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Staff Issue Paper

PROTECTED AREAS DESIGNATION

October 8, 1987

NORTHWEST POWER PLANNING COUNCIL

ISSUE PAPER

PROTECTED AREAS DESIGNATION

The purpose of this issue paper is to describe the results of a three-year Hydro Assessment Study and to propose a course of action which, if approved by the Council, would lead to rulemaking on the subject of protected areas. If protected areas are included in the Fish and Wildlife Program and the Power Plan through amendment proceedings, they would provide the following benefits:

> 1. They would help ensure that substantial ratepayer investments in fish and wildlife rehabilitation in the Columbia River Basin would not be undermined.
>
> 2. They would provide clearer signals to potential developers on the importance of fish and wildlife resources in given portions of the Basin and the region and would help developers focus their attention on less sensitive areas for development.
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> 3. They would provide useful information to the Federal Energy Regulatory Commission so that its hydropower decisions can reflect the region's interest in quality resource development and environmental protection.

In deciding whether to enter rulemaking, it is important to consider the background of the Hydro Assessment Study, and the legal, biological and institutional reasons that led to the initiation of these studies. These topics are discussed in detail in the body of this document.

Based on the results of the Hydro Assessment Study and recommendations from the four Northwest States, the staff recommendation proposes the following guidelines for protected areas:

1. Protect all areas currently used by anadromous (ocean-migrating) fish or potentially usable by anadromous fish in the Columbia River Basin.

2. Protect all areas currently used by anadromous fish outside the Columbia River Basin.

3. Protect high quality resident fish and wildlife areas both inside and outside the Columbia River Basin.

4. Provide for reevaluation of protected areas after system planning is completed. (The Council is about to embark on an analysis of 31 subbasins in the Columbia River Basin to determine their potential contributions to the goal of doubling salmon and steelhead runs. When these subbasin plans are completed, they will be integrated into a single basinwide or "system" plan.)

The Council would like comments on the following issues raised in this paper:

1. Should the Council enter rulemaking for purposes of designating protected areas?

2. Should protected areas be designated both in and out of the Columbia River Basin?

3. Should protected areas be expanded to include specifically non-fish and wildlife values?

4. Are there other considerations which should be taken into account by the Council?

The Council is also seeking comment on the accuracy of its data base. To help commentors, either hard copy or computer diskette copies of the data will be made available upon request.

The schedule for presentation and comment on the issue paper is as follows:

October 15	Staff presentation of issue paper to the Council in Helena
November 12-13	Public comment on issue paper at the Council meeting in Tacoma
December 9-10	Public comment on issue paper at the Council meeting in Portland
January 8, 1988	Deadline for written comments
February 1988	Council action

Consultations will be scheduled with interested parties during October, November and December.

For further information, copies of reports or data contact Ms. Janie Pearcy, Northwest Power Planning Council, 850 S.W. Broadway, Suite 1100, Portland, Oregon 97205, 503-222-5161; 1-800-452-2324 (Oregon toll-free number); or 1-800-222-3355 (regional toll-free number).

I. INTRODUCTION AND BACKGROUND.

A. Protected Areas and Site Ranking.

The fish and wildlife resources of the Columbia River Basin have been adversely affected by past hydroelectric development, and it is possible they could be harmed even more by future development. The Council estimates that approximately 35% of anadromous fish habitat has been lost, due in part to hydroelectric development. (See program section 203(b)(1).) Yet more hydropower development will occur. The Corps of Engineers and the Bureau of Reclamation continue to study the need for additional federal hydroelectric projects and to plan for new development. The records of the Federal Energy Regulatory Commission (FERC), which licenses nonfederal hydroelectric development, suggests that most new hydroelectric development in the Columbia River Basin and in the Pacific Northwest will be accomplished by private or nonfederal public entities. FERC has at least 350[1] applications pending for hydroelectric development in Idaho, Oregon, Montana and Washington. Many of those applications and permits are for projects within the Columbia River Basin. A number of these are proposed for tributary drainage basins which contain important anadromous fish habitat, such as the Salmon River Basin in Idaho.

In 1981, the region's fish and wildlife agencies and Indian tribes called for the Council to influence federal development and licensing of new hydroelectric development in the Columbia River Basin. They proposed procedural and substantive standards to ensure that no new hydroelectric development took place without considering cumulative effects and adequate mitigation of any adverse effects on fish and wildlife. A significant number of recommendations also requested that certain unaltered streams and priority wildlife habitats be protected from all future hydroelectric development as mitigation for the extensive fish and wildlife losses caused by hydroelectric development in the past.

In 1982, when the Council adopted its first fish and wildlife program, the Council agreed with the concept of protecting some streams and wildlife habitats from future hydroelectric development. The Council initiated studies to ensure that recommendations for protective classification would have the benefit of a standard set of criteria and that the criteria would apply systemwide. The program

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1 This figure includes pending preliminary permits, granted preliminary permits, pending licenses and pending exemptions. It does not include projects that have been granted licenses or exemptions.

called on Bonneville to conduct an 18-month study of alternatives for designating certain streams and wildlife habitat in the Columbia River Basin to be protected from future hydroelectric development. The Council said that, based on the results of that study and the requirements of the Northwest Power Act, it would designate stream reaches and wildlife habitat areas to be protected from further hydroelectric development.

In developing the Northwest Conservation and Electric Power Plan in 1983, the Council also recognized the need to have a more reliable estimate of the amount of developable hydropower in the region. Accordingly, the Council called for a regionwide study to rank potential hydropower sites based on fish and wildlife concerns. In doing so, the Council stated that the site-ranking study should be coordinated with the protected areas study under the Council's Fish and Wildlife Program. The site-ranking process was to result in three categories of sites:[2] 1) those with insignificant adverse impacts on fish and wildlife, 2) those where adverse impacts could be mitigated, and 3) those where adverse impacts could not be mitigated. In addition, the Council said that it would continue its effort to refine the Corps' of Engineers data base on existing and potential hydropower sites that are environmentally sound and cost-effective. These site ranking provisions are not mentioned specifically in the 1986 power plan, but the plan commits the Council to reevaluate the region's hydropower potential.

In August 1984, the Council formally initiated the studies called for in the program and the plan by adopting the Pacific Northwest Hydro Assessment Study Work Plan.

B. The Pacific Northwest Hydro Assessment Study

Because the protected areas and site ranking studies are closely related, the Council established the Hydropower Assessment Steering Committee (HASC)[3] in October 1983 to help coordinate these actions.

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2 The 1983 Power Plan stated that the term "sites" was to be used in a broad sense and was meant to cover both specific sites and stream reaches.

3 The Hydropower Assessment Steering Committee was composed of members representing state and federal fish and wildlife agencies, energy agencies, Bonneville, the Corps, federal land management agencies, the Bureau of Reclamation, small hydro developers and the Pacific Northwest Utilities Conference Committee. The committee provided advice to the Council but did not function as a voting body. Individual members may disagree with the recommendations and conclusions of this document.

On August 29, 1984 the Council adopted the Pacific Northwest Hydro Assessment Study Work Plan, which was based on the work of the Council's HASC. The Hydro Assessment Study Work Plan was aimed at providing information to help the Council to designate protected areas and rank sites. The Hydro Assessment Study was divided into three major components: the anadromous fish study, the rivers assessment study, and the hydro site data base.[4]

1. Anadromous Fish Productivity Study.

For anadromous fish, the Council has characterized stream reaches throughout the region based on whether they contain anadromous fish, their importance as migratory routes and their potential habitat value. The data for this characterization were provided by the fish and wildlife and land management agencies, tribes, and utilities.

2. The Rivers Assessment Study.

For nonanadromous fish values (resident fish and wildlife and cultural, aesthetic or other river values), a Pacific Northwest River Assessment Study was coordinated and funded by the Bonneville Power Administration. This study was conducted with the participation of states, federal agencies, and tribes. The study identified the significance of each stream based on an assessment of "river values:" special protections, such as wild and scenic rivers status, resident fish use, wildlife use, recreational use; cultural values, such as historical or archaeological significance; and natural features.[5]

3. The Hydro Site Data Base.

In the past the Council has received estimates of environmentally-acceptable hydropower ranging from 400 to 4,000 megawatts. These estimates were based on inadequate resource information. In an effort to refine further its data base on environmentally sound and cost-effective hydropower sites, the Council determined that the data base should include constraints beyond fish and wildlife values. These

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4 All the information generated is computerized and can be cross-referenced through the use of a river reach coding system common to all three data bases.

5 This information has been combined with a data base being developed by the Corps of Engineers and Bonneville to help the Council staff to make recommendations on protected areas and site ranking. The hydro site data base contains site-specific information on costs, capacity, output, location, and other characteristics of existing and proposed hydroelectric projects in the Pacific Northwest.

could reduce the amount of dependable hydropower in the Council's resource estimates.

The Council is attempting to obtain a realistic estimate of hydropower capability in the region by: 1) identifying the electrical capability of all projected hydropower projects in the Northwest; 2) reducing the estimate in accordance with the Council's designation of protected areas and site ranking; and 3) reducing the estimate further based on the river values assigned in the River Assessment Study.

All data have been collected for both the Anadromous Fish Productivity and Rivers Assessment studies. The anadromous fish data base has been reviewed by the fish, wildlife, and land management agencies, tribes, and the general public. The rivers assessment data have been reviewed at the state level by the agencies and tribes and has been subjected to public scrutiny through a series of public meetings conducted in each state. The Hydro Assessment Study Work Plan contemplated that the states would submit to the Council proposals for protected areas based on the data collected in the three studies. The states (Idaho, Montana, Oregon and Washington) now have done so. The state proposals contain the results of the studies described above, and their criteria and recommendations for protected areas.

In the course of the Hydro Assessment studies, it became apparent that the distinction between "protected areas" and site ranking" was confusing and, accordingly, the site ranking terminology was dropped. The staff's proposal is to designate protected areas throughout the region, while recognizing that such designations have different legal consequences within the Columbia River Basin than in the region outside the Basin. (See Attachment 1)

C. LEGAL CONSIDERATIONS

Attachment 1 discusses the Council's legal authority to designate protected areas in the region and in the Columbia River Basin. The attachment also discusses the legal significance of protected area designation.

Briefly, the Council may designate protected areas after considering fish and wildlife, environmental, and power system impacts. Such designations would not be enforced directly by the Council but would be implemented by various federal agencies in accordance with their obligations under the Northwest Power Act and other laws.

D. BIOLOGICAL AND INSTITUTIONAL CONTEXT

In choosing to pursue the Hydro Assessment Study, the Council recognized the historical losses to fish and wildlife, particularly salmon and steelhead, due to the construction and operation of the

existing hydroelectric system. This recognition of the losses to fish and wildlife was consistent with the the views of Congress in passing the Northwest Power Act. However, at the time the Council adopted the Hydro Assessment Study Plan, no estimate had been made of the extent of the losses due to the hydrosystem. As part of the basis for establishing a goal for the Fish and Wildlife Program, the Council initiated a study to determine the extent of the hydro-related losses. As a result of that study, the Council concluded in its 1987 Columbia River Basin Fish and Wildlife Program that the estimated decline in run size due to hydropower development and operation ranges from 5 million to 11 million adult salmon and steelhead. This compares with a total decline from all causes of about 7 million to 14 million adult fish. In contrast, the average annual run size is presently about 2.5 million adult fish. In addition, the Council concluded that salmon and steelhead habitat in the entire Columbia River Basin has decreased from about 14,700 river miles before 1850 to about 10,100 river miles in 1976, a loss of about 30 percent.

In light of the losses to salmon and steelhead in the Columbia River Basin and the contribution of the hydropower system to those losses, the Council has set doubling the runs as an interim goal. Doubling means increasing the current run size of about 2.5 million adult fish to one of about 5 million adult fish. Achieving this goal will require a mix of wild, natural and hatchery production. Protecting valuable fish habitat from hydropower development should preserve an appropriate environment for wild and naturally spawning fish. Accordingly, protected area designations could play an important part in the Council's basinwide strategy to double existing anadromous fish runs.

The Northwest Power Act directed that "the program, to the greatest extent possible, shall be designed to deal with that river and its tributaries as a system." 16 U.S.C. 839b(h)(1)(A). The Council has determined that development of new hydro facilities within the basin must be consistent with this systemwide approach and with the system planning process being initiated under section 200 of the program. The system planning process will develop a plan for doubling existing anadromous fish runs within the framework of a number of policies. See program section 204. In the system planning process, the 31 subbasins comprising the Columbia River Basin will be intensively studied to identify methods for increasing production in each of the subbasins. The subbasin measures will be integrated into a system plan, in which production, harvest, mainstem passage, and system policies are balanced. The Council expects that the system planning process will be completed in approximately two and one-half years.

Two of the Council's system policies are particularly relevant to the protected areas process. First, the Council believes that increased production must come from a variety of production methods,

including wild and natural production. See program section 204(d). In order to ensure that wild and natural production options are fully available for increased production, valuable habitat should be protected. Without such protection, efforts to rebuild fish runs may be forced away from wild and natural production, closing options that could help rebuild self-sustaining runs. Second, the Council believes that genetic risks in enhancing production must be assessed so a high degree of genetic diversity may be maintained. See program section 204(b). Maintaining habitat for wild and naturally spawning fish will help the Basin to maintain genetic diversity.

II. THE STAFF PROPOSAL

As stated in the background section, the original intent of the Hydro Assessment Study was to provide a uniform method to collect data and establish criteria to designate protected areas, carry out site ranking and provide a better estimate of the available environmentally acceptable hydropower in the region. To a great degree, these goals were accomplished. However, during the course of the study it became clear that the site categorization envisioned as part of the site ranking process needed to be modified.

The major problem was the development of the list of Category II sites (sites that posed threats to fish and wildlife but where those threats could be mitigated). Because the study looked at fish and wildlife values on a river reach basis and not on a project basis, it was impossible to evaluate mitigation techniques on a project-specific basis. To do so would have required detailed engineering plans for all projects in the region. Because this type of information was unavailable for the vast majority of projects proposed for the region, no attempt was made to evaluate individual projects. Instead, the study was done on a site-blind basis in which river reaches were evaluated solely on their value as fish and wildlife habitat. It was only after the fish and wildlife values were identified that the hydro sites were linked to the corresponding river reaches.

Because of this study limitation, the staff is proposing the use of only two categories of sites: 1) sites which fall into high value fish and wildlife areas and therefore should be designated as unsuitable for development and 2) sites which do not fall into the high resource value areas and therefore are potentially developable. Given that these designations would be made using the same criteria as are used within the Columbia River Basin, the first category of sites would be equivalent to protected areas within the Basin, but with different legal implications (see Attachment 1).

Based on the foregoing and the recommendations received from the states the Council staff recommends that the Council enter rulemaking

to amend the program and the plan to designate protected areas according to the following guidelines:

1. Designate for protection all areas currently used by anadromous fish or potentially usable by anadromous fish in the Columbia River Basin.

In choosing to undertake system planning, the Council recognized that doubling salmon and steelhead runs may be very difficult but appear to be possible. In order to succeed, the Council cannot afford to foreclose any opportunity to maintain or increase the existing run size. The development of hydropower projects in areas currently supporting anadromous fish, or in areas that have reasonable potential for supporting anadromous fish in the future, could undermine the Council's and regional ratepayers' efforts to double the runs.

The proposal to designate anadromous fish habitat inside the Columbia River Basin is intended to protect all currently available anadromous fish habitat as well as habitat that is potentially available for anadromous fish use. The potentially available habitat has been identified as habitat that historically contained anadromous fish and could be used by these fish in the future. Also included as potentially available habitat were areas identified in the Fish and Wildlife Program as habitat restoration sites. Areas above impassable migratory barriers were excluded from the analysis, as were areas within federally designated wilderness areas. If this proposed guideline were adopted, approximately 25 percent of the total river miles within the basin would be designated as protected areas. Based on the number of projects analyzed the amount of energy affected is estimated at 140 average megawatts (See Attachment 2).

2. Designate for protection all areas currently used by anadromous fish outside the Columbia River Basin.

As explained above, designating anadromous fish areas outside the Columbia River Basin derives from the site-ranking process described in the 1983 Power Plan. The proposal to designate river reaches containing anadromous fish as unsuitable for development is analogous to what were termed Category III sites in the Power Plan (e.g. river reaches which would cause unmitigatable damage to fish and wildlife resources).

The staff recommendation is consistent with the recommendations of the states of Oregon and Washington fish and wildlife agencies, the two states where anadromous fish occur outside of the Columbia River

Basin.[6] In Oregon's case the recommendation is also consistent with state law, which prohibits the development of hydroelectric projects in areas containing anadromous fish. (See ORS 469.371(1)(a), 537.017(1)(a), and 468.734(1)(b)(C).) In the case of the other states, the staff proposal is consistent with the recommendations of the relevant state fish and wildlife agencies.

The major difference between the staff-recommended approach for areas inside the Columbia River Basin and those outside the basin is that there would be no protection for potential anadromous fish habitat outside the basin. The reason for this difference is that outside of the basin, the Council has no program to enhance existing fish runs. Nonetheless, the Council recognizes the importance of maintaining existing runs outside the basin. Additionally, it should be noted that declines in runs of salmon and steelhead outside of the basin could lead to increased harvest pressures on Columbia River Stocks.

If implemented, this guideline would cover approximately 27 percent of the total river miles outside of the basin. The amount of energy affected is estimated to be 306 average megawatts (See Attachment 2).

3. Designate high quality resident fish and wildlife areas both inside and outside the Columbia River Basin.

Both the Power Plan and the Fish and Wildlife Program determined that site ranking and protected areas designations should reflect all fish and wildlife values, not just anadromous fish values.

The staff proposes that the Council designate those river reaches that have been identified by the states as containing species of special concern (e.g. rare, threatened, or endangered species, or species with high recreational value) or habitats necessary to support such species. The proposal is based on the recommendations of the states. It should be noted that under their recommendation only a small subset of the river reaches that were designated as class I sites in the Hydro Assessment Study (the highest ranked sites in terms of their fish and wildlife values) are proposed for protected designation. If the Council chose to adopt this proposal, an additional 17 percent of the river miles within the Columbia River Basin and 3 percent of the miles outside the basin would be classified as protected.

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6 The Washington Department of Energy office recommended that the Council delay designating protected areas outside the Columbia River Basin until the state completes its internal evaluation of those areas.

The equivalent energy figures are estimated at 308 and 60 average megawatts, respectively (See Attachment 2).

4. Provide for reevaluation of protected areas after system planning is completed.

As stated above, one reason for designating protected areas is to ensure that options for increased production are not foreclosed. Once the previously discussed system planning process is completed, however, it likely will be necessary to reevaluate protected areas within the Columbia River Basin. In order to facilitate this effort, data being collected through the system planning process will be cross referenced to the fish and wildlife data base developed during the hydro assessment process.

III. Analysis

1. Hydropower Impacts.

The Council directed that the Hydro Assessment Study should, examine the impacts of the protected areas proposals on hydroelectric power potential. In carrying out this instruction, the staff examined the impacts of the proposals on projects for which an application for a preliminary permit, license or exemption is pending. The results of the analysis are shown in Attachment 2. A total of 387 active projects was analyzed: 193 of the projects are within the Columbia River Basin, 194 outside. If the Council followed the staff proposal, 241 of the projects (62%) would be affected by a protected area designation. Of the 241 affected projects, 123 are within the basin and 118 outside. Within the basin this would represent 60 megawatts of capacity or 448 average megawatts of energy. Outside of the basin the equivalent figures are 682 megawatts and 366 average megawatts of energy.

On the other hand, the staff proposal would leave 146 projects (38%) unaffected by protected area designations. These projects represent 1780 megawatts of capacity or 917 average megawatts of energy. Of the total 1780 megawatts, 1546 megawatts (representing 795 average megawatts) are within the Columbia River Basin, and 234 megawatts (representing 122 average megawatts) are outside the basin.

2. Benefits of staff proposal.

- Preserves production options needed to achieve interim doubling goal. The Council has recognized that doubling the runs will require a mix of production methods, including wild and natural production. Preserving habitat for wild and

natural production will help preserve the Council's options in reaching the doubling goal.

- Respects the Council's interest in conserving genetic resources. The Council's policy of evaluating carefully the genetic consequences of its actions will require the development of new methods of genetic risk assessment. Pending development of new methods, designating protected areas tends to conserve genetic resources until trade-offs are identified in system planning and choices are made.

- Is compatible with the existing power system. Designating protected areas throughout the region should encourage geographically-balanced hydropower development, and minimize potential incompatibilities. Moreover, if the Council limits its decision on protected areas to within the Columbia Basin it will likely serve to shift most new development to areas outside of the Basin. This shift could cause a decline in the fish and wildlife resources which could result in increased harvest pressure on Columbia River resources.

- Allows ample room for future hydropower development. Approximately 917 average megawatts of proposed new energy would not be affected if the staff proposal were adopted. This is equivalent to the 920 megawatts of new hydroelectric capacity the Council identified in its 1983 Power Plan.[7] However, it should be noted that all of the potential hydropower may not be cost-effective, and therefore, the 917 average megawatts represents an upper limit for new development.

Moreover, the information provided by the designation of protected areas would assist hydropower developers in focusing on areas of least environmental concern and resource conflict. The proposal should enable the region to preserve its adequate, reliable and economical power supply.

3. Disadvantages of Staff Proposal

The major disadvantage to the staff proposal is that it could affect several potential hydro projects where developers have already invested sums of money. If the Council follows the staff proposal these investments may be adversely impacted.

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7 In its 1986 Power Plan the Council reduced the amount of hydro capacity in its resource portfolio to 250 megawatts because of environmental concerns. The Council stated that it would reevaluate this figure based on the results of the Hydro Assessment Study.

IV. ALTERNATIVES

o Limit actions to Columbia River Basin.

The Council could choose to designate protected areas only within the Columbia River Basin. The protected areas concept was originally part of the Fish and Wildlife Program, applicable only to the Columbia River and its tributaries. However, as explained above, the staff believes that if the Council limits its action to the Columbia River Basin, development pressure could be shifted outside the basin. For this reason the staff does not recommend this alternative.

o Delay action until system planning is finished.

It could be argued that the Council should wait until the results of the system planning process are available before it designates protected areas. With the results of system planning in hand, the Council would have more certain knowledge of the specific areas within subbasins that will be needed to achieve the doubling goal. Having that information, the Council could judge more precisely those areas needed to reach the goal. However, as stated above, until the subbasin plans are completed, there is a great deal of uncertainty as to the habitat available for increased production and whether or not that habitat will be sufficient to allow achievement of the doubling goal. Without protection, habitat that might be necessary to meet the goal could be lost.

In addition, system planning only applies to the salmon and steelhead stocks of the Columbia River Basin. Delaying protected areas until it is finished would not provide any protection to resident fish and wildlife within the basin, and would leave the rest of the region unprotected for no apparent reason. For these reasons, the staff does not recommend this alternative.

o Protect only areas currently used by anadromous fish.

The Council could choose to apply the protected areas concept only to areas currently containing anadromous fish. It could be argued that this would be consistent with the Act, since the Act puts special emphasis on anadromous fish. This alternative would reduce by approximately one half the hydropower capacity that would be affected by protected areas.

However, this alternative ignores the possible effects of hydropower development on resident fish and wildlife, an area in which the Council's program anticipates large expenditures of ratepayer funds. In addition, although the Act directs the Council to give special

consideration to anadromous fish, rehabilitating resident fish and wildlife is clearly within the Council's obligation. The Council recognized this in both the Power Plan and Fish and Wildlife Program at the time it adopted the protected areas and site ranking measures and in approving the Hydro Assessment Workplan.

- o Use criteria requiring the presence of anadromous fish plus resident fish and wildlife for designation of protected areas.

The criteria proposed by the staff call for protection of either anadromous fish or resident fish, and wildlife. The Council could consider criteria in which only areas that contain anadromous fish plus important species of resident fish and wildlife would be considered for protection. Potential anadromous fish habitat in the Columbia River Basin would be excluded. This would result in a significant reduction in the amount of new hydropower that would be affected by designating protected areas. For example, on a regionwide basis this alternative would reduce the percentage of stream miles affected by protected areas from 26 percent to 4 percent. An additional 1307 megawatts and 701 average megawatts should be left open under this alternative.

However, for all of the reasons discussed above, this alternative would not provide significant protection to fish and wildlife resources and could lead to significant loss of habitat which may be necessary to meet the Council's goal of doubling salmon and steelhead runs in the Columbia River Basin.

- o Broaden protection for resident fish and wildlife.

As stated in the proposal section of this document, the criteria recommended for resident fish and wildlife do not represent all areas that states have designated as their high value sites. Instead, the states recommended a subset of those sites representing only the highest value sites. In part, these recommendations were based on the recognition by the fish and wildlife agencies that it is often easier to mitigate for damages to resident fish and wildlife than for anadromous fish. Indeed, in some cases hydroelectric development can be beneficial to some resident species. Because the staff proposal is based on the recommendations of the states and their respective fish and wildlife agencies and because significant resident fish and wildlife habitat will be protected through the anadromous criteria, the staff does not recommend this alternative.

- o Broaden criteria to include non-fish and wildlife values.

As discussed in the body of this document, during the course of the Hydro Assessment Study data was collected on a number of non-fish

and wildlife values. These included recreational values, cultural values and natural features values. The Council collected this information to help increase the accuracy of hydropower forecasts (see pp. 4-6), but stated in both the Power Plan and Fish and Wildlife Program that protected areas would be based only on fish and wildlife values. During the past several years some have argued that the Council should make use of these other values in designating protected areas.

The staff does not recommend this course of action since preliminary analysis of the data indicates that more than 80 percent of the recreational and cultural areas, and 70 percent of the natural features identified as high value sites would be included in the protected areas if the Council followed the staff proposal. The inclusion of all high value non-fish and wildlife values would cause an additional 639 average megawatts of energy to be impacted.

- No action.

The Council could decide that taking action on protected areas is unnecessary. Some might argue that this would be appropriate given the existence of state and federal hydroelectric power licensing processes. The major advantage to this action is that it could help some developers avoid impaired investments in proposed projects that fall within protected areas. However, by taking this course of action the Council would lose an important means of ensuring the protection of ratepayer investments in fish and wildlife rehabilitation and would miss an opportunity to provide systematic basinwide information to the Federal Energy Regulatory Commission for use in its hydroelectric licensing process. This would reduce chances that licensing decisions would be consistent with the Council's Plan and Program. For this reason the staff does not recommend this course of action.

Attachment 1. Legal Considerations Underlying Protected Area and Site Ranking Designations.

1. Protected area designations within the Columbia River Basin.

The Northwest Power Act directs the Council to develop a "program to protect, mitigate, and enhance fish and wildlife, including related spawning grounds and habitat, on the Columbia River and its tributaries."[1] Congress did not give the Council a specific definition of "protect, mitigate, and enhance," but left the Council flexibility to devise "effective and imaginative measures that are also reasonable and will not result in unreasonable power shortages or loss of power revenue."[2] If the Council finds that designating protected areas will help fish and wildlife, their spawning grounds or habitat, and will not cause unreasonable power shortages or lost power revenues, protected area designations would be within the Council's mandate.

Protected area designations are not zoning classifications that in themselves prevent or permit hydropower development. Rather, protected area designations establish standards to be applied by certain federal agencies consistent with their obligations under the Northwest Power Act and other laws.

Certain federal agencies in the Columbia River Basin have responsibilities under the Northwest Power Act and the Columbia River Basin Fish and Wildlife Program that would come into play in several ways if the Council designates protected areas.

First, the Bonneville Power Administration would be obliged to act consistently with the protected area designations generally;[3] and specifically, Bonneville acquisitions of power resources would have to be consistent with protected area designations.[4] This obligation would apply to any relevant power system planning, operations or regulation.[5]

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1 16 U.S.C. 839b(h)(1)(A) (emphasis added).

2 H.R. Rep. 96-976, Part I, 96th Cong. 2d Sess. (Commerce Committee Report) p. 57 (1980).

3 Bonneville must use its fund and other authorities consistent with the protected area designations. See 16 U.S.C. 839b(h)(10)(A).

4 See 16 U.S.C. 839d.

5 See Columbia River Basin Fish and Wildlife Program, sections 1203(a)(1), 1203(a)(3).

Second, Bonneville, the Federal Energy Regulatory Commission, the U.S Army Corps of Engineers, the U.S. Bureau of Reclamation, and other federal agencies that manage, operate, or regulate hydroelectric facilities in the Basin would have to take the protected area designations into account "to the fullest extent practicable."[6] In the program the Council has indicated its expectation that these agencies would provide plans indicating that they will implement the protected area designations in permit, license or exemption or other relevant proceedings, or provide explanations and supporting information why it will not be physically, legally or otherwise possible to implement the designations. These plans should include a description of possible allowances available to permit implementation.[7] In the case of the Federal Energy Regulatory Commission, these obligations would be buttressed by the Electric Consumers Protection Act, discussed below.

2. Protected area designations outside the Columbia River Basin.

Under the Northwest Power Act, the Council's Power Plan, which covers the entire Pacific Northwest region,[8] must include a:

> [G]eneral scheme for implementing conservation measures and developing resources pursuant to section 6 of this Act to reduce or meet the Administrator's obligations with due consideration by the Council for (A) environmental quality, (B) compatibility with the existing regional power system, (C) protection, mitigation and enhancement of fish and wildlife and related spawning grounds and habitat, including sufficient quantity and quality of flows for successful migration, survival and propagation of anadromous fish, and (D) other criteria which may be set forth in the plan.[9]

Designating protected areas could preserve environmental quality, and protect, mitigate and enhance fish and wildlife, their spawning

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6 See 16 U.S.C. 839b(h)(11)(A)(ii).

7 See Columbia River Basin Fish and Wildlife Program Section 1203(a)(4) (1987).

8 The region consists of the States of Oregon, Washington and Idaho, the portion of Montana that is west of the continental divide, and those parts of Wyoming, Utah, and Nevada that are within the Columbia River Basin. See 16 U.S.C. 839a(14). The Oregon coast and Puget Sound in Washington, for example, are within the region but not within the Columbia River Basin.

9 16 U.S.C. 839b(e)(2).

grounds and habitat. Moreover, if protected areas were designated only inside the Columbia River Basin, development might simply be pushed out of the Basin and into the rest of the region. In this sense, designating protected areas regionwide could mitigate potential incompatibilities with the existing regional power system resulting from unbalanced system development.

Outside the Columbia River Basin, protected areas designations would have two kinds of legal consequences. First, as with areas inside the Columbia River Basin, Bonneville's acquisition of power resources would have to be consistent with the protected area designations.[10]

Second, the provisions of the Electric Consumers Protection Act of 1986 apply to Federal Energy Regulatory Commission proceedings for sites outside the Columbia River Basin. The Electric Consumers Protection Act requires the Commission to give "equal consideration" to energy conservation, fish and wildlife (including their spawning grounds and habitat), recreation, and other aspects of environmental quality in licensing determinations.[11] In carrying out this responsibility, the Commission must ensure that hydropower projects are:

> [B]est adapted to a comprehensive plan for improving or developing a waterway or waterways for the use or benefit of interstate or foreign commerce, for the improvement and utilization of water-power development, for the adequate protection, mitigation, and enhancement of fish and wildlife (including related spawning grounds and habitat), and for other beneficial public uses, including irrigation, flood control, water supply, and recreational and other purposes....[12]

The Commission has found that the Council's Fish and Wildlife Program and Power Plan are "comprehensive plans" for purposes of this section.[13] Accordingly, in determining whether to issue hydroelectric project licenses, the Council expects that the Commission will carefully consider the extent to which proposed projects are consistent with protected area designations throughout the Basin.

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10 See 16 U.S.C. 839d.

11 See 16 U.S.C. 797(e).

12 16 U.S.C. 803(a)(1) (emphasis added).

13 See Utah Power & Light Co., Proj. No. 2381-001, Order Issuing New License at 5, ___ FERC ___ (Aug. 3, 1987).

3. State protection.

The Council's protected areas process is in some ways a starting point. The states, too, are considering designating areas to be protected from hydroelectric development. Under the Electric Consumers Protection Act of 1986, discussed above, states have the ability to propose restricting small hydropower development in areas with "unique natural, recreational, cultural, or scenic attributes."[14] Such designations could be made either within the Columbia River Basin and beyond it. The state agency processes are independent of the Council's, and the Council's action on protected areas in no sense predetermines any state agency decisions. However, if the state agencies choose to act on this subject, they could add a layer of protection for uniquely valuable areas.

Finally, Oregon law obliges various Oregon agencies to use the Council's Fish and Wildlife Program as a minimum standard in evaluating proposals for hydroelectric development.[15] Accordingly, in areas of Oregon within the Columbia River Basin, we expect that Oregon agencies would require new hydroelectric projects to be consistent with protected areas designations.

4. Consequences of protected area designations for federal land management agencies.

The U.S. Forest Service and the U.S. Bureau of Land Management have statutory obligations to coordinate their natural resource plans with planning processes like the Council's.[16] Staff expects that these agencies will coordinate their plans with the protected areas designations.

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14 16 U.S.C. 824a-3(j).

15 See ORS 469.371(1)(b), 543.017(1)(b), 468.732(1)(c).

16 See Forest and Rangeland Renewable Resources Planning Act, 16 U.S.C. 1604(a) (Forest Service), and Federal Land Policy and Management Act of 1976, 43 U.S.C. 1712(c)(9) (Bureau of Land Management).

ATTACHMENT 2

FIGURES

Figure 1

NUMBER OF PROJECTS POTENTIALLY AFFECTED BY PROPOSED CRITERIA

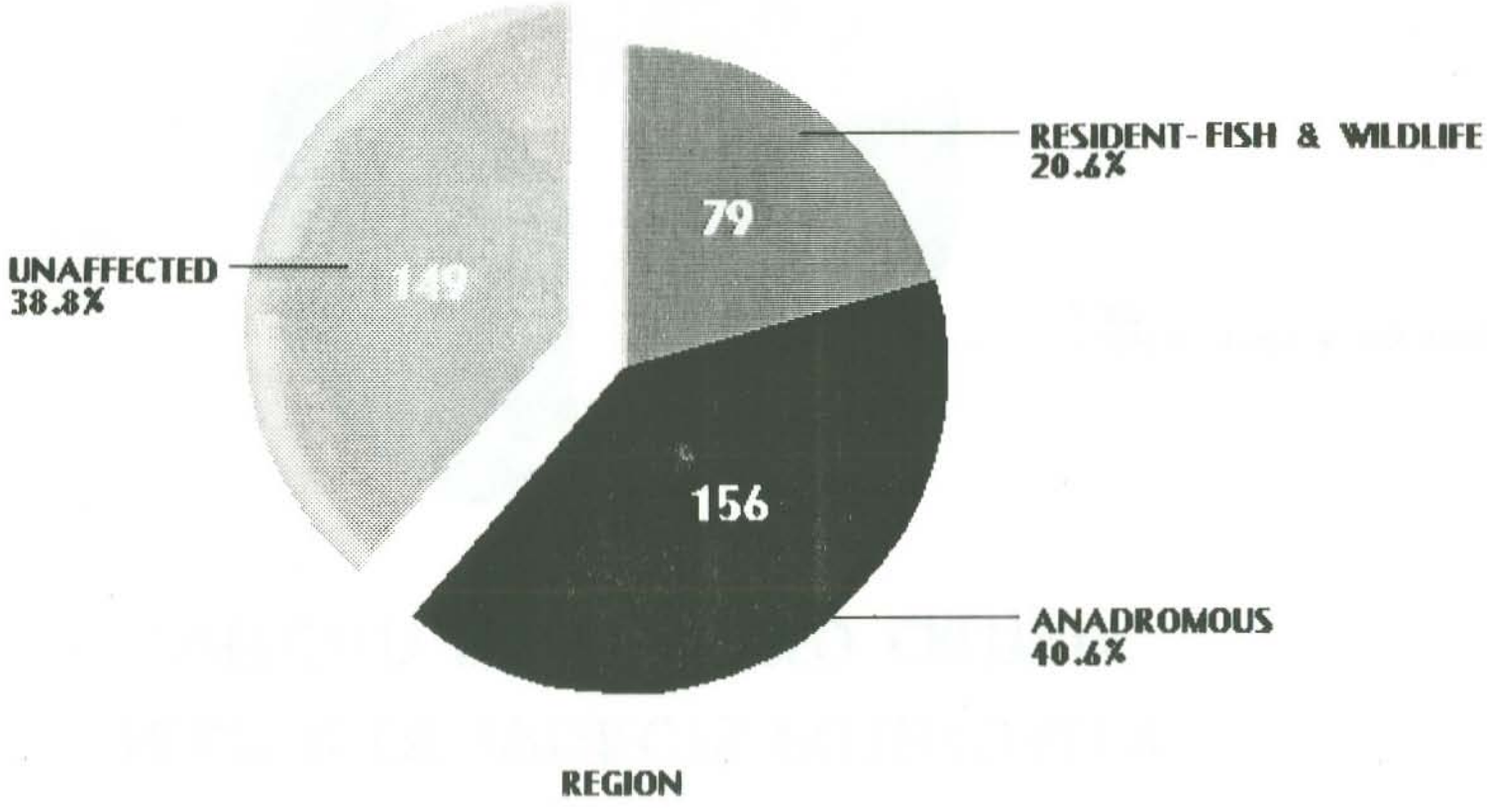


Figure 2

NUMBER OF PROJECTS POTENTIALLY AFFECTED BY PROPOSED CRITERIA

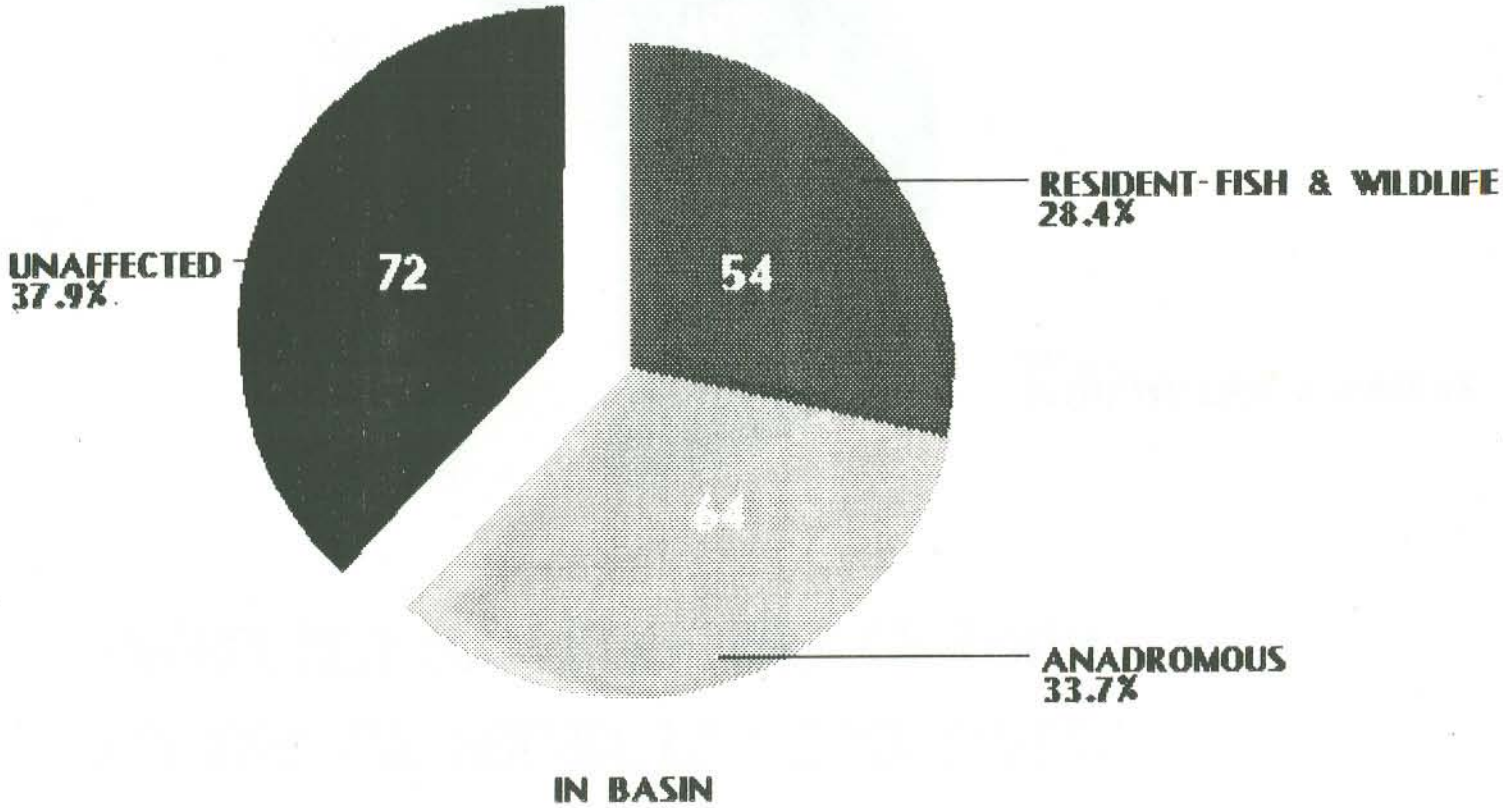


Figure 3

NUMBER OF PROJECTS POTENTIALLY AFFECTED BY PROPOSED CRITERIA

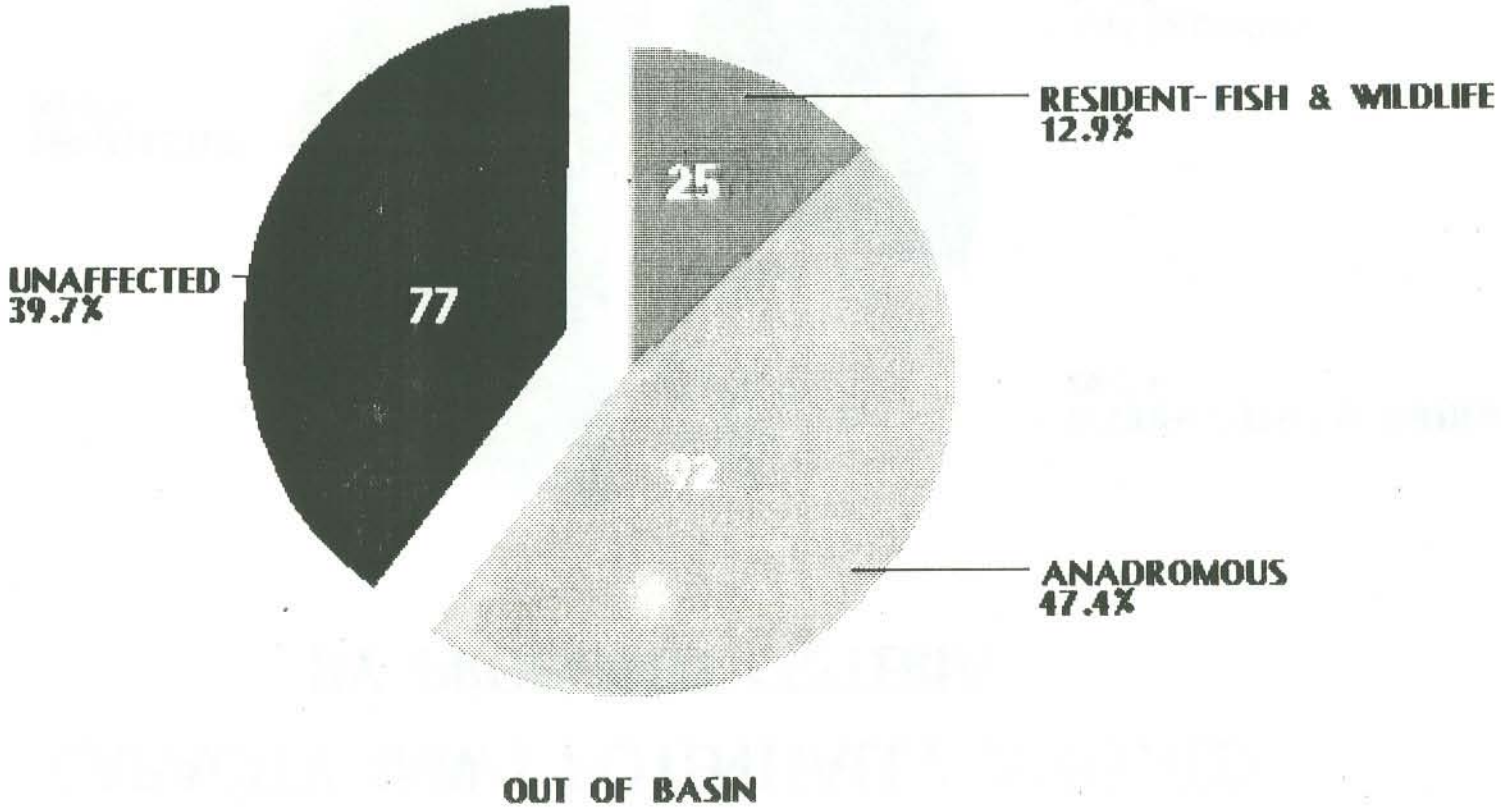


Figure 4

CAPACITY (MW) POTENTIALLY AFFECTED BY PROPOSED CRITERIA

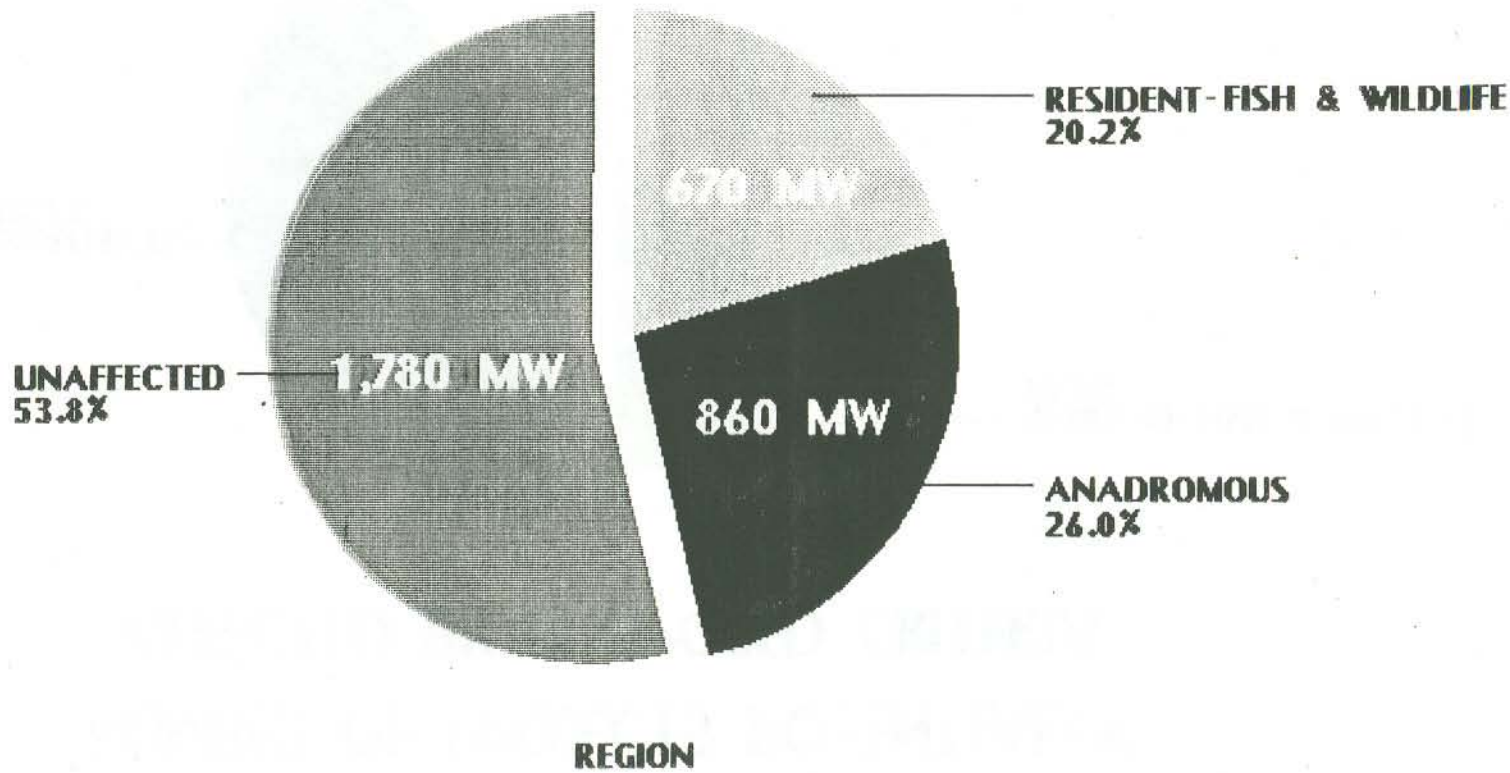


Figure 5

CAPACITY (MW) POTENTIALLY AFFECTED BY PROPOSED CRITERIA

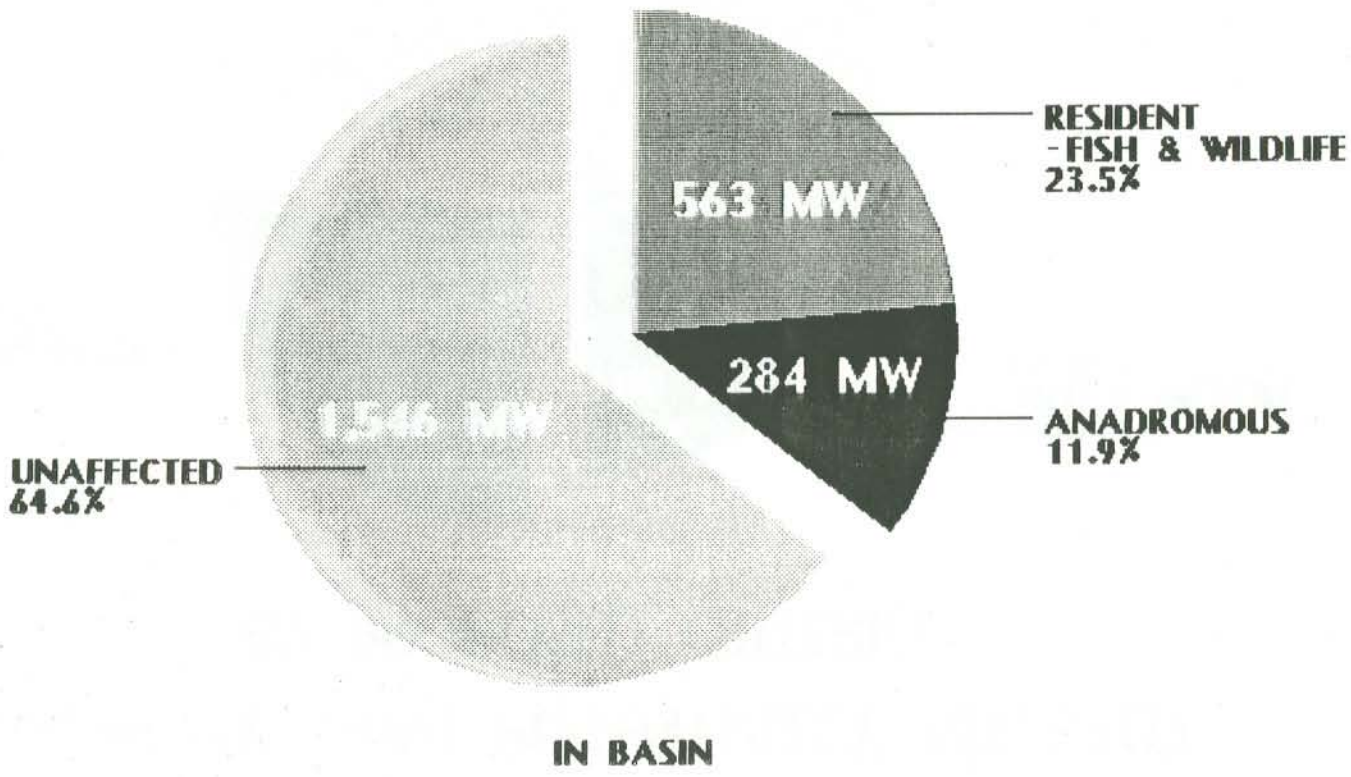
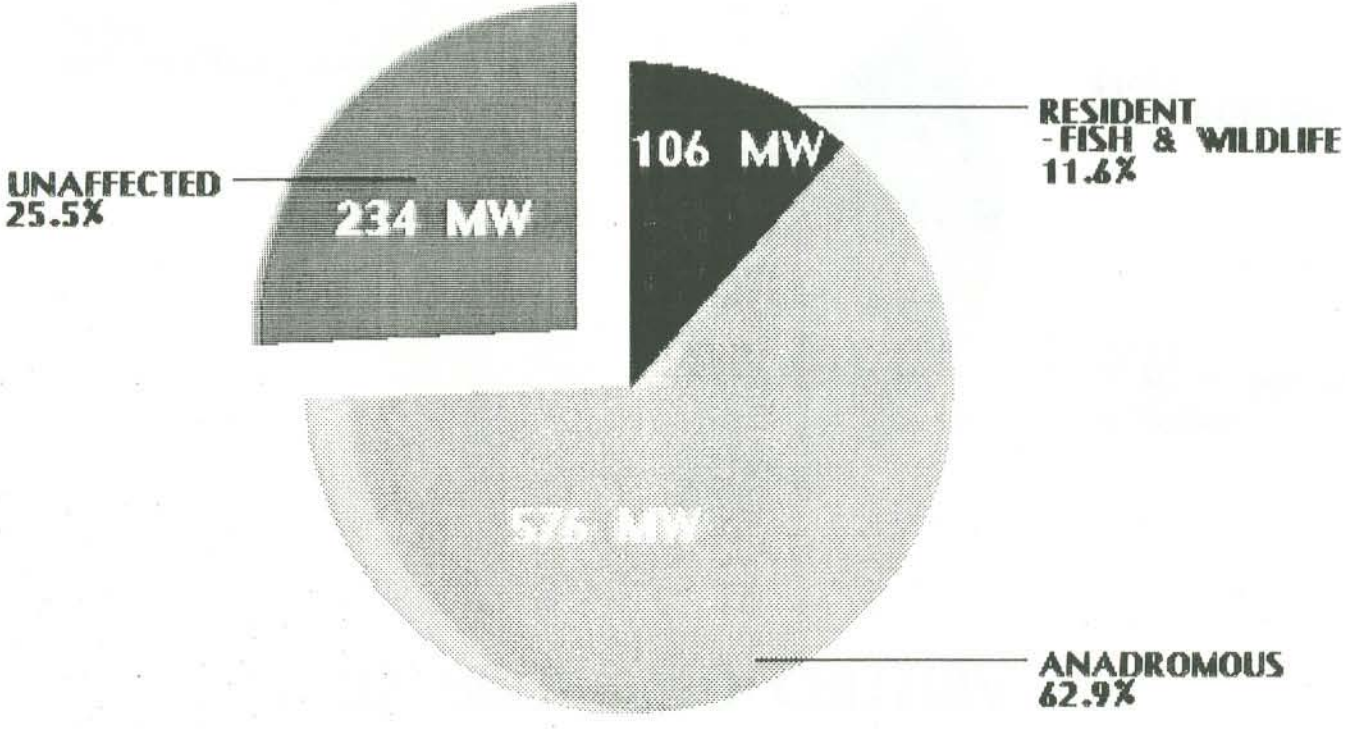


Figure 6

CAPACITY (MW) POTENTIALLY AFFECTED BY PROPOSED CRITERIA



OUT OF BASIN

Figure 7

ENERGY (AVERAGE MW) POTENTIALLY AFFECTED BY PROPOSED CRITERIA

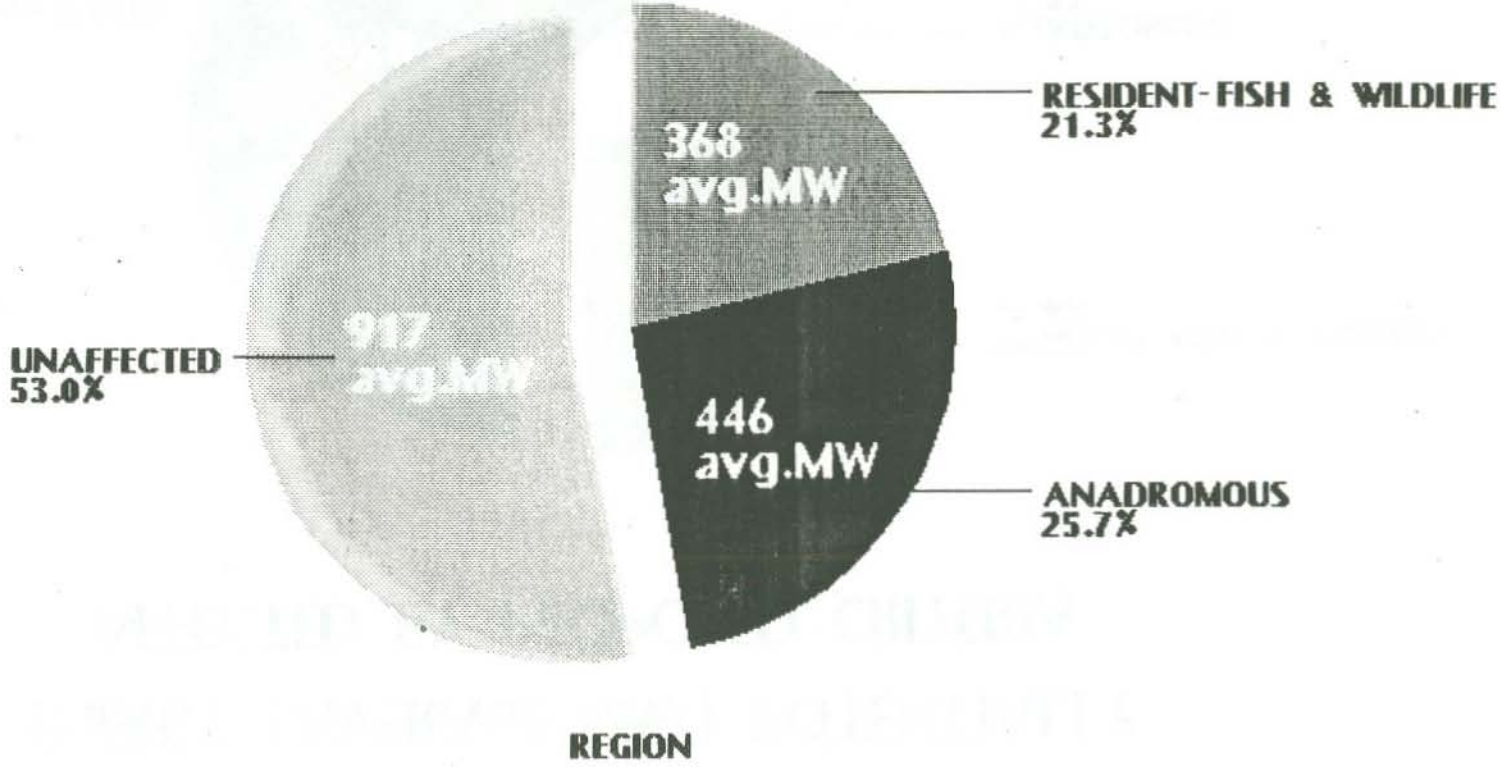


Figure 8

ENERGY (AVERAGE MW) POTENTIALLY AFFECTED BY PROPOSED CRITERIA

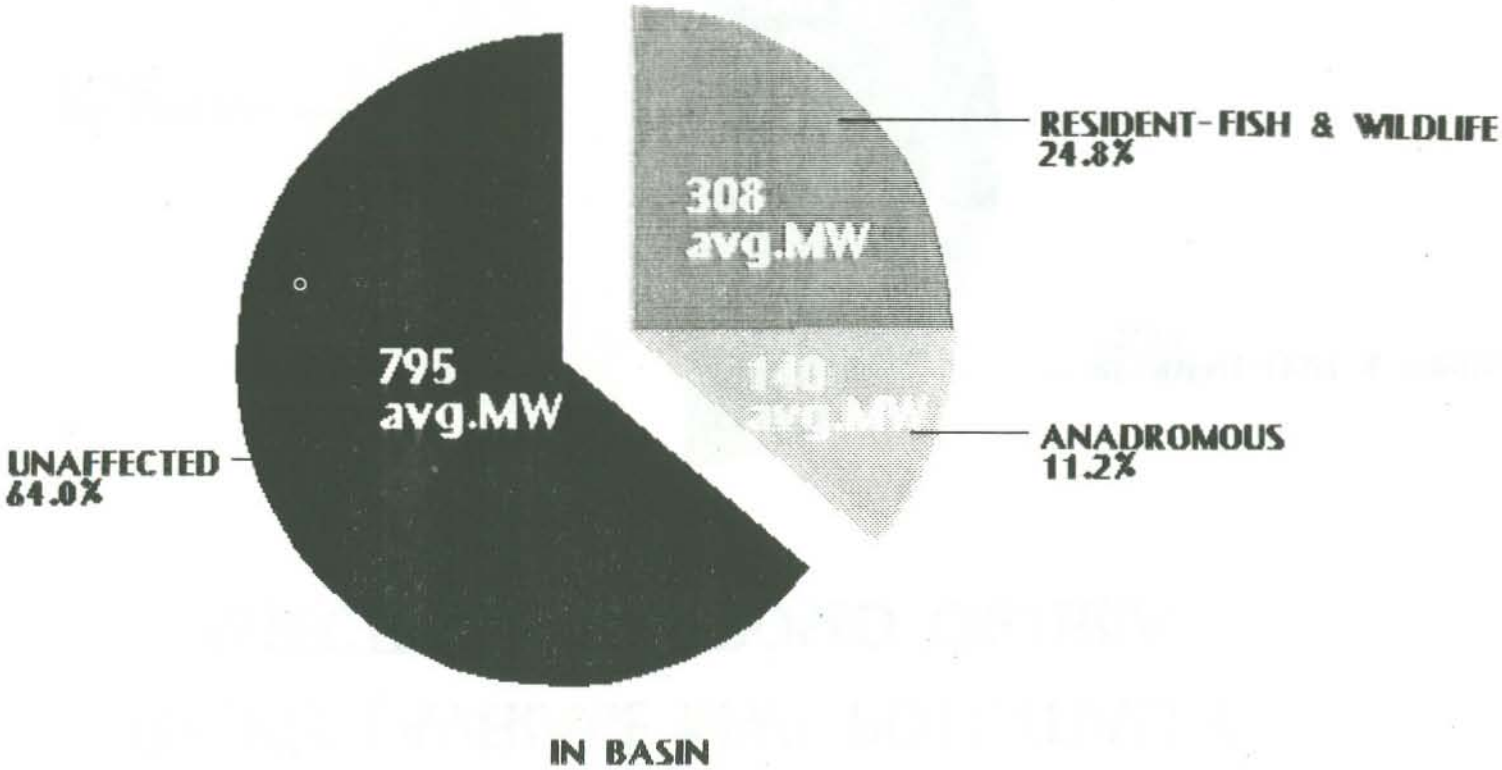
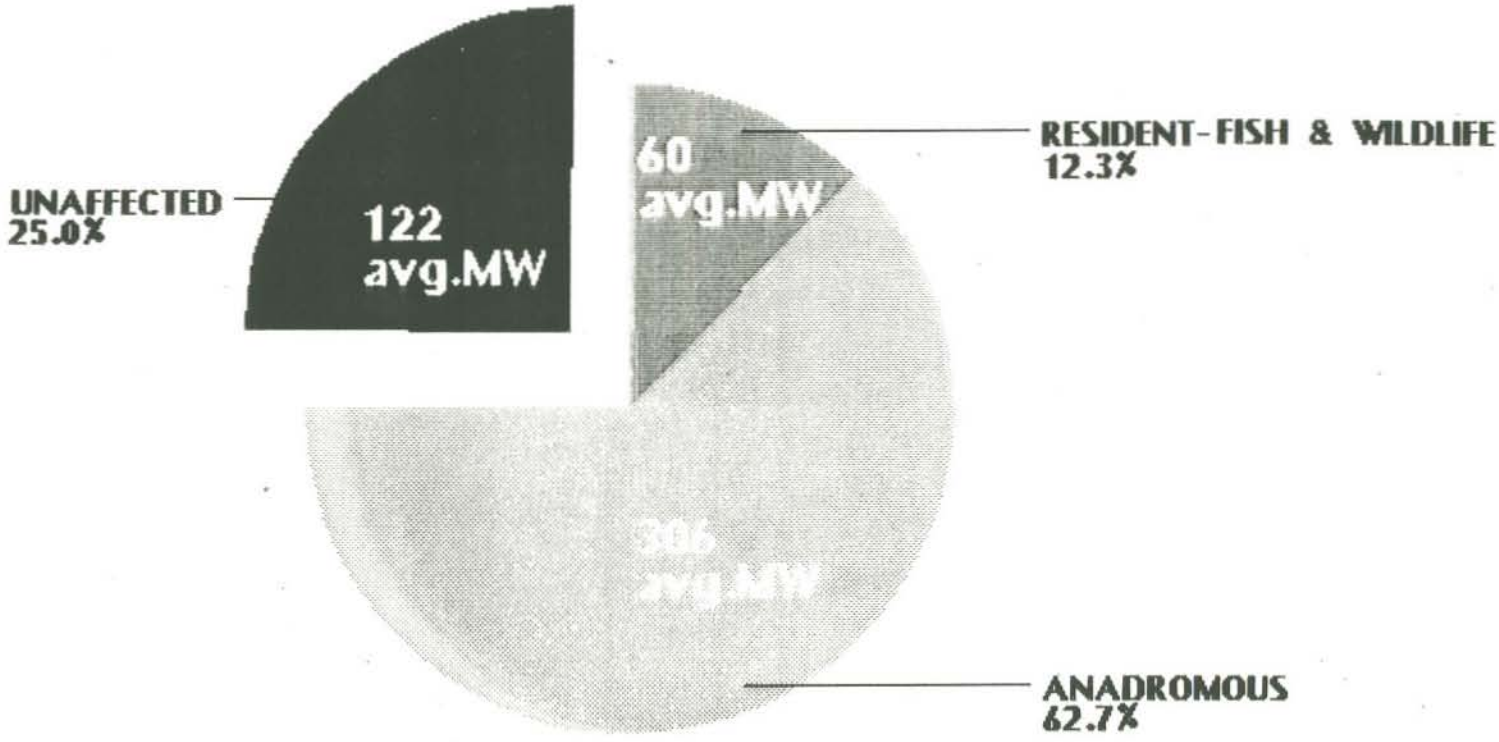


Figure 9

ENERGY (AVERAGE MW) POTENTIALLY AFFECTED BY PROPOSED CRITERIA



OUT OF BASIN