

# Memorandum

To: Todd Heidgerken, General Manager Clackamas River Water Carol Bryck, Finance Director Clackamas River Water Wyatt Parno, Finance Director City of Oregon City Ryan Bredehoeft, Sr. Management Analyst City of Oregon City

From: Courtney Black, FCS GROUP Angie Sanchez, FCS GROUP

#### **RE:** Wholesale Wheeling Rates Analysis

# INTRODUCTION

Financial Consulting Solutions Group was engaged by the City of Oregon City and Clackamas River Water (CRW) to develop wholesale wheeling rates for three CRW customer groups. The service arrangements vary, including wheeling of water, pumping and wheeling of water, and wheeling directly to retail-level service meters. Water supply is sourced from the South Fork Water Board and wheeled through the City's system to CRW customers.

This study included review of the service arrangements identified in three Cooperative Intergovernmental Agreements (IGAs) and shared ownership of eligible assets under the Memorandum of Understanding - HOPP Area Water Service Plan (MOU). Rates were developed based on eligible infrastructure and allocations of service capacity.

Under traditional industry standard approaches to rate-making, wholesale customers are often charged under a "utility basis" of rate-making methodology. This approach recovers applicable operating and maintenance costs, plus a capital cost recovery based on the capital investment committed to the wholesale customer's service. The "capital cost recovery" includes two components: depreciation of fixed assets and a rate of return on the net investment or book value of those wholesale serving assets. The utility basis approach was used to develop the requested rates for the identified wholesale service areas.

Rates were developed separately for three service groups; (1) master meters 8 & 9 in the South End, (2) master meters 11, 12, & 13 in the Holcomb/Outlook/Park Place (HOPP) service area, and non-master metered customers that are CRW retail customers near Oregon City service boundaries, receiving wheeling, pumping and distribution to the service location.

# CAPITAL COST RECOVERY COMPONENTS

The capital cost recovery includes two components; 1) rate of return on assets serving the customer and 2) annual depreciation on those assets.

Rate of return is calculated based on book value of the eligible and allocated assets that serve the wholesale customer groups. Depreciation of those assets is included in the cost basis of the rate calculations. Asset values are based on records through FY 2015/16.

# **Eligible Assets**

The City's consulting engineer provided an inventory of wholesale-eligible assets for each service group based on the pressure zone and the identified assets within the pressure zone that would serve the

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customer group. Assets serving master meters 11, 12 and 13 in Park Place were identified and evaluated to determine which assets included shared CRW ownership for exclusion from allocation.

Asset allocations were evaluated by function and are summarized in the sections that follow. Assets that were excluded based on CRW funding are summarized in **Exhibit 1**.

# Exhibit 1: CRW Joint Funding & Exclusions

		Estim	nate	9		Actua	ls	
Assets Cost Deductions	OC Funded Shares			CRW		HOPP Bond	Book Value	Notes:
Hunter Ave PS & MM	\$	318,000	\$	282,000	\$	384,443	277,345	Joint funded
Holcomb Rd Transmission Piping and Forsythe Road MM		560,000		440,000		677,007	488,405	Joint funded
Barlow Crest Res and Lower Level CRW MM		1,305,000		195,000		1,577,667	1,138,159	Joint funded
Barlow Crest PS and Upper Level CRW MM				550,000		-	-	CRW funded
SFWB Hunter Ave Transmission Piping improvements		25,000				30,224	21,804	Non-benefitting, excluded
OC HOPP Pressure zone 1 & 2 Intertie Facilities		75,000				90,671	65,411	Non-benefitting, excluded
Total		2,283,000		1,467,000		2,760,011	1,991,124	Total
South End Water Line	\$	271,540	\$	378,012	\$	271,540	203,655	Joint funded

# Allocation of Eligible Assets

The 2012 Water System Plan - Table 6-1 provided demand statistics for the City's system, including by pressure zone and individual master meters. These demand statistics were used to allocate facility costs. Detailed demand statistics are provided in Appendix A.

# Pumping

Pumping infrastructure was allocated based on Maximum Day Demand shares. **Exhibit 2** shows the allocation of eligible pump station assets to each of the three service areas.

#### **Exhibit 2: Pumping Infrastructure Allocations**

MM 8 & 9	Pump Capacity (gpm) [a]	Firm Capacity (gpm)	MM 8 & 9 MDD (gpm) [b]	Capacity share	Asset Cost	Book Value	Depreciation	Allocated Cost	Allocated Book Value	Allocated Depreciation
Mountain View Pump Station	12,000	8,000	208	2.6%	\$90,830	\$54,498	\$1,514	\$ 2,356	\$ 1,414	\$ 39

[a] WSP Table 6-3 [b] WSP Table 6-1

#### Joint-funded - No allocation

MM 11, 12, 13	Pump Capacity (gpm) [a]	Firm Capacity (gpm)	MM 11, 12 , 13 MDD (gpm) [b]	Capacity share	Asset Cost [d]	Book Value	Depreciation	Allocated Cost	Allocated Book Value	Allocated Depreciation
Hunter Avenue Pump Station	2,700	1,800	544	30.2%	384,443	277,345	253	n/a	n/a	n/a
Barlow Crest Pump Station [c]										

[a] WSP Table 6-3

[b] WSP Table 6-1 [c] 100% CRW Funded

[d] Estimated from HOPP water bond project - Hunter Ave share in MOU

Non-Master Metered	Pump Capacity (gpm) [a]	Firm Capacity (gpm)	NMM MDD (gpm) [b]	Capacity share	Asset Cost	Book Value	Depreciation	Allocated Cost	Allocated Book Value	Allocated Depreciation
Mountain View	12,000	8,000								
Hunter Avenue	2,700	1.800								
Fairway Downs	1.550	1.050								
Livesay Road	30	0								
Total	16,280	10,850	130	) 1.2%	117,038	57,680	1,695	\$ 1,407	\$ 694	\$ 20
	-,	-,			,		,			

[a] WSP Table 6-3

[b] Based on OC averages for single family residential class

Master meters 8 & 9 are served by the Mountain View Pump Station. Their combined MDD share represents 2.6% of that pump station's firm capacity. The allocated share is applied to the book value and depreciation of the eligible assets.



Master Meters 11, 12, and 13 are served by the Hunter Avenue and Barlow Crest pump stations. The Barlow Crest pump station was fully funded by CRW, and the Hunter Avenue pump station was jointly-funded per the MOU. Joint-funded assets are assumed to have been allocated based on projected capacity demand shares between the City and CRW. The portion of the asset that CRW uses is assumed to be owned by CRW and not eligible for allocation and City cost recovery. The CRW demand share is assumed to be fully met by the CRW shared capacity investment, so no City-funded portion is allocated to the master meter group.

Non-master metered customers do not reside together in one defined service area, but rather are dispersed within the City's service area. Given the varied locations, and their level of service that includes distribution up to the service location, there are no specific asset exclusions based on location, though the cost basis has been reduced to recognize CRW joint funding of system assets. Non-master metered customers receive an allocation of system-wide pumping, net of the Hunter Avenue Pump Station joint-funded costs, based on their demand share of system-wide pumping capacity. Applying the City's average residential demand statistics to the number of non-master metered customers, the non-master metered group's share of system-wide pump station firm capacity represents 1.2%.

### Storage

Storage infrastructure was allocated based on reservoir storage demand by pressure zone, then further allocated to wholesale service groups based on their share of demand in the pressure zone. **Exhibit 3** shows the allocation of eligible storage assets to each of the three service areas.

### **Exhibit 3: Storage Infrastructure Allocations**

#### Master Meters 8 & 9

Reservoir Group (MV No. 2, Boynton, Henrici)	Equalization	Emergency	Fire Flow	Surplus/Deficit	Total
Asset Book Value					\$ 4,649,035
Storage Capacity MG [a]	1.58	6.31	0.72	5.89	14.50
Allocable Zones (Upper) [a]	1.54	6.15	0.70	0.00	8.39
Upper Zone Share of Storage Group					57.9%
Master Meters Share of Zone Capacity					4.6%
Book Value by Function	\$ 22,908	\$ 91,483	\$ 10,439	\$-	\$ 124,830
Depreciation	\$ 457	\$ 1,826	\$ 208	\$-	\$ 2,491

[a] WSP Table 6-2

#### Master Meters 11, 12 & 13

#### Joint-funded - No allocation

Barlow Crest (1.75 MG) 1999	Equalization	Emergency	Fire Flow	Surplus/Deficit	Total
Asset Book Value					\$1,138,159
Storage Capacity MG [a]	0.19	0.77	0.72	0.07	1.75
Allocable Zones [a]	0.06	0.24	0.23	0.00	0.53
Book Value by Function	n/a	n/a	n/a	n/a	n/a
Depreciation					n/a
[a] WSP Table 6-2					

#### **Non-Master Metered**

Total System Storage	E	qualization	Emergency	Fire Flow	Surplus/Deficit	Total
Reservoir Group (Boynton, Henrici, MV No. 2)		1.58	6.31	0.72	5.89	14.50
Mountainview No. 1 (2.0 MG) 2007		0.37	1.49	1.10	(0.97)	1.99
Barlow Crest (1.75 MG) 1999		0.19	0.77	0.72	0.07	1.75
		2.14	8.57	2.54	5.00	18.25
Asset Book Value	\$	1,093,849	\$ 4,380,508	\$ 1,298,307	\$ 2,554,700	\$ 9,327,364
Planning Criteria		25% of MDD	MDD	3,000 gpm 4 hrs		
Allocation Basis		MDD	MDD	ERUs		
Allocation Share		1.9%	1.9%	2.0%		
Book Value by Function	\$	21,275	\$ 85,201	\$ 25,418		\$ 131,894
Depreciation	\$	279	\$ 1,118	\$ 331		\$ 2,381

Master meters 8 & 9 are served by the Mountain View, Boynton, and Henrici reservoirs. The Upper Zone share of reservoir capacity represents 57.9%, and the master meters 8 & 9 share of the Upper Zone capacity represents 4.6% based on MDD gpm demand statistics. The allocated book value is \$124,830 and depreciation, \$2,491.

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The Barlow Crest reservoir that serves master meters 11, 12, and 13 was jointly-funded by CRW, so that CRW owns the capacity that serves their wholesale customer group and there is no allocation.

An allocation of system-wide storage to the non-master metered customers is based on the planning criteria for each storage function. The total allocated book value is \$131,894 and depreciation of \$2,381.

#### Transmission & Distribution

The City and the City's consulting engineer evaluated transmission service for each customer group. Master meters 8 & 9 receive water from the Upper Zone. The City's consulting engineer performed a hydraulic analysis to determine the pipe inventory that serves the transmission function in the Upper Zone, with results summarized in a June 2018 Water Wheeling Charge Update memo. The allocation of Upper Zone pipe to the transmission function is summarized in **Exhibit 4**.

Exhibit 4:	Upper	Zone	Transmission	Line Allocation

**Upper Zone** Only Looped Pipes (If) Include per Total If 6.01.18 Memo 0% 1 0 2 976 0% 3 232 0% Diameter (in) 4 14,639 0% 6 88,988 0% 8 238,920 34% 9 156 100% 10 17,543 100% 12 78.439 100% 16.329 14 100% 100% 16 32.949 489,171 226,649 Transmission only 46.3% If transmission

The transmission-only total pipe of 226,649 lf reflects inclusion of 9" diameter and larger pipe, and 34% of 8" diameter pipe. The share of Upper Zone pipe allocated to transmission is 46%,

Master meters 11, 12, and 13 are served by a 12 in transmission line that has limited reliance on other transmission lines in the Park Place Zone, resulting in the transmission service level being based on eligible 12 inch and larger pipe size. The HOPP and Holcomb Road lines were identified as serving this master meter group. HOPP and Holcomb Road were joint-funded and are not allocable.

Non-master metered customers receive all transmission and distribution service functional costs, net of CRW shared funding.

Since asset records do not track cost to the individual pipe, the total original cost of transmission and distribution was allocated across the pipe inventory based on the replacement cost of the total lf of pipe at each size. Replacement cost per lf at each size was applied to lf of pipe inventory for the benefiting zones. Only pipe within the eligible transmission size for each group were included.

System-wide T&D asset costs were adjusted to exclude the portion of system-wide replacement cost that represented distribution lines. Then system-wide transmission asset costs were allocated to the service



areas based on shares of transmission lines at replacement cost. Exhibit 5 shows the T&D adjusted cost basis.

### **Exhibit 5: Transmission and Distribution Allocable Costs**

Allocable Transmission Cost	
System-wide T&D assets - original cost	10,385,683
Joint-funded and excluded assets	(1,069,440)
	9,316,243
System-wide transmission share	62.3%
Allocable transmission cost	5,800,302

The eligible \$5.8 million of original cost T&D assets are allocated to the Upper Zone and Park Place as summarized in **Exhibit 6**.

### **Exhibit 6: Transmission Cost Allocation**

Service Area	Est. Repl. Cost -		Share of	Original Cost		Book Value			Depreciation	
Schuce Area		Transm.	<b>Replacement Cost</b>		Shares	Dook value			Depresident	
System-wide	\$	40,002,712	42.4%	\$	2,457,656	\$	1,654,736	\$	52,052	
Upper Zone		54,007,496	57.2%		3,318,072		2,234,052		70,275	
Park Place Int.		399,973	0.4%		24,573		16,545		520	
Total System	\$	94,410,181	100.0%	\$	5,800,302		3,905,333	\$	122,847	

After applying replacement cost per lineal foot to the pipe inventory data, the Upper Zone transmission replacement cost represents 57.2% of the system-wide cost, and Park Place 0.4%. The smaller Park Place share is due to the exclusion of joint-funded assets.

In applying the replacement cost distribution to the \$5.8 million transmission and distribution asset total, the resulting Upper Zone share is \$3.3 million and Park Place \$24,573. The related book value and depreciation costs used in rate-setting are then allocated to the master meter groups based on their demand within the zone. Allocations of capital costs for the return on rate base and depreciation rate components are summarized by wholesale customer group in **Exhibit 7 Summary of Capital Cost Recovery**.

# **Exhibit 7: Summary of Capital Cost Recovery**

#### 7a Master Meters 8 & 9, Upper Zone

									A	llocable to	MN	8&9
Asset Category	E	ook Value Allocable	De j A	preciation llocable	Basis for Allocation	Allocable Basis	MM 8 & 9 Basis	% Allocated	Bool	Book Value		reciation
Pumping [1]	\$	54,498	\$	1,514	MDD gpm / Firm Capacity	8,000 gpm	208 gpm	2.6%	\$	1,414	\$	39
Storage [2]		2,689,847		53,685	MG of Upper Zone Capacity	8.39 MG	0.39 MG	4.6%		124,830		2,491
Transmission/Distribution [3]		2,234,052		70,275	Demand Share of Upper Zone	4,482 gpm	208 gpm	4.6%		103,678		3,261
Meters and Services [4]		-		-	direct allocation	2 meters	2 meters	100.0%		-		-
SCADA		41,344		9,720	System-wide ERUs	16,856 ERUs	431 ERUs	2.6%		1,058		249
General		136,553		16,502	System-wide ERUs	16,856 ERUs	431 ERUs	2.6%		3,493		422
Other Water Assets		-		-	Non-allocable	n/a	n/a	n/a		n/a		n/a
Total	\$	5,156,294	\$	151,696					\$	234,472	\$	6,463

[1] Mountain View Pump Station

[2] Includes Boynton, Henrici and Mountainview No. 2 - Upper zone share of functional storage categories (8.39 MG of 14.5 MG) cost basis, allocated to MM demand shares of zone.
[3] Upper Zone share based on est, replacement cost as share of total system net of South End line cost, MM 8 & 9 share based on MDD gpm share of total Upper Zone

[4] No meter cost data available at study time



### 7b Master Meters 11, 12 & 13, Park Place

							Allocable to I	VIM 11, 12, 13
	Book Value	Depreciation	Basis for Allocation	Allocable	MM 11, 12,	% Allocated	Book Value	Depreciation
Asset Category	Allocable	Allocable	Basis for Anotation	Basis	13 Basis	76 Anocateu	BOOK Value	Depreciation
Pumping [1]			Joint-funded					
Storage [2]			Joint-funded					
Transmission/Distribution [3]	16,545	520	Demand Share of Park Pl. Zone	708 gpm	544 gpm	76.84%	12,713	400
Meters and Services			CRW-owned MMs					
SCADA	41,344	9,720	System-wide ERUs	16,856 ERUs	1,030 ERUs	6.11%	2,528	594
General	136,553	16,502	System-wide ERUs	16,856 ERUs	1,030 ERUs	6.11%	8,348	1,009
Other Water Assets	-	-	Non-allocable	n/a	n/a	n/a	n/a	n/a
Total	\$ 194,442	\$ 26,743					\$ 23,588	\$ 2,003

[1] CRW funded capacity in the Hunter Avenue PS and fully funded the Barlow Crest PS.

[2] CRW funded capacity in the Barlow Crest Reservoir.
[3] Park Place Zone share based on est. replacement cost as share of total system, MM 11, 12, 13 share based on MDD gpm share of total Park Place Zone.

#### 7c Non-Master Metered

The depreciation component of the cost basis is shown for each service area in the last column. Return on rate base requires the additional step of applying the rate of return to the allocated book value. Rate of return is based on recent values from the Bond Buyer Index for municipal bond rates and a 0.5% risk factor adjustment. Return on rate base is calculated as follows in **Exhibit 8 Return on Rate Base**.

#### Exhibit 8: Return on Rate Base

MM 8 & 9 Rate of Return	Amount		
Allocable Wholesale Assets	\$	234,472	
Cost of Capital		4.50%	
Return on Rate Base	\$	10,551	

MM 11, 12, 13 Rate of Return	Amount
Allocable Wholesale Assets	\$ 23,588
Cost of Capital	4.50%
Return on Rate Base	\$ 1,061

NMM Rate of Return	Amount
Allocable Wholesale Assets	\$ 303,916
Cost of Capital	 4.50%
Return on Rate Base	\$ 13,676



# OPERATING AND MAINTENANCE

The utility basis approach recovers eligible and allocated operating and maintenance (O&M) costs. The 2017 budget was allocated to wholesale-eligible costs and then further categorized into customer costs, operations – fixed, and operations – variable.

- Ineligible wholesale costs included water purchases, newspaper and legal ads, visa card discount and meters.
- Customer costs included supplies, postage and other office support items, and the customer service and finance overhead transfers.
- While most utility costs are fixed, allocation to the variable category included gas, electric and fuel.

### **Exhibit 9: Operations and Maintenance Allocation**

Asset Category	Total Budget 2017	Basis of Allocation	Total Units	MM 8 & 9 Units [3]	% Allocated	\$ Al to M	locable IM 8 & 9	MM 11, 12, 13 Units	% Allocated	\$ Allocab to MM 1	e Non-Maste I, Metered	r % Allocated	\$ A to	llocable NMM
Customer Costs [1]	\$ 698,231	# of Meters	9,807	2	0.020%	\$	142	3	0.031%	\$2	4	0.010%	\$	71
Operations Fixed	\$ 2,617,581	MDD	6,708	208	3.09%	\$	80,990	544	8.116%	\$ 212,4	3 13	1.945%	\$	50,912
Variable [2]	18,216	ADD	2,841	69	2.37%	L _	432	181	6.371%	1,1	51 5	1.998%		364
Primary Allocation of O&M	\$ 2,635,796					Ş	81,422			Ş 213,6	4		Ş	51,276
Transmission Service Share														
Factor							51.1%			16.	8%			n/a
Secondary Allocation of O&M						\$	41,586			\$ 35,9	3		\$	51,276

[1] Customer costs include Internal Service Charges for Customer Service and Finance, as well as office supplies, publications and subscription.

[2] Variable costs include items such as utilities and water purchases. Since wholesale customers will pay for water supply through the SFWB rate, purchased water is excluded.

[3] Transmission service share factor based on transmission pipe lines of 8" diameter and larger for MM 8 & 9, and 12" and larger for MM 11, 12, 13. NMM receive full service including distribution lines.

Customer costs are allocated based on number of meters, fixed costs are allocated based on maximum day demand and variable costs on average day demand. An additional step was taken to deduct a portion of O&M allocable to maintaining the distribution system. The transmission share of pipe inventory length was used to make a final adjustment to the O&M allocation to the wholesale customer groups. The transmission service share factor applied for master meters 8 & 9 is 51%, adjusting their allocation O&M cost of \$81,422 to \$41,586. Master meters 11, 12 and 13 are adjusted to 16.8% of their allocated total, reducing from \$213,614 to \$35,963. The non-master meter customers again, would not receive a



distribution system deduction, though the customer costs allocation recognizes individual customers are not billed, but rather one billing is managed for the customer group.

# TOTAL UTILITY BASIS COSTS

Total utility basis components are combined, resulting in the total cost for each wholesale customer group.

# Exhibit 10: Total Allocation and Wholesale Rate

#### 10a Master Meters 8 & 9

DESCRIPTION	FY 2016	RATE OF RETURN	WHOLESALE	Reference
Operating & Maintanance	\$ 41,586		\$ 41,586	Exhibit 9
Return on Rate Base	234,472	4.50%	10,551	Exhibit 8
Depreciation	6,463		6,463	Exhibit 7a
Total	\$ 282,521		\$ 58,600	
Annual ccf			53,868	
\$/ccf New			\$ 1.0878	
\$/ccf Existing			\$ 0.4031	
Increase (Decrease)			\$ 0.6847	

The allocated costs will be charged as a volumetric rate per hundred cubic foot (ccf). Total allocated costs spread over the annual use of 53,868 ccf results in \$1.0878 per ccf. CRW additionally pays the South Fork Water Board at a rate of \$0.9690 per ccf, for a total of \$2.0568 per ccf.

### 10b Master Meters 11, 12, 13

DESCRIPTION	FY 2016	RATE OF RETURN	WHOLESALE	Reference
Operating & Maintanance	\$ 35,963		\$ 35,963	Exhibit 9
Return on Rate Base	23,588	4.50%	1,061	Exhibit 8
Depreciation	2,003		2,003	Exhibit 7b
Total	\$ 61,554		\$ 39,027	
Annual ccf			128,739	
\$/ccf New			\$ 0.3031	
\$/ccf Existing			n/a	no rate
Increase (Decrease)			n/a	

Total allocated costs spread over the annual use of 128,739 ccf results in \$0.3031 per ccf. CRW additionally pays the South Fork Water Board at a rate of \$0.9690 per ccf, for a total of \$1.2721 per ccf.

### 10c Non-Master Metered

DESCRIPTION	FY 2016	RATE OF RETURN	WHOLESALE	Reference
Operating & Maintanance	\$ 51,276		\$ 51,276	Exhibit 9
Return on Rate Base	303,916	4.50%	13,676	Exhibit 8
Depreciation	7,923		7,923	Exhibit 7c
Total	\$ 363,114		\$ 72,875	
Annual ccf			39,651	
\$/ccf New			\$ 1.8379	
\$/ccf Existing			\$ 0.8932	
Increase (Decrease)			\$ 0.9447	

Total allocated costs spread over the annual use of 39,651 ccf results in \$1.8379 per ccf. In passing through the City's South Fork Water Board rate of \$0.9561 per ccf the total rate charged is \$2.7940.



#### **APPENDIX A**

#### **Customer Statistics**

Water Use (2015/2016 records)

Location	Total CCF	% Share
Oregon City	1,882,040	89.4%
Upper Zone MM 8,9	53,868	2.6%
Park Place Int. MM 11,12,13	128,739	6.1%
Non-Master Metered	39,651	1.9%
	2,104,298	100.0%

Max Day Demand (2012 WSP, 2008 data)

Location	gpm MDD	% Share
Oregon City	5,826	86.8%
Upper Zone MM 8,9	208	3.1%
Park Place Int. MM 11,12,13	544	8.1%
Non-Master Metered	130	1.9%
	6,708	100.0%

ERUs (Usage / SFR Average 2012 WSP, 2008 data)

Location		% Share
Oregon City	15,064	89.4%
Upper Zone MM 8,9	431	2.6%
Park Place Int. MM 11,12,13	1,030	6.1%
Non-Master Metered	330	2.0%
	16,856	100.0%

#### Demand Shares in Upper Zone

Location	MDD gpm	% Share
Upper Zone	4,274	95.4%
Master Meter 8	138	3.1%
Master Meter 9	70	1.6%
	4,482	100.0%

#### Services (2012 WSP, 2008 data)

Location	Total Accts	% Share
Oregon City	9,801	99.94%
Upper Zone MM 8,9	2	0.02%
Park Place Int. MM 11,12,13	3	0.03%
Non-Master Metered	1	0.01%
	9,807	100.0%

#### Average Day Demand (2012 WSP, 2008 data)

Location	gpm ADD	% Share
Oregon City	2,534	89.2%
Upper Zone MM 8,9	69	2.4%
Park Place Int. MM 11,12,13	181	6.4%
Non-Master Metered	57	2.0%
	2,841	100.0%

#### Demand Shares in Park Place Int. Zone

Location	MDD gpm	% Share
Park Place Int. Zone	164	23.2%
Master Meter 11	504	71.2%
Master Meter 12	15	2.1%
Master Meter 13	25	3.5%
	708	100.0%

