

Chelan PUD

Energy Resources Quarterly Board Update

November 3, 2014



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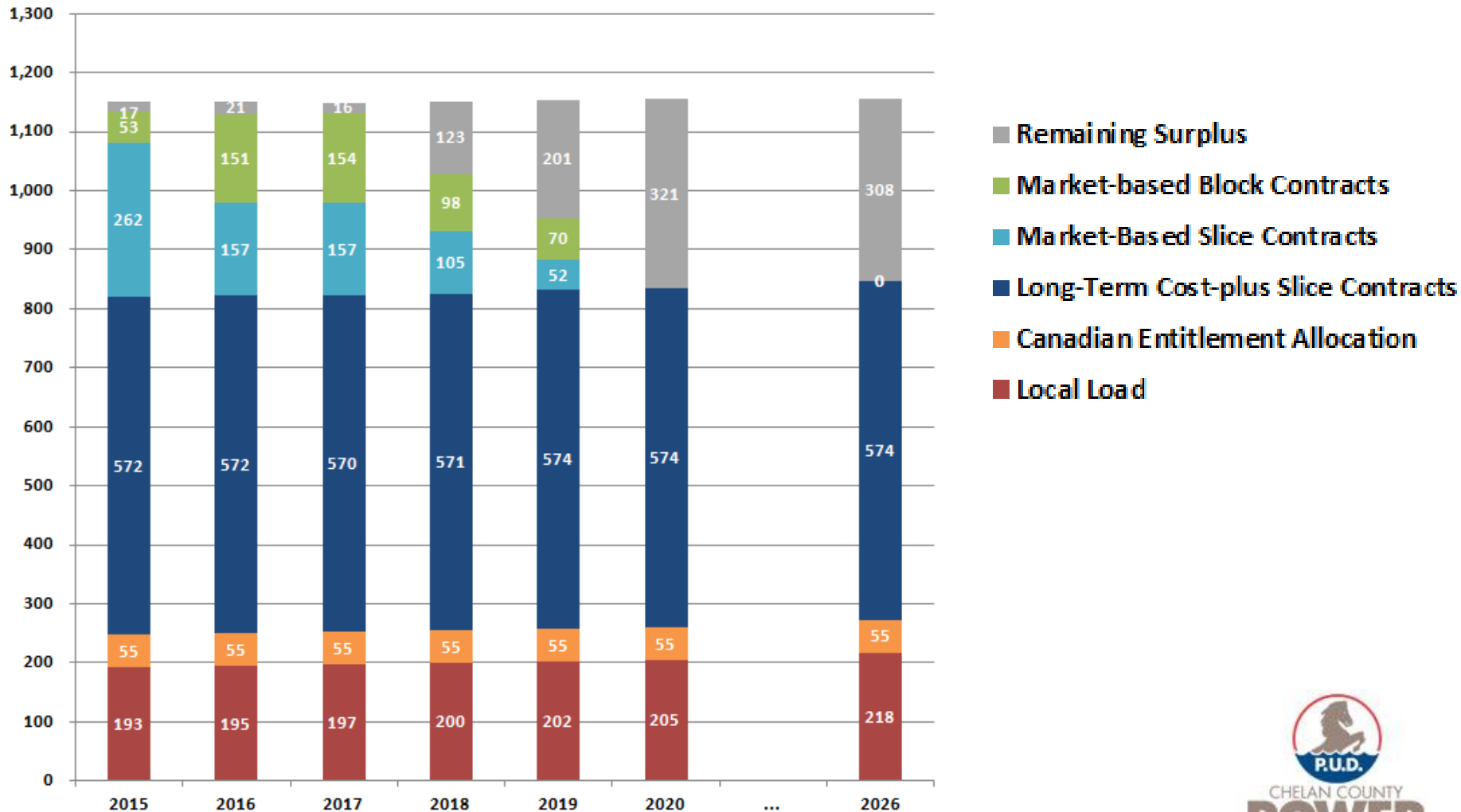
Energy Planning & Trading

2014 Q3

- **Portfolio Overview** (Janet Jaspers)
- **Operations and Planning** (Janet Jaspers)
 - 2014 streamflow and prices
 - 2014 Budget vs. YTD Actual Net Wholesale Revenue
 - Lake Chelan
 - Wanapum Drawdown Update
- **Conservation Update** (Andrew Grassell)

District's Load/Resource Balance (average MW)

Generation Allocation (aMW)



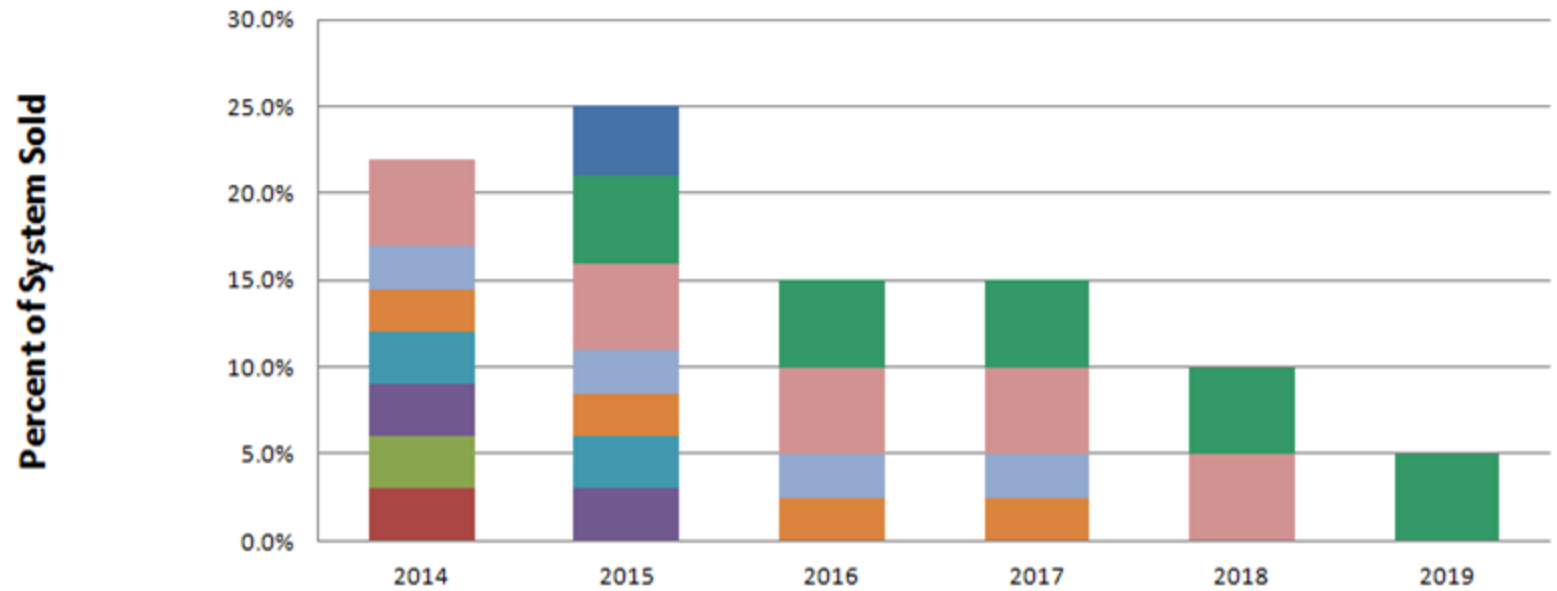
Market-based Hedges

(average MW)

		5-year Target (4/1/2015)	
Year	Market-based hedges	Min	Max
2016	276	265	265
2017	297	212	265
2018	204	159	265
2019	123	106	265
2020	0	53	265
		3-year Target (9/1/2015)	
Year	Market-based hedges	Min	Max
2016	35	31	87
2017	17	4	18
2018	0	2	17

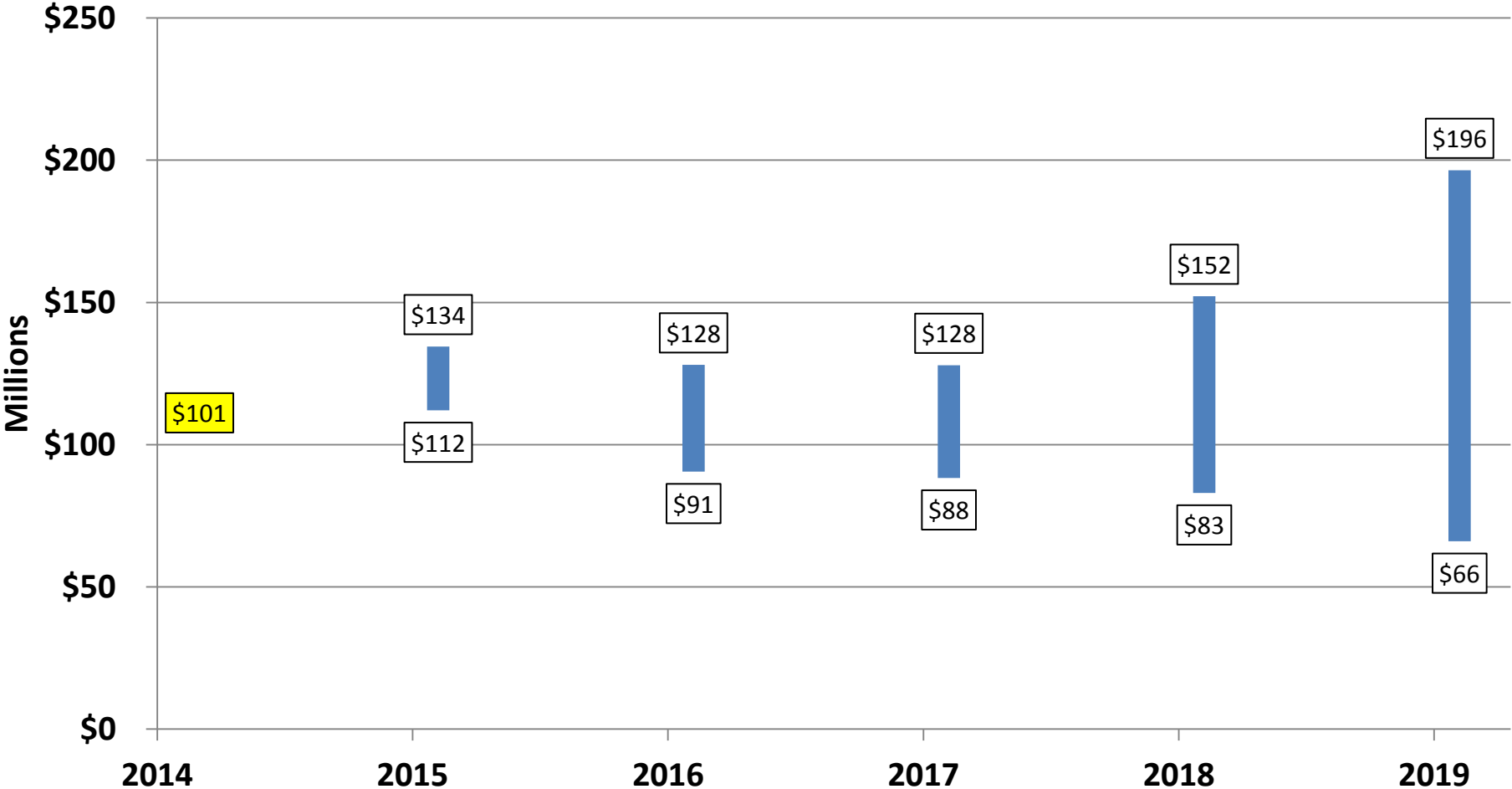


Current Market Position - Slice Products



	2014	2015	2016	2017	2018	2019
■ Slice Product 19 - Avista		4.0%				
■ Slice Product 18 - Exelon		5.0%	5.0%	5.0%	5.0%	5.0%
■ Slice Product 15 - Morgan	5.0%	5.0%	5.0%	5.0%	5.0%	
■ Slice Product 11 - Morgan	2.5%	2.5%	2.5%	2.5%		
■ Slice Product 10 - Exelon	2.5%	2.5%	2.5%	2.5%		
■ Slice Product 8 - Morgan	3.0%	3.0%				
■ Slice Product 7 - NextEra	3.0%	3.0%				
■ Slice Product 2 - Avista	3.0%					
■ Slice Product 1 - Shell	3.0%					

Net Wholesale Revenue Projections



Columbia River Flow Update for 2014

2014	Rocky Reach Flow (kcf)	Budget Rocky Reach Flow (kcf)	% of Budget
Jan	94	115	82%
Feb	70	110	64%
Mar	112	102	110%
Apr	138	114	121%
May	181	147	123%
Jun	173	167	104%
Jul	150	131	115%
Aug	110	106	104%
Sep	63	76	83%
Oct		78	
Nov		92	
Dec		108	
YTD Average	121	119	100%

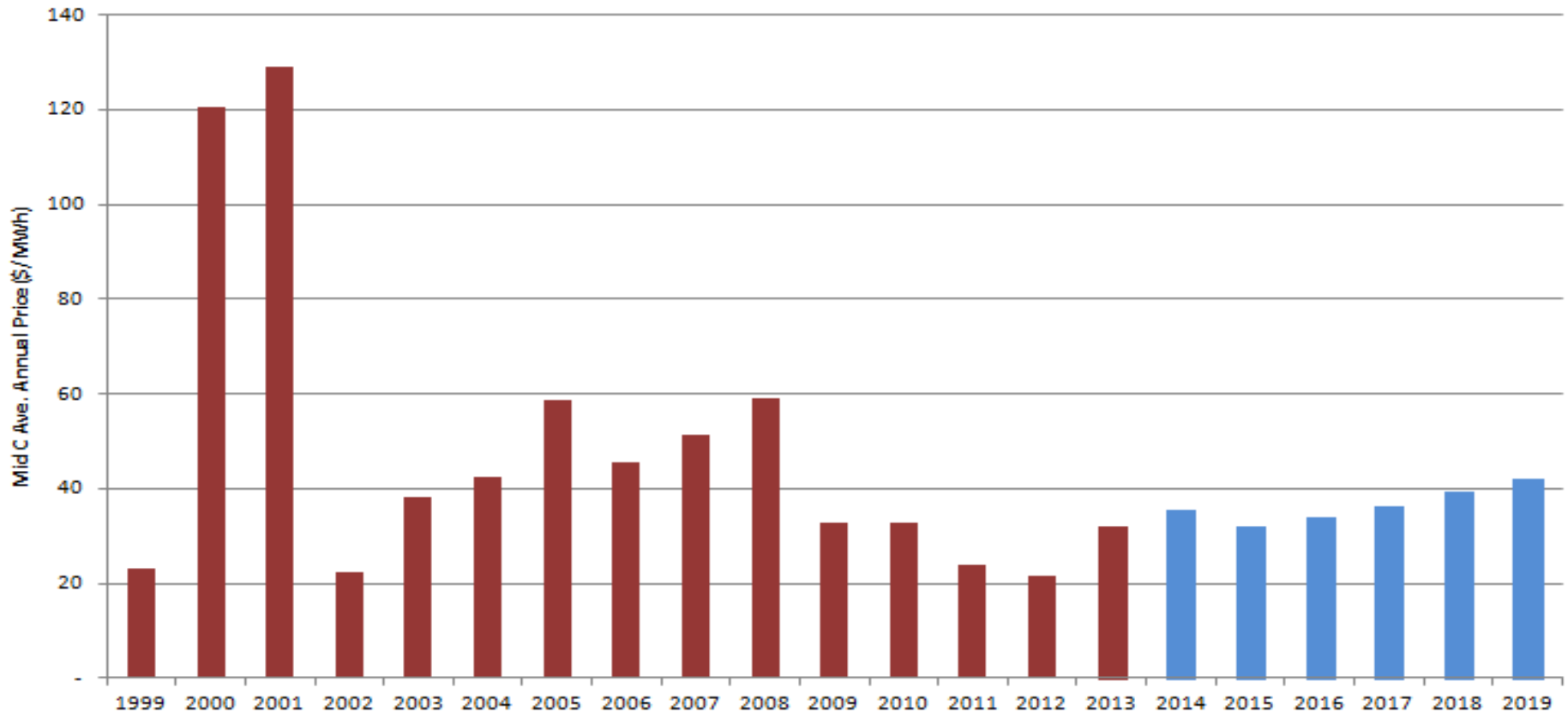
* Budgeted Rocky Reach flow is the median year from the 1929-2011 data set



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Mid-C Flat Annual Wholesale Electricity Prices



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2014 NWR and Other Energy-Related Revenue

	Budget	Forecast*	Variance
Net Wholesale Revenue**	\$ 107,948,169	\$ 101,391,772	\$ (6,556,397)
Other Energy-Related Revenue***	\$ 8,787,057	\$ 13,553,004	\$ 4,765,946
NWR and Other Energy-Related Revenue	\$ 116,735,227	\$ 114,944,776	\$ (1,790,451)

* 2014 forecast includes actual revenue received for Jan-Sep and estimated revenues for Oct-Dec

** Net Wholesale Revenue includes slice sales revenue and forward / pre-schedule trading activity revenue.

*** Other energy-related revenue includes real-time service contract, specified source sales, renewables, hubbing, system delivery, scheduling services and Lake Chelan reserves

CHELAN - LAKE CHELAN DAM (CHDW1) Forecasts for Water Year 2015

Official Forecast

10 days QPF: Ensemble: 2014-10-22 Issued: 2014-10-22

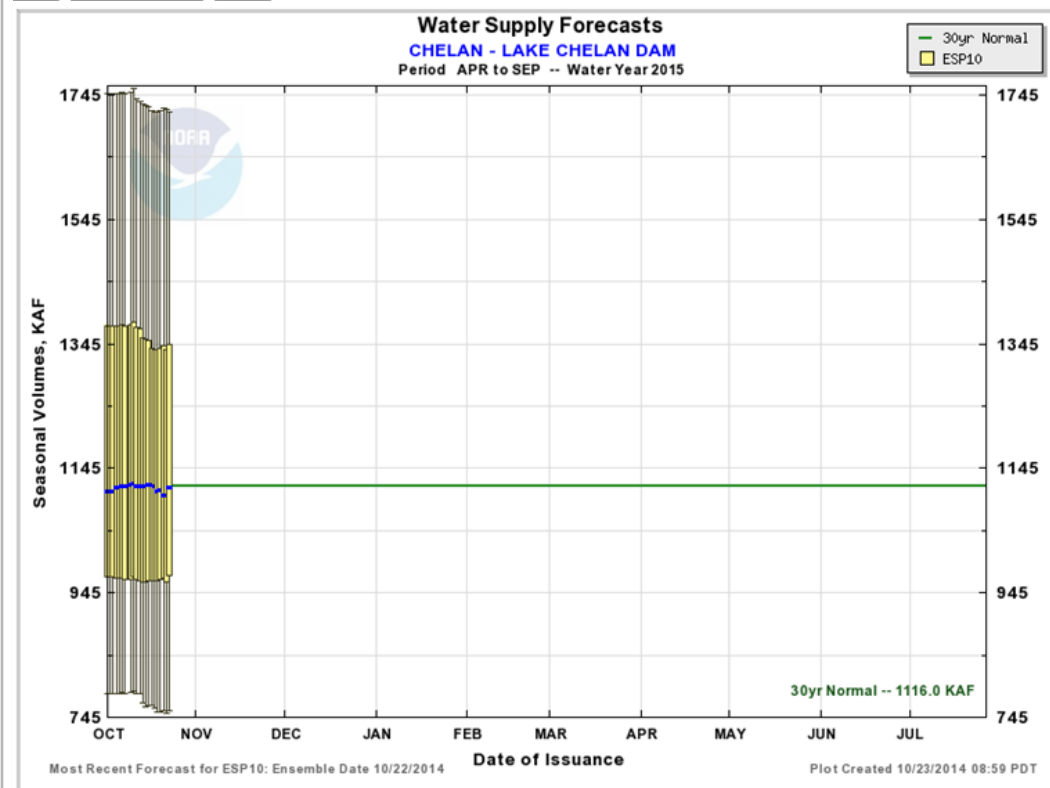
Forecast Period	Forecasts Are in KAF				30 Year Average (1981-2010)
	90 %	50 %	% Average	10 %	
APR-SEP	756	1114	100	1718	1116
APR-JUL	704	994	99	1455	1000
JAN-JUL	902	1270	108	1693	1178

5 days QPF: Ensemble: 2014-10-22 Issued: 2014-10-22

APR-SEP	764	1123	101	1724	1116
APR-JUL	702	1000	100	1456	1000
JAN-JUL	904	1263	107	1701	1178

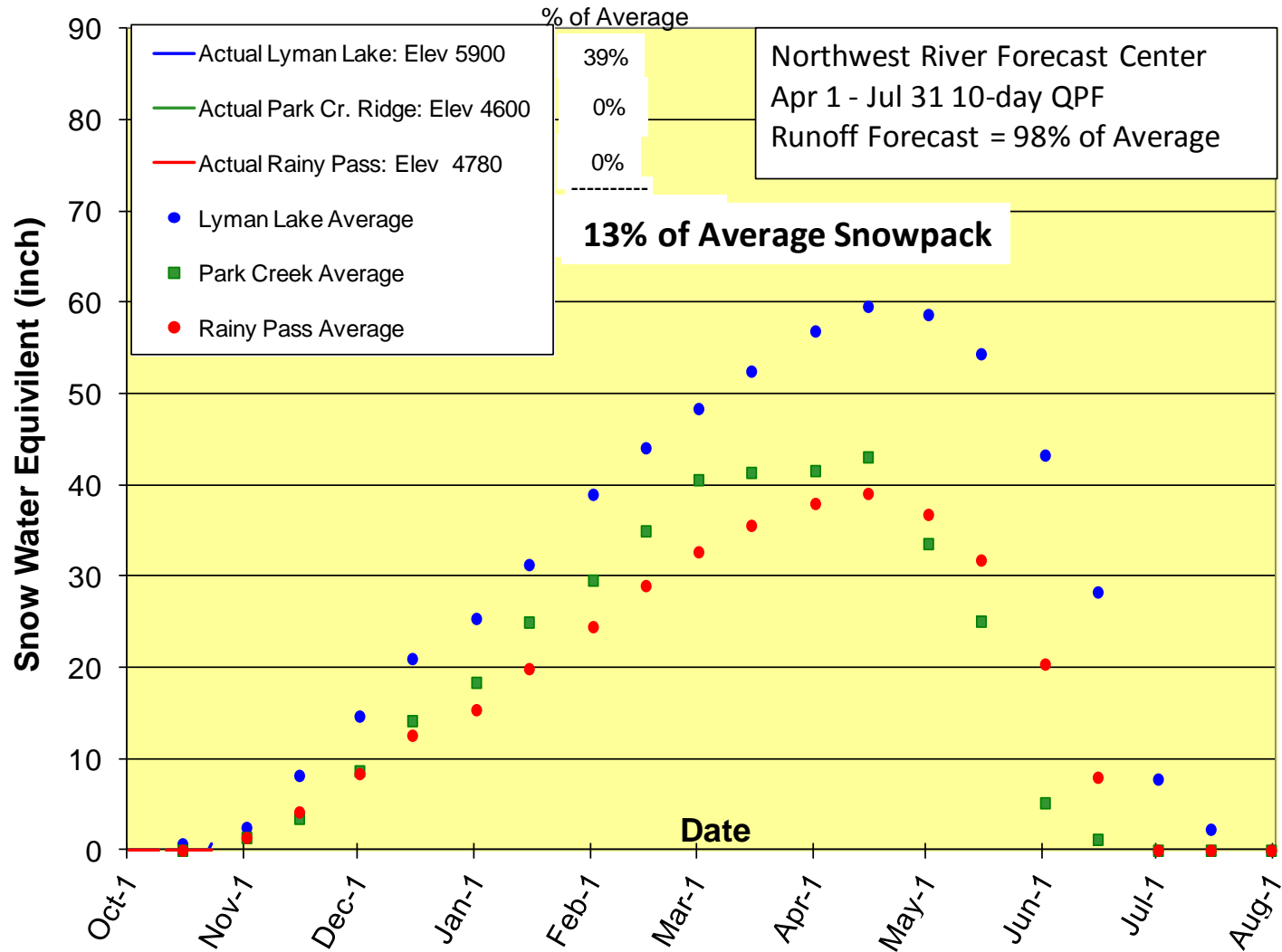
0 days QPF: Ensemble: 2014-10-22 Issued: 2014-10-22

APR-SEP	785	1118	100	1735	1116
APR-JUL	711	1030	103	1498	1000
JAN-JUL	884	1250	106	1702	1178

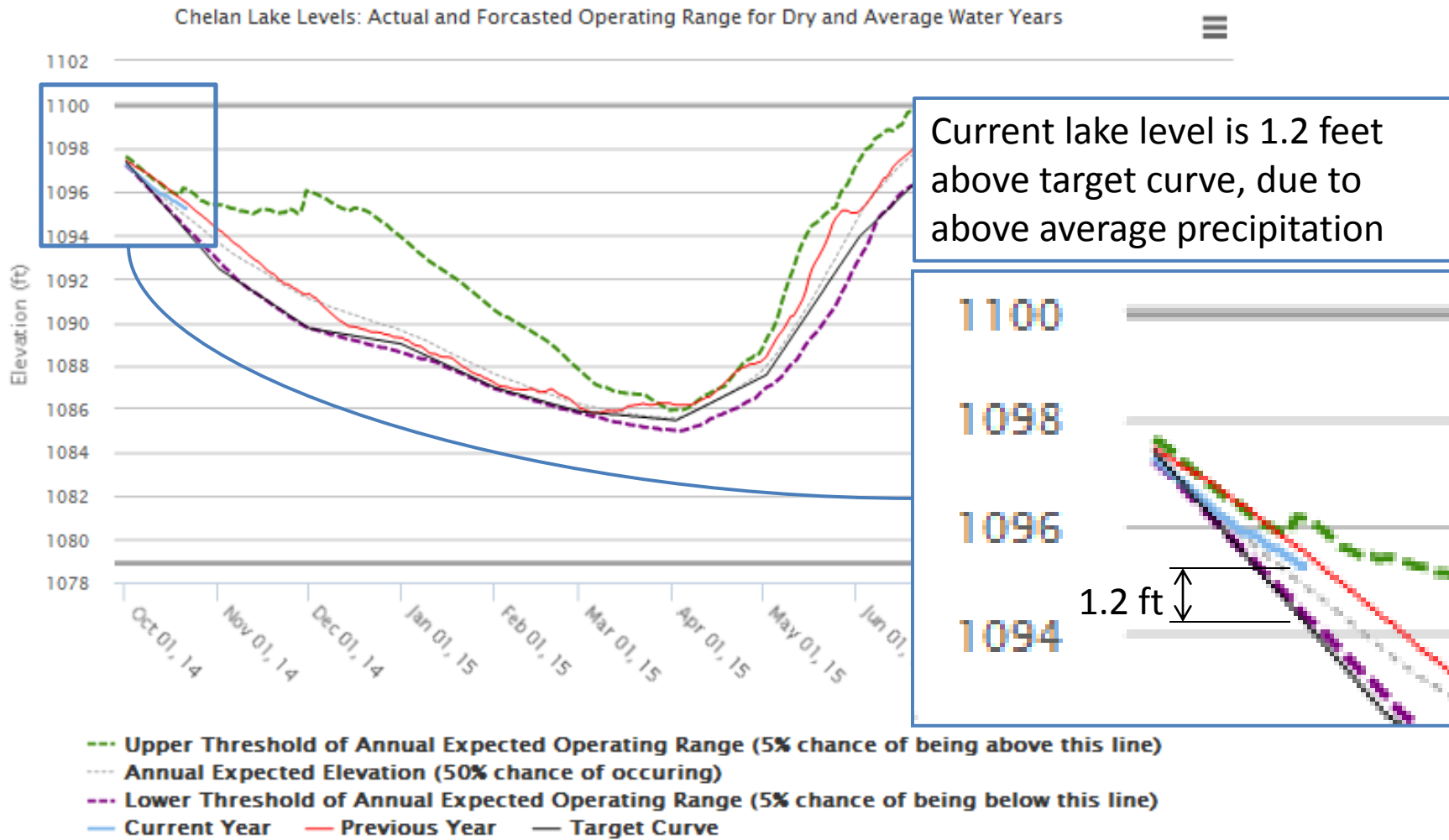


Lake Chelan Basin Snowpack 2014 - 2015

Oct 23, 2014



Interactive Graph Displayed on the Lake Level Webpage Oct 23, 2014



Forecasted operating range based on a range of water years from 47% to 117% of average

Wanapum Drawdown Update

- Fracture discovered on Wanapum Dam Spillway, Feb. 27, 2014.
- Wanapum reservoir lowered by 26 feet in Feb/Mar 2014.
- Remaining Repair Schedule:
 - Mid-December 2014/Mid-January 2015
 - Raise Wanapum forebay elevation from 545' to 558' – 562'
 - Late March/Mid April 2015
 - Raise Wanapum forebay elevation from 562' to 568' (possibly 571.5' which is full)
 - Possible September to December 31, 2015
 - Lower Wanapum forebay elevation from 571.5 to 568'

Conservation-Status Review as of 9/30/2014

Summary of Committed/Completed Conservation Projects

2014 Savings to Date (aMW)	Spent/Committed to Date	\$/MWh over Measure Life	Forecasted Revenue Over the Life of Measure*
1.20	\$ 1,900,000	\$ 12.04	\$6,300,000

*Based on present value of forward price curve and weighted average of measure life

Summary of Conservation Savings by Sector

Sector	Savings (aMW)	Percent
Agricultural	0.00	0%
Commercial	0.12	10%
Industrial	0.49	41%
NEEA	0.19	15%
Residential	0.40	33%
Grand Total	1.20	100%

Conservation-Project Spotlight

Stemilt-Euclid Lighting Project Upgrade Statistics

Lights Replaced	Total Cost	PUD Incentive	Savings (aMW)	Forecasted Revenue Over the Life of Measure*
1,400	\$ 606,000	\$ 435,000	0.33	\$ 1,700,000

*Based on present value of forward price curve and measure life



Questions?



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