

**Bonneville Power Administration
2000 Pacific Northwest Loads and Resources Study
Technical Appendix**

**Section 4
Loads & Resources Federal Tables
Medium Loads
Monthly OY 2002, 2006 & 2011
Average Energy in Megawatts**

Power Business Line

Reports Powered by:



Loads and Resources Information System

**Loads and Resources - Federal System
PNW Loads and Resources Study
2001 - 2002 Operating Year
1937 Water Year
2000 White Book**

10/1/2001

Average Energy in Megawatts	Aug1	Aug16	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Avg
Non-Utility Obligations															
Federal Agencies 1981 PSC Sale	148	148	140	0	0	0	0	0	0	0	0	0	0	0	24
USBR 1981 PSC Sale	83	83	52	0	0	0	0	0	0	0	0	0	0	0	11
DSI 1981 PSC Sale	2465	2465	2465	0	0	0	0	0	0	0	0	0	0	0	411
Federal Agencies 2002 PSC Sale	0	0	0	109	126	138	140	136	125	115	115	108	110	117	102
USBR 2002 PSC Sale	0	0	0	97	24	15	15	13	37	214	214	271	288	329	109
DSI 2002 PSC Sale	0	0	0	330	330	330	326	326	326	662	662	662	662	842	400
Total Firm Non-Utility Obligations	2696	2696	2657	536	480	483	481	475	488	992	991	1041	1059	1288	1056
Transfers Out															
NGP 1981 PSC Sale	2405	2406	2210	0	0	0	0	0	0	0	0	0	0	0	385
GPU 1981 PSC Sale	1495	1508	1506	0	0	0	0	0	0	0	0	0	0	0	251
IOU 1981 PSC Sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NGP 2002 PSC Sale	0	0	0	2277	2582	2952	3053	2946	2558	2467	2460	2373	2418	2460	2173
GPU 2002 PSC Sale	0	0	0	1696	2073	2398	2433	2386	2186	1948	1942	1777	1368	1452	1643
NGP Slice Sale	0	0	0	598	579	676	565	602	513	528	520	761	647	684	512
GPU Slice Sale	0	0	0	996	965	1126	941	1003	854	880	866	1267	1077	1139	853
IOU 2002 PSC Sale	0	0	0	350	350	350	350	350	350	350	350	350	350	350	292
Exports	1375	1375	1197	1150	1126	1149	1199	1196	1161	1285	1285	1301	1408	1322	1239
Intra-Regional Transfers (Out)	1009	1008	1056	1193	1495	1545	1155	1112	982	955	955	762	913	914	1091
Supp & Entitlement Capacity (Out)	48	48	48	48	48	48	48	48	48	42	42	42	42	42	46
CSPE To West Group Utilities	95	95	95	95	95	95	95	95	95	93	93	93	93	93	94
Federal Diversity	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Transfers Out	6427	6441	6111	8403	9311	10338	9838	9738	8747	8548	8513	8726	8315	8457	8579
Total Firm Obligations	9123	9136	8768	8939	9792	10822	10319	10213	9235	9540	9505	9768	9375	9744	9636
Hydro Resources															
Regulated Hydro	7034	6213	5897	6168	5943	7143	5856	6297	5140	5335	5154	7902	6507	7292	6334
Independent Hydro	435	443	367	389	307	242	180	200	279	442	523	729	775	471	405
Sustained Peaking Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non-Fed CER (CSPE)	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21
Non-Fed CER (Canada)	80	80	80	80	80	80	80	80	80	79	79	79	79	79	79
Restoration	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro Resources	7569	6757	6365	6657	6351	7486	6136	6598	5520	5876	5776	8730	7381	7862	6840
Other Resources															
Small Thermal & Misc.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Combustion Turbines	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Renewables	27	27	27	28	29	31	32	31	31	30	30	27	27	27	29
Cogeneration	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Imports	261	260	301	489	561	621	597	373	328	309	268	133	157	238	362
Intra-Regional Transfers (In)	1319	1320	1451	2231	2265	2263	2103	2104	2137	1804	1404	1140	1254	2020	1824
Supp & Entitlement Capacity (In)	48	48	48	48	48	48	48	48	48	42	42	42	42	42	46
Large Thermal	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Non-Utility Generation	11	11	13	44	68	86	85	67	71	70	70	59	51	52	56
Resource Acquisition	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Other Resources	2666	2666	2840	3839	3970	4049	3864	3623	3615	3256	2815	2402	2531	3379	3318
Total Resources	10235	9422	9205	10496	10321	11534	10000	10221	9135	9132	8591	11132	9913	11241	10157
Reserves & Maintenance															
Hydro Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small Thermal & Misc. Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Large Thermal Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Federal Hydro Maintenance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Spinning Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Federal Transmission Losses	-289	-266	-260	-296	-291	-325	-282	-288	-258	-258	-242	-314	-280	-317	-286
Total Reserves, Maintenance & Losses	-289	-266	-260	-296	-291	-325	-282	-288	-258	-258	-242	-314	-280	-317	-286
Total Net Resources	9947	9157	8946	10200	10030	11209	9718	9933	8878	8874	8349	10818	9633	10924	9871
Total Firm Surplus/Deficit	824	20	178	1261	238	388	-601	-280	-357	-665	-1156	1051	258	1180	235

**Loads and Resources - Federal System
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10/1/2001

Average Energy in Megawatts	Aug1	Aug16	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Avg
Non-Utility Obligations															
Federal Agencies 1981 PSC Sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
USBR 1981 PSC Sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DSI 1981 PSC Sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Federal Agencies 2002 PSC Sale	127	127	123	121	139	152	154	150	137	129	129	121	123	131	134
USBR 2002 PSC Sale	278	278	193	97	24	15	15	13	37	214	214	271	288	329	148
DSI 2002 PSC Sale	1435	1435	1435	1442	1442	1442	1442	1442	1442	1442	1442	1442	1442	1442	1441
Total Firm Non-Utility Obligations	1841	1841	1751	1660	1606	1609	1611	1605	1616	1785	1785	1835	1853	1901	1723
Transfers Out															
NGP 1981 PSC Sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GPU 1981 PSC Sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IOU 1981 PSC Sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NGP 2002 PSC Sale	2784	2782	2596	2649	2994	3397	3501	3368	2942	2842	2835	2743	2789	2837	2953
GPU 2002 PSC Sale	1849	1850	1921	1954	2337	2637	2668	2609	2406	2237	2226	2121	1797	1799	2194
NGP Slice Sale	662	594	565	596	578	675	563	599	510	526	518	759	644	681	610
GPU Slice Sale	1102	989	941	993	962	1124	938	998	849	876	862	1264	1072	1134	1016
IOU 2002 PSC Sale	382	382	382	382	382	382	382	382	382	382	382	382	382	382	382
Exports	1144	1144	1134	990	987	995	995	993	986	1106	1106	1142	1174	1070	1060
Intra-Regional Transfers (Out)	314	314	344	410	664	719	595	552	422	295	295	105	254	296	414
Supp & Entitlement Capacity (Out)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CSPE To West Group Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Federal Diversity	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Transfers Out	8237	8055	7883	7973	8905	9928	9644	9500	8497	8265	8224	8515	8113	8199	8629
Total Firm Obligations	10078	9895	9634	9633	10510	11537	11254	11106	10114	10051	10009	10350	9965	10101	10352
Hydro Resources															
Regulated Hydro	7073	6242	5923	6195	5976	7180	5894	6320	5163	5370	5187	7938	6535	7314	6364
Independent Hydro	442	450	375	389	307	242	180	200	279	442	523	729	775	471	406
Sustained Peaking Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non-Fed CER (CSPE)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non-Fed CER (Canada)	140	140	140	140	140	140	140	140	140	139	139	139	139	139	140
Restoration	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro Resources	7656	6832	6438	6724	6424	7562	6214	6660	5583	5950	5849	8805	7449	7924	6911
Other Resources															
Small Thermal & Misc.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Combustion Turbines	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Renewables	27	27	27	28	29	31	32	31	31	30	30	27	27	27	29
Cogeneration	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Imports	192	192	225	257	324	384	357	313	283	284	243	108	132	213	254
Intra-Regional Transfers (In)	1585	1585	1755	1752	1755	1697	1295	1296	1330	996	996	734	847	1185	1352
Supp & Entitlement Capacity (In)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Large Thermal	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Non-Utility Generation	94	94	84	94	117	136	134	117	121	120	120	109	101	102	111
Resource Acquisition	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Other Resources	2898	2898	3091	3132	3226	3247	2819	2758	2765	2430	2389	1978	2107	2527	2746
Total Resources	10554	9730	9529	9856	9649	10809	9033	9418	8348	8381	8239	10783	9556	10451	9657
Reserves & Maintenance															
Hydro Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small Thermal & Misc. Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Large Thermal Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Federal Hydro Maintenance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Spinning Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Federal Transmission Losses	-298	-274	-269	-278	-272	-305	-255	-266	-235	-236	-232	-304	-269	-295	-272
Total Reserves, Maintenance & Losses	-298	-274	-269	-278	-272	-305	-255	-266	-235	-236	-232	-304	-269	-295	-272
Total Net Resources	10256	9456	9261	9578	9377	10504	8778	9152	8112	8144	8006	10479	9287	10156	9385
Total Firm Surplus/Deficit	179	-440	-373	-56	-1133	-1033	-2476	-1953	-2001	-1906	-2003	129	-679	55	-967

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10/1/2001

Average Energy in Megawatts	Aug1	Aug16	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Avg
Non-Utility Obligations															
Federal Agencies 1981 PSC Sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
USBR 1981 PSC Sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DSI 1981 PSC Sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Federal Agencies 2002 PSC Sale	79	79	76	73	88	99	101	95	88	79	79	77	79	84	85
USBR 2002 PSC Sale	78	78	48	23	0	0	0	1.0	13	39	39	72	78	102	38
DSI 2002 PSC Sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Firm Non-Utility Obligations	157	157	124	96	88	99	101	96	101	118	118	149	157	186	123
Transfers Out															
NGP 1981 PSC Sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GPU 1981 PSC Sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IOU 1981 PSC Sale	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NGP 2002 PSC Sale	2996	2994	2791	2810	3241	3655	3757	3612	3113	3037	3029	2918	2966	3037	3161
GPU 2002 PSC Sale	2093	2101	2250	2346	2743	3075	3083	3014	2780	2573	2567	2380	1997	2043	2531
NGP Slice Sale	664	596	567	598	580	677	566	601	512	528	520	720	563	683	602
GPU Slice Sale	1106	992	944	996	966	1127	942	1001	852	880	866	1199	938	1137	1002
IOU 2002 PSC Sale	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
Exports	743	743	733	685	693	705	703	700	694	707	707	737	768	770	720
Intra-Regional Transfers (Out)	117	117	147	213	467	522	495	452	322	295	295	105	254	246	303
Supp & Entitlement Capacity (Out)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CSPE To West Group Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Federal Diversity	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Transfers Out	9920	9743	9632	9847	10890	11960	11745	11579	10473	10221	10184	10258	9687	10114	10518
Total Firm Obligations	10077	9900	9756	9943	10978	12060	11846	11676	10573	10339	10301	10406	9843	10300	10641
Hydro Resources															
Regulated Hydro	7097	6258	5938	6211	5995	7200	5915	6333	5176	5389	5206	7959	6552	7327	6382
Independent Hydro	442	450	375	389	307	242	180	200	279	442	523	729	775	471	406
Sustained Peaking Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non-Fed CER (CSPE)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non-Fed CER (Canada)	136	136	136	136	136	136	136	136	136	135	135	135	135	135	136
Restoration	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro Resources	7675	6845	6449	6735	6438	7578	6231	6669	5591	5966	5864	8822	7462	7933	6924
Other Resources															
Small Thermal & Misc.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Combustion Turbines	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Renewables	27	27	27	28	29	31	32	31	31	30	30	27	27	27	29
Cogeneration	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Imports	103	103	136	168	238	292	266	222	192	193	167	75	93	124	174
Intra-Regional Transfers (In)	104	104	275	273	275	217	217	217	250	217	217	104	217	104	206
Supp & Entitlement Capacity (In)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Large Thermal	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	500	0	1000	875
Non-Utility Generation	94	94	84	94	117	136	134	117	121	120	120	109	101	102	111
Resource Acquisition	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Other Resources	1329	1329	1522	1563	1659	1676	1649	1587	1594	1559	1534	815	438	1357	1395
Total Resources	9004	8174	7971	8298	8097	9254	7880	8256	7185	7525	7398	9638	7899	9290	8318
Reserves & Maintenance															
Hydro Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small Thermal & Misc. Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Large Thermal Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Federal Hydro Maintenance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Spinning Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Federal Transmission Losses	-254	-230	-225	-234	-228	-261	-222	-233	-203	-212	-209	-272	-223	-262	-235
Total Reserves, Maintenance & Losses	-254	-230	-225	-234	-228	-261	-222	-233	-203	-212	-209	-272	-223	-262	-235
Total Net Resources	8750	7943	7746	8064	7869	8993	7658	8023	6983	7313	7190	9366	7677	9028	8084
Total Firm Surplus/Deficit	-1327	-1957	-2010	-1879	-3109	-3067	-4188	-3653	-3591	-3026	-3111	-1041	-2167	-1272	-2557

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2000 Pacific Northwest Loads and Resources Study
Technical Appendix**

**Section 5
Loads & Resources Regional Tables
Medium Loads
Monthly OY 2002, 2006 & 2011
Average Energy in Megawatts**

Power Business Line

Reports Powered by:



Loads and Resources Information System

Loads and Resources - Pacific Northwest Region
PNW Loads and Resources Study
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Average Energy in Megawatts	Aug1	Aug16	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Avg
<u>Firm Regional Loads</u>															
Regional Firm Loads	22522	22522	21530	20722	22648	24495	25035	24204	22329	21444	21424	20767	21211	21505	22367
Exports	2300	2300	2069	1765	1700	1726	1765	1725	1687	1817	1817	1821	2255	2265	1908
Federal Diversity	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Firm Regional Loads	24822	24822	23599	22487	24348	26221	26800	25929	24016	23261	23240	22588	23466	23770	24275
<u>Non-Firm Regional Loads</u>															
Regional Non-Firm Loads	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Total Non-Firm Regional Loads	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Total Loads	24836	24836	23613	22501	24362	26235	26814	25943	24030	23275	23254	22602	23480	23784	24289
<u>Hydro Resources</u>															
Regulated Hydro	11234	10205	9234	10180	10184	11902	9462	10492	8550	9243	9208	12591	11704	11781	10502
Independent Hydro	1103	1131	1052	1024	934	998	812	825	975	1241	1294	1593	1643	1209	1121
Sustained Peaking Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro Resources	12337	11336	10286	11204	11118	12900	10275	11317	9524	10484	10502	14184	13348	12990	11623
<u>Other Resources</u>															
Small Thermal & Misc.	71	72	58	59	49	46	47	45	47	46	45	57	17	66	51
Combustion Turbines	660	683	688	717	731	734	735	735	489	264	551	584	691	675	655
Renewables	78	78	78	79	80	82	83	82	82	81	81	33	78	78	76
Cogeneration	718	718	718	718	718	731	718	718	718	718	718	275	651	711	676
Imports	1780	1779	1383	1550	1887	2191	2245	2005	1626	1534	1493	1347	1651	1806	1749
Large Thermal	5213	5217	5165	5167	5129	5119	5122	5114	4995	4886	4979	4087	5161	5201	5034
Non-Utility Generation	1296	1333	1243	1223	1266	1285	1204	1211	1127	1278	1278	1001	1305	1350	1234
Resource Acquisition	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Other Resources	9817	9881	9332	9513	9860	10188	10154	9911	9084	8807	9146	7385	9555	9887	9475
Total Resources	22153	21216	19618	20717	20977	23088	20429	21228	18608	19291	19648	21569	22903	22877	21097
<u>Reserves & Maintenance</u>															
Hydro Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small Thermal & Misc. Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Contract Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Large Thermal Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Regional Hydro Maintenance	-31	-26	-8.6	-9	-3.8	0	0	0	-5.2	-7.4	-7.6	-20	-15	-50	-12
Spinning Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Regional Transmission Losses	-624	-598	-553	-584	-591	-651	-576	-599	-525	-544	-554	-608	-645	-644	-595
Total Reserves, Maintenance & Losses	-655	-623	-562	-593	-595	-651	-576	-599	-530	-551	-561	-628	-660	-694	-607
Total Net Resources	21498	20593	19057	20124	20382	22437	19853	20629	18078	18740	19087	20942	22242	22184	20491
<u>Surplus/Deficits</u>															
Firm Surplus/Deficit	-3323	-4229	-4542	-2363	-3966	-3783	-6947	-5299	-5937	-4521	-4153	-1646	-1224	-1586	-3784
Total Surplus/Deficit	-3337	-4243	-4556	-2377	-3980	-3797	-6961	-5313	-5951	-4535	-4167	-1660	-1238	-1600	-3798

Loads and Resources - Pacific Northwest Region
PNW Loads and Resources Study
2005 - 2006 Operating Year
1937 Water Year
2000 White Book

10/1/2001

Average Energy in Megawatts	Aug1	Aug16	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Avg
Firm Regional Loads															
Regional Firm Loads	22306	22304	21385	22195	24377	26435	27077	26107	24128	23172	23147	22194	22636	23000	23750
Exports	1598	1598	1517	1321	1313	1316	1316	1295	1284	1392	1392	1414	1614	1556	1411
Federal Diversity	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Firm Regional Loads	23904	23902	22902	23517	25689	27752	28394	27402	25412	24564	24539	23607	24250	24556	25161
Non-Firm Regional Loads															
Regional Non-Firm Loads	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Total Non-Firm Regional Loads	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Total Loads	23918	23916	22916	23531	25703	27766	28408	27416	25426	24578	24553	23621	24264	24570	25175
Hydro Resources															
Regulated Hydro	11266	10227	9261	10207	10217	11946	9507	10520	8572	9278	9241	12626	11732	11787	10532
Independent Hydro	1092	1120	1051	1024	933	1004	819	832	974	1240	1294	1593	1643	1200	1121
Sustained Peaking Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro Resources	12357	11346	10312	11231	11150	12950	10326	11352	9546	10518	10535	14219	13376	12987	11652
Other Resources															
Small Thermal & Misc.	60	61	58	58	48	52	53	51	46	46	45	57	17	56	50
Combustion Turbines	677	700	705	717	731	734	735	735	489	264	551	584	691	675	658
Renewables	78	78	78	79	80	82	83	82	82	81	81	33	78	78	76
Cogeneration	718	718	718	718	718	731	718	718	718	718	718	275	651	711	676
Imports	1508	1508	1279	1186	1615	1675	1720	1667	1299	1249	1208	937	1416	1604	1428
Large Thermal	5173	5177	5164	5166	5128	5142	5145	5138	5013	4959	4954	4016	4345	5157	4962
Non-Utility Generation	1379	1415	1294	1214	1255	1280	1252	1258	1171	1323	1323	1046	1351	1389	1269
Resource Acquisition	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Other Resources	9594	9657	9296	9139	9576	9698	9707	9650	8818	8640	8880	6949	8549	9670	9120
Total Resources	21951	21003	19608	20370	20726	22648	20033	21002	18365	19158	19415	21168	21925	22657	20772
Reserves & Maintenance															
Hydro Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small Thermal & Misc. Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Contract Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Large Thermal Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Regional Hydro Maintenance	-31	-25	-8.6	-9	-3.8	0	0	0	-5.2	-7.4	-7.6	-20	-15	-50	-12
Spinning Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Regional Transmission Losses	-618	-592	-553	-574	-584	-639	-565	-592	-518	-540	-547	-596	-618	-638	-585
Total Reserves, Maintenance & Losses	-649	-617	-561	-583	-588	-639	-565	-592	-523	-547	-555	-616	-633	-687	-598
Total Net Resources	21302	20386	19047	19787	20138	22009	19468	20410	17842	18611	18860	20551	21292	21970	20174
Surplus/Deficits															
Firm Surplus/Deficit	-2602	-3516	-3855	-3730	-5551	-5743	-8926	-6992	-7570	-5954	-5680	-3056	-2958	-2586	-4987
Total Surplus/Deficit	-2616	-3530	-3869	-3744	-5565	-5757	-8940	-7006	-7584	-5968	-5694	-3070	-2972	-2600	-5001

Loads and Resources - Pacific Northwest Region
PNW Loads and Resources Study
2010 - 2011 Operating Year
1937 Water Year
2000 White Book

10/1/2001

Average Energy in Megawatts	Aug1	Aug16	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Avg
Firm Regional Loads															
Regional Firm Loads	24085	24083	23102	24008	26392	28651	29318	28294	26093	25030	25006	23955	24426	24808	25679
Exports	1104	1104	1042	950	936	944	939	924	907	941	941	940	1134	1165	994
Federal Diversity	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Firm Regional Loads	25189	25187	24144	24958	27328	29594	30257	29218	27000	25971	25947	24895	25560	25973	26673
Non-Firm Regional Loads															
Regional Non-Firm Loads	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Total Non-Firm Regional Loads	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Total Loads	25203	25201	24158	24972	27342	29608	30271	29232	27014	25985	25961	24909	25574	25987	26687
Hydro Resources															
Regulated Hydro	11290	10244	9276	10224	10250	11980	9543	10543	8597	9306	9271	12661	11751	11802	10557
Independent Hydro	1093	1121	1052	1025	946	1017	832	845	987	1254	1307	1602	1644	1201	1128
Sustained Peaking Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hydro Resources	12383	11365	10328	11249	11196	12997	10375	11388	9584	10560	10578	14263	13396	13003	11685
Other Resources															
Small Thermal & Misc.	61	62	59	59	60	64	65	64	59	59	58	66	17	57	58
Combustion Turbines	679	702	707	719	733	736	737	736	491	266	553	585	693	677	659
Renewables	78	78	78	79	80	82	83	82	82	81	81	33	78	78	76
Cogeneration	718	718	718	718	718	731	718	718	718	718	718	275	651	711	676
Imports	796	796	533	638	909	982	961	967	913	748	723	753	796	864	821
Large Thermal	5177	5181	5167	5170	5172	5187	5191	5186	5004	4467	4206	3826	4165	5161	4895
Non-Utility Generation	1374	1409	1288	1208	1258	1281	1259	1268	1180	1330	1330	1052	1352	1389	1271
Resource Acquisition	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Other Resources	8884	8947	8551	8592	8932	9064	9016	9022	8448	7670	7668	6589	7752	8938	8457
Total Resources	21267	20312	18879	19840	20128	22061	19391	20411	18032	18229	18246	20852	21148	21941	20142
Reserves & Maintenance															
Hydro Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small Thermal & Misc. Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Contract Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Large Thermal Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Regional Hydro Maintenance	-31	-25	-8.6	-9	-3.8	0	0	0	-5.2	-7.4	-7.6	-20	-15	-50	-12
Spinning Reserves	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Regional Transmission Losses	-599	-572	-532	-559	-568	-622	-547	-576	-508	-514	-514	-587	-596	-617	-568
Total Reserves, Maintenance & Losses	-630	-597	-541	-568	-571	-622	-547	-576	-514	-521	-522	-607	-611	-667	-580
Total Net Resources	20637	19714	18338	19272	19557	21439	18844	19835	17518	17708	17724	20245	20537	21274	19563
Surplus/Deficits															
Firm Surplus/Deficit	-4551	-5472	-5806	-5686	-7771	-8155	-11413	-9383	-9482	-8263	-8223	-4650	-5023	-4700	-7110
Total Surplus/Deficit	-4565	-5486	-5820	-5700	-7785	-8169	-11427	-9397	-9496	-8277	-8237	-4664	-5037	-4714	-7124

**Bonneville Power Administration
2000 Pacific Northwest Loads and Resources Study
Technical Appendix**

**Section 6
50 Water Year Surplus/Deficit
Federal Tables
Medium Loads
Monthly OY 2002, 2006 & 2011
Average Energy in Megawatts**

Power Business Line

Reports Powered by:



Loads and Resources Information System

**Federal 50 Water Year Surplus/Deficit
PNW Loads and Resources Study
2001 - 2002 Operating Year
2000 White Book**

10/1/2001

Average Energy in Megawatts	Aug1	Aug16	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Aug
1929 Federal Surplus/Deficit	3215	481	112	1731	-79	360	-613	149	10	-537	141	-96	1662	1213	508
1930 Federal Surplus/Deficit	392	-47	139	1233	444	506	-574	-212	-158	231	2504	-541	-185	1414	301
1931 Federal Surplus/Deficit	1082	485	-304	1142	509	660	-1089	-1164	-172	1200	-373	1556	243	1552	344
1932 Federal Surplus/Deficit	620	-379	-418	1210	436	87	-1055	-80	2250	4403	3540	3555	3435	2405	1326
1933 Federal Surplus/Deficit	1375	947	448	1810	317	538	4396	2175	617	2861	442	2163	5650	5061	2166
1934 Federal Surplus/Deficit	3256	3479	1099	2768	1975	4295	6882	4830	3868	5734	4731	4139	1119	616	3349
1935 Federal Surplus/Deficit	-453	-1026	-231	974	35	212	3930	1481	1566	3458	1147	1527	2642	2545	1354
1936 Federal Surplus/Deficit	1629	-829	-119	1476	159	439	-166	303	391	66	3959	4102	1686	2131	1068
1937 Federal Surplus/Deficit	824	20	178	1261	238	388	-601	-280	-357	-665	-1156	1051	258	1180	235
1938 Federal Surplus/Deficit	950	160	380	1347	572	838	3322	848	3375	2892	2316	4285	3314	1768	1934
1939 Federal Surplus/Deficit	526	-680	27	1821	-8.3	265	-561	2103	1817	2285	2110	2004	-281	2602	992
1940 Federal Surplus/Deficit	1493	-162	147	1768	297	351	205	1151	3175	2284	2061	975	-806	1373	956
1941 Federal Surplus/Deficit	861	-388	516	1907	207	373	56	-172	848	-273	586	663	1385	623	566
1942 Federal Surplus/Deficit	456	-244	25	1816	585	2545	3263	1585	-22	1187	1054	1928	2294	3147	1533
1943 Federal Surplus/Deficit	3576	1381	706	1677	50	335	3446	3439	3398	5781	4564	4022	3697	3380	2650
1944 Federal Surplus/Deficit	3110	1659	124	1841	-24	370	-544	375	-420	-499	-171	335	693	578	448
1945 Federal Surplus/Deficit	634	-430	-387	1312	489	73	-998	-706	-132	-154	289	2443	2029	2273	547
1946 Federal Surplus/Deficit	1189	601	294	1208	131	1174	4197	1179	2655	2973	3500	4744	3560	2702	2165
1947 Federal Surplus/Deficit	2506	-304	712	1892	241	2552	5205	4317	2409	2597	2244	3732	3166	2379	2511
1948 Federal Surplus/Deficit	2326	203	490	3927	1435	1270	5302	3124	1568	1769	2949	6127	7713	4180	3230
1949 Federal Surplus/Deficit	3355	3635	1285	2174	86	268	2326	926	4946	3415	4024	3952	3050	368	2216
1950 Federal Surplus/Deficit	-670	-1273	31	1375	-115	1021	4123	3077	4243	4769	3478	3576	6394	4062	2578
1951 Federal Surplus/Deficit	2592	2001	695	2836	1919	3257	6049	5224	3883	4848	4180	4885	2478	3476	3460
1952 Federal Surplus/Deficit	3349	2216	653	3413	611	1764	4899	2546	2070	4956	4116	5567	3511	1999	2863
1953 Federal Surplus/Deficit	2381	-139	70	1465	42	481	307	5064	2968	963	901	2463	4157	3509	1882
1954 Federal Surplus/Deficit	3468	2052	752	2152	357	615	2798	5619	2221	2834	2068	4111	5455	4246	2795
1955 Federal Surplus/Deficit	4209	3132	3480	2726	962	736	2065	1509	-205	1532	1168	1142	4843	5286	2297
1956 Federal Surplus/Deficit	3224	2810	872	2559	1298	3152	6240	4306	4004	4260	5362	6338	6238	3654	3874
1957 Federal Surplus/Deficit	3669	2185	562	2273	1.8	986	1868	3963	2313	4893	1756	6066	4495	1810	2549
1958 Federal Surplus/Deficit	1373	10.0	196	1668	-33	342	1976	4968	1499	1601	2947	5030	3782	1522	1993
1959 Federal Surplus/Deficit	1287	199	186	2046	788	1763	5980	4407	2958	3129	1143	3402	4857	3620	2741
1960 Federal Surplus/Deficit	3402	1865	3334	4567	2289	2063	4808	1765	2560	6199	3177	1980	2704	2691	3007
1961 Federal Surplus/Deficit	2874	-108	433	2074	470	-24	3668	4903	2851	2763	317	4058	5418	2146	2410
1962 Federal Surplus/Deficit	2069	286	-5.5	1864	-103	150	3669	557	850	4002	3553	2252	1686	2990	1572
1963 Federal Surplus/Deficit	3226	1343	157	2509	948	1700	4137	2390	1020	1960	1463	1738	2782	2796	2014
1964 Federal Surplus/Deficit	2911	1158	1161	1788	-1.3	62	1724	3967	390	2623	665	2105	5561	4566	2083
1965 Federal Surplus/Deficit	3445	2654	1588	2781	514	3483	6815	4968	3960	2502	4391	4462	4295	2663	3502
1966 Federal Surplus/Deficit	3477	2317	741	2396	573	879	3275	2929	1003	4149	1435	1480	1035	3083	1924
1967 Federal Surplus/Deficit	3182	87	218	1720	-18	469	4743	4264	2344	2291	-579	2098	5045	4398	2314
1968 Federal Surplus/Deficit	3517	2302	940	2221	387	804	3996	4188	2796	259	218	251	2911	2861	2042
1969 Federal Surplus/Deficit	3815	2344	2253	2899	1406	1491	6087	4451	3295	4261	4498	5913	4203	2752	3517
1970 Federal Surplus/Deficit	1765	-685	173	2159	-34	159	1588	4167	1772	923	1116	2140	3355	1906	1579
1971 Federal Surplus/Deficit	1859	68	16	1609	-88	1160	5786	5682	3959	4566	3548	6171	5539	3997	3238
1972 Federal Surplus/Deficit	3806	3312	1306	2075	383	811	5546	5415	6966	5470	2212	5851	6384	4840	3914
1973 Federal Surplus/Deficit	3982	3533	1499	2213	100	1390	1669	1083	974	-428	-510	122	511	1735	1215
1974 Federal Surplus/Deficit	1407	-724	-266	1437	519	2923	7322	5841	5318	4811	4897	5647	7204	5494	3886
1975 Federal Surplus/Deficit	3356	2724	954	1649	-31	362	3170	3418	3885	2560	1357	2962	4532	4785	2557
1976 Federal Surplus/Deficit	1934	1258	440	2634	1638	4114	6234	4665	2707	5238	3319	5388	2801	4014	3376
1977 Federal Surplus/Deficit	5120	3968	4505	2074	-26	424	-258	682	-774	-720	127	149	348	600	998
1978 Federal Surplus/Deficit	549	-329	-707	1109	405	664	2698	916	3408	3571	1998	2654	1743	2531	1526
-Ranked Averages-															
Top Ten Percent	3139	2079	1151	2350	824	2372	6402	4996	4708	4261	4272	5642	5665	3880	3739
Middle Eighty Percent	2230	903	636	2041	451	1024	3018	2711	2110	2769	2062	3054	3240	2805	2089
Bottom Ten Percent	1725	520	50	1442	218	457	-684	-227	-219	-54	189	461	534	1187	367

**Federal 50 Water Year Surplus/Deficit
PNW Loads and Resources Study
2005 - 2006 Operating Year
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Average Energy in Megawatts	Aug1	Aug16	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Avg
1929 Federal Surplus/Deficit	2037	-82	-424	418	-1454	-1062	-2482	-1526	-1635	-1778	-698	-1023	726	86	-720
1930 Federal Surplus/Deficit	-160	-491	-403	-84	-927	-914	-2450	-1885	-1802	-1010	1670	-1459	-1125	291	-896
1931 Federal Surplus/Deficit	377	-77	-747	-176	-864	-759	-2968	-2837	-1816	-39	-1209	641	-695	431	-855
1932 Federal Surplus/Deficit	20	-746	-835	-106	-936	-1335	-2933	-1753	614	3177	2709	2643	2515	1291	146
1933 Federal Surplus/Deficit	603	282	-163	496	-1055	-884	2534	522	-1012	1632	-408	1249	4739	3967	954
1934 Federal Surplus/Deficit	2066	2251	345	1460	609	2888	5038	3191	2253	4523	3906	3241	189	-507	2090
1935 Federal Surplus/Deficit	-817	-1251	-691	-342	-1337	-1210	2068	-174	-63	2240	299	608	1717	1438	187
1936 Federal Surplus/Deficit	804	-1097	-604	160	-1215	-981	-2044	-1361	-1253	-1175	3120	3193	762	1013	-125
1937 Federal Surplus/Deficit	179	-440	-373	-56	-1133	-1033	-2476	-1953	-2001	-1906	-2003	129	-679	55	-967
1938 Federal Surplus/Deficit	271	-330	-217	30	-800	-583	1455	-808	1746	1663	1472	3383	2389	654	732
1939 Federal Surplus/Deficit	-57	-985	-491	505	-1384	-1159	-2432	442	175	1047	1266	1092	-1218	1485	-196
1940 Federal Surplus/Deficit	699	-579	-398	454	-1075	-1072	-1661	-518	1538	1049	1223	58	-1742	250	-247
1941 Federal Surplus/Deficit	204	-756	-112	594	-1166	-1050	-1817	-1846	-793	-1516	-251	-252	448	-504	-638
1942 Federal Surplus/Deficit	-110	-643	-493	501	-788	1134	1394	-71	-1658	-54	215	1010	1367	2038	345
1943 Federal Surplus/Deficit	2313	616	34	362	-1325	-1091	1574	1778	1777	4561	3729	3120	2773	2267	1407
1944 Federal Surplus/Deficit	1950	832	-416	527	-1400	-1054	-2413	-1300	-2066	-1741	-1010	-588	-247	-549	-791
1945 Federal Surplus/Deficit	27	-788	-812	-4.6	-883	-1348	-2881	-2379	-1777	-1395	-562	1525	1099	1155	-639
1946 Federal Surplus/Deficit	459	11	-283	-110	-1242	-247	2328	-480	1024	1742	2665	3844	2638	1591	958
1947 Federal Surplus/Deficit	1483	-690	41	578	-1134	1135	3343	2667	786	1367	1404	2825	2247	1265	1295
1948 Federal Surplus/Deficit	1339	-299	-131	2624	67	-149	3439	1471	-61	535	2110	5228	6817	3081	2019
1949 Federal Surplus/Deficit	2141	2371	489	862	-1288	-1157	457	-732	3316	2182	3192	3041	2125	-753	942
1950 Federal Surplus/Deficit	-985	-1443	-488	56	-1493	-400	2258	1422	2625	3540	2642	2668	5487	2957	1414
1951 Federal Surplus/Deficit	1548	1104	29	1526	550	1841	4195	3579	2266	3625	3350	3984	1550	2372	2226
1952 Federal Surplus/Deficit	2137	1266	-0.7	2106	-762	345	3037	887	445	3730	3279	4669	2588	886	1617
1953 Federal Surplus/Deficit	1383	-566	-458	149	-1331	-940	-1573	3407	1345	-262	51	1551	3237	2401	674
1954 Federal Surplus/Deficit	2229	1136	71	840	-1015	-808	932	3973	599	1597	1221	3208	4547	3146	1549
1955 Federal Surplus/Deficit	2811	1984	2198	1417	-409	-684	199	-156	-1848	303	322	222	3926	4193	981
1956 Federal Surplus/Deficit	2041	1729	167	1250	-73	1736	4387	2664	2377	3034	4535	5444	5332	2547	2625
1957 Federal Surplus/Deficit	2385	1243	-75	961	-1373	-437	2.0	2307	676	3681	907	5169	3579	692	1301
1958 Federal Surplus/Deficit	600	-449	-359	353	-1407	-1083	109	3314	-129	365	2106	4126	2862	402	792
1959 Federal Surplus/Deficit	536	-301	-367	734	-585	345	4123	2763	1337	1902	298	2495	3946	2513	1543
1960 Federal Surplus/Deficit	2179	993	2082	3267	924	647	2947	111	930	4989	2341	1067	1779	1584	1716
1961 Federal Surplus/Deficit	1766	-541	-176	760	-902	-1448	1803	3262	1227	1540	-533	3155	4512	1031	1195
1962 Federal Surplus/Deficit	1144	-232	-515	551	-1478	-1274	1802	-1099	-787	2773	2716	1339	759	1875	364
1963 Federal Surplus/Deficit	2043	587	-390	1197	-424	283	2274	734	-613	723	625	820	1855	1686	784
1964 Federal Surplus/Deficit	1797	442	390	473	-1376	-1362	-144	2313	-1243	1384	-187	1190	4649	3468	840
1965 Federal Surplus/Deficit	2213	1605	724	1473	-859	2065	4963	3324	2334	1266	3558	3558	3374	1552	2236
1966 Federal Surplus/Deficit	2238	1344	63	1085	-800	-543	1411	1275	-631	2924	594	566	112	1971	672
1967 Federal Surplus/Deficit	2005	-388	-342	406	-1392	-954	2882	2618	724	1063	-1433	1185	4133	3301	1099
1968 Federal Surplus/Deficit	2269	1333	220	908	-987	-619	2128	2539	1174	-974	-627	-671	1988	1753	786
1969 Federal Surplus/Deficit	2499	1366	1241	1591	36	73	4228	2811	1666	3037	3669	5017	3287	1640	2240
1970 Federal Surplus/Deficit	904	-988	-380	847	-1407	-1266	-285	2505	145	-307	273	1222	2426	789	378
1971 Federal Surplus/Deficit	981	-404	-500	294	-1464	-263	3923	4042	2331	3346	2714	5275	4625	2891	2039
1972 Federal Surplus/Deficit	2494	2120	503	761	-992	-612	3682	3772	5361	4254	1371	4953	5475	3746	2647
1973 Federal Surplus/Deficit	2633	2295	655	900	-1274	-33	-204	-580	-665	-1668	-1352	-800	-424	613	-71
1974 Federal Surplus/Deficit	626	-1017	-718	119	-857	1510	5477	4208	3695	3588	4067	4748	6301	4400	2710
1975 Federal Surplus/Deficit	2144	1668	235	333	-1406	-1063	1304	1758	2265	1325	511	2050	3611	3686	1300
1976 Federal Surplus/Deficit	1037	521	-170	1321	268	2700	4380	3019	1082	4016	2482	4488	1872	2916	2159
1977 Federal Surplus/Deficit	3515	2633	2996	762	-1401	-1000	-2127	-992	-2419	-1961	-708	-770	-590	-526	-361
1978 Federal Surplus/Deficit	-36	-708	-1060	-209	-969	-761	826	-746	1775	2350	1158	1744	812	1420	351
-Ranked Averages-															
Top Ten Percent	1974	1161	383	1039	-549	954	4547	3356	3087	3036	3440	4744	4754	2777	2492
Middle Eighty Percent	1268	247	-17	728	-922	-397	1152	1055	481	1540	1221	2144	2318	1694	864
Bottom Ten Percent	876	-52	-473	126	-1155	-965	-2558	-1900	-1864	-1295	-650	-460	-404	63	-846

**Federal 50 Water Year Surplus/Deficit
PNW Loads and Resources Study
2010 - 2011 Operating Year
2000 White Book**

10/1/2001

Average Energy in Megawatts	Aug1	Aug16	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Avg
1929 Federal Surplus/Deficit	536	-1599	-2060	-1404	-3432	-3097	-4189	-3226	-3225	-2898	-1802	-2196	-762	-1243	-2310
1930 Federal Surplus/Deficit	-1669	-2009	-2039	-1907	-2903	-2948	-4162	-3583	-3391	-2130	571	-2627	-2615	-1035	-2486
1931 Federal Surplus/Deficit	-1129	-1593	-2383	-1999	-2840	-2792	-4681	-4536	-3404	-1157	-2310	-524	-2184	-893	-2444
1932 Federal Surplus/Deficit	-1486	-2262	-2471	-1929	-2911	-3369	-4646	-3452	-971	2066	1610	1480	1037	-29	-1441
1933 Federal Surplus/Deficit	-904	-1233	-1798	-1325	-3032	-2919	830	-1165	-2593	520	-1518	84	3267	2660	-630
1934 Federal Surplus/Deficit	563	743	-1288	-358	-1363	861	3344	1512	681	3420	2810	2086	-1294	-1832	510
1935 Federal Surplus/Deficit	-2325	-2768	-2327	-2164	-3313	-3244	364	-1862	-1643	1134	-809	-559	236	122	-1398
1936 Federal Surplus/Deficit	-699	-2614	-2239	-1663	-3193	-3014	-3757	-3054	-2843	-2294	2017	2031	-719	-309	-1713
1937 Federal Surplus/Deficit	-1326	-1957	-2009	-1879	-3109	-3066	-4188	-3652	-3590	-3025	-3111	-1040	-2167	-1272	-2557
1938 Federal Surplus/Deficit	-1237	-1846	-1852	-1793	-2777	-2617	-252	-2497	166	550	366	2224	908	-667	-853
1939 Federal Surplus/Deficit	-1566	-2504	-2127	-1317	-3362	-3194	-4140	-1250	-1413	-71	159	-72	-2706	163	-1784
1940 Federal Surplus/Deficit	-804	-2096	-2034	-1368	-3051	-3106	-3367	-2214	-47	-66	120	-1109	-3229	-1075	-1835
1941 Federal Surplus/Deficit	-1304	-2273	-1748	-1227	-3143	-3084	-3527	-3545	-2380	-2637	-1353	-1418	-1040	-1832	-2227
1942 Federal Surplus/Deficit	-1618	-2159	-2131	-1320	-2765	-895	-314	-1760	-3243	-1174	-888	-157	-115	720	-1242
1943 Federal Surplus/Deficit	810	-900	-1602	-1460	-3302	-3128	-136	86	201	3453	2628	1962	1293	947	-179
1944 Federal Surplus/Deficit	446	-683	-2052	-1295	-3378	-3090	-4121	-3000	-3656	-2861	-2114	-1759	-1738	-1878	-2381
1945 Federal Surplus/Deficit	-1481	-2306	-2449	-1828	-2860	-3382	-4596	-4078	-3366	-2514	-1672	357	-385	-168	-2228
1946 Federal Surplus/Deficit	-1048	-1506	-1919	-1934	-3219	-2281	620	-2171	-558	628	1563	2687	1160	273	-627
1947 Federal Surplus/Deficit	-20	-2207	-1595	-1245	-3111	-898	1640	981	-791	254	300	1664	770	-55	-290
1948 Federal Surplus/Deficit	-167	-1817	-1766	809	-1907	-2182	1735	-217	-1641	-581	1007	4071	5352	1770	437
1949 Federal Surplus/Deficit	638	862	-1143	-960	-3265	-3194	-1250	-2422	1734	1067	2092	1877	645	-2077	-644
1950 Federal Surplus/Deficit	-2496	-2962	-2125	-1768	-3472	-2434	553	-267	1051	2427	1541	1506	4017	1642	-170
1951 Federal Surplus/Deficit	43	-407	-1605	-293	-1425	-190	2495	1896	692	2515	2252	2827	68	1057	644
1952 Federal Surplus/Deficit	634	-247	-1634	289	-2739	-1688	1333	-804	-1133	2619	2177	3514	1110	-434	34
1953 Federal Surplus/Deficit	-124	-2086	-2095	-1674	-3308	-2975	-3287	1717	-232	-1372	-1059	387	1759	1084	-912
1954 Federal Surplus/Deficit	726	-378	-1565	-981	-2992	-2844	-774	2289	-977	479	112	2049	3076	1834	-34
1955 Federal Surplus/Deficit	1313	477	572	-401	-2384	-2717	-1507	-1849	-3435	-809	-785	-946	2450	2886	-603
1956 Federal Surplus/Deficit	538	217	-1467	-570	-2048	-296	2688	983	797	1923	3438	4290	3862	1231	1044
1957 Federal Surplus/Deficit	882	-270	-1710	-859	-3350	-2472	-1704	618	-910	2578	-202	4014	2104	-631	-284
1958 Federal Surplus/Deficit	-908	-1967	-1995	-1470	-3384	-3119	-1598	1627	-1708	-752	1001	2967	1385	-923	-794
1959 Federal Surplus/Deficit	-971	-1818	-2003	-1087	-2562	-1688	2421	1081	-240	791	-808	1334	2474	1197	-40
1960 Federal Surplus/Deficit	677	-522	454	1454	-1048	-1384	1244	-1576	-650	3888	1240	-99	298	268	134
1961 Federal Surplus/Deficit	261	-2059	-1812	-1061	-2879	-3484	98	1581	-351	431	-1643	1997	3043	-290	-389
1962 Federal Surplus/Deficit	-360	-1748	-2151	-1270	-3455	-3310	96	-2788	-2372	1660	1615	174	-723	553	-1222
1963 Federal Surplus/Deficit	541	-928	-2026	-623	-2400	-1749	569	-956	-2196	-395	-477	-347	373	368	-801
1964 Federal Surplus/Deficit	294	-1075	-1244	-1349	-3354	-3398	-1850	626	-2826	265	-1298	24	3176	2157	-745
1965 Federal Surplus/Deficit	711	92	-909	-345	-2835	32	3265	1642	755	150	2458	2399	1896	234	653
1966 Federal Surplus/Deficit	736	-169	-1572	-735	-2777	-2577	-294	-413	-2215	1813	-511	-599	-1368	652	-914
1967 Federal Surplus/Deficit	500	-1905	-1977	-1416	-3369	-2988	1178	935	-850	-49	-2545	20	2659	1990	-485
1968 Federal Surplus/Deficit	768	-181	-1414	-912	-2964	-2654	421	854	-402	-2088	-1733	-1841	508	436	-799
1969 Federal Surplus/Deficit	997	-146	-390	-228	-1939	-1960	2526	1132	85	1928	2572	3862	1812	321	658
1970 Federal Surplus/Deficit	-601	-2505	-2016	-974	-3384	-3302	-1995	812	-1435	-1420	-833	54	942	-533	-1209
1971 Federal Surplus/Deficit	-524	-1923	-2138	-1529	-3442	-2298	2218	2362	751	2238	1614	4119	3150	1575	456
1972 Federal Surplus/Deficit	993	610	-1131	-1060	-2970	-2648	1978	2091	3794	3149	266	3797	4004	2438	1067
1973 Federal Surplus/Deficit	1134	788	-978	-921	-3252	-2068	-1914	-2273	-2251	-2787	-2457	-1971	-1910	-711	-1659
1974 Federal Surplus/Deficit	-882	-2536	-2355	-1705	-2835	-520	3782	2532	2118	2478	2969	3592	4832	3093	1129
1975 Federal Surplus/Deficit	643	160	-1397	-1489	-3384	-3099	-402	67	691	210	-597	885	2133	2375	-284
1976 Federal Surplus/Deficit	-469	-994	-1807	-500	-1707	669	2680	1337	-496	2907	1380	3331	389	1605	576
1977 Federal Surplus/Deficit	2017	1127	1373	-1058	-3379	-3035	-3835	-2691	-4009	-3081	-1809	-1938	-2078	-1853	-1948
1978 Federal Surplus/Deficit	-1542	-2224	-2697	-2032	-2946	-2798	-884	-2438	191	1242	54	581	-672	101	-1236
-Ranked Averages-															
Top Ten Percent	472	-353	-1250	-781	-2525	-1078	2848	1676	1510	1926	2341	3588	3281	1463	910
Middle Eighty Percent	-237	-1268	-1651	-1094	-2898	-2431	-555	-634	-1100	427	117	981	839	375	-721
Bottom Ten Percent	-628	-1568	-2109	-1697	-3132	-2999	-4268	-3600	-3453	-2414	-1753	-1629	-1893	-1264	-2435

**Bonneville Power Administration
2000 Pacific Northwest Loads and Resources Study
Technical Appendix**

**Section 7
50 Water Year Surplus/Deficit
Regional Tables
Medium Loads
Monthly OY 2002, 2006 & 2011
Average Energy in Megawatts**

Power Business Line

Reports Powered by:



Loads and Resources Information System

**Regional 50 Water Year Surplus/Deficit
PNW Loads and Resources Study
2001 - 2002 Operating Year
2000 White Book**

10/1/2001

Average Energy in Megawatts	Aug1	Aug16	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Avg
1929 Regional Surplus/Deficit	398	-3267	-4142	-925	-3915	-3480	-6599	-4951	-5161	-4186	-2463	-3185	1360	-1471	-3102
1930 Regional Surplus/Deficit	-3989	-4669	-4581	-2453	-3960	-3802	-6685	-4697	-5328	-3225	1945	-3826	-2876	-1501	-3723
1931 Regional Surplus/Deficit	-3206	-4259	-4623	-2549	-4045	-3897	-7266	-7062	-5258	-2243	-3504	-845	-2149	-1694	-3833
1932 Regional Surplus/Deficit	-3808	-5143	-4804	-2617	-3991	-4059	-7471	-4810	-562	4298	4299	3277	4657	777	-1648
1933 Regional Surplus/Deficit	-2800	-3138	-4000	-1119	-2683	-2719	2925	-1268	-3762	2004	-1413	838	8633	6880	88
1934 Regional Surplus/Deficit	282	739	-2791	1665	339	4120	8080	4601	2963	6968	6712	4349	-151	-3070	2288
1935 Regional Surplus/Deficit	-4879	-5902	-4783	-2697	-3298	-3408	2568	-1525	-1937	1934	-508	-130	3362	1000	-1294
1936 Regional Surplus/Deficit	-2247	-5473	-4765	-1858	-4035	-3938	-5382	-4388	-4125	-3449	4789	4335	1371	-382	-2196
1937 Regional Surplus/Deficit	-3337	-4243	-4556	-2377	-3980	-3797	-6961	-5313	-5951	-4535	-4167	-1660	-1238	-1600	-3798
1938 Regional Surplus/Deficit	-3708	-4364	-4154	-1933	-2471	-2173	1460	-2988	1271	1568	2568	5194	4315	-195	-303
1939 Regional Surplus/Deficit	-4171	-5347	-4492	-1123	-3931	-3498	-5913	-1043	-1471	460	1766	830	-2532	494	-2194
1940 Regional Surplus/Deficit	-3004	-4724	-4525	-1315	-3862	-3458	-4723	-2086	1205	512	1584	-1262	-4143	-2267	-2438
1941 Regional Surplus/Deficit	-3498	-5099	-4199	-1350	-3987	-3719	-5396	-5241	-3696	-4878	-1864	-2491	-572	-3075	-3450
1942 Regional Surplus/Deficit	-4495	-5257	-4613	-1361	-3537	581	222	-1839	-5246	-2185	-659	358	2343	1852	-1462
1943 Regional Surplus/Deficit	105	-2909	-3800	-1495	-3598	-3097	1283	1852	1465	7412	6635	4951	5288	3919	1032
1944 Regional Surplus/Deficit	-83	-1725	-4236	-908	-3897	-3137	-6270	-4181	-5823	-4432	-3107	-3101	-1485	-2930	-3387
1945 Regional Surplus/Deficit	-4155	-5427	-4511	-2405	-3950	-4285	-6918	-5983	-5232	-4076	-1984	1461	1965	126	-3129
1946 Regional Surplus/Deficit	-3272	-3832	-4090	-2028	-3499	-1415	3149	-2081	367	2168	4629	6353	5012	1680	275
1947 Regional Surplus/Deficit	-1011	-4579	-3440	-666	-2927	1197	4665	3803	-14	1751	2673	3368	3705	568	806
1948 Regional Surplus/Deficit	-1490	-4116	-3753	3937	-618	-1374	4895	1082	-2465	-315	3456	7940	11868	4424	2059
1949 Regional Surplus/Deficit	342	1109	-2483	-17	-3408	-3570	-1369	-2631	4610	2807	5557	4587	3951	-2786	149
1950 Regional Surplus/Deficit	-4569	-5853	-4545	-1659	-3484	-1735	2915	1188	3479	5228	4748	3689	10068	5283	1248
1951 Regional Surplus/Deficit	-87	-749	-3204	1760	723	3038	6516	6503	3156	5860	6007	6256	3206	3423	3074
1952 Regional Surplus/Deficit	151	-1041	-3265	2898	-2192	-235	3643	820	-780	5081	5584	7304	4787	208	1506
1953 Regional Surplus/Deficit	-1279	-4600	-4397	-1801	-3911	-3501	-3299	4887	615	-2035	-220	2170	6093	3596	-301
1954 Regional Surplus/Deficit	559	-1286	-3403	-161	-2828	-2226	588	5856	-102	2330	1624	4416	8108	5774	1470
1955 Regional Surplus/Deficit	1625	638	709	1001	-1443	-2476	-1517	-1845	-5368	-780	-591	-852	7134	7334	260
1956 Regional Surplus/Deficit	205	-244	-3207	1369	-461	2262	6912	3896	2983	5025	7962	8540	10415	3931	3593
1957 Regional Surplus/Deficit	933	-954	-3472	582	-3458	-1479	-1348	3165	-34	5272	1076	8068	6529	-580	928
1958 Regional Surplus/Deficit	-2821	-4431	-4237	-1246	-3914	-3269	-633	5061	-1902	-544	3088	6345	5141	-1150	-180
1959 Regional Surplus/Deficit	-2919	-4205	-4158	-448	-1690	-229	6005	3620	596	2625	868	3259	7192	3739	1339
1960 Regional Surplus/Deficit	73	-1496	848	5249	1133	19	3191	-839	289	8252	4246	1099	3616	1532	1806
1961 Regional Surplus/Deficit	-293	-4043	-3864	-483	-2541	-3812	1879	5020	660	1509	-1634	4109	7908	346	583
1962 Regional Surplus/Deficit	-1978	-3960	-4566	-828	-3980	-3690	1787	-3652	-3261	3730	4868	1385	1708	1500	-1022
1963 Regional Surplus/Deficit	-112	-2641	-4290	483	-1616	-191	2482	712	-2885	259	574	359	3469	1163	-106
1964 Regional Surplus/Deficit	-736	-3053	-2937	-991	-3463	-3634	-1533	2163	-4201	1495	-962	1275	8948	5859	-12
1965 Regional Surplus/Deficit	506	-250	-1981	1026	-2613	2770	7749	5250	2566	1088	6317	5339	6106	1713	2646
1966 Regional Surplus/Deficit	360	-610	-3197	242	-2676	-2306	1368	224	-2727	4166	860	43	726	1855	-338
1967 Regional Surplus/Deficit	-157	-4080	-4176	-1152	-3746	-2662	4077	3419	-662	846	-2007	1088	7914	4958	530
1968 Regional Surplus/Deficit	37	-1145	-3242	399	-2711	-2295	2930	3948	1037	-2774	-1697	-2189	3621	1719	36
1969 Regional Surplus/Deficit	650	-684	-979	1657	-594	-693	6126	3866	1237	4694	6564	8053	5895	1355	2628
1970 Regional Surplus/Deficit	-2398	-4980	-4095	-122	-3807	-3525	-1770	3342	-1560	-1573	-278	1447	4467	-89	-860
1971 Regional Surplus/Deficit	-2127	-4477	-4357	-1279	-3845	-1611	6267	6550	2893	5049	4352	8194	8861	5090	2347
1972 Regional Surplus/Deficit	1177	582	-2511	-80	-2585	-2045	5790	6243	9162	7787	3025	7769	10446	6565	3753
1973 Regional Surplus/Deficit	1510	863	-2146	-58	-3430	-762	-1616	-2858	-3038	-4298	-2531	-2870	-1635	-1403	-1837
1974 Regional Surplus/Deficit	-3229	-5483	-4536	-1989	-2831	2051	9198	7154	5534	5832	6974	7330	11878	8180	3668
1975 Regional Surplus/Deficit	971	-22	-2935	-1269	-3690	-2754	1217	1446	2233	632	243	2917	7048	6289	951
1976 Regional Surplus/Deficit	-1501	-1886	-3555	1087	46	4477	7122	4706	483	5901	4208	7105	3895	4625	2779
1977 Regional Surplus/Deficit	3133	1743	2084	-483	-3937	-3428	-5796	-3753	-6009	-5112	-2815	-3434	-2399	-3227	-2659
1978 Regional Surplus/Deficit	-4331	-5338	-5022	-2537	-3914	-2798	-207	-3222	1447	2921	1761	2641	1837	1310	-1080
-Ranked Averages-															
Top Ten Percent	-687	-1556	-3403	429	-1022	1956	7108	5700	4264	6081	5635	7400	7968	5345	3374
Middle Eighty Percent	-1278	-2938	-3419	-423	-2943	-2028	634	503	-839	1393	1792	2678	4354	1643	-30
Bottom Ten Percent	-2823	-3999	-4439	-1928	-3974	-3670	-6516	-5299	-5211	-3863	-2139	-2384	-1664	-2160	-3638

**Regional 50 Water Year Surplus/Deficit
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10/1/2001

Average Energy in Megawatts	Aug1	Aug16	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Avg
1929 Regional Surplus/Deficit	1116	-2567	-3454	-2288	-5505	-5442	-8569	-6646	-6795	-5619	-3979	-4602	-374	-2477	-4306
1930 Regional Surplus/Deficit	-3276	-3956	-3893	-3820	-5546	-5761	-8666	-6388	-6961	-4657	436	-5231	-4615	-2497	-4925
1931 Regional Surplus/Deficit	-2488	-3543	-3936	-3917	-5631	-5854	-9249	-8755	-6890	-3672	-5015	-2245	-3885	-2683	-5034
1932 Regional Surplus/Deficit	-3088	-4429	-4117	-3983	-5576	-6020	-9453	-6503	-2184	2884	2793	1881	2944	-208	-2845
1933 Regional Surplus/Deficit	-2089	-2425	-3311	-2482	-4270	-4678	966	-2935	-5376	588	-2943	-562	6933	5918	-1103
1934 Regional Surplus/Deficit	1005	1458	-2097	309	-1239	2183	6146	2960	1368	5573	5214	2969	-1877	-4062	1107
1935 Regional Surplus/Deficit	-4163	-5191	-4095	-4063	-4884	-5368	608	-3194	-3550	532	-2034	-1536	1642	22	-2487
1936 Regional Surplus/Deficit	-1531	-4763	-4077	-3224	-5623	-5897	-7364	-6068	-5758	-4881	3274	2941	-347	-1369	-3395
1937 Regional Surplus/Deficit	-2616	-3530	-3869	-3744	-5565	-5757	-8940	-7006	-7584	-5968	-5694	-3070	-2972	-2600	-5001
1938 Regional Surplus/Deficit	-2995	-3649	-3466	-3300	-4058	-4133	-508	-4660	-341	151	1047	3809	2596	-1178	-1497
1939 Regional Surplus/Deficit	-3461	-4641	-3805	-2489	-5521	-5461	-7884	-2720	-3101	-968	243	-568	-4266	-494	-3394
1940 Regional Surplus/Deficit	-2281	-4010	-3838	-2679	-5448	-5420	-6689	-3773	-419	-913	70	-2666	-5876	-3259	-3636
1941 Regional Surplus/Deficit	-2781	-4387	-3512	-2712	-5575	-5681	-7371	-6935	-5324	-6313	-3377	-3893	-2306	-4071	-4651
1942 Regional Surplus/Deficit	-3778	-4542	-3928	-2725	-5125	-1367	-1749	-3509	-6869	-3618	-2174	-1047	622	869	-2657
1943 Regional Surplus/Deficit	821	-2196	-3113	-2859	-5187	-5062	-689	176	-137	6007	5124	3565	3571	2932	-161
1944 Regional Surplus/Deficit	636	-1021	-3550	-2272	-5488	-5101	-8240	-5876	-7458	-5866	-4623	-4513	-3224	-3928	-4591
1945 Regional Surplus/Deficit	-3438	-4715	-3825	-3772	-5536	-6246	-8906	-7676	-6865	-5508	-3515	56	239	-868	-4332
1946 Regional Surplus/Deficit	-2561	-3119	-3402	-3396	-5087	-3374	1181	-3755	-1249	748	3118	4971	3298	700	-918
1947 Regional Surplus/Deficit	-294	-3868	-2750	-2031	-4517	-755	2707	2142	-1620	333	1155	1976	1994	-417	-384
1948 Regional Surplus/Deficit	-780	-3412	-3064	2588	-2199	-3328	2937	-583	-4077	-1739	1940	6559	10187	3458	873
1949 Regional Surplus/Deficit	1061	1826	-1788	-1379	-4997	-5535	-3337	-4303	2995	1385	4049	3190	2232	-3777	-1045
1950 Regional Surplus/Deficit	-3857	-5146	-3858	-3028	-5077	-3694	953	-481	1881	3811	3236	2296	8372	4307	58
1951 Regional Surplus/Deficit	622	-36	-2513	401	-860	1088	4569	4852	1557	4451	4503	4873	1484	2446	1889
1952 Regional Surplus/Deficit	871	-330	-2571	1545	-3780	-2190	1684	-851	-2387	3669	4071	5925	3072	-775	318
1953 Regional Surplus/Deficit	-564	-3894	-3711	-3167	-5499	-5462	-5283	3215	-990	-3446	-1750	772	4381	2615	-1496
1954 Regional Surplus/Deficit	1274	-578	-2715	-1522	-4415	-4188	-1378	4198	-1705	903	97	3030	6411	4804	281
1955 Regional Surplus/Deficit	2356	1364	1419	-355	-3027	-4431	-3482	-3525	-6999	-2197	-2115	-2259	5424	6373	-930
1956 Regional Surplus/Deficit	928	468	-2515	11	-2045	311	4965	2248	1372	3613	6462	7166	8720	2952	2410
1957 Regional Surplus/Deficit	1648	-243	-2783	-779	-5047	-3441	-3312	1495	-1658	3876	-453	6690	4822	-1572	-264
1958 Regional Surplus/Deficit	-2112	-3722	-3550	-2612	-5503	-5234	-2601	3394	-3514	-1970	1570	4957	3429	-2141	-1374
1959 Regional Surplus/Deficit	-2204	-3493	-3470	-1809	-3278	-2182	4054	1971	-1008	1211	-655	1868	5492	2759	152
1960 Regional Surplus/Deficit	797	-790	1554	3904	-444	-1930	1234	-2500	-1325	6860	2735	-301	1897	553	620
1961 Regional Surplus/Deficit	418	-3342	-3177	-1846	-4128	-5776	-85	3368	-947	100	-3164	2724	6214	-644	-608
1962 Regional Surplus/Deficit	-1262	-3246	-3879	-2190	-5570	-5654	-179	-5322	-4884	2313	3356	-14	-13	510	-2218
1963 Regional Surplus/Deficit	607	-1928	-3602	-878	-3202	-2143	522	-956	-4503	-1168	-940	-1046	1748	179	-1300
1964 Regional Surplus/Deficit	-19	-2341	-2246	-2355	-5052	-5599	-3501	495	-5820	65	-2494	-127	7247	4892	-1205
1965 Regional Surplus/Deficit	1230	458	-1286	-329	-4200	817	5804	3602	957	-338	4810	3952	4393	729	1460
1966 Regional Surplus/Deficit	1086	97	-2508	-1118	-4263	-4264	-592	-1443	-4347	2754	-659	-1358	-991	869	-1531
1967 Regional Surplus/Deficit	555	-3376	-3488	-2516	-5335	-4623	2119	1764	-2263	-571	-3542	-312	6211	3991	-660
1968 Regional Surplus/Deficit	764	-436	-2550	-963	-4299	-4255	963	2287	-567	-4195	-3219	-3600	1904	740	-1157
1969 Regional Surplus/Deficit	1367	25	-280	300	-2177	-2647	4172	2222	-377	3285	5062	6676	4188	370	1443
1970 Regional Surplus/Deficit	-1683	-4270	-3408	-1483	-5394	-5490	-3745	1664	-3171	-2992	-1798	41	2743	-1079	-2058
1971 Regional Surplus/Deficit	-1415	-3769	-3672	-2645	-5435	-3573	4307	4906	1281	3643	2842	6817	7156	4112	1159
1972 Regional Surplus/Deficit	1902	1297	-1819	-1443	-4174	-4008	3830	4591	7580	6387	1506	6390	8749	5602	2570
1973 Regional Surplus/Deficit	2238	1593	-1451	-1420	-5019	-2721	-3590	-4538	-4664	-5729	-4050	-4281	-3366	-2400	-3035
1974 Regional Surplus/Deficit	-2519	-4774	-3851	-3357	-4422	104	7263	5519	3929	4422	5470	5950	10188	7218	2487
1975 Regional Surplus/Deficit	1689	700	-2239	-2635	-5280	-4718	-746	-230	632	-792	-1281	1520	5335	5320	-240
1976 Regional Surplus/Deficit	-793	-1183	-2868	-275	-1538	2530	5174	3055	-1125	4492	2695	5723	2172	3656	1593
1977 Regional Surplus/Deficit	3864	2474	2799	-1844	-5527	-5389	-7767	-5447	-7644	-6546	-4325	-4841	-4135	-4222	-3857
1978 Regional Surplus/Deficit	-3611	-4623	-4337	-3904	-5502	-4762	-2179	-4900	-172	1514	244	1246	111	325	-2276
-Ranked Averages-															
Top Ten Percent	28	-846	-2713	-932	-2608	5.1	5160	4053	2663	4673	4127	6020	6263	4375	2190
Middle Eighty Percent	-560	-2226	-2728	-1786	-4531	-3986	-1331	-1166	-2454	-25	274	1283	2639	660	-1222
Bottom Ten Percent	-2105	-3287	-3752	-3293	-5561	-5631	-8493	-6992	-6843	-5295	-3654	-3790	-3400	-3156	-4840

**Regional 50 Water Year Surplus/Deficit
PNW Loads and Resources Study
2010 - 2011 Operating Year
2000 White Book**

10/1/2001

Average Energy in Megawatts	Aug1	Aug16	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr1	Apr16	May	Jun	Jul	Avg
1929 Regional Surplus/Deficit	-826	-4522	-5405	-4242	-7726	-7855	-11052	-9038	-8707	-7928	-6515	-6200	-2439	-4592	-6429
1930 Regional Surplus/Deficit	-5230	-5913	-5844	-5776	-7766	-8172	-11156	-8778	-8873	-6963	-2084	-6821	-6682	-4610	-7048
1931 Regional Surplus/Deficit	-4438	-5498	-5887	-5874	-7851	-8266	-11739	-11146	-8801	-5980	-7548	-3832	-5951	-4794	-7156
1932 Regional Surplus/Deficit	-5039	-6384	-6068	-5939	-7797	-8433	-11942	-8895	-4088	599	275	295	892	-2313	-4963
1933 Regional Surplus/Deficit	-4040	-4378	-5261	-4436	-6490	-7086	-1506	-5311	-7276	-1710	-5478	-2149	4887	3830	-3217
1934 Regional Surplus/Deficit	-941	-486	-4044	-1641	-3448	-212	3689	608	-511	3299	2699	1394	-3936	-6175	-999
1935 Regional Surplus/Deficit	-6117	-7147	-6045	-6018	-7102	-7779	-1865	-5569	-5450	-1759	-4571	-3126	-414	-2078	-4604
1936 Regional Surplus/Deficit	-3478	-6720	-6027	-5179	-7845	-8308	-9854	-8452	-7670	-7192	748	1358	-2403	-3477	-5515
1937 Regional Surplus/Deficit	-4565	-5486	-5820	-5700	-7785	-8169	-11427	-9397	-9496	-8277	-8237	-4664	-5037	-4714	-7124
1938 Regional Surplus/Deficit	-4948	-5605	-5417	-5256	-6279	-6546	-2989	-7039	-2242	-2147	-1482	2231	540	-3283	-3614
1939 Regional Surplus/Deficit	-5415	-6600	-5756	-4444	-7744	-7876	-10368	-5102	-5010	-3270	-2285	-2154	-6332	-2601	-5514
1940 Regional Surplus/Deficit	-4228	-5966	-5788	-4633	-7668	-7833	-9171	-6161	-2325	-3215	-2461	-4255	-7940	-5371	-5757
1941 Regional Surplus/Deficit	-4734	-6345	-5463	-4666	-7800	-8095	-9857	-9327	-7234	-8623	-5912	-5484	-4372	-6186	-6774
1942 Regional Surplus/Deficit	-5731	-6498	-5880	-4680	-7354	-3774	-4233	-5887	-8775	-5925	-4701	-2637	-1436	-1232	-4776
1943 Regional Surplus/Deficit	-1124	-4150	-5065	-4814	-7409	-7478	-3170	-2206	-2030	3724	2601	1987	1516	828	-2276
1944 Regional Surplus/Deficit	-1311	-2973	-5502	-4227	-7711	-7516	-10723	-8269	-9372	-8175	-7161	-6111	-5293	-6044	-6715
1945 Regional Surplus/Deficit	-5392	-6672	-5777	-5729	-7765	-8662	-11399	-10067	-8777	-7817	-6062	-1536	-1821	-2976	-6457
1946 Regional Surplus/Deficit	-4512	-5075	-5353	-5353	-7308	-5783	-1296	-6135	-3151	-1547	596	3395	1245	-1403	-3034
1947 Regional Surplus/Deficit	-2241	-5824	-4700	-3986	-6738	-3159	235	-228	-3507	-1954	-1370	393	-57	-2522	-2497
1948 Regional Surplus/Deficit	-2730	-5369	-5014	642	-4415	-5733	465	-2956	-5977	-4039	-585	4983	8151	1365	-1237
1949 Regional Surplus/Deficit	-884	-118	-3735	-3333	-7219	-7951	-5818	-6682	1094	-915	1530	1604	176	-5888	-3162
1950 Regional Surplus/Deficit	-5814	-7105	-5810	-4985	-7301	-6104	-1522	-2857	-6	1525	714	713	6329	2209	-2056
1951 Regional Surplus/Deficit	-1325	-1983	-4462	-1549	-3073	-1315	2103	2494	-325	2169	1985	3295	-575	349	-220
1952 Regional Surplus/Deficit	-1074	-2280	-4518	-403	-5997	-4595	-787	-3223	-4283	1378	1547	4350	1018	-2880	-1794
1953 Regional Surplus/Deficit	-2515	-5854	-5663	-5123	-7721	-7875	-7773	836	-2886	-5743	-4290	-814	2329	515	-3615
1954 Regional Surplus/Deficit	-671	-2531	-4666	-3475	-6635	-6602	-3858	1828	-3598	-1398	-2435	1451	4368	2710	-1833
1955 Regional Surplus/Deficit	417	-579	-519	-2305	-5244	-6837	-5959	-5909	-8910	-4495	-4655	-3853	3374	4285	-3044
1956 Regional Surplus/Deficit	-1018	-1480	-4463	-1940	-4262	-2091	2501	-110	-520	1328	3945	5592	6678	853	302
1957 Regional Surplus/Deficit	-296	-2192	-4733	-2732	-7269	-5854	-5789	-881	-3564	1592	-2989	5115	2773	-3680	-2380
1958 Regional Surplus/Deficit	-4064	-5680	-5501	-4568	-7724	-7650	-5082	1018	-5414	-4274	-961	3377	1378	-4252	-3492
1959 Regional Surplus/Deficit	-4154	-5450	-5421	-3762	-5498	-4586	1586	-387	-2894	-1074	-3184	286	3447	660	-1958
1960 Regional Surplus/Deficit	-1147	-2742	-386	1961	-2651	-4331	-1235	-4865	-3216	4587	213	-1888	-159	-1546	-1488
1961 Regional Surplus/Deficit	-1529	-5300	-5128	-3800	-6349	-8191	-2564	1002	-2842	-2187	-5697	1145	4173	-2749	-2722
1962 Regional Surplus/Deficit	-3209	-5201	-5830	-4144	-7791	-8069	-2656	-7698	-6789	22	833	-1600	-2071	-1596	-4335
1963 Regional Surplus/Deficit	-1337	-3882	-5553	-2830	-5421	-4548	-1951	-3330	-6405	-3469	-3465	-2636	-310	-1922	-3415
1964 Regional Surplus/Deficit	-1965	-4297	-4194	-4309	-7275	-8014	-5982	-1881	-7724	-2241	-5036	-1715	5200	2800	-3322
1965 Regional Surplus/Deficit	-714	-1492	-3232	-2278	-6420	-1587	3341	1244	-932	-2629	2290	2371	2340	-1374	-650
1966 Regional Surplus/Deficit	-859	-1853	-4459	-3070	-6483	-6671	-3065	-3818	-6251	464	-3184	-2945	-3046	-1234	-3646
1967 Regional Surplus/Deficit	-1392	-5332	-5438	-4470	-7555	-7036	-352	-603	-4150	-2859	-6078	-1899	4164	1899	-2772
1968 Regional Surplus/Deficit	-1180	-2386	-4498	-2916	-6520	-6663	-1514	-84	-2457	-6490	-5754	-5193	-150	-1360	-3272
1969 Regional Surplus/Deficit	-576	-1924	-2224	-1650	-4391	-5051	1704	-131	-2271	1001	2544	5102	2140	-1732	-665
1970 Regional Surplus/Deficit	-3632	-6227	-5358	-3436	-7615	-7905	-6229	-719	-5070	-5288	-4330	-1549	683	-3186	-4177
1971 Regional Surplus/Deficit	-3363	-5727	-5624	-4600	-7657	-5987	1832	2552	-609	1361	321	5242	5108	2013	-953
1972 Regional Surplus/Deficit	-40	-648	-3767	-3397	-6396	-6421	1355	2225	5708	4110	-1020	4814	6704	3514	462
1973 Regional Surplus/Deficit	298	-350	-3397	-3373	-7241	-5129	-6074	-6922	-6572	-8037	-6588	-5876	-5429	-4510	-5155
1974 Regional Surplus/Deficit	-4472	-6732	-5803	-5314	-6644	-2299	4805	3170	2043	2140	2951	4374	8147	5130	379
1975 Regional Surplus/Deficit	-255	-1243	-4184	-4590	-7503	-7132	-3223	-2610	-1261	-3095	-3820	-66	3282	3227	-2355
1976 Regional Surplus/Deficit	-2742	-3136	-4819	-2228	-3755	130	2710	697	-3018	2210	172	4146	113	1564	-517
1977 Regional Surplus/Deficit	1925	532	864	-3796	-7750	-7798	-10249	-7839	-9557	-8856	-6857	-6434	-6201	-6337	-5977
1978 Regional Surplus/Deficit	-5562	-6579	-6290	-5861	-7731	-7175	-4661	-7281	-2071	-767	-2281	-338	-1950	-1777	-4394
-Ranked Averages-															
Top Ten Percent	-1919	-2796	-4663	-2886	-4826	-2399	2695	1695	778	2392	1607	4444	4213	2282	81
Middle Eighty Percent	-2508	-4180	-4677	-3739	-6751	-6397	-3808	-3542	-4353	-2319	-2255	-302	585	-1443	-3338
Bottom Ten Percent	-4056	-5243	-5703	-5249	-7783	-8044	-10981	-9383	-8755	-7604	-6188	-5383	-5467	-5270	-6963