied coatings will meet the requirements of Gas Operating Standard 2600.1100, "Coatings for Pipe and Fittings."

At least one (potentially three depending on site conditions at time of installation) of the sections of the proposed pipe will be installed via directional drill. That pipe will have an abrasion resistant overlay (ARO) coating applied to it per Gas Operating Standard 2600.1100, "Coatings for Pipe and Fittings."

All coating specifications will be included in the notice of proposed construction.

#### Testing:

The medium used to test the pipeline will be water and the test pressure will be a minimum of 750 psig in order to substantiate an MAOP of at least 500 psig. Elevation changes along the proposed pipeline route amount to approximately sixty (60) feet. Therefore, the test pressure at the lowest elevation will be at least 776 psig in order to ensure that 750 psig is obtained at the highest point along the route. All testing will be done in accordance with PSE Gas Operating Standard 2525.3300, "Testing Requirements," and as per the Gas Engineering approved procedure.

#### Welding:

All welding and weld inspections will conform to the following PSE Gas Operating Standards:

2525.2700	Installation Requirements for Steel Pipe and Fittings
2700.1100	Welder Qualification Requirements
2700.1200	Weld Inspection and Repair
2700.1300	Weld Inspector Qualification Requirements
2700.1400	Welder Qualification Test Requirements

In addition, PSE has a comprehensive set of welding procedures that are included in the Gas Standards Welding Manual. All welding to be done on this project will be governed by these procedures. If any new procedures are required for the welding done on this project, they will be qualified in accordance with the PSE Gas Operating Standards and added to the Gas Field Procedures Manual.

Note that a minimum of 90 percent of the welds will be inspected via x-ray.

#### Leakage Surveys:

Leakage Surveys will be conducted in accordance with PSE Gas Operating Standard 2625.1100, "Leakage Survey Program." This Operating Standard requires leak surveys to be conducted every year for supply mains – supply mains are all high pressure mains other than transmission mains. This stipulation provides more frequent surveying than is required by state and federal regulations.

### **Exhibit B – Route and Facilities Map**

## Bonney Lake HP Supply Main - Route Map



# Exhibit C – Structure List

	ЕХНІВІТ С								
PUGET SOUND ENERGY - Bonney Lake HP #1 Pressure Authorization Request									
	Distance (feet) of		Structures	in Proximity (100 ) of Proposed 12 1					
Count	Structure From Gas	Address	Land Use	Land Owner	Use Code	NOTES			
1	66'	19115 Edwards Rd E	Commercial	19040 2nd ST Misty Pond LLC	1500 - MH PARK	Mobile Home Park - Building 1			
2	68'	19115 Edwards Rd E	Commercial	19040 2nd ST Misty Pond LLC	1500 - MH PARK	Mobile Home Park - Shed			
3	61'	19115 Edwards Rd E	Commercial	309 191st Ave Misty Pond LLC	1500 - MH PARK	Mobile Home Park - Building 2			
4	108'	19115 Edwards Rd E	Commercial	19008 2nd ST E Misty Pond LLC	1500 - MH PARK	Mobile Home Park - Building 3			
5	81'	19127 Edwards Rd E	Residential	Swepston Aaron A & Kerle M	9400 - CU OPEN SP	Makila Hawa Davis, Daibian 4			
5	63	408XXX 195th Ave E	Commercial		1500 - MH PARK	Mahila Hama Dark - Building 1			
	60	407XXX 195th AVE E	Commercial	Tibeau Barbara L	1500 - MH PARK	Mobile Home Park - Building 2			
0	62 52'	19612 Still St Ct E	Posidontial	Durbam Anna M		INIODILE FIOTTE Park - Building 3			
10	90'	405 196th Ave Ct E	Residential	Schermerhorn Pose M & Daniel L	1101 - SINGLE FAM	Building 1			
11	53'	405 196th Ave Ct E	Residential	Schermerhorn Rose M & Daniel L	1101 - SINGLE FAM	Building 2			
12	78'	19706 Edwards Rd E	Residential	Koenen Gerald D	1101 - SINGLE FAM	Building 1 Yellow house			
13	84'	19706 Edwards Rd E	Residential	Koenen Gerald D	1101 - SINGLE FAM	Building 2 - Yellow Garage			
14	53'	19710 Edwards Rd E	Residential	McCrea Mary E	1155 - MH TITLE ELI M	j			
15	52'	19712 Edwards Rd E	Residential	McHenry Clara R	1152 - MFG HOME				
16	83'	20012 3rd St E	Residential	Karki Gregory T	1155 - MH TITLE ELI M	Building 1 House			
17	102	20012 3rd St E	Residential	Karki Gregory T	1155 - MH TITLE ELI M	Building 2 - Garage			
18	81'	20014 3rd St E	Residential	Howie James A	1101 - SINGLE FAM	Building 1			
19	76'	20014 3rd St E House	Residential	Howie James A	1101 - SINGLE FAM	Building 2			
20	95'	20120 3rd St E	Residential	Decker Lawrence D Jr	1155 - MH TITLE ELI M	Building 1			
21	37'	20120 3rd St E	Residential	Decker Lawrence D Jr	1155 - MH TITLE ELI M	Building 2 (Shed)			
22	111'	20120 3rd St E	Residential	Decker Lawrence D Jr	1155 - MH TITLE ELI M	Building 3			
23	79'	303 202nd Ave E	Residential	Kingsley David O	1155 - MH TITLE ELI M	Garage, the house is over 100' away			
24	73'	405 202nd Ave E	Residential	Waits Larry D & Jackalynn E	1101 - SINGLE FAM	Building 2 - Container			
25	est 70'	405 202nd Ave E	Residential	Waits Larry D & Jackalynn E	1101 - SINGLE FAM	Building 3 - Container			
26	est 62'	405 202nd Ave E	Residential	Waits Larry D & Jackalynn E	1101 - SINGLE FAM	Building 4 - Container			
21	88	20308 3rd St E	Residential	Hansen Gary K Itee	1152 - IVIEG HOIVIE	Building 1			
28	92	20308 3rd St E	Residential	Ballard Lawry E & Therees A	1152 - IVIEG HUIVIE	Building 2			
29	90	415 20410 Sru SLE	Residential	Battalio Pohert P	1100 - MIT TITLE ELI M	Building 1			
31	105	415 204th Ave E	Residential	Battalio Robert R	1101 - SINGLE FAM	Building 2			
32	85'	20412 3rd St F	Residential	Brassfield Carolyn I	1155 - MH TITLE ELLM	Building 1 (Shed)			
33	89'	20412 3rd St E	Residential	Brassfield Carolyn J	1155 - MH TITLE ELIM	Building 2			
34	97'	20412 3rd St E	Residential	Brassfield Carolyn J	1155 - MH TITLE ELI M	Building 3			
35	99'	406 205th Ave Ct E	Residential	Myers Dianne J	1155 - MH TITLE ELI M				
36	76'	20707 Edwards Rd E	Residential	Callas Daniel B & Kristi L	1101 - SINGLE FAM	Building 1 (Shed)			
37	87'	526 208th Ave E	Residential	Lloyd Kathy J	1101 - SINGLE FAM	Building 1			
38	83'	526 208th Ave E	Residential	Lloyd Kathy J	1101 - SINGLE FAM	Building 2			
39	85'	20714 Edwards Rd E	Residential	Cummins Robin A	1155 - MH TITLE ELI M	Building 1			
40	100'	20714 Edwards Rd E	Residential	Cummins Robin A	1155 - MH TITLE ELI M	Building 2			
41	96'	527 208th Ave E	Residential	King David C & Pamela J	1101 - SINGLE FAM	V			
42	93'	20809 Edwards Rd E	Residential	Bell Robert W & Kathy J	1101 - SINGLE FAM	Building 1			
43	82'	20809 Edwards Rd E	Residential	Bell Robert W & Kathy J	1101 - SINGLE FAM	Building 2 (Shed)			
44	87'	20810 Edwards Rd E	Residential	Pollard Leonard L & Betty Jo Ttee	1101 - SINGLE FAM				
45	63'	721 209th Ave Ct E	Residential	Brant Gregory S & Kim	1101 - SINGLE FAM	Building 1 (Garage)			
46	63	721 209th AVe CTE	Residential	Brant Gregory S & Kim	1101 - SINGLE FAM	Duilding 1			
4/	69.	20904 Edwards Rd E	Residential	Lemay Julie M	1101 - SINGLE FAM	Duilding 1			
48	114	21009 Edwards Rd E	Residential	Platt Crystal E	1155 - MH TITLE ELIM	Building 2			
43	45'	21009 Edwards Ru E	Residential	Platt Crystal E		Building 3 (Shed)			
50	40 60'	21009 Edwards Ru E	Residential	Platt Crystal E		Building 4 (Out Buildings)			
52	97'	21013 Edwards Rd F	Residential	Winans William M	1101 - SINGLE FAM	Building 1			
53	75'	21013 Edwards Rd F	Residential	Winans William M	1101 - SINGLE FAM	Building 2 (Pump House)			
54	88'	1410 210th Ave E	Residential	Spencer Theodore H	1101 - SINGLE FAM	Note: Across 210th at southeastern end			