

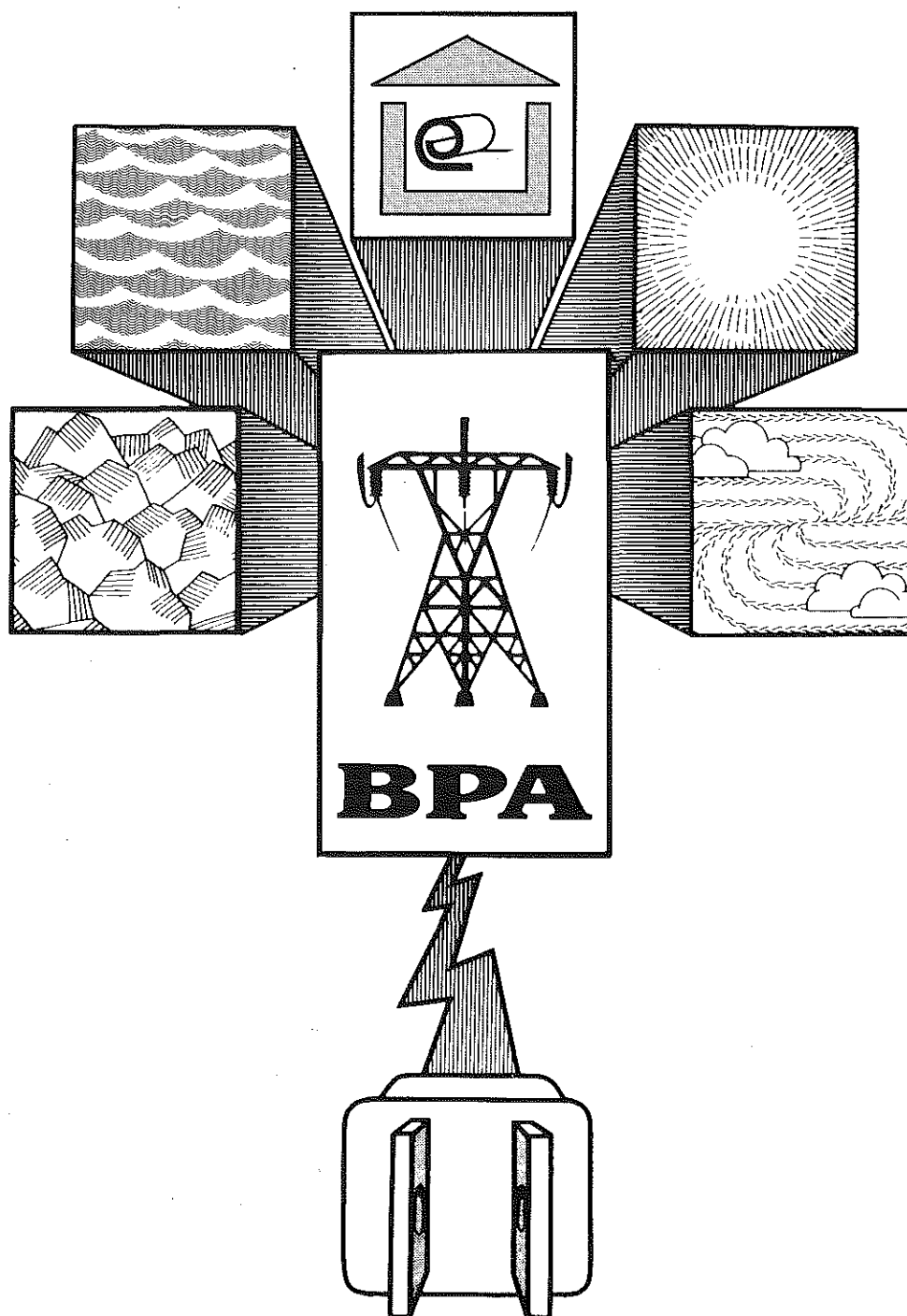
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Final Environmental Impact Statement Resource Programs

DOE/EIS-0162

Addendum to Volume 2: Appendices

February 1993



U.S. Department
of Energy

**Resource Programs
Final Environmental Impact Statement**

Volume 2: Addendum to Volume 2: Appendices

**Bonneville Power Administration
February 1993**

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Addendum to Volume 2: Technical Appendices

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 - ♦ **Section 2:** Revised Analysis of the Emphasize Renewables Alternative

Verification and Update of Threatened and Endangered Species Lists

Appendix G

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United States Department of the Interior

FISH AND WILDLIFE SERVICE

Portland Field Station
2600 S.E. 98th Avenue, Suite 100
Portland, Oregon 97266

November 7, 1991

Ref: 1-7-92-SP-4

Ms. Katherine S. Pierce
Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208-3621

RE: Resource Programs Environmental
Impact Statement

Dear Ms. Pierce:

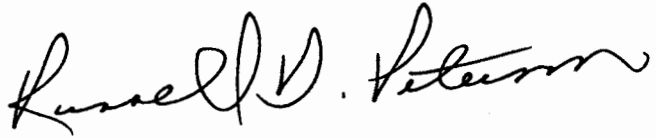
This response regards your letter, dated October 9, 1991, which was received by us on October 10, 1991. The Portland Field Station handles Section 7 consultation requests for Oregon only. We have attached a list (Attachment A) of endangered and threatened species that may be present within Oregon under consideration in your Resource Programs Environmental Impact Statement. The list fulfills the requirement of the Fish and Wildlife Service under Section 7(c) of the Endangered Species Act of 1973, as amended (16 USC 1531 et seq.) for Oregon. Your requirements under the Act are outlined in Attachment B.

Should your biological assessment determine that a listed species is likely to be adversely affected by the project, the Bonneville Power Administration (BPA) should request formal Section 7 consultation through this office. Even if your biological assessment shows a "no effect" or "beneficial effect" situation, we would appreciate receiving a copy for our information.

Attachment A includes a list of candidate species presently under review by this Service. Candidate species have no protection under the Endangered Species Act but are included for your consideration as it is possible candidates could become formal proposals and be listed prior to project completion. If you determine your project may affect candidate species, you are not required to perform a biological assessment or to consult with the Fish and Wildlife Service. However, if early evaluation of your project indicates that it is likely to adversely impact a candidate species, you may wish to request technical assistance from this office.

Your interest in endangered species is appreciated. If you have any additional questions regarding your responsibilities under the Act, please contact Laura Todd at our office, phone (503) 231-6179 or FTS 429-6179. All correspondence should include the above referenced case number.

Sincerely,

A handwritten signature in cursive script, reading "Russell D. Peterson".

Russell D. Peterson
Field Supervisor

Attachments

LT4:792SP4.LTR

cc: PFO-ES
BFO-SE
ODFW (Nongame)
ONHP

LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES AND
CANDIDATE SPECIES THAT MAY OCCUR IN OREGON IN THE AREA OF THE PROPOSED
RESOURCE PROGRAMS ENVIRONMENTAL IMPACT STATEMENT
1-7-92-SP-4

LISTED^{1/} AND CANDIDATE ANIMAL^{3/} SPECIES

<u>Name</u>		<u>Category</u>
SUMMER BASIN TUI CHUB	GILA BICOLOR SSP 13	C1
TRICOLORED BLACKBIRD	AGELAIUS TRICOLOR	C2
WHITE-FOOTED VOLE	ARBORIMUS ALBIPES	C2
MARbled MURRELET	BRACHYRAMPHUS MARMORATUS	C2
FERRUGINOUS HAWK	BUTEO REGALIS	C2
GOOSE LAKE SUCKER	CATOSTOMUS OCCIDENTALIS LACUSANSERINUS	C2
JENNY CREEK SUCKER	CATOSTOMUS RIMICULUS SSP 1	C2
KLAMATH LARGESCALE SUCKER	CATOSTOMUS SNYDERI	C2
SAGE GROUSE	CENTROCERCUS UROPHASIANUS	C2
WESTERN SAGE GROUSE	CENTROCERCUS UROPHASIANUS PHAIOS	C2
SNOWY PLOVER	CHARADRIUS ALEXANDRINUS	C2
WESTERN SNOWY PLOVER	CHARADRIUS ALEXANDRINUS NIVOSUS	C2
MOUNTAIN PLOVER	CHARADRIUS MONTANUS	C2
WESTERN POND TURTLE	CLEMMYS MARMORATA	C2
WESTERN YELLOW-BILLED CUCKOO	COCCYZUS AMERICANUS OCCIDENTALIS	C2
MALHEUR MOTTLED SCULPIN	COTTUS BAIRDI SSP 1	C2
SLENDER SCULPIN	COTTUS TENUIS	C2
FULVOUS WHISTLING-DUCK	DENDROCYGNA BICOLOR	C2
SPOTTED BAT	EUDERMA MACULATUM	C2
LYNX	FELIS LYNX	C2
ALVORD CHUB	GILA ALVORDENSIS	C2
SHELDON TUI CHUB	GILA BICOLOR EURYSOMA	C2
OREGON LAKES TUI CHUB	GILA BICOLOR OREGONENSIS	C2
CATLOW TUI CHUB	GILA BICOLOR SSP 2	C2
WOLVERINE	GULO GULO	C2
LONG-BILLED CURLEW	NUMENIUS AMERICANUS	C2
WHITEHORSE CUTTHROAT TROUT	ONCORHYNCHUS CLARKI SSP 1	C2
INLAND REDBAND TROUT	ONCORHYNCHUS MYKISS GIBBSI	C2
GOOSE LAKE REDBAND TROUT	ONCORHYNCHUS MYKISS SSP 1	C2
OREGON CHUB	OREGONICHTHYS CRAMERI	C2
CALIFORNIA BIGHORN	OVIS CANADENSIS CALIFORNIANA	C2
TOWNSEND'S BIG-EARED BAT	PLECOTUS TOWNSENDII	C2
TOWNSEND'S WESTERN BIG-EARED BAT	PLECOTUS TOWNSENDII TOWNSENDII	C2
WHITE-FACED IBIS	PLEGADIS CHIHI	C2
DEL NORTE SALAMANDER	PLETHODON ELONGATUS	C2
LARCH MOUNTAIN SALAMANDER	PLETHODON LARSELLI	C2
SISKIYOU MOUNTAINS SALAMANDER	PLETHODON STORMI	C2
BULL TROUT	SALVELINUS CONFLUENTUS	C2
PREBLE'S SHREW	SOREX PREBLEI	C2
VAGRANT SHREW	SOREX VAGRANS	C2
PISTOL RIVER POCKET GOPHER	THOMOMYS BOTTAE DETUMIDUS	C2
GOLD BEACH POCKET GOPHER	THOMOMYS MAZAMA HELLERI	C2

ATTACHMENT A

<u>Name</u>		<u>Category</u>
COLUMBIAN SHARP-TAILED GROUSE	TYMPANUCHUS PHASIANELLUS COLUMBIANUS	C2
BLACK RIGHT WHALE	BALAENA GLACIALIS	LE*
SEI WHALE	BALAENOPTERA BOREALIS	LE*
BLUE WHALE	BALAENOPTERA MUSCULUS	LE*
FIN WHALE	BALAENOPTERA PHYSALUS	LE*
ALEUTIAN CANADA GOOSE	BRANTA CANADENSIS LEUCOPAREIA	LE
SHORTNOSE SUCKER	CHASMISTES BREVIROSTRIS	LE
LOST RIVER SUCKER	DELTISTES LUXATUS	LE
LEATHERBACK TURTLE	DERMOCHELYS CORIACEA	LE*
SHORT-TAILED ALBATROSS	DIOMEDEA ALBATRUS	LE
GRAY WHALE	ESCHRICHTIUS ROBUSTUS	LE*
PEREGRINE FALCON	FALCO PEREGRINUS	LE
AMERICAN PEREGRINE FALCON	FALCO PEREGRINUS ANATUM	LE
PEALE'S PEREGRINE FALCON	FALCO PEREGRINUS PEALEI	LE
BORAX LAKE CHUB	GILA BORAXOBIUS	LE
CALIFORNIA CONDOR	GYMNOGYPS CALIFORNIANUS	LE
HUMPBACK WHALE	MEGAPTERA NOVAEANGLIAE	LE*
COLUMBIAN WHITE-TAILED DEER	ODOCOILEUS VIRGINIANUS LEUCURUS	LE
BROWN PELICAN	PELECANUS OCCIDENTALIS	LE
SPERM WHALE	PHYSETER MACROCEPHALUS	LE*
LEAST TERN	STERNA ANTILLARUM	LE
GRAY WOLF	CANIS LUPUS	LELT
LOGGERHEAD SEA TURTLE	CARETTA CARETTA	LT*
WARNER SUCKER	CATOSTOMUS WARNERENSIS	LT
GREEN SEA TURTLE	CHELONIA MYDAS	LT*
SOUTHERN SEA OTTER	ENHYDRA LUTRIS NEREIS	LT*
HUTTON SPRING TUI CHUB	GILA BICOLOR SSP 1	LT
BALD EAGLE	HALIAEETUS LEUCOCEPHALUS	LT
PACIFIC RIDLEY SEA TURTLE	LEPIDOCHELYS OLIVACEA	LT*
FOSKETT SPRING SPECKLED DACE	RHINICHTHYS OSCULUS SSP 3	LT
SPOTTED OWL	STRIX OCCIDENTALIS	LT

Listed^{1/} and Candidate Plant^{4/} Species

<u>Name</u>		<u>Category</u>
MALHEUR VALLEY FIDDLENECK	AM SINCKIA CARINATA	C1
NORTHERN WORMWOOD	ARTEMISIA CAMPESTRIS VAR WORMSKIOLD	C1
APPLEGATE'S MILK-VETCH	ASTRAGALUS APPLEGATEI	C1
PUMICE GRAPE-FERN	BOTRYCHIUM PUMICOLA	C1
GOLDEN INDIAN-PAINTBRUSH	CASTILLEJA LEVISECTA	C1
WILLAMETTE VALLEY DAISY	ERIGERON DECUMBENS SSP DECUMBENS	C1
GOLDEN BUCKWHEAT	ERIOGONUM CHRYSOPS	C1
CRONQUIST'S STICKSEED	HACKELIA CRONQUISTII	C1
SNAKE RIVER GOLDENWEED	HAPLOPAPPUS RADIATUS	C1
LARGE-FLOWERED RUSH-LILY	HASTINGSIA BRACTEOSA	C1
HOWELLIA	HOWELLIA AQUATILIS	C1
WESTERN LILY	LILIUM OCCIDENTALE	C1
DWARF WOOLY MEADOW-FOAM	LIMNANTHES FLOCCOSA SSP PUMILA	C1
AGATE DESERT LOMATIUM	LOMATIUM COOKII	C1
RED-FRUITED LOMATIUM	LOMATIUM ERYTHROCARPUM	C1
GREENMAN'S LOMATIUM	LOMATIUM GREENMANII	C1
COLONIAL LUINA	LUINA SERPENTINA	C1
MT. ASHLAND LUPINE	LUPINUS ARIDUS SSP ASHLANDENSIS	C1
WOLF'S EVENING-PRIMROSE	OENOTHERA WOLFII	C1
ROUGH POPCORN FLOWER	PLAGIOBOTHRYIS HIRTUS	C1
OREGON SEMAPHORE GRASS	PLEUROPOGON OREGONUS	C1
DALLES MT. BUTTERCUP	RANUNCULUS RECONDITUS	C1
ERTTER'S SENECEO	SENECIO ERTTERAE	C1
NELSON'S SIDALCEA	SIDALCEA NELSONIANA	C1
HOWELL'S SPECTACULAR THELYPODY	THELYPODIUM HOWELLII SSP SPECTABILI	C1
PINK SANDVERBENA	ABRONIA UMBELLATA SSP BREVIFLORA	C2
HENDERSON'S BENTGRASS	AGROSTIS MICROPHYLLA VAR HENDERSONI	C2
AROMATIC ANTENNARIA	ANTENNARIA AROMATICA	C2
KOEHLER'S ROCKCRESS	ARABIS KOEHLERI VAR KOEHLERI	C2
PRESTON PEAK ROCK CRESS	ARABIS SERPENTINICOLA	C2
CRATER LAKE ROCKCRESS	ARABIS SUFFRUTESCENS VAR HORIZONTAL	C2
ESTES' ARTEMISIA	ARTEMISIA LUDOVICIANA SSP ESTESII	C2
WHITE-TOPPED ASTER	ASTER CURTUS	C2
GORMAN'S ASTER	ASTER GORMANII	C2
WAYSIDE ASTER	ASTER VIALIS	C2
LAURENCE'S MILK-VETCH	ASTRAGALUS COLLINUS VAR LAURENTII	C2
SOUTH JOHN DAY MILK-VETCH	ASTRAGALUS DIAPHANUS VAR DIURNUS	C2
MULFORD'S MILK-VETCH	ASTRAGALUS MULFORDIAE	C2
PECK'S MILK-VETCH	ASTRAGALUS PECKII	C2
WEAK MILK-VETCH	ASTRAGALUS SOLITARIUS	C2
STERILE MILK-VETCH	ASTRAGALUS STERILIS	C2
BASTARD KENTROPHYTA	ASTRAGALUS TEGETARIOIDES	C2
TYGH VALLEY MILK-VETCH	ASTRAGALUS TYGHENSIS	C2
BENSONIA	BENSONIELLA OREGONA	C2
UPWARD-LOBED MOONWORT	BOTRYCHIUM ASCENDENS	C2
CRENULATE GRAPE-FERN	BOTRYCHIUM CRENULATUM	C2
STALKED MOONWORT	BOTRYCHIUM PEDUNCULOSUM	C2
THURBER'S REED GRASS	CALAMAGROSTIS CRASSIGLUMIS	C2
COX'S MARIPOSA LILY	CALOCHORTUS COXII	C2
GREENE'S MARIPOSA LILY	CALOCHORTUS GREENEI	C2

ATTACHMENT A

<u>Name</u>	<u>Category</u>
HOWELL'S MARIPOSA LILY	C2
PECK'S MARIPOSA-LILY	C2
UMPQUA MARIPOSA-LILY	C2
HOWELL CAMASSIA	C2
PURPLE TOOTHWORT	C2
SADDLE MT. BITTERCRESS	C2
GREEN-TINGED PAINTBRUSH	C2
STEENS MT. PAINTBRUSH	C2
MT. MAZAMA COLLOMIA	C2
BARREN VALLEY COLLOMIA	C2
SALT-MARSH BIRD'S-BEAK	C2
COLD-WATER CORYDALIS	C2
WHITE ROCK LARKSPUR	C2
PEACOCK LARKSPUR	C2
HOWELL'S DAISY	C2
CROSBY'S BUCKWHEAT	C2
CUSICK'S ERIGONUM	C2
COAST RANGE FAWN-LILY	C2
UMPQUA SWERTIA	C2
TALUS FRITILLARY	C2
GENTNER'S FRITILLARIA	C2
ELEGANT GENTIAN	C2
BOGGS LAKE HEDGE-HYSSOP	C2
HENDERSON'S HORKELIA	C2
GRIMY IVESIA	C2
SHELLY'S IVESIA	C2
DAVIS' PEPPERGRASS	C2
HAZEL'S PRICKLY-PHLOX	C2
PURDY'S LEWISIA	C2
BELLINGER'S MEADOW-FOAM	C2
BIG-FLOWERED WOOLY MEADOWFOAM	C2
SMOOTH DESERT PARSLEY	C2
SUKSDORF'S LOMATIUM	C2
BIDDLE'S LUPINE	C2
CUSICK'S LUPINE	C2
KINCAID'S LUPINE	C2
SMOOTH MENTZELIA	C2
PACKARD'S MENTZELIA	C2
HOWELL'S MICROSERIS	C2
BANK MONKEYFLOWER	C2
MEMBRANE-LEAVED MONKEYFLOWER	C2
STALK-LEAVED MONKEYFLOWER	C2
PYGMY MONKEYFLOWER	C2
WASHINGTON MONKEYFLOWER	C2
HOWELL'S MONTIA	C2
SESSILE MOUSETAIL	C2
BARRETT'S PENSTEMON	C2
BLUE-LEAVED PENSTEMON	C2
PECK'S PENSTEMON	C2
RED-ROOT YAMPAH	C2
SILVERY PHACELIA	C2
CALOCHORTUS HOWELLII	C2
CALOCHORTUS LONGEBARBATUS VAR PECKII	C2
CALOCHORTUS UMPQUAENSIS	C2
CAMASSIA HOWELLII	C2
CARDAMINE GEMMATA	C2
CARDAMINE PATTERSONII	C2
CASTILLEJA CHLOROTICA	C2
CASTILLEJA PILOSA VAR STEENENSIS	C2
COLLOMIA MAZAMA	C2
COLLOMIA RENACTA	C2
CORDYLANTHUS MARITIMUS SSP PALUSTRI	C2
CORYDALIS AQUAE-GELIDAE	C2
DELPHINIUM LEUCOPHAEUM	C2
DELPHINIUM PAVONACEUM	C2
ERIGERON HOWELLII	C2
ERIOGONUM CROSBYAE	C2
ERIOGONUM CUSICKII	C2
ERYTHRONIUM ELEGANS	C2
FRASERA UMPQUAENSIS	C2
FRITILLARIA FALCATA	C2
FRITILLARIA GENTNERI	C2
GENTIANA SETIGERA	C2
GRATIOLA HETEROSEPALA	C2
HORKELIA HENDERSONII	C2
IVESIA RHYPARA VAR RHYPARA	C2
IVESIA RHYPARA VAR SHELLYI	C2
LEPIDIUM DAVISII	C2
LEPTODACTYLON PUNGENS SSP HAZELIAE	C2
LEWISIA COTYLEDON VAR PURDYI	C2
LIMNANTHES FLOCCOSA SSP BELLINGERIA	C2
LIMNANTHES FLOCCOSA SSP GRANDIFLORA	C2
LOMATIUM LAEVIGATUM	C2
LOMATIUM SUKSDORFII	C2
LUPINUS BIDDLEI	C2
LUPINUS CUSICKII	C2
LUPINUS SULPHUREUS VAR KINCAIDII	C2
MENTZELIA MOLLIS	C2
MENTZELIA PACKARDIAE	C2
MICROSERIS HOWELLII	C2
MIMULUS CLIVICOLA	C2
MIMULUS HYMENOPHYLLUS	C2
MIMULUS PATULUS	C2
MIMULUS PYGMAEUS	C2
MIMULUS WASHINGTONENSIS VAR WASHINGTONENSIS	C2
MONTIA HOWELLII	C2
MYOSURUS MINIMUS VAR SESSILIFLORUS	C2
PENSTEMON BARRETTIAE	C2
PENSTEMON GLAUCINUS	C2
PENSTEMON PECKII	C2
PERIDERIDIA ERYTHORRHIZA	C2
PHACELIA ARGENTEA	C2

ATTACHMENT A

<u>Name</u>		<u>Category</u>
A POPCORNFLOWER	PLAGIOBOTHRYS LAMPROCARPUS	C2
SOUTHERN OREGON BUTTERCUP	RANUNCULUS AUSTRO-OREGANUS	C2
COLUMBIA CRESS	RORIPPA COLUMBIAE	C2
SADDLE MT. SAXIFRAGE	SAXIFRAGA HITCHCOCKIANA	C2
ROGUE RIVER STONECROP	SEDUM MORANII	C2
APPLEGATE STONECROP	SEDUM OBLANCEOLATUM	C2
	SEDUM RADIATUM SSP DEPAUPERATUM	C2
WESTERN SENEIO	SENECIO HESPERIUS	C2
BRISTLY SIDALCEA	SIDALCEA SETOSA SSP SETOSA	C2
CASCADE HEAD CATCHFLY	SILENE DOUGLASII VAR ORARIA	C2
SPALDING'S CAMPION	SILENE SPALDINGII	C2
PALE BLUE-EYED GRASS	SISYRINCHIUM SARMENTOSUM	C2
WESTERN NECKLACE	SOPHORA LEACHIANA	C2
OREGON SULLIVANTIA	SULLIVANTIA OREGANA	C2
HOWELL'S TAUSCHIA	TAUSCHIA HOWELLII	C2
ARROW-LEAF THELYPODY	THELYPODIUM EUCOSMUM	C2
LEIBERG'S CLOVER	TRIFOLIUM LEIBERGII	C2
OWYHEE CLOVER	TRIFOLIUM OWYHEENSE	C2
SEXTON MT. MARIPOSA-LILY	CALOCHORTUS INDECORUS	C2*
CORAL SEEDED ALLOCARYA	PLAGIOBOTHRYS FIGURATUS VAR CORALLI	C2*
RED MT. ROCKCRESS	ARABIS MCDONALDIANA	LE
BRADSHAW'S LOMATIUM	LOMATIUM BRADSHAWII	LE
MACFARLANE'S FOUR-O'CLOCK	MIRABILIS MACFARLANEI	LE
MALHEUR WIRE-LETTUCE	STEPHANOMERIA MALHEURENSIS	LE

LE - Endangered

LT - Threatened

C1 - Category 1: Taxa for which the Fish and Wildlife Service has sufficient biological information to support a proposal to list as endangered or threatened.

C2 - Category 2: Taxa for which existing information indicates may warrant listing, but for which substantial biological information to support a proposed rule is lacking.

* Consultation with National Marine Fisheries Service required.

^{1/} U. S. Department of Interior, Fish and Wildlife Service, April 15, 1990, Endangered and Threatened Wildlife and Plants, 50 CFR 17.11 and 17.12.

^{2/} Federal Register Vol. 55, No. 123, June 26, 1990 Final Rule-Northern Spotted Owl

^{3/} Federal Register Vol. 54, No. 4, January 6, 1989 Notice of Review-Animals

^{4/} Federal Register Vol. 55, No. 38, February 21, 1990 Notice of Review-Plants

**FEDERAL AGENCIES RESPONSIBILITIES UNDER SECTIONS 7(a) and (c)
OF THE ENDANGERED SPECIES ACT**

SECTION 7(a) - Consultation/Conference

Requires: 1) Federal agencies to utilize their authorities to carry out programs to conserve endangered and threatened species;

2) Consultation with FWS when a Federal action may affect a listed endangered or threatened species to insure that any action authorized, funded or carried out by a Federal agency is not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of Critical Habitat. The process is initiated by the Federal agency after they have determined if their action may affect (adversely or beneficially) a listed species; and

3) Conference with FWS when a Federal action is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed Critical Habitat.

SECTION 7(c) - Biological Assessment for Major Construction Projects ^{1/}

Requires Federal agencies or their designees to prepare a Biological Assessment (BA) for construction projects only. The purpose of the BA is to identify any proposed and/or listed species which are/is likely to be affected by a construction project. The process is initiated by a Federal agency in requesting a list of proposed and listed threatened and endangered species (list attached). The BA should be completed within 180 days after its initiation (or within such a time period as is mutually agreeable). If the BA is not initiated within 90 days of receipt of the species list, the accuracy of the species list should be informally verified with our Service. No irreversible commitment of resources is to be made during the BA process which would foreclose reasonable and prudent alternatives to protect endangered species. Planning, design, and administrative actions may be taken; however, no construction may begin.

To complete the BA, your agency or its designee should: (1) conduct an on-site inspection of the area to be affected by the proposal which may include a detailed survey of the area to determine if the species is present and whether suitable habitat exists for either expanding the existing population or for potential reintroduction of the species; (2) review literature and scientific data to determine species distribution, habitat needs, and other biological requirements; (3) interview experts including those within FWS, National Marine Fisheries Service, State conservation departments, universities, and others who may have data not yet published in scientific literature; (4) review and analyze the effects of the proposal on the species in terms of individuals and populations, including consideration of cumulative effects of the proposal on the species and its habitat; (5) analyze alternative actions that may provide conservation measures and (6) prepare a report documenting the results, including a discussion of study methods used, any problems encountered, and other relevant information. The BA should conclude whether or not a listed or proposed species will be affected. Upon completion, the report should be forwarded to our Portland Office.

^{1/} A construction project (or other undertaking having similar physical impacts) which is a major Federal action significantly affecting the quality of the human environment as referred to in NEPA (42 U.S.C. 4332.(2)(c)). On projects other than construction, it is suggested that a biological evaluation similar to the biological assessment be undertaken to conserve species influenced by the Endangered Species Act.

U.S. FISH AND WILDLIFE SERVICE
FISH AND WILDLIFE ENHANCEMENT

OLYMPIA FIELD OFFICE
3704 GRIFFIN LANE SE, SUITE 102
OLYMPIA, WASHINGTON 98501-2192
(206)753-9440
FAX: 753-9008

TO: Kathy Pierce

DATE: 11-30-92

FROM: Richard Carlson

TIME: 9:00 AM

SUBJECT: ESA Section 7

TOTAL PAGES: 4

MESSAGE: Attached is an updated list of
Endangered, Threatened, Designated, Proposed, and Candidate
plants, animals, and habitat. I have stored (*) the
new changes. Please call me if you have any questions.

FEDERALLY LISTED ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES,
AND CRITICAL HABITAT IN WASHINGTON STATE
(Revised - October 1992)

Endangered

Brown pelican (*Pelecanus occidentalis*)
Columbian white-tailed deer (*Odocoileus virginianus leucurus*)
Gray wolf (*Canis lupus*)
Leatherback sea turtle (*Dermochelys coriacea*)
Peregrine falcon (*Falco peregrinus*)
Woodland caribou (*Rangifer tarandus caribou*)

Threatened

Aleutian Canada goose (*Branta canadensis leucopareia*)
Bald eagle (*Haliaeetus leucocephalus*)
Green sea turtle (*Chelonia mydas*)
Grizzly bear (*Ursus arctos* = *U.a. horribilis*)
Loggerhead sea turtle (*Caretta caretta*)
* Marbled murrelet (*Brachyramphus marmoratus*)
Northern spotted owl (*Strix occidentalis caurina*)
Olive ridley sea turtle (*Lepidochelys olivacea*)
Oregon silverspot butterfly (*Speyeria zerene hippolyta*)

* Designated

* Critical habitat for the northern spotted owl

Proposed

* Western snowy plover (*Charadrius alexandrinus nivosus*)

Candidate Animals

* Beller's ground beetle (*Agonum belleri*)
* Black tern (*Chlidonias niger*)
Bull trout (*Salvelinus confluentus*)
California bighorn sheep (*Ovis canadensis californiana*)
* California floater (mussel) (*Anodonta californiensis* (Lea, 1852))
California wolverine (*Gulo gulo luteus*)
* Cascades frog (*Rana cascadae*)
Columbia pebblesnail (*Fluminicola* (= *Lithoglyphus*) *columbianus* (Hemphill in Pilsbry, 1899)) [great Columbia River spire snail]
Columbian sharp-tailed grouse (*Tympanuchus phasianellus columbianus*)
Destruction Island shrew (*Sorex trowbridgii destructioni*)
Fender's soliperlan stonefly (*Soliperla fenderi*)
Ferruginous hawk (*Buteo regalis*)

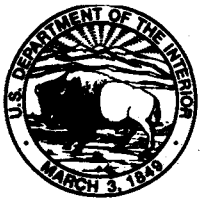
- * Harlequin duck (*Histrionicus histrionicus*)
- Hatch's click beetle (*Eanus hatchi*)
- Larch Mountain salamander (*Plethodon larselli*)
- * Loggerhead shrike (*Lanius ludovicianus*)
- Louie's western pocket gopher (*Thomomys mazama louiei*)
- * Lynn's clubtail (dragonfly) (*Gomphus lynnae*)
- * Mountain quail (*Oreortyx pictus*)
- Newcomb's littorine snail (*Algamorda newcombiana*)
- North American lynx (*Felis lynx canadensis*)
- * Northern goshawk (*Accipiter gentilis*)
- * Northern red-legged frog (*Rana aurora aurora*)
- Northwestern pond turtle (*Clemmys marmorata marmorata*)
- Olympic mudminnow (*Novumbra hubbsi*)
- * Pacific fisher (*Martes pennanti pacifica*)
- Pacific western big-eared bat (*Plecotus townsendii townsendii*)
- Potholes meadow vole (*Microtus pennsylvanicus kincaidi*)
- Preble's shrew (*Sorex preblei*)
- * Pygmy rabbit (*Brachylagus idahoensis*)
- Roy Prairie pocket gopher (*Thomomys mazama glacialis*)
- Shaw Island Townsend's vole (*Microtus townsendii pugeti*)
- * Spotted frog (*Rana pretiosa*)
- Tacoma western pocket gopher (*Thomomys mazama tacomensis*)
- Western sage grouse (*Centrocercus urophasianus phaios*)

Candidate Plants

Abronia umbellata spp. *acutalata* (rose-purple sand-verbena)
Allium constrictum (Douglas' constricted onion)
Allium dictuon (Blue Mountain onion)
Arenaria paludicola (marsh sandwort)
Artemisia campestris var. *wormskioldii* (northern wormwood)
Aster curtus (white-top aster)
Aster jessicae (Jessica's aster)
Astragalus australis var. *olympicus* (Cotton's milk-vetch)
Astragalus columbianus (Columbia milk-vetch)
Astragalus diaphanus var. *diurnus* (transparent milk-vetch)
Astragalus sinuatus (whited milk-vetch)
Calamagrostis crassiglumis (Thurber's reedgrass)
Calamagrostis tweedyi (reedgrass)
Calochortus nitidus (broad-fruit mariposa)
Castilleja cryptantha (obscure Indian paintbrush)
Castilleja levisecta (golden paintbrush)
Corydalis aquac-gelidae (Clackamas corydalis)
Delphinium leucophaeum (pale larkspur)
Delphinium viridescens (Wenatchee larkspur)
Erigeron basalticus (basalt daisy)
Erigeron howellii (Howell's fleabane)
Hackelia venusta (showy stickseed)
Haplopappus liatritiformis (Palouse goldenweed)
Howellia aquatilis (Howellia)
Lomatium laevigatum (smooth desert-parsley)

Lomatium suksdorfii (Suksdorf's desert-parsley)
Lomatium tuberosum (Hoover's desert-parsley)
Lupinus cusickii (Cusick's lupine)
Mimulus clivicola (bank monkey-flower)
Mimulus patulus (stalk-leaved monkey-flower)
Mimulus washingtonensis var. *washingtonensis* (Washington's monkey-flower)
Montia howellii (Howell's montia)
Penstemon barrettiae (Barrett's beardtongue)
Petrophytum cinerascens (Chelan rockmat)
Phacelia lenta (sticky phacelia)
Poa unilateralis (sea cliff bluegrass)
Polemonium pectinatum (Washington polemonium)
Ranunculus reconditus (obscure buttercup)
Rorippa columbiae (Columbia yellow-cress)
Rubus nigerrimus (northwest raspberry)
Sidalcea oregana var. *calva* (Oregon checker-mallow)
Silene seelyi (Seely's silene)
Silene spaldingii (Spalding's silene)
Sisyrinchium sarmentosum (pale blue-eyed grass)
Sullivantia oregana (Oregon sullivantia)
Tauschia hooveri (Hoover's tauschia) . .
Trifolium thompsonii (Thompson's clover)

mer Candidates; Long Billed Curlew, and Short-faced Owl have been taken off
the candidates list.



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Boise Field Station
4696 Overland Road, Room 576
Boise, Idaho 83705

December 9, 1992

Katherine S. Pierce - RAE
Environmental Specialist
Department of Energy
Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208-3621

Re: Resource Programs - Draft RPEIS
(SP# 1-4-93-SP-59) (501.1000)

Dear Ms. Pierce:

As requested by your FAX dated November 27, 1992, and received by this office on the same day, we have attached a list (Attachment A) of endangered and threatened, proposed and/or candidate species that may be present in the proposed project area. The list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under Section 7(c) of the Endangered Species Act of 1973 (Act), as amended. The requirements for Federal agency compliance under the Act are outlined in Attachment B. Please reference the species list number on Attachment A in all subsequent correspondence, reports, environmental assessments, environmental impact statements, biological assessments (evaluations), Coordination Act reports, etc. If a construction project is not commenced within 180 days of this response, a subsequent species list request is required by regulations. This letter updates the Service's species list response of October 29, 1991 (#1-4-91-SP-44).

If a listed species appears on Attachment A, a biological assessment (evaluation) would be prudent. Should your biological assessment (evaluation) determine that a listed species is likely to be affected adversely by the project, Bonneville Power Administration should request formal Section 7 consultation through this office. If a proposed species is likely to be jeopardized by a Federal action, regulations require a conference between the Federal agency and the Service.

Candidate species that may appear on Attachment A have no protection under the Act, but are included for early planning consideration. Proposed species could be formally listed and candidate species could be formally proposed and listed during project planning, thereby falling within the scope of Section 7 of the Act. Therefore, if they appear on Attachment A, we recommend that additional surveys be made for proposed

and/or candidate species that are likely to be in your project area. If the project is likely to adversely impact candidate species, informal consultation with this office is recommended.

If you have any questions regarding Federal consultation responsibilities under the Act, please contact Jeri Williams of this office at (208) 334-1931.

Thank you for your continued interest in the Endangered Species Program.

Sincerely,

A handwritten signature in black ink, appearing to read 'Charles H. Lobdell', with a large, looping flourish at the end.

Charles H. Lobdell
Field Supervisor

Enclosures

cc: IDFG, Hdqtrs., Boise

ATTACHMENT A

LISTED AND PROPOSED ENDANGERED AND THREATENED
SPECIES, AND CANDIDATE SPECIES, THAT MAY OCCUR
WITHIN THE AREA OF IDAHO
FWS-1-4-93-SP-57

LISTED SPECIES

COMMENTS

Bald Eagle
(Haliaeetus leucocephalus)

Peregrine Falcon
(Falco peregrinus)

Whooping Crane
(Grus americana)

Grizzly Bear
(Ursus arctos)

Woodland Caribou
(Rangifer tarandus caribou)

Spring, Summer, and Fall Chinook Salmon
(Oncorhynchus tshawytscha)

Sockeye Salmon
(Oncorhynchus nerka)

PROPOSED SPECIES

Utah Valvata Snail
(Oreohelix vortex)

Idaho Springsnail
(Pyrgulopsis idahoensis)

Bliss Rapids Snail
(undescribed species)

Snake River Physa Snail
(Physa natricina)

Bruneau Hot Springs Snail
(Undescribed species)

Banbury Springs Limpet
(Lanx sp.)

CANDIDATE SPECIES

White Sturgeon (C1)
(Acipenser transmontanus)

Bull Trout (C2)
(Salvelinus confluentus)

Snake River Fine-Spotted Cutthroat Trout (C2)
(Oncorhynchus mykiss spp.)

Redband Trout (C2)
(Oncorhynchus clarki spp.)

Leatherside Chub (C2)
(Gila copei)

Wood River Sculpin (C2)
(Cottus leiopomus)

Spotted Frog (C2)
(Rana pretiosa)

White-faced Ibis (C2)
(Plegadis chihi)

Trumpeter Swan (C2)
(Cygnus buccinator)

Harlequinn Duck (C2)
(Histrionicus histrionicus)

Northern Goshawk (C2)
(Accipiter gentilis)

Ferruginous Hawk (C2)
(Buteo regalis)

Columbian Sharp-tailed Grouse (C2)
(Tympanuchus phasianellus)

Mountain Quail (C2)
(Oreotyx pictus)

Black Tern (C2)
(Chlidonias niger)

Long-billed Curlew (3c)
(Numenius americanus)

Loggerhead Shrike (C2)
(Lanius ludovicianus)

Preble's Shrew (C2)
(Sorex preblei)

Pygmy Rabbit (C2)
(Brachylagus idahoensis)

Townsend's Big-eared Bat (C2)
(Plecotus townsendii)

Northern Idaho Ground Squirrel (C1)
(Spermophilus brunneus spp.)

Southern Idaho Ground Squirrel (C2)
(Spermophilus brunneus endemicus)

Wolverine (C2)
(Gulo gulo luscus)

Lynx (C2)
(Felix lynx)

Idaho pointheaded Grasshopper (C2)
(Acrolophitus pulchellus)

Idaho Dunes Tiger Beetle (C2)
(Cicindela arenicola)

Blind Cave Leodid Beetle (C2)
(Glacivicola bathysciodes)

California Floater (C2)
(Anodonta californiensis)

Columbia Pebblesnail (C2)
(Fluminicola columbianus)

Shortface Lanx (3c)
(Fisharola nuttalli)

Marbled Disc (C2)
(Discus marmorensis)

Mission Creek Oregonian (C2)
(Cryptomastix magnidentata)

Idaho Banded Mountainsnail (C2)
(Oreohelix idahoensis)

Boulder Pile Mountainsnail (C2)
(Oreohelix jugalis)

Carinated Striate Banded Mountainsnail (C2)
(Oreobehlix magnidentata)

Whorled Mountainsnail (C2)
(Oreohelix vortex)

Lava Rock Mountainsnail (C2)
(Oreohelix waltonai)

GENERAL COMMENTS:

C1 = Category 1 Taxa for which the U.S. Fish and Wildlife Service currently has substantial information on hand to support the biological appropriateness of proposing to list as endangered or threatened. Proposed rules have not been issued, but development and publication of such rules are anticipated.

C2 = Category 2 Taxa for which information now in possession of the U.S. Fish and Wildlife Service indicates that proposing to list as endangered or threatened is possibly appropriate, but for which conclusive data on biological vulnerability and threat are not currently available to support proposed rules. Further biological research and field study may be needed to ascertain the status of taxa in this category.

3c = Category 3 Taxa that have proven to be more abundant or widespread than previously believed and/or those that are not subject to any identifiable threat. If further research or changes in habitat indicate a significant decline in any of these taxa, they may be reevaluated for possible inclusion in categories 1 or 2.

NORTHERN GOSHAWK -- To determine the most likely areas for goshawk nest territories, identify all mature and old growth stands over 25 acres that have a canopy closure of 60% or more, and contain Douglas fir, aspen, and western larch. Areas that will NOT need to be surveyed include stands less than mature, spruce, alpine fir or mountain hemlock forest types, and stands that are less than 50% canopy closure.

CONVERSATION RECORD

TIME

8:20 a.m.

DATE

January 29, 1993

TYPE

☐ VISIT☐ CONFERENCE☒ TELEPHONE☐ INCOMING☒ OUTGOING

ROUTING

NAME/SYMBOL

INT

Location of Visit/Conference:

NAME OF PERSON(S) CONTACTED OR IN CONTACT
WITH YOU

Dale R. Harms

ORGANIZATION (Office, dept., bureau,
etc.)

USFWS

TELEPHONE NO.

406

449-5225

SUBJECT

Endangered Species Act

SUMMARY

I contacted Dale R. Harms, Montana State Supervisor, Ecological Services, Fish and Wildlife Service to verify and update the list of threatened and endangered species in Montana potentially affected by BPA's Resource Programs EIS. The original species list was dated November 15, 1991. Mr. Harms indicated that no additional species had been officially listed as threatened or endangered and no new species had been added as candidates. We agreed that a documentation of our telephone conversation provides adequate verification and update.

ACTION REQUIRED

NAME OF PERSON DOCUMENTING CONVERSATION

Katherine S. Pierce

SIGNATURE

Katherine S. Pierce

DATE

1-29-93

ACTION TAKEN

SIGNATURE

TITLE

DATE

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and the role of the accounting department in ensuring the integrity of the financial statements. It also highlights the need for transparency and accountability in the reporting process.

2. The second part of the document outlines the various methods used to collect and analyze data, including surveys, interviews, and focus groups. It also discusses the challenges associated with data collection and the importance of using a variety of methods to ensure the reliability of the results.

3. The third part of the document provides a detailed analysis of the data collected, including a comparison of the results with previous studies and a discussion of the implications for policy and practice. It also includes a section on the limitations of the study and suggestions for future research.

4. The fourth part of the document concludes the report and provides a summary of the key findings. It also includes a section on the overall impact of the study and the potential for future research to build on the findings.



IN REPLY REFER TO:

United States Department of the Interior

FISH AND WILDLIFE SERVICE

FISH AND WILDLIFE ENHANCEMENT
FEDERAL BUILDING, US COURTHOUSE
301 S PARK
P O BOX 10023
HELENA MT 59626



M.03 (I)

November 15, 1991

Ms. Katherine S. Pierce
Bonneville Power Administration
P.O. Box 3621
Portland, OR 97208-3621

Dear Ms. Pierce,

This is in response to your letter of October 9, 1991 regarding Bonneville's preparation of a Resource Programs Environmental Impact Statement. Your letter was received by the Montana-Wyoming Field Office on October 11, 1991.

In accordance with Section 7(c) of the Endangered Species Act of 1973, as amended (ESA), we have determined that the following listed, proposed and category 1 candidate threatened or endangered (T/E) species may be present in the project area.

Listed Species

Expected Occurrence

Grizzly bear (<u><i>Ursus arctos horribilis</i></u>)	resident
Bald eagle (<u><i>Haliaeetus leucocephalus</i></u>)	resident, migrant, wintering
Peregrine falcon (<u><i>Falco peregrinus</i></u>)	migrant
Gray wolf (<u><i>Canis lupus</i></u>)	resident and transient
Black-footed ferret (<u><i>Mustela nigripes</i></u>)	potential resident of prairie dog towns

Proposed Species

None

Category 1 Candidate Species

None

Section 7(c) of ESA requires that Federal agencies proposing major construction activities complete a biological assessment to determine the effects of the proposed actions on listed and proposed species and use the biological assessment to determine whether formal consultation is required. A major construction activity is defined as "a construction project (or other undertaking having similar physical impacts) which is a major Federal action

significantly affecting the quality of the human environment as referred to in the National Environmental Policy Act" (50 CFR Part 402). If a biological assessment is not required (i.e. all other actions), the Federal agency is still required to review their proposed activities to determine whether listed species may be affected. If such a determination is made, formal consultation with the Fish and Wildlife Service (Service) is required.

For those actions wherein a biological assessment is required, it should be completed within 180 days of initiation, but can be extended by mutual agreement between the Federal agency or its designated non-Federal representative and the Service. If the assessment is not initiated within 90 days, the list of T/E species should be verified with the Service prior to initiation of the assessment. The biological assessment may be undertaken as part of the Federal agency's compliance of Section 102 of the National Environment Policy Act (NEPA) and incorporated into the NEPA documents. We recommend that biological assessments include the following:

1. A description of the project,
2. A description of the specific area that may be affected by the action,
3. The current status, habitat use, and behavior of T/E species in the project area,
4. Discussion of the methods used to determine the information in Item 3,
5. An analysis of the affects of the action on listed species and proposed species and their habitats, including an analysis of any cumulative effects,
6. Coordination/mitigation measures that will reduce/eliminate adverse impacts to T/E species,
7. The expected status of T/E species in the future (short and long term) during and after project completion,
8. A determination of "is likely to adversely affect" or "is not likely to adversely affect" for listed species,
9. A determination of "is likely to jeopardize" or "is not likely to jeopardize" for proposed species.
10. Citation of literature and personal contacts used in developing the assessment.

If it is determined that the proposed program or project "is likely to adversely affect" any listed species, formal consultation should be initiated with this office. If it is concluded that the project "is not likely to adversely affect" listed species, we should be asked to review the assessment and concur with the determination of no adverse effect.

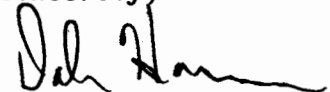
Pursuant to Section 7(a) (4) of ESA, if it is determined that any proposed species may be jeopardized, the Federal agency should initiate a conference with us to discuss conservation measures for those species. Although candidate species have no legal status and are accorded no protection under ESA, they are included here to alert your agency of potential proposals or listings.

A Federal agency may designate a non-Federal representative to conduct informal consultation or prepare biological assessments. However, the ultimate responsibility for Section 7 compliance remains with the Federal agency and written notice should be provided to the Service upon such a designation. We recommend that Federal agencies provide their non-Federal representatives with proper guidance and oversight during preparation of biological assessments and evaluation of potential impacts to listed species.

Section 7(d) of ESA requires that the Federal agency and permit/license applicant shall not make any irreversible or irretrievable commitment of resources which would preclude the formulation of reasonable and prudent alternatives until consultation on listed species is completed.

Please contact us by mail at the above-referenced letterhead address or call Larry Lockard at (406) 755-7870 if we can be of further assistance. Your interest and cooperation in meeting our joint responsibilities under the Endangered Species Act are appreciated.

Sincerely,



Dale R. Harms
State Supervisor
Montana State Office

LLL/ndg

PIERCE.LTR

cc: Kalispell Suboffice

"TAKE PRIDE IN AMERICA"



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Fish and Wildlife Enhancement

2617 East Lincolnway

Cheyenne, WY 82001



IN REPLY REFER TO:
FWE-61411

spb/W.03(bparpeis.spl)

November 30, 1992

Katherine S. Pierce - RAE
Environmental Specialist
Bonneville Power Administration
P.O. Box 3621
Portland, OR 97208-3621

Dear Ms. Pierce:

This responds to your fax of November 27, 1992, requesting a verification and update of the list of threatened and endangered species potentially affected by the Bonneville Power Administration's Resource Programs Environmental Impact Statement, affecting Teton and Lincoln counties, Wyoming. The original species list was submitted by this office on November 6, 1991.

No additional species have been officially listed as threatened or endangered since our original letter. One candidate, the mountain plover (Charadrius montanus), has been upgraded from Category 2 (more information needed) to Category 1 (listing is appropriate and is anticipated).

Several new species have since been added as Candidates for listing as threatened or endangered since our letter of November 6, 1991. Many Federal agencies have policies to protect candidate species from further population declines. Our office would appreciate receiving any information available on the status of these species in or near the project area.

<u>SPECIES</u>	<u>CATEGORY*</u>	<u>SCIENTIFIC NAME</u>	<u>EXPECTED OCCURRENCE</u>
<u>Birds</u>			
Trumpeter swan	2	<u>Cygnus buccinator</u>	NW Wyoming
Harlequin duck	2	<u>Histrionicus histrionicus</u>	rivers in NW Wyoming
Northern Goshawk	2	<u>Accipiter gentilis</u>	forests statewide
Black tern	2	<u>Chlidonias niger</u>	wetlands statewide
Loggerhead shrike	2	<u>Lanius ludovicianus</u>	woodlands/shrublands
<u>Amphibians</u>			
Spotted frog	2	<u>Rana pretiosa</u>	NW WY; YNP

Fish

Bonneville cutthroat
trout

2

Salmo clarki utah

Bear R.
River drges.

Plants

Payson's milk-vetch

2**

Astragalus paysonii

Salt River & Wyo.
Mt ranges, in forest
openings.

Wyoming tansymustard

1

Descuriania torulosa

Togwotee Pass, in
rocky soils and talus
slopes

Keeled bladderpod

2**

Lesquerella carinata

Teton Basin & Jackson
Hole area, dry
grasslands

Payson's bladderpod

2

Lesquerella paysonii

Jackson Hole and
Greys River; open,
rocky soils
Rock Cr. Ridge, betw.
Fossil Butte & Sage;
rocky soils

Dorn's twinpod

2

Physaria dornii

*1 = Federal T/E listing appears appropriate and is anticipated. 2 = Current data insufficient to support listing. 3C
= More widespread or abundant than previously believed, or no immediate threats identified.

**Unofficial status proposed in Nov., 1991. Official status expected shortly.

The guidance offered in our November 6, 1991, letter concerning preparation of biological assessments and consultation procedures remains valid. If you have any questions please contact Steve Brockmann of my staff at the letterhead address or phone (307) 772-2374.

Sincerely,



Charles P. Davis
State Supervisor
Wyoming State Office

cc: Director, WGFD, Cheyenne, WY
Nongame Coordinator, WGFD, Lander, WY

Integrated System for the Analysis of Acquisitions (ISSAAC) Model Runs

Appendix H

1. The first part of the document is a list of names and addresses of the members of the committee.

2. The second part of the document is a list of names and addresses of the members of the committee.

3. The third part of the document is a list of names and addresses of the members of the committee.

4. The fourth part of the document is a list of names and addresses of the members of the committee.

Section 1: Analysis of Resource Additions using Medium Loads

The attached material documents ISAAC analysis of resource additions over the period 1991 to 2040, assuming that medium loads occur.

0001 Games

Operating Year	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	00-01	01-02	02-03	03-04	04-05	05-06
Observed Load	3794	3820	3854	3896	3941	3983	4025	4068	4110	4148	4188	4231	4277	4329	4383
Observed Rate		0.70%	0.90%	1.09%	1.14%	1.06%	1.05%	1.08%	1.04%	0.91%	0.98%	1.03%	1.07%	1.23%	1.23%
DSI Firm Load	2054	2054	2054	2054	2054	2054	2054	2054	2054	2054	2054	2054	2054	2054	2054
BPA Requirements	1728	1849	1796	1864	1934	1996	2059	2133	2204	2250	2299	2368	2442	2500	2441
Existing Resources	7343	7331	7220	7236	7252	7572	7573	7589	7484	7465	7574	7504	7434	7442	7198

NON-DISCRETIONARY RESOURCES:

1990 R/P Conservatio	22	50	50	50	50	50	50	50	50	50	50	50	50	50
Load Reduction - BPA	6	11	16	21	25	29	33	37	43	48	53	58	63	68
New SF Res-HW	0	0	1	2	3	4	5	7	11	15	19	23	27	31
New MF Res-HW	0	0	0	0	0	0	0	1	1	2	2	3	3	4
Water Heat-HW	0	0	1	3	4	6	8	10	12	14	16	18	18	18
Solar Acc-HW	0	0	0	0	1	1	1	2	2	2	2	3	3	3
New Comm-HW	0	0	3	7	12	18	23	29	36	43	50	57	57	57
New Manuf Hsg-HW	0	0	4	8	12	16	20	24	28	33	37	41	41	41

DISCRETIONARY RESOURCES:

[illegible]

Wind3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Biomass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Solar2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Replacement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Conserv Energy	28	61	107	163	227	293	364	440	517	592	664	735	778	819	867
Total Gen Res Energy	0	0	59	218	218	467	864	864	864	864	864	864	864	864	873
Total Imports Energy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Firm Resources	7371	7392	7386	7617	7697	8332	8801	8893	8865	8921	9102	9103	9076	9125	8938
Load/Resource Balance	-205	-331	-317	-198	-234	298	663	637	495	467	557	447	300	239	58

0001 Games

BPA Requirements	2443	2511	2500	2507	2748	2750	2752	2753	2755	2757	2758	2760	2762	2764	2765
Existing Resources	7113	7139	7045	7091	7091	7091	7092	7092	7093	7075	6873	6874	6815	6160	6160

[illegible]

Hydro Eff Imp	75	75	75	75	75	75	75	75	75	75	75	75	75	75
WNP2 MW Imp	47	47	47	47	47	47	47	47	47	47	47	47	47	47
Conservation Voltage	31	35	39	41	41	41	41	41	41	41	41	41	41	41
Solar Access	4	5	5	6	6	6	6	6	6	6	6	6	6	6
Irrigation Conservat	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Non-Aluminum Industr	143	143	143	143	143	143	143	143	143	143	143	143	143	143
New Commercial	29	38	46	55	55	55	55	55	55	55	55	55	55	55
Comm Discret Ex	114	120	127	134	134	134	134	134	134	134	134	134	134	134
Manuf Hsg Weath	23	23	23	23	23	23	23	23	23	23	23	23	23	23
Small Hydro 1	8	12	15	15	15	15	15	15	15	15	15	15	15	15
Comm Lost Opps Exist	75	81	87	93	93	93	93	93	93	93	93	93	93	93
T & D Eff Imp	65	71	76	81	81	81	81	81	81	81	81	81	81	81
Thermal Eff Imp	0	0	0	0	0	0	0	0	0	0	0	0	0	0
New Manuf Housing	15	19	22	26	26	26	26	26	26	26	26	26	26	26
Optioned CCCT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Combined Cycle CT	349	349	349	349	349	349	349	349	349	349	349	349	349	349
Southwest Imports	299	349	398	398	398	398	398	398	398	398	398	398	398	398
MF Res Weath	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Small Hydro 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SF Res Weath	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Water Heat	28	41	54	69	69	69	69	69	69	69	69	69	69	69
New Residential Ligh	10	11	13	14	14	14	14	14	14	14	14	14	14	14
Cogen1	101	101	101	101	101	101	101	101	101	101	101	101	101	101
WNP3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Residential	8	8	8	8	8	8	8	8	8	8	8	8	8	8
WNP1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cogen2	48	48	48	48	48	48	48	48	48	48	48	48	48	48
Wind1	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Small Hydro 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Geothermal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cogen3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal1 (E. Mont)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal2 (E. Wash)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cogen4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small Hydro 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal3 (E. Oregon)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal4 (Nevada)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wind2	0	0	0	0										

Wind3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Biomass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Solar2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Replacement	0	0	0	0	102	102	102	102	102	102	271	273	333	990	992
Total Conserv Energy	924	983	1040	1099	1099	1099	1099	1099	1099	1099	1099	1099	1099	1099	1099
Total Gen Res Energy	934	988	1040	1040	1142	1142	1142	1142	1142	1142	1311	1313	1373	2030	2032
Total Imports Energy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Firm Resources	8971	9110	9125	9230	9332	9332	9333	9333	9334	9316	9283	9286	9287	9289	9291
Load/Resource Balance	40	59	95	197	59	57	56	55	54	34	0	0	0	0	0

0001 Games

[illegible]

[illegible]

SYSTEM SUMMARY: Mean Loads and Resources (Avg MW),

PARTY - BPA

0001 Games

Operating Year	36-37	37-38	38-39	39-40
Observed Load	4471	4471	4471	4471
Observed Rate	0.00%	0.00%	0.00%	0.00%
DSI Firm Load	2054	2054	2054	2054

BPA Requirements	2793	2795	2797	2798
Existing Resources	6157	6157	6157	6157

NON-DISCRETIONARY RESOURCES:

1990 R/P Conservatio	50	50	50	50
Load Reduction - BPA	92	92	92	92
New SF Res-HW	51	51	51	51
New MF Res-HW	5	5	5	5
Water Heat-HW	18	18	18	18
Solar Acc-HW	3	3	3	3
New Comm-HW	57	57	57	57
New Manuf Hsg-HW	41	41	37	33

DISCRETIONARY RESOURCES:

Hydro Eff Imp	5	5	5	5
WNP2 MW Imp	0	0	0	0
Conservation Voltage	37	35	33	31
Solar Access	6	6	6	6
Irrigation Conservat	14	14	14	14
Non-Aluminum Industr	143	143	143	143
New Commercial	55	55	55	55
Comm Discret Ex	134	134	134	134
Manuf Hsg Weath	23	23	23	23
Small Hydro 1	15	15	15	15
Comm Lost Opps Exist	93	93	93	93
T & D Eff Imp	72	66	60	54
Thermal Eff Imp	0	0	0	0
New Manuf Housing	26	26	26	26
Optioned CCCT	0	0	0	0
Combined Cycle CT	0	0	0	0
Southwest Imports	100	50	0	0
MF Res Weath	25	25	25	25
Small Hydro 2	0	0	0	0
SF Res Weath	50	50	50	50
Water Heat	69	69	69	69
New Residential Ligh	14	14	14	14
Cogen1	0	0	0	0
WNP3	0	0	0	0
Existing Residential	8	8	7	5
WNP1	0	0	0	0
Cogen2	48	0	0	0
Wind1	7	7	7	7
Small Hydro 3	0	0	0	0
Geothermal	0	0	0	0
Cogen3	0	0	0	0
MSW	0	0	0	0
Coal1 (E. Mont)	0	0	0	0
Coal2 (E. Wash)	0	0	0	0
Cogen4	0	0	0	0
Small Hydro 4	0	0	0	0
Coal3 (E. Oregon)	0	0	0	0
Coal4 (Nevada)	0	0	0	0
Wind2	0	0	0	0
Coal5 (W. Wa/Or)	0	0	0	0

Wind3	0	0	0	0
Biomass	0	0	0	0
Solar2	0	0	0	0
Replacement	1900	2008	2073	2089
Total Conserv Energy	1086	1078	1065	1051
Total Gen Res Energy	2075	2085	2100	2116
Total Imports Energy	0	0	0	0
Total Firm Resources	9318	9320	9322	9324
Load/Resource Balance	0	0	0	0

SYSTEM SUMMARY: Mean Loads and Resources (Avg MW), PARTY = IOUs															0001 Games
Operating Year	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	00-01	01-02	02-03	03-04	04-05	05-06
Observed Load	9356	9533	9677	9805	9935	10087	10241	10394	10544	10677	10820	10975	11140	11324	11511
Observed Rate		1.90%	1.51%	1.32%	1.33%	1.53%	1.52%	1.49%	1.45%	1.27%	1.34%	1.43%	1.50%	1.65%	1.65%
BPA Requirements	-30	-80	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Resources	9577	9625	9673	9625	9502	9262	9297	9105	9057	9006	8805	8756	8674	8630	8741
NON-DISCRETIONARY RESOURCES:															
Load Reduction - IOU	5	9	12	16	20	24	29	34	38	42	47	52	56	61	65
New SF Res-HW	0	0	1	1	2	3	4	5	8	11	14	17	20	23	27
New MF Res-HW	0	0	0	0	1	1	1	1	2	3	4	5	6	6	7
Water Heat-HW	0	0	2	4	6	8	10	13	15	18	21	23	23	23	23
Solar Acc-HW	0	0	0	0	1	1	1	1	1	2	2	2	2	2	2
New Comm-HW	0	0	5	11	18	26	35	44	54	64	75	86	86	86	86
New Manuf Hsg-HW	0	0	5	9	14	18	23	28	32	37	41	46	46	46	46
DISCRETIONARY RESOURCES:															
Hydro Eff Imp	0	0	0	15	30	35	35	35	35	35	35	35	35	35	35
Conservation Voltage	0	0	3	9	15	21	27	33	39	45	50	56	59	59	59
Solar Access	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
Irrigation Conservat	0	0	0	2	3	5	7	9	11	12	14	16	18	19	20
Non-Aluminum Industr	0	0	4	17	38	62	86	111	135	153	153	153	153	153	153
New Commercial	0	0	0	0	0	0	0	0	0	0	0	0	9	22	31
Comm Discret Ex	0	0	2	8	16	24	32	40	48	56	64	72	80	88	96
Manuf Hsg Weath	0	0	1	3	5	7	9	12	14	16	18	21	23	25	25
Small Hydro 1	0	0	0	0	0	0	0	0	0	0	12	23	35	46	58
Comm Lost Opps Exist	0	0	1	5	12	19	27	34	41	49	56	64	71	78	86
T & D Eff Imp	0	0	2	7	12	17	22	26	31	36	41	46	50	55	60
Thermal Eff Imp	0	0	0	0	41	41	41	41	41	41	41	41	41	41	41
New Manuf Housing	0	0	0	0	0	0	0	0	0	0	0	0	4	8	13
Cheap BC Hydro	0	0	0	80	230	570	620	620	620	620	620	620	620	620	620
Combined Cycle CT	0	0	0	0	0	0	0	0	349	349	697	697	697	697	697
MF Res Weath	0	0	1	3	6	9	12	14	17	20	23	26	28	31	31
Small Hydro 2	0	0	0	0	0	0	0	0	0	0	16	32	48	63	75
SF Res Weath	0	0	1	3	6	9	12	15	17	20	23	26	29	31	31
Water Heat	0	0	0	0	0	0	0	0	0	0	0	0	4	18	37
New Residential Ligh	0	0	1	2	3	4	6	7	8	10	11	12	14	15	16
Cogen1	0	0	0	0	0	0	0	0	17	118	118	134	269	353	353
Existing Residential	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3
Cogen2	0	0	0	0	0	0	0	0	0	0	0	0	0	48	48
Wind1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small Hydro 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Geothermal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cogen3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal1 (E. Mont)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal2 (E. Wash)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cogen4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small Hydro 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal3 (E. Oregon)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal4 (Nevada)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wind2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal5 (W. Wa/Or)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wind3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Biomass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Solar2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Replacement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Conserv Energy	5	9	41	100	178	259	344	428	512	596	659	725	783	853	919

Total Gen Res Energy	0	0	0	95	301	646	696	696	1062	1163	1539	1582	1745	1903	1927
Total Imports Energy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Firm Resources	9582	9634	9714	9820	9981	10167	10337	10229	10631	10765	11003	11063	11202	11386	11587
Load/Resource Balance	256	181	37	16	44	79	94	-167	87	86	183	88	64	64	77

SYSTEM SUMMARY: Mean Loads and Resources (Avg MW),					PARTY - IOUs					0001 Games					
Operating Year	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21
Observed Load	11697	11895	11916	11937	11937	11937	11937	11937	11937	11937	11937	11937	11937	11937	11937
Observed Rate	1.62%	1.69%	0.17%	0.17%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
BPA Requirements	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Resources	8819	8729	8574	8483	7261	6981	6670	6648	6484	6131	5533	5523	5478	5040	4565
NON-DISCRETIONARY RESOURCES:															
Load Reduction - IOU	69	74	79	83	83	83	83	83	83	83	83	83	83	83	83
New SF Res-HW	30	32	35	38	38	38	38	38	38	38	38	38	38	38	38
New MF Res-HW	8	9	10	11	11	11	11	11	11	11	11	11	11	11	11
Water Heat-HW	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
Solar Acc-HW	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
New Comm-HW	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86
New Manuf Hsg-HW	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46
DISCRETIONARY RESOURCES:															
Hydro Eff Imp	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
Conservation Voltage	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59
Solar Access	3	3	4	5	5	5	5	5	5	5	5	5	5	5	5
Irrigation Conservat	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Non-Aluminum Industr	153	153	153	153	153	153	153	153	153	153	153	153	153	153	153
New Commercial	44	57	70	83	83	83	83	83	83	83	83	83	83	83	83
Comm Discret Ex	104	112	120	127	127	127	127	127	127	127	127	127	127	127	127
Manuf Hsg Weath	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Small Hydro 1	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65
Comm Lost Opps Exist	93	101	108	115	115	115	115	115	115	115	115	115	115	115	115
T & D Eff Imp	65	70	74	79	79	79	79	79	79	79	79	79	79	79	79
Thermal Eff Imp	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41
New Manuf Housing	17	21	25	29	29	29	29	29	29	29	29	29	29	29	29
Cheap BC Hydro	620	620	620	620	620	620	620	620	540	390	50	0	0	0	0
Combined Cycle CT	697	697	697	697	697	697	697	697	697	697	697	697	697	697	697
MF Res Weath	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
Small Hydro 2	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
SF Res Weath	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
Water Heat	55	72	90	109	109	109	109	109	109	109	109	109	109	109	109
New Residential Ligh	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
Cogen1	353	353	353	353	353	353	353	353	353	353	353	353	353	353	353
Existing Residential	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Cogen2	72	288	400	448	448	448	448	448	448	448	448	448	448	448	448
Wind1	0	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Small Hydro 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Geothermal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cogen3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal1 (E. Mont)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal2 (E. Wash)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cogen4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small Hydro 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal3 (E. Oregon)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal4 (Nevada)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wind2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal5 (W. Wa/Or)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wind3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Biomass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Solar2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Replacement	0	0	0	0	1219	1435	1746	1768	2012	2515	3453	3513	3558	3996	4471
Total Conserv Energy	984	1048	1112	1176	1176	1176	1176	1176	1176	1176	1176	1176	1176	1176	1176

[illegible]

SYSTEM SUMMARY: Mean Loads and Resources (Avg MW), PARTY = IOUs															
															0001 Games
Operating Year	21-22	22-23	23-24	24-25	25-26	26-27	27-28	28-29	29-30	30-31	31-32	32-33	33-34	34-35	35-36
Observed Load	11937	11937	11937	11937	11937	11937	11937	11937	11937	11937	11937	11937	11937	11937	11937
Observed Rate	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
BPA Requirements	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Resources	4555	4546	4536	4526	4516	4506	4496	4486	4477	4467	4457	4447	4437	4427	4417
NON-DISCRETIONARY RESOURCES:															
Load Reduction - IOU	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
New SF Res-HW	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38
New MF Res-HW	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
Water Heat-HW	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
Solar Acc-HW	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
New Comm-HW	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86
New Manuf Hsg-HW	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46
DISCRETIONARY RESOURCES:															
Hydro Eff Imp	35	35	35	35	35	35	35	35	35	35	35	35	35	20	5
Conservation Voltage	59	59	59	59	59	59	59	59	59	59	59	59	59	50	45
Solar Access	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Irrigation Conservat	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Non-Aluminum Industr	153	153	153	153	153	153	153	153	153	153	153	153	153	153	153
New Commercial	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83
Comm Discret Ex	127	127	127	127	127	127	127	127	127	127	127	127	127	127	127
Manuf Hsg Weath	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Small Hydro 1	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65
Comm Lost Opps Exist	115	115	115	115	115	115	115	115	115	115	115	115	115	115	115
T & D Eff Imp	79	79	79	79	79	79	79	79	79	79	79	79	79	72	67
Thermal Eff Imp	41	41	41	41	0	0	0	0	0	0	0	0	0	0	0
New Manuf Housing	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29
Cheap BC Hydro	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Combined Cycle CT	697	697	697	697	697	697	697	697	349	349	0	0	0	0	0
MF Res Weath	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
Small Hydro 2	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
SF Res Weath	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
Water Heat	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109
New Residential Ligh	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
Cogen1	353	353	353	353	353	353	353	353	353	353	353	353	353	353	353
Existing Residential	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Cogen2	448	448	448	448	448	448	448	448	448	448	448	448	448	448	448
Wind1	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Small Hydro 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Geothermal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cogen3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal1 (E. Mont)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal2 (E. Wash)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cogen4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small Hydro 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal3 (E. Oregon)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal4 (Nevada)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wind2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal5 (W. Wa/Or)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wind3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Biomass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Solar2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Replacement	4481	4491	4500	4510	4561	4571	4580	4590	4949	4959	5317	5327	5342	5378	5413
Total Conserv Energy	1176	1176	1176	1176	1176	1176	1176	1176	1176	1176	1176	1176	1171	1160	1150

[illegible]

SYSTEM SUMMARY: Mean Loads and Resources (Avg MW),

PARTY = IOUs

0001 Games

Operating Year	36-37	37-38	38-39	39-40
Observed Load	11937	11937	11937	11937
Observed Rate	0.00%	0.00%	0.00%	0.00%

BPA Requirements	0	0	0	0
Existing Resources	4407	4398	4388	4378

NON-DISCRETIONARY RESOURCES:

Load Reduction - IOU	83	83	83	83
New SF Res-HW	38	38	38	38
New MF Res-HW	11	11	11	11
Water Heat-HW	23	23	23	23
Solar Acc-HW	2	2	2	2
New Comm-HW	86	86	86	86
New Manuf Hsg-HW	46	46	41	37

DISCRETIONARY RESOURCES:

Hydro Eff Imp	0	0	0	0
Conservation Voltage	39	33	27	21
Solar Access	5	5	5	5
Irrigation Conservat	20	20	20	20
Non-Aluminum Industr	153	153	153	153
New Commercial	83	83	83	83
Comm Discret Ex	127	127	127	127
Manuf Hsg Weath	25	25	25	25
Small Hydro 1	65	65	65	65
Comm Lost Opps Exist	115	115	115	115
T & D Eff Imp	62	58	53	48
Thermal Eff Imp	0	0	0	0
New Manuf Housing	29	29	29	29
Cheap BC Hydro	0	0	0	0
Combined Cycle CT	0	0	0	0
MF Res Weath	31	31	31	31
Small Hydro 2	75	75	75	75
SF Res Weath	31	31	31	31
Water Heat	109	109	109	109
New Residential Ligh	17	17	17	17
Cogen1	353	353	353	336
Existing Residential	4	4	4	4
Cogen2	448	448	448	448
Wind1	7	7	7	7
Small Hydro 3	0	0	0	0
Geothermal	0	0	0	0
Cogen3	0	0	0	0
MSW	0	0	0	0
Coal1 (E. Mont)	0	0	0	0
Coal2 (E. Wash)	0	0	0	0
Cogen4	0	0	0	0
Small Hydro 4	0	0	0	0
Coal3 (E. Oregon)	0	0	0	0
Coal4 (Nevada)	0	0	0	0
Wind2	0	0	0	0
Coal5 (W. Wa/Or)	0	0	0	0
Wind3	0	0	0	0
Biomass	0	0	0	0
Solar2	0	0	0	0
Replacement	5439	5460	5485	5527

Total Conserv Energy	1139	1129	1113	1098
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Total Gen Res Energy	6387	6408	6433	6458
Total Imports Energy	0	0	0	0
Total Firm Resources	11933	11935	11934	11934
Load/Resource Balance	0	0	0	0

0001 Games

[illegible]

0001 Games

BPA Requirements	-2443	-2511	-2500	-2507	-2748	-2750	-2752	-2753	-2755	-2757	-2758	-2760	-2762	-2764	-2765
Existing Resources	2546	2546	2546	2526	2286	2284	2282	2280	2279	2277	2275	2274	2272	2270	2268

DISCRETIONARY RESOURCES:

[illegible]

0001 Games

[illegible]

Study ID : 10-NOV-92 16:23:18
Study Title: FINAL RPEIS MEDIUM RUN

Pg 12

SYSTEM SUMMARY: Mean Loads and Resources (Avg MW),

PARTY = Generating Publics

0001 Games

Operating Year	36-37	37-38	38-39	39-40
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Observed Load	5034	5034	5034	5034
Observed Rate	0.00%	0.00%	0.00%	0.00%
BPA Requirements	-2793	-2795	-2797	-2798
Existing Resources	2241	2239	2237	2235

NON-DISCRETIONARY RESOURCES:

DISCRETIONARY RESOURCES:

Total Conserv Energy	0	0	0	0
Total Gen Res Energy	0	0	0	0
Total Imports Energy	0	0	0	0
Total Firm Resources	2241	2239	2237	2235
Load/Resource Balance	0	0	0	0

0001 Games

Hydro Eff Imp	0	0	45	85	100	105	105	105	105	105	105	105	105	110
WNP2 MW Imp	0	0	14	47	47	47	47	47	47	47	47	47	47	47
Conservation Voltage	0	0	3	10	17	25	33	41	49	57	64	72	78	87
Solar Access	0	0	0	0	0	0	0	0	0	0	0	1	3	5
Irrigation Conservat	0	0	2	4	8	11	14	17	20	23	26	29	31	34
Non-Aluminum Industr	0	0	13	35	68	105	143	183	223	259	277	296	296	296
New Commercial	0	0	0	0	0	0	0	0	0	0	0	15	36	51
Comm Discret Ex	0	0	6	19	36	54	74	94	113	133	154	174	189	206
Manuf Hsg Weath	0	0	4	9	14	20	25	31	35	39	41	43	46	48
Small Hydro 1	0	0	0	0	0	0	0	0	0	12	23	35	46	61
Comm Lost Opps Exist	0	0	3	10	21	33	45	59	72	86	100	114	128	154
T & D Eff Imp	0	0	3	10	18	26	37	47	58	69	80	91	101	120
Thermal Eff Imp	0	0	0	0	41	41	41	41	41	41	41	41	41	41
New Manuf Housing	0	0	0	0	0	0	0	0	0	0	0	8	16	24
Optioned CCCT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Combined Cycle CT	0	0	0	0	0	0	349	349	697	697	1046	1046	1046	1046
Southwest Imports	0	0	0	0	0	249	249	249	249	249	249	249	249	249
MF Res Weath	0	0	4	10	17	23	29	35	40	45	47	50	53	56
Small Hydro 2	0	0	0	0	0	0	0	0	0	16	32	48	63	75
SF Res Weath	0	0	8	18	28	38	48	58	65	71	73	76	79	82
Water Heat	0	0	0	0	0	0	0	0	0	0	0	4	21	51
New Residential Ligh	0	0	1	2	4	6	8	9	12	14	17	19	20	25
Cogen1	0	0	0	101	101	101	101	101	118	218	218	235	370	454
WNP3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Residential	0	0	1	3	5	6	7	8	9	9	10	10	10	11
WNP1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cogen2	0	0	0	0	0	0	48	48	48	48	48	48	48	96
Wind1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small Hydro 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Geothermal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cogen3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal1 (E. Mont)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal2 (E. Wash)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cogen4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small Hydro 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal3 (E. Oregon)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal4 (Nevada)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wind2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal5 (W. Wa/Or)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wind3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Biomass	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Solar2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Replacement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Conserv Energy	33	70	148	263	405	552	708	868	1029	1188	1323	1460	1561	1672	1786
Total Gen Res Energy	0	0	59	313	519	1113	1560	1560	1926	2027	2403	2446	2609	2767	2800
Total Imports Energy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Firm Resources	19374	19450	19557	19877	20098	20920	21557	21518	21873	22064	22488	22533	22630	22871	23007
Load/Resource Balance	52	-150	-281	-182	-190	377	757	470	582	553	740	535	364	304	134

0001 Games

[illegible]

Solar2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Replacement	0	0	0	0	1321	1537	1848	1870	2114	2617	3724	3786	3891	4986	5463
Total Conserv Energy	1908	2031	2152	2275	2275	2275	2275	2275	2275	2275	2275	2275	2275	2275	2275
Total Gen Res Energy	2892	3169	3333	3381	4702	4918	5229	5251	5415	5768	6535	6547	6652	7747	8224
Total Imports Energy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Firm Resources	23278	23613	23652	23760	23619	23553	23552	23551	23549	23529	23495	23496	23495	23496	23496
Load/Resource Balance	106	124	160	264	123	57	56	55	53	33	-1	0	-1	0	1

PARTY = REGION

0001 Games

[illegible]

Solar2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Replacement	5474	5486	5511	5556	5609	5870	6229	6241	6602	6614	6974	6986	7049	7216	7256
Total Conserv Energy	2275	2275	2275	2275	2275	2275	2275	2275	2275	2275	2275	2275	2269	2255	2241
Total Gen Res Energy	8235	8247	8258	8270	8282	8294	8304	8316	8329	8341	8352	8364	8382	8408	8433
Total Imports Energy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Firm Resources	23496	23496	23495	23496	23496	23496	23495	23495	23496	23496	23496	23496	23496	23497	23495
Load/Resource Balance	0	0	0	0	0	1	-1	-1	0	0	0	0	0	1	-1

SYSTEM SUMMARY: Mean Loads and Resources (Avg MW),

PARTY = REGION

0001 Games

Operating Year	36-37	37-38	38-39	39-40
	-----	-----	-----	-----
Observed Load	21442	21442	21442	21442
Observed Rate	0.00%	0.00%	0.00%	0.00%
DSI Firm Load	2054	2054	2054	2054

Existing Resources	12805	12794	12782	12770
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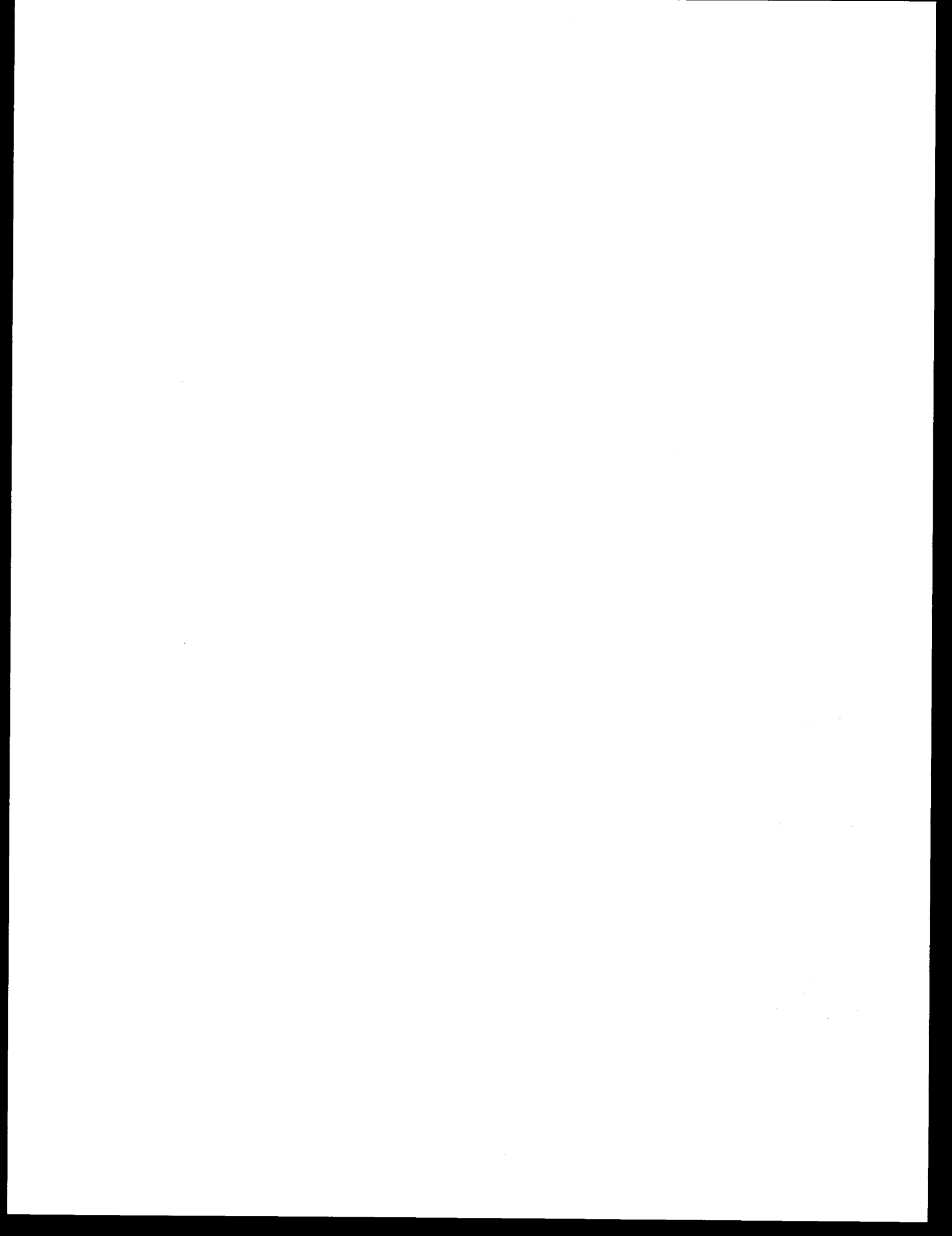
NON-DISCRETIONARY RESOURCES:

1990 R/P Conservatio	50	50	50	50
Load Reduction - BPA	92	92	92	92
New SF Res-HW	89	89	89	89
New MF Res-HW	16	16	16	16
Water Heat-HW	42	42	42	42
Solar Acc-HW	5	5	5	5
New Comm-HW	144	144	144	144
New Manuf Hsg-HW	87	87	78	69

DISCRETIONARY RESOURCES:

Hydro Eff Imp	5	5	5	5
WNP2 MW Imp	0	0	0	0
Conservation Voltage	75	67	59	51
Solar Access	11	11	11	11
Irrigation Conservat	34	34	34	34
Non-Aluminum Industr	296	296	296	296
New Commercial	138	138	138	138
Comm Discret Ex	262	262	262	262
Manuf Hsg Weath	48	48	48	48
Small Hydro 1	81	81	81	81
Comm Lost Opps Exist	208	208	208	208
T & D Eff Imp	134	124	113	102
Thermal Eff Imp	0	0	0	0
New Manuf Housing	55	55	55	55
Optioned CCCT	0	0	0	0
Combined Cycle CT	0	0	0	0
Southwest Imports	100	50	0	0
MF Res Weath	56	56	56	56
Small Hydro 2	75	75	75	75
SF Res Weath	82	82	82	82
Water Heat	178	178	178	178
New Residential Ligh	31	31	31	31
Cogen1	353	353	353	336
WNP3	0	0	0	0
Existing Residential	12	12	11	9
WNP1	0	0	0	0
Cogen2	496	448	448	448
Wind1	14	14	14	14
Small Hydro 3	0	0	0	0
Geothermal	0	0	0	0
Cogen3	0	0	0	0
MSW	0	0	0	0
Coal1 (E. Mont)	0	0	0	0
Coal2 (E. Wash)	0	0	0	0
Cogen4	0	0	0	0
Small Hydro 4	0	0	0	0
Coal3 (E. Oregon)	0	0	0	0
Coal4 (Nevada)	0	0	0	0
Wind2	0	0	0	0
Coal5 (W. Wa/Or)	0	0	0	0
Wind3	0	0	0	0
Biomass	0	0	0	0

Solar2	0	0	0	0
Replacement	7339	7468	7558	7616
Total Conserv Energy	2225	2207	2178	2149
Total Gen Res Energy	8462	8493	8533	8574
Total Imports Energy	0	0	0	0
Total Firm Resources	23496	23496	23496	23496
Load/Resource Balance	0	0	0	0



Section 2: Revised Analysis of Emphasize Renewables Alternative

The attached material is a revised analysis of resource acquisitions over the period 1990 to 2050 for the Emphasize Renewables Alternative. In the Draft EIS, a block of wind resources ("Wind2") was inadvertently dropped out of the supply curves. This analysis corrects that oversight.

Operating Year	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	00-01	01-02	02-03	03-04	04-05
Observed Load	3888	4002	4120	4235	4355	4473	4591	4709	4826	4944	5058	5173	5286	5400	5514
Observed Rate	2.95%	2.94%	2.78%	2.84%	2.71%	2.63%	2.56%	2.50%	2.43%	2.32%	2.26%	2.20%	2.15%	2.10%	
DSI Firm Load	2261	2268	2278	2288	2298	2308	2319	2329	2339	2350	2360	2371	2381	2392	2403
Existing Resources	8379	8546	8382	8219	8213	8208	8255	8302	8310	8319	8417	8515	8521	8527	8408
BPA Requirements	-1952	-2132	-2308	-2322	-2491	-2654	-2803	-2953	-3123	-3295	-3425	-3556	-3706	-3857	-3984

CONSERVATION PROGRAMS:															
SF Res MCS	0	5	11	16	22	27	33	40	46	53	60	67	75	82	89
MF Res MCS	0	1	1	2	2	3	4	4	5	6	6	7	8	8	9
New Manuf Housing	0	1	2	3	5	6	8	11	13	15	18	20	22	25	27
Water Heat	0	0	0	0	4	13	22	31	40	50	60	71	81	92	103
Refrigerators	0	0	0	0	1	4	6	8	11	13	16	19	22	25	28
Freezers	0	0	0	0	0	1	2	2	3	4	4	5	6	7	8
Irrigation	0	0	1	1	2	4	5	6	8	9	11	12	13	14	14
Industrial	0	2	8	17	27	38	49	60	71	82	92	103	114	125	136
New Commercial	0	7	19	31	42	53	63	74	86	98	109	119	130	141	153
Comm Lost Opps Exist	0	2	6	9	13	16	20	23	27	31	34	38	41	45	49
MF Res Weath	0	0	1	2	2	3	4	4	5	6	6	7	8	8	9
SF Res Weath	0	2	6	12	18	23	29	34	40	46	51	57	62	62	62
Comm Discret Ex	0	2	8	16	24	32	40	48	56	64	72	79	85	86	86
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Subtotal	0	22	63	109	162	223	285	345	411	477	539	604	667	720	773

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Coal2 (E. Wash)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal3 (E. Oregon)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal4 (Nevada)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal5 (W. Wa/Or)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Replacement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal	0	0	111	342	811	917	1123	1549	1619	1688	1877	2047	2114	2486	2511
Total Firm Resources	6428	6435	6248	6348	6696	6693	6859	7243	7217	7189	7407	7610	7595	7876	7707
Load/Resource Balance	278	165	-151	-175	44	-88	-51	206	49	-107	-11	67	-73	85	-210

Operating Year	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20
Observed Load	5642	5771	5898	6026	6153	6158	6164	6169	6173	6178	6182	6185	6189	6192	6195
Observed Rate	2.34%	2.27%	2.22%	2.16%	2.11%	0.09%	0.09%	0.08%	0.07%	0.07%	0.07%	0.06%	0.06%	0.05%	0.05%
DSI Firm Load	2413	2424	2435	2446	2457	2457	2457	2457	2457	2457	2457	2457	2457	2457	2457
Existing Resources	8289	8394	8500	8431	8362	8291	8220	8150	8079	8009	7920	7650	7579	7449	6727
BPA Requirements	-4138	-4313	-4487	-4661	-4849	-5000	-4992	-4985	-4979	-4973	-4967	-4962	-4957	-4952	-4948

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Coal2 (E. Wash)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal3 (E. Oregon)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal4 (Nevada)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal5 (W. Wa/Or)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Replacement	0	0	0	0	0	89	103	157	157	157	157	682	901	1030	1751
Subtotal	3324	3340	3450	4256	4256	4345	4359	4333	4306	4306	4306	4771	4990	5119	5840
Total Firm Resources	8295	8293	8388	9006	8802	8669	8620	8530	8439	8375	8292	8492	8645	8649	8652
Load/Resource Balance	241	99	54	533	193	54	0	-95	-191	-259	-347	-150	0	0	0

[illegible]

[illegible]

Operating Year	35-36	36-37	37-38	38-39	39-40	40-41	41-42	42-43	43-44	44-45	45-46	46-47	47-48	48-49	49-50
Observed Load	6236	6239	6241	6243	6245	6247	6248	6250	6252	6253	6255	6256	6257	6257	6258
Observed Rate	0.04%	0.04%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.02%	0.02%	0.01%	0.01%	0.01%
DSI Firm Load	2457	2457	2457	2457	2457	2457	2457	2457	2457	2457	2457	2457	2457	2457	2457
Existing Resources	6727	6727	6727	6727	6727	6727	6727	6727	6727	6727	6727	6727	6727	6727	6727
BPA Requirements	-4928	-4929	-4929	-4930	-4931	-4931	-4932	-4933	-4933	-4934	-4934	-4935	-4935	-4934	-4934

CONSERVATION PROGRAMS:															
SF Res MCS	126	126	126	126	126	126	126	126	126	126	126	126	126	126	126
MF Res MCS	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
New Manuf Housing	39	38	37	36	34	32	31	28	26	24	21	19	17	14	12
Water Heat	159	159	159	159	159	159	159	159	159	159	159	159	159	159	159
Refrigerators	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45
Freezers	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Irrigation	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Industrial	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188
New Commercial	214	214	214	214	214	214	214	214	214	214	214	214	214	214	214
Comm Lost Opps Exist	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67
MF Res Weath	9	9	9	9	9	9	9	8	7	7	6	5	5	4	3
SF Res Weath	62	62	62	62	62	62	60	56	50	45	39	33	28	22	17
Comm Discret Ex	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86
Subtotal	1033	1032	1031	1030	1028	1026	1023	1015	1006	999	989	980	973	963	955

[illegible]

[illegible]

SYSTEM SUMMARY: Mean Loads and Resources (Avg MW), PARTY = IOUs
0100 Games

Operating Year	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	00-01	01-02	02-03	03-04	04-05
Observed Load	9551	9881	10214	10558	10916	11253	11590	11927	12264	12600	12946	13291	13638	13984	14331
Observed Rate		3.45%	3.37%	3.37%	3.39%	3.09%	3.00%	2.91%	2.82%	2.74%	2.74%	2.67%	2.60%	2.54%	2.48%
Existing Resources	9685	9681	9795	9910	9353	8791	8795	8798	8710	8621	8652	8683	8448	8214	8306
BPA Requirements	47	77	127	0	0	0	0	0	0	0	0	0	0	0	0
CONSERVATION PROGRAMS:															
SF Res MCS	0	3	6	10	14	17	21	25	30	34	39	44	50	55	60
MF Res MCS	0	1	2	4	5	6	7	9	10	11	13	14	16	17	18
New Manuf Housing	0	1	2	4	5	7	9	12	14	17	20	22	25	28	31
Refrigerators	0	0	0	0	2	5	8	12	15	19	23	27	32	36	41
Freezers	0	0	0	0	1	1	2	3	4	5	6	8	9	10	11
Water Heat	0	0	0	0	5	16	28	39	51	63	76	90	104	117	131
Irrigation	0	0	1	2	3	5	7	10	12	14	16	18	20	21	22
Industrial	0	2	8	19	31	43	55	68	80	92	104	116	129	141	153
New Commercial	0	11	32	52	72	89	108	127	146	166	185	203	222	241	260
Comm Lost Opps Exist	0	2	6	10	14	18	21	25	29	33	37	41	45	49	53
MF Res Weath	0	1	3	5	7	9	11	13	15	17	19	21	23	25	27
SF Res Weath	0	1	4	8	11	15	18	22	26	29	33	36	39	40	40
Comm Discret Ex	0	2	7	14	21	28	35	42	49	56	63	71	76	76	76
Subtotal	0	24	71	128	191	259	330	407	481	556	634	711	790	856	923
GENERATING RESOURCES:															
Small Hydro 1 West	0	0	0	29	29	29	29	29	29	29	29	29	29	29	29
Small Hydro 1 East	0	0	0	34	43	43	43	43	43	43	43	43	43	43	43
Small Hydro 2 West	0	0	0	25	32	32	32	32	32	32	32	32	32	32	32
Small Hydro 2 East	0	0	0	25	47	47	47	47	47	47	47	47	47	47	47
Cogen1w	0	0	30	30	30	30	30	30	30	30	30	30	30	30	30
Combined Cycle Mix	0	0	0	0	349	349	349	349	349	349	349	349	349	349	349
Cogen1e	0	0	30	30	30	30	30	30	30	30	30	30	30	30	30
Cogen2w	0	0	180	180	180	180	180	180	180	180	180	180	180	180	180
Small Hydro 3 West	0	0	0	0	0	0	26	37	37	37	37	37	37	37	37
Small Hydro 3 East	0	0	0	0	0	0	26	52	52	52	52	52	56	56	56
Cogen2e	0	0	0	180	180	180	180	180	180	180	180	180	180	180	180
Coal1 (E. Mont)	0	0	0	0	0	0	0	188	375	563	750	938	1125	1313	1313
Cogen3w	0	0	0	0	360	360	360	360	360	360	360	360	360	360	360
Small Hydro 4 West	0	0	0	0	0	0	25	25	25	25	25	25	25	25	25
Small Hydro 4 East	0	0	0	0	0	0	25	32	32	32	32	32	32	32	32
Cogen3e	0	0	0	0	140	360	360	360	360	360	360	360	360	360	360
Coal2 (E. Wash)	0	0	0	0	0	0	0	188	375	563	563	563	563	563	563
Cogen4w	0	0	0	0	0	620	780	780	780	780	780	780	1000	1330	1330
Coal3 (E. Oregon)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	188
Cogen4e	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal4 (Nevada)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal5 (W. Wa/Or)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wind1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wind2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Replacement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal	0	0	240	533	1420	2260	2522	2942	3316	3692	3879	4067	4478	4996	5184
Total Firm Resources	9732	9782	10233	10571	10964	11310	11647	12147	12507	12869	13165	13461	13716	14066	14413

Load/Resource Balance	181	-98	21	11	47	58	59	218	243	271	221	171	77	81	79
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SYSTEM SUMMARY: Mean Loads and Resources (Avg MW), PARTY = IOUs
 0100 Games

Operating Year	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20
Observed Load	14754	15178	15604	16030	16458	16460	16462	16464	16466	16468	16470	16471	16473	16474	16475
Observed Rate	2.95%	2.87%	2.80%	2.73%	2.67%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
Existing Resources	8398	8383	8368	8513	8542	7194	6872	6543	6477	6261	5838	5194	5139	5051	4589
BPA Requirements	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CONSERVATION PROGRAMS:															
SF Res MCS	66	71	77	83	89	89	89	89	89	89	89	89	89	89	89
MF Res MCS	20	21	22	24	25	25	25	25	25	25	25	25	25	25	25
New Manuf Housing	33	36	38	41	44	44	44	44	44	44	44	44	44	44	44
Refrigerators	45	49	53	59	65	65	65	65	65	65	65	65	65	65	65
Freezers	12	13	14	16	18	18	18	18	18	18	18	18	18	18	18
Water Heat	144	158	173	188	203	203	203	203	203	203	203	203	203	203	203
Irrigation	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
Industrial	165	177	189	202	212	212	212	212	212	212	212	212	212	212	212
New Commercial	280	300	321	343	365	365	365	365	365	365	365	365	365	365	365
Comm Lost Opps Exist	57	60	64	68	72	72	72	72	72	72	72	72	72	72	72
MF Res Weath	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
SF Res Weath	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Comm Discret Ex	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76
Subtotal	987	1050	1116	1189	1258	1258	1258	1258	1258	1258	1258	1258	1258	1258	1258
GENERATING RESOURCES:															
Small Hydro 1 West	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29
Small Hydro 1 East	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43
Small Hydro 2 West	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
Small Hydro 2 East	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47
Cogen1w	30	30	30	30	30	30	30	0	0	0	0	0	0	0	0
Combined Cycle Mix	349	349	349	349	349	349	349	349	349	349	349	349	349	349	349
Cogen1e	30	30	30	30	30	30	30	0	0	0	0	0	0	0	0
Cogen2w	180	180	180	180	180	180	180	0	0	0	0	0	0	0	0
Small Hydro 3 West	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37
Small Hydro 3 East	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56
Cogen2e	180	180	180	180	180	180	180	0	0	0	0	0	0	0	0
Coal1 (E. Mont)	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313
Cogen3w	360	360	360	360	360	360	360	360	360	0	0	0	0	0	0
Small Hydro 4 West	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Small Hydro 4 East	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
Cogen3e	360	360	360	360	360	360	360	360	360	220	0	0	0	0	0
Coal2 (E. Wash)	563	563	563	563	563	563	563	563	563	563	563	563	563	563	563
Cogen4w	1400	1500	1500	1500	1500	1500	1500	1500	1500	1500	880	720	720	720	720
Coal3 (E. Oregon)	375	563	563	563	563	563	563	563	563	563	563	563	563	563	563
Cogen4e	0	80	450	670	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Coal4 (Nevada)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal5 (W. Wa/Or)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wind1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wind2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Replacement	0	0	0	0	0	1352	1607	1831	1831	2643	3907	4714	4980	5279	5822
Subtotal	5441	5809	6179	6399	6729	8081	8336	8320	8140	8452	8876	9523	9789	10088	10631
Total Firm Resources	14826	15242	15663	16101	16529	16533	16466	16121	15875	15971	15972	15975	16186	16397	16478

Load/Resource Balance 69 63 60 67 68 69 0 -346 -595 -500 -500 -290 -80 0

SYSTEM SUMMARY: Mean Loads and Resources (Avg MW), PARTY = IOUs
0100 Games

Operating Year	20-21	21-22	22-23	23-24	24-25	25-26	26-27	27-28	28-29	29-30	30-31	31-32	32-33	33-34	34-35
Observed Load	16475	16474	16474	16473	16472	16472	16471	16471	16470	16470	16469	16468	16464	16461	16457
Observed Rate	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-0.01%	-0.02%	-0.02%	-0.02%
Existing Resources	4143	4143	4143	4143	4143	4143	4143	4143	4143	4143	4143	4143	4143	4143	4143
BPA Requirements	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CONSERVATION PROGRAMS:															
SF Res MCS	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89
MF Res MCS	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
New Manuf Housing	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44
Refrigerators	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65
Freezers	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Water Heat	203	203	203	203	203	203	203	203	203	203	203	203	203	203	203
Irrigation	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
Industrial	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212
New Commercial	365	365	365	365	365	365	365	365	365	365	365	365	365	365	365
Comm Lost Opps Exist	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72
MF Res Weath	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
SF Res Weath	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Comm Discret Ex	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76
Subtotal	1258	1258	1258	1258	1258	1258	1258	1258	1258	1258	1258	1258	1258	1258	1258
GENERATING RESOURCES:															
Small Hydro 1 West	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29
Small Hydro 1 East	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43
Small Hydro 2 West	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
Small Hydro 2 East	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47
Cogen1w	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Combined Cycle Mix	349	349	349	349	0	0	0	0	0	0	0	0	0	0	0
Cogen1e	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cogen2w	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small Hydro 3 West	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37
Small Hydro 3 East	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56
Cogen2e	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal1 (E. Mont)	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313	1313
Cogen3w	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small Hydro 4 West	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Small Hydro 4 East	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
Cogen3e	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal2 (E. Wash)	563	563	563	563	563	563	563	563	563	563	563	563	563	563	563
Cogen4w	720	720	500	170	170	100	0	0	0	0	0	0	0	0	0
Coal3 (E. Oregon)	563	563	563	563	563	563	563	563	563	563	563	563	563	563	563
Cogen4e	1000	1000	1000	1000	1000	1000	920	550	330	0	0	0	0	0	0
Coal4 (Nevada)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal5 (W. Wa/Or)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wind1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wind2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Replacement	6268	6268	6486	6816	7164	7233	7413	7782	8002	8331	8331	8331	8331	8331	8331
Subtotal	11077	11077	11075	11075	11074	11073	11073	11072	11072	11071	11071	11071	11071	11071	11071
Total Firm Resources	16478	16478	16476	16476	16475	16474	16474	16473	16473	16472	16472	16472	16472	16472	16472

Load/Resource Balance

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SYSTEM SUMMARY: Mean Loads and Resources (Avg MW), PARTY - IOUs
0100 Games

Operating Year	35-36	36-37	37-38	38-39	39-40	40-41	41-42	42-43	43-44	44-45	45-46	46-47	47-48	48-49	49-50
Observed Load	16454	16451	16448	16446	16443	16441	16438	16436	16434	16431	16429	16428	16427	16427	16427
Observed Rate	-0.02%	-0.02%	-0.02%	-0.02%	-0.02%	-0.02%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	-0.01%	0.00%	0.00%
Existing Resources	4143	4143	4143	4143	4143	4143	4143	4143	4143	4143	4143	4143	4143	4143	4143
BPA Requirements	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CONSERVATION PROGRAMS:															
SF Res MCS	89	89	89	89	89	89	89	89	89	89	89	89	89	89	89
MF Res MCS	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
New Manuf Housing	44	43	42	40	38	37	34	32	29	27	24	21	19	16	13
Refrigerators	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65
Freezers	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Water Heat	203	203	203	203	203	203	203	203	203	203	203	203	203	203	203
Irrigation	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
Industrial	212	212	212	212	212	212	212	212	212	212	212	212	212	212	212
New Commercial	365	365	365	365	365	365	365	365	365	365	365	365	365	365	365
Comm Lost Opps Exist	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72
MF Res Weath	27	27	27	27	27	27	26	24	22	20	18	16	14	12	10
SF Res Weath	40	40	40	40	40	40	39	36	32	29	25	21	18	14	11
Comm Discret Ex	76	76	76	76	76	76	76	76	76	76	76	76	76	76	76
Subtotal	1258	1257	1256	1254	1252	1251	1246	1239	1230	1223	1214	1205	1198	1189	1181
GENERATING RESOURCES:															
Small Hydro 1 West	29	29	29	29	29	29	29	29	0	0	0	0	0	0	0
Small Hydro 1 East	43	43	43	43	43	43	43	43	10	0	0	0	0	0	0
Small Hydro 2 West	32	32	32	32	32	32	32	32	7	0	0	0	0	0	0
Small Hydro 2 East	47	47	47	47	47	47	47	47	22	0	0	0	0	0	0
Cogen1w	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Combined Cycle Mix	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cogen1e	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cogen2w	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small Hydro 3 West	37	37	37	37	37	37	37	37	37	37	37	11	0	0	0
Small Hydro 3 East	56	56	56	56	56	56	56	56	56	56	56	30	4	4	4
Cogen2e	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal1 (E. Mont)	1313	1313	1125	938	750	563	375	188	0	0	0	0	0	0	0
Cogen3w	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small Hydro 4 West	25	25	25	25	25	25	25	25	25	25	25	0	0	0	0
Small Hydro 4 East	32	32	32	32	32	32	32	32	32	32	32	7	0	0	0
Cogen3e	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal2 (E. Wash)	563	563	375	188	0	0	0	0	0	0	0	0	0	0	0
Cogen4w	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal3 (E. Oregon)	563	563	563	563	563	563	563	563	563	375	188	0	0	0	0
Cogen4e	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal4 (Nevada)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coal5 (W. Wa/Or)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wind1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wind2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Replacement	8331	8331	8687	9061	9435	9622	9811	10004	10310	10542	10736	11032	11083	11092	11100
Subtotal	11071	11071	11051	11051	11049	11049	11050	11056	11062	11067	11074	11080	11087	11096	11104
Total Firm Resources	16472	16471	16450	16448	16444	16443	16439	16438	16435	16433	16431	16428	16428	16428	16428

Load/Resource Balance

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Operating Year	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	00-01	01-02	02-03	03-04	04-05
Observed Load	17723	18317	18922	19551	20193	20811	21431	22050	22669	23288	23899	24509	25120	25730	26341
Observed Rate		3.35%	3.30%	3.32%	3.28%	3.07%	2.97%	2.89%	2.81%	2.73%	2.62%	2.56%	2.49%	2.43%	2.37%
DSI Firm Load	2261	2268	2278	2288	2298	2308	2319	2329	2339	2350	2360	2371	2381	2392	2403
Existing Resources	20443	20605	20585	20564	19997	19429	19495	19560	19475	19389	19538	19687	19458	19229	19225
CONSERVATION PROGRAMS:															
SF Res MCS	0	8	17	26	36	44	54	65	76	87	99	111	125	137	149
MF Res MCS	0	2	3	6	7	9	11	13	15	17	19	21	24	25	27
Water Heat	0	0	0	0	9	29	50	70	91	113	136	161	185	209	234
Refrigerators	0	0	0	0	3	9	14	20	26	32	39	46	54	61	69
Freezers	0	0	0	0	1	2	4	5	7	9	10	13	15	17	19
New Manuf Housing	0	2	4	7	10	13	17	23	27	32	38	42	47	53	58
Irrigation	0	0	2	3	5	9	12	16	20	23	27	30	33	35	36
Industrial	0	4	16	36	58	81	104	128	151	174	196	219	243	266	289
New Commercial	0	18	51	83	114	142	171	201	232	264	294	322	352	382	413
Comm Discret Ex	0	4	15	30	45	60	75	90	105	120	135	150	161	162	162
Comm Lost Opps Exist	0	4	12	19	27	34	41	48	56	64	71	79	86	94	102
SF Res Weath	0	3	10	20	29	38	47	56	66	75	84	93	101	102	102
MF Res Weath	0	1	4	7	9	12	15	17	20	23	25	28	31	33	36
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Subtotal	0	46	134	237	353	482	615	752	892	1033	1173	1315	1457	1576	1696
GENERATING RESOURCES:															
Hydro Eff Imp	0	0	20	40	60	80	100	100	100	100	100	100	100	100	100
Trans Eff Imp	0	0	11	22	33	34	34	34	34	34	34	34	34	34	34
Small Hydro 1 East	0	0	0	48	57	57	57	57	57	57	57	57	57	57	57
Small Hydro 2 East	0	0	0	36	61	61	61	61	61	61	61	61	61	61	61
Small Hydro 3 East	0	0	0	0	0	0	37	71	71	71	71	71	75	75	75
Small Hydro 4 East	0	0	0	0	0	0	36	43	43	43	43	43	43	43	43
Small Hydro 1 West	0	0	0	39	39	39	39	39	39	39	39	39	39	39	39
Small Hydro 2 West	0	0	0	36	43	43	43	43	43	43	43	43	43	43	43
Small Hydro 3 West	0	0	0	0	0	0	37	48	48	48	48	48	48	48	48
Small Hydro 4 West	0	0	0	0	0	0	32	32	32	32	32	32	32	32	32
Combined Cycle BPA	0	0	0	0	0	0	0	349	349	349	349	349	349	697	697
Combined Cycle Mix	0	0	0	0	698	698	698	698	698	698	698	698	698	698	698
Cogen1e	0	0	40	40	40	40	40	40	40	40	40	40	40	40	40
Cogen2e	0	0	0												

GCoal3 (EOre)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GCoal4 (Nev)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GCoal5 (WWaOr)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Replacement	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WNP 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WNP 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Geothermal1	0	0	0	27	27	27	27	27	27	27	27	27	27	27	27
Geothermal2	0	0	0	0	45	90	135	180	225	270	315	360	383	383	383
Solar1	0	0	0	22	22	22	22	22	22	22	22	22	22	22	22
Solar2	0	0	0	22	22	22	22	22	22	22	22	22	22	22	22
Solar3	0	0	0	42	42	42	42	42	42	42	42	42	42	42	42
Wind1	0	0	0	17	33	49	66	66	66	66	66	66	66	66	66
Wind2	0	0	0	24	49	73	97	121	146	170	194	219	243	267	292
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Subtotal	0	0	351	875	2231	3177	3645	4491	4935	5380	5756	6114	6592	7482	7695
Total Firm Resources	20443	20652	21069	21675	22582	23091	23757	24803	25300	25801	26469	27118	27505	28288	28612
Load/Resource Balance	459	67	-130	-164	91	-29	8	424	292	163	210	238	4	166	-131

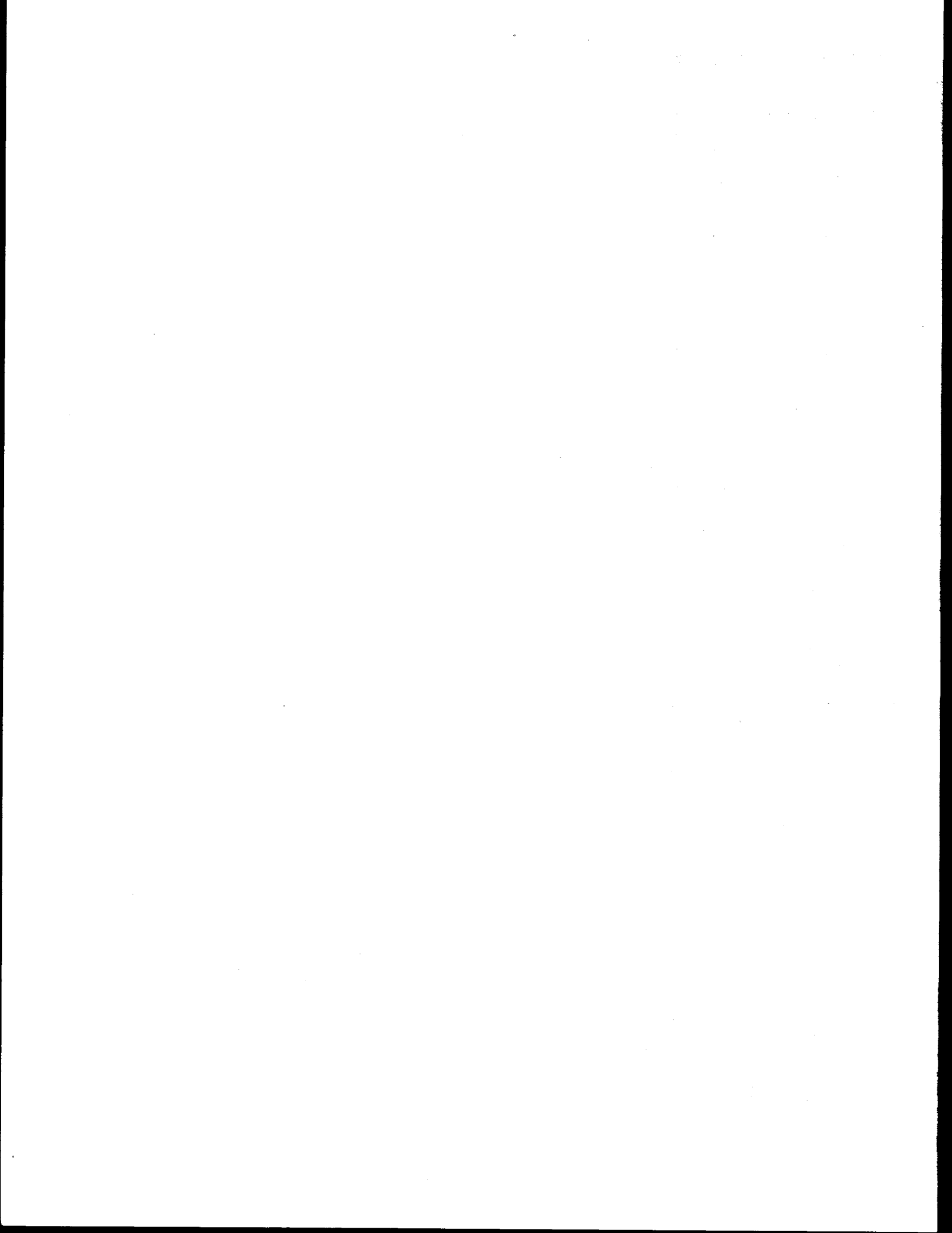
Operating Year	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20
Observed Load	27069	27796	28524	29251	29979	29979	29979	29979	29979	29979	29979	29979	29979	29979	29979
Observed Rate	2.76%	2.69%	2.62%	2.55%	2.49%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
DSI Firm Load	2413	2424	2435	2446	2457	2457	2457	2457	2457	2457	2457	2457	2457	2457	2457
Existing Resources	19221	19312	19402	19478	19423	17845	17453	17054	16917	16631	16119	15204	15079	14861	13677
CONSERVATION PROGRAMS:															
SF Res MCS	162	174	188	201	215	215	215	215	215	215	215	215	215	215	215
MF Res MCS	30	31	33	36	37	37	37	37	37	37	37	37	37	37	37
Water Heat	257	282	309	336	362	362	362	362	362	362	362	362	362	362	362
Refrigerators	76	83	90	100	110	110	110	110	110	110	110	110	110	110	110
Freezers	20	22	24	27	30	30	30	30	30	30	30	30	30	30	30
New Manuf Housing	62	68	72	77	83	83	83	83	83	83	83	83	83	83	83
Irrigation	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
Industrial	311	334	357	381	400	400	400	400	400	400	400	400	400	400	400
New Commercial	444	476	510	544	579	579	579	579	579	579	579	579	579	579	579
Comm Discret Ex	162	162	162	162	162	162	162	162	162	162	162	162	162	162	162
Comm Lost Opps Exist	109	116	123	131	139	139	139	139	139	139	139	139	139	139	139
SF Res Weath	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102
MF Res Weath	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
Subtotal	1807	1922	2042	2169	2291	2291	2291	2291	2291	2291	2291	2291	2291	2291	2291
GENERATING RESOURCES:															
Hydro Eff Imp	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Trans Eff Imp	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34
Small Hydro 1 East	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57
Small Hydro 2 East	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61
Small Hydro 3 East	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
Small Hydro 4 East	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43
Small Hydro 1 West	39	39	39	39	39	39	39	39	39	39	39	39	39	39	39
Small Hydro 2 West	43	43	43	43	43	43	43	43	43	43	43	43	43	43	43
Small Hydro 3 West	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48
Small Hydro 4 West	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
Combined Cycle BPA	697	697	697	697	697	697	697	697	697	697	697	697	697	697	697
Combined Cycle Mix	698	698	698	698	698	698	698	698	698	698	698	698	698	698	698
Cogen1e	40	40	40</												

GCoal3 (EOre)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GCoal4 (Nev)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GCoal5 (WWaOr)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Replacement	0	0	0	0	0	1441	1710	1988	1988	2800	4064	5396	5881	6309	7573
WNP 3	0	0	0	806	806	806	806	806	806	806	806	806	806	806	806
WNP 1	813	813	813	813	813	813	813	813	813	813	813	813	813	813	813
Geothermal1	27	27	27	27	27	27	27	27	0	0	0	0	0	0	0
Geothermal2	383	383	383	383	383	383	383	383	383	383	383	383	383	383	383
Solar1	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
Solar2	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
Solar3	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42
Wind1	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66
Wind2	292	308	308	308	308	308	308	308	308	308	308	308	308	308	308
Subtotal	8765	9149	9629	10655	10985	12426	12695	12653	12446	12758	13182	14294	14779	15207	16471
Total Firm Resources	29792	30383	31073	32298	32696	32559	32436	31995	31651	31677	31589	31786	32146	32356	32436
Load/Resource Balance	310	162	114	601	260	123	0	-441	-785	-759	-847	-650	-290	-80	0

[illegible]

GCoal3 (EOre)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GCoal4 (Nev)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GCoal5 (WWaOr)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Replacement	8139	8240	8510	8958	9731	9867	10112	10985	11251	11625	11671	11717	11744	12136	12180
WNP 3	806	806	806	806	806	806	806	806	806	806	806	806	806	806	806
WNP 1	813	813	813	813	813	813	813	813	813	813	813	813	813	813	813
Geothermal1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Geothermal2	383	383	383	383	338	293	248	202	157	113	67	23	0	0	0
Solar1	22	22	22	0	0	0	0	0	0	0	0	0	0	0	0
Solar2	22	22	22	0	0	0	0	0	0	0	0	0	0	0	0
Solar3	42	42	42	0	0	0	0	0	0	0	0	0	0	0	0
Wind1	66	66	66	66	66	66	66	66	66	66	66	66	66	49	33
Wind2	308	308	308	308	308	308	308	308	308	308	308	308	308	284	259
Subtotal	16917	16918	16917	16918	16917	16917	16917	16916	16917	16917	16917	16919	16923	16925	16928
Total Firm Resources	32436	32437	32436	32436	32436	32436	32436	32435	32436	32435	32436	32437	32442	32444	32448
Load/Resource Balance	0	1	0	0	0	0	0	-1	0	-1	0	1	6	9	12

[illegible]



DOE/BP-2076
February 1993
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