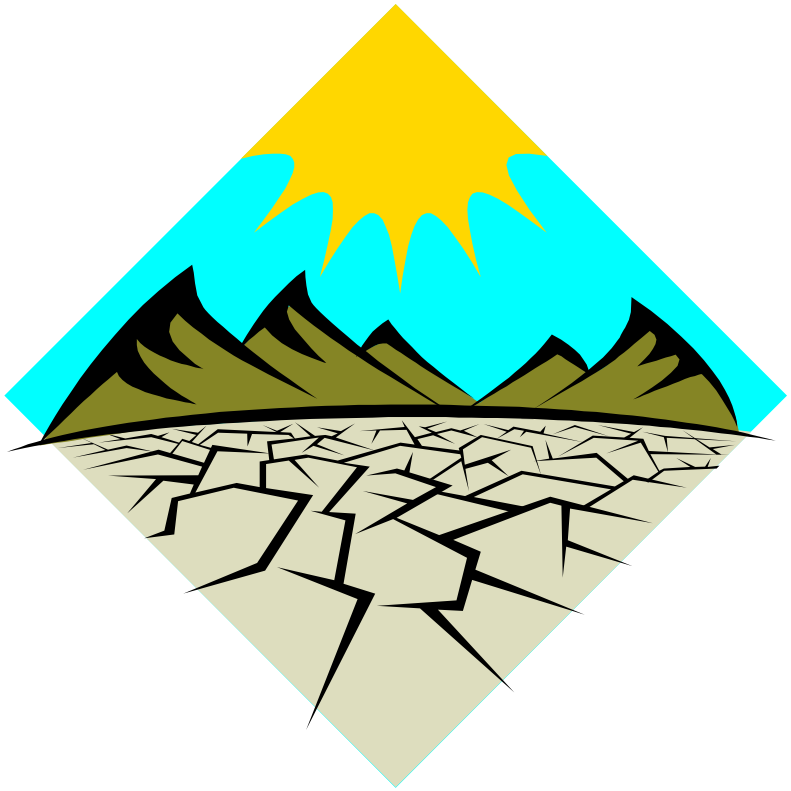
Guide to Tools and Principles for a Dry Year Strategy



DRAFT

Bonneville Power Administration
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I. Executive Summary

The Executive Summary will be formulated once the internal draft is finalized.

II. Introduction

Following the events of the energy crisis of 2000 and 2001, Bonneville Power Administration (BPA) believes a strategy is useful to help guide it through future critical periods marked by abnormal conditions such as drought, volatile market prices, and/or significant reductions in the availability of power to BPA. Some of these conditions may cause BPA's firm power load obligations to exceed BPA's available energy supply on a short- or long-term basis. If such an imbalance arises and is sufficiently large or long-term and occurs during a period when there is a scarcity of available electricity, then extraordinary efforts may be required to achieve load/resource balance in an economically viable and environmentally sound manner. Therefore, BPA is undertaking efforts to develop plans in advance of this type of situation to enable BPA to act proactively if future critical periods occur.

Short-duration load/resource imbalances consistent with those experienced in cold snaps are being addressed in the Reliability Protocols Manual, which is currently undergoing internal review.

Longer duration load/resource imbalances that might last an entire year, or even a couple of years, are being addressed in this document. This guidance document is only the first step to formulating a Dry Year Strategy. As shown in Figure 1, some of the other components in a Dry Year Toolbox are being formulated in other processes. All of these tools would potentially be available to address a long-term load/resource imbalance. Decisions on the magnitude and type of tools to deploy would be guided by the Dry Year Principles and based on the specific circumstances associated with the imbalance. Although a number of situations could cause such imbalances to occur, generally such imbalances are associated with critically dry water conditions. For the sake of simplicity, the proactive planning effort discussed in this document is being termed a dry year strategy, but can be used in connection with any longer duration load/resource imbalance. The term "dry year" is synonymous with any year in which such an imbalance occurs.

A. EVENTS OF 2001

In Fiscal Year (FY) 2001 (October 2000 through September 2001), the West Coast electricity industry found itself in an energy crisis, a result of a "perfect storm" of separate multiple conditions converging together at the same time. The crisis affected nearly all buyers and sellers of electricity. Because BPA is primarily a marketer of hydro-generated power, a dry year combined with other conditions can significantly impact BPA's planning and operation capabilities. In FY 2001, the following combination of conditions occurred to create an energy crisis in the Pacific Northwest:

- After six years of above-average water supplies, water year 2001 was the second lowest on record. A January—July runoff volume of only 58.2 million acre-feet (MAF) at The Dalles constituted about 57 percent of the runoff in an average year.

- The region found itself in a power supply deficit, in part, due to the reluctance of utilities, developers, and investors to develop new electricity infrastructure during the uncertain climate surrounding deregulation. This situation had existed for several years, but was masked by abundant hydropower generation associated with the preceding six above-average water years.

- California's flawed deregulated electricity market design coupled with power resource deficits in that region caused extremely high and volatile wholesale market prices at the same time when BPA was forced to purchase from the market due to low water conditions and increasing load obligations under new subscription contracts.

- At this time of unprecedented wholesale market price increases, the Federal Energy Regulatory Commission (FERC) had not yet imposed price caps.

- California's power crisis precluded the usual exports from California to help the Pacific Northwest meet its winter needs.

- More than the usual number of thermal units were out-of-service on the West Coast.

- Gas lines, which previously only fed into the West, were completed allowing deliveries into the Midwest. This increased demand helped cause higher than normal gas prices, which in turn led to higher electricity prices.

With BPA's near-term load projected at that time to exceed the firm generation of the Federal Base System by some 3,000 average megawatts (aMW), BPA was forced to acquire power from other resources, mainly the market. As drought conditions intensified and price volatility in the market went unchecked, BPA took the following actions to maintain BPA's financial viability and to secure generation adequacy for BPA and the region:

- Negotiated load reductions (buy-downs and power buy-backs) with regional customers; the most significant of these buy-downs were with the Direct Service Industries (DSIs);

- Bought down irrigation loads, in partnership with the Bureau of Reclamation (Reclamation), to decrease load obligations;

- Offered the Demand Exchange Program to promote load reductions or load switches to non-Federal sources at times of very high market prices;

- Amended the customer power sales contracts to allow customers to add and use non-Federal sources to serve load;

- Worked with utilities, governors, and other regional partners to accelerate conservation program implementation and to promote conservation efforts region-wide;

- Negotiated Summer Treaty Storage Agreements with Canada to ensure a minimum of 28,000 MW-months of reliability storage that served to reduce regional Loss of Load Probability (LOLP) from 17 percent to 12 percent. (An LOLP of 5 percent has historically been deemed an acceptable standard for the region);

- Minimized high-price market purchases;

- Invoked the power emergency provisions in the 2000 National Marine Fisheries Service Biological Opinion (NMFS BiOp) on three occasions in the winter of 2001 and from April 3 through October 1, 2001 to ensure the financial integrity and reliable operation of the Federal Columbia River Power System (FCRPS).

Table 1 summarizes these actions and their impact on preserving the ability of the FCRPS to meet its load obligations in 2000 and 2001.

Table 1: Summary of Actions Taken in 2001

RECAP OF 2001	
TOOLS USED	BENEFITS REALIZED – Annual Average MWs (except for DEMX which shows capacity)
Load Reduction Tools:	
• Voluntary Load Reduction	75 aMW
• DSI Buy Back	540 aMW
• Irrigation Buy Downs	60 aMW
Reliability Enhancement	
• Demand Exchange Program (DEMX)	12 participants that could offer up to 634 MW of curtailment
• Summer Storage Agreement	260 aMW
Energy increases	
• California Exchanges	40 aMW (2 for 1 exchanges)
• Market Purchases	630 aMW (net purchases for drought)
• Adjusted Biological Actions	420 aMW*

B. IMPETUS TO DEVELOP STRATEGY FOR FUTURE DRY YEARS

Extensive and timely information sharing, coordination, and partnering among Federal agencies, states, tribes, power customers, and regional stakeholders were vital to the development of a regional response to the 2001 drought and power emergency. The success of the actions taken by BPA, often in concert with the other Federal Action Agencies (Corps of Engineers [COE] and Reclamation), demonstrates the viability of

* Although the declaration of power emergencies under the NMFS BiOp allowed BPA to relax fish measures in 2001, this tool is not within the scope of this document. Alternative fishery operations are being investigated in other forums.

the tools used by BPA to meet its load obligations and to assist in securing the reliability of the regional power system. However, there has been criticism that insufficient pre-planning led to a more immediate and prolonged use of BPA's declaration of power emergencies and the consequent relaxation of fish measures than were necessary. Preparation of this document is the first step to accomplishing the following objectives:

- To develop a strategy to reduce reliance on the power emergency provisions of the NMFS BiOp, the need for which was identified in the "Endangered Species Act 2001 Progress Report for the Federal Columbia River Power System," (Progress Report) published in May 2002 by the Federal Action Agencies (BPA, COE, and Reclamation);

- To build on the successful actions of 2001 in order to maximize the effectiveness of BPA's Dry Year Toolbox in the event of another "dry year;"

- To offer customers, constituents, tribes, and other regional stakeholders the opportunity for input regarding the sufficiency of dry year tools, the appropriateness of the principles, the definition of scope, etc. in advance of a "dry year."

As seen in 2001, the wholesale market can be very volatile. If uncontrolled, energy prices may increase by orders of magnitude in times of shortages. The additional cost forces rates in the region to increase, which may bankrupt individual businesses and create undue economic hardship for residential ratepayers. The overall goals of a Dry Year Strategy are:

⇒ Minimize power-related impacts to fishery operations;
⇒ Avoid long-term adverse impacts on the FCRPS financial health;
⇒ Minimize the economic impact on the region.

III. Scope

The Dry Year Strategy is a proactive planning effort to help ensure that BPA is prepared to meet its load obligations should another "dry year" occur with some or all of the characteristics of the energy crisis of 2000 and 2001. Key to this strategy is a set of principles and tools developed and reviewed, in advance, with input from customers, constituents, tribal interests, and other regional stakeholders. The implementation of these tools, guided by the Dry Year Principles, will then enable BPA to respond quickly to a "dry year" in an environmentally and financially sound, and regionally balanced manner. Fishery operations and financial tools that are also appropriate for addressing a "dry year" are being formulated in other forums.

Specifically, the identification of tools for this strategy focuses on operating years up to and including 2006. The tools described in this document as well as fishery operation options and financial tools will be evaluated for their compliance with the Dry Year Principles and their potential effectiveness to meet or reduce BPA's load obligations throughout a "dry year." As depicted in Figure 4, BPA will coordinate with the other Federal Action Agencies (Reclamation and COE) on decisions to deploy tools in a "dry year," especially those that involve the operation of FCRPS.

The Communications/Regional Coordination section outlines BPA's plan to communicate with the region and coordinate with entities charged with addressing regional energy crises. Although the scope of this document is limited to BPA's efforts to meet its load obligations, coordination with other load-serving entities and regional organizations will be essential to minimize the economic impact on the Pacific Northwest Region.

A. FOCUS ON PRINCIPLES AND TOOLS

As shown in Figure 1, a Dry Year Strategy encompasses dry year tools, fishery operations and financial tools with decisions regarding the use of these tools guided by the Dry Year Principles. This document focuses on the formulation of the Dry Year Principles and Dry Year Tools. The issues of fishery operations and BPA's financial tools are being addressed in other forums. However, should the Dry Year Strategy be triggered, the tools discussed in this document, alternative dry-year options for fishery operations and financial tools will all be part of the toolbox to allow BPA to meet its load obligations in an economically viable and environmentally sound manner.

The issue of fishery operations in both normal and dry years is being addressed in several forums:

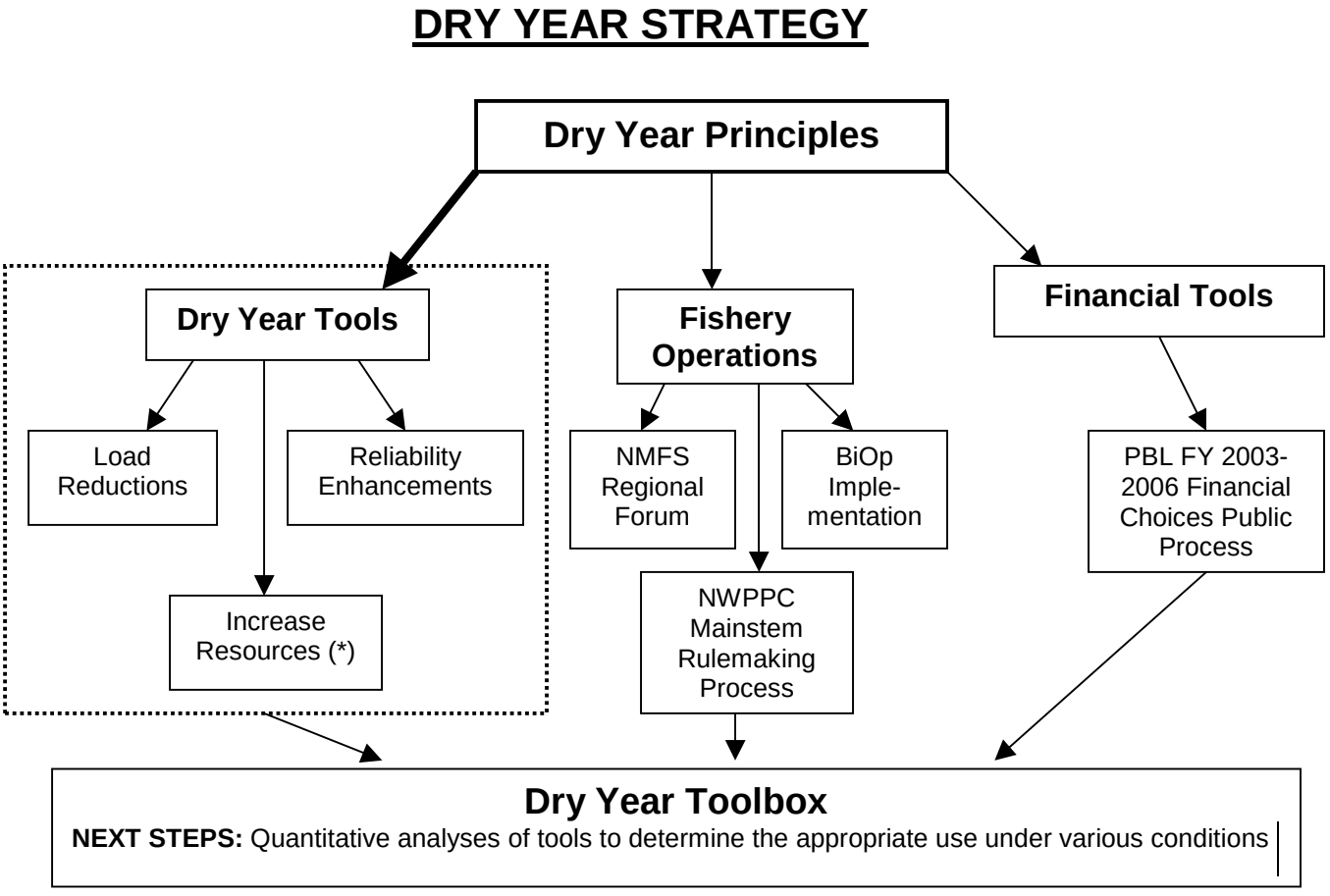
- The Northwest Power Planning Council's Mainstem Rulemaking Process;
- The National Marine Fisheries Service's Regional Forum Process; and

- The continued BiOp Implementation Planning for the FCRPS by the Action Agencies.

If the efforts in these forums result in the definition of revised fishery operations for a "dry year," then the new agreements will be honored in the event of a situation that triggers the Dry Year Strategy. Otherwise the BiOps, as currently planned for implementation, will determine the range of fishery operations contemplated for this situation.

BPA has financial tools that are available for use in any year to address financial concerns. Due to BPA's current precarious financial situation, the PBL's public process regarding Financial Choices has been initiated to gain insights from regional stakeholders on various options to address BPA's financial concerns. The results of that process will help guide the use of financial tools for both normal and dry years between now and operating year 2006.

Figure 1: Focus of Dry Year Strategy Guidance Document



(*) not including increases in generation due to changes in fishery operations

B. TIMEFRAME FOR DRY YEAR STRATEGY

The scope of this Dry Year Strategy covers operating years up to and including 2006 because this timeframe coincides with that of BPA's existing 2002 power rates. A regional dialogue on BPA power sales in the post-2006 period was initiated during the summer of 2002. Since knowledge of the magnitude and characteristics of BPA's load obligations is critical to the design of tools, this Dry Year Strategy is limited to the period between 2002 and 2006.

While BPA plans to ensure that it has, or can readily acquire, sufficient resources to serve its firm load, the potential for a power shortage still exists. Between 2002 and 2006, the probability of BPA needing to use Dry Year Tools in order to meet its load obligations, or to assist in meeting regional reliability needs, is very small for the following reasons:

- BPA's augmentation actions including continued DSI load reductions greatly reduce the gap between Federal resources and BPA's load obligations;

- The reduced loads associated with the region's economic downturn and continuing conservation efforts have helped to decrease the region's LOLP to less than the historical 5 percent standard and to keep electricity market prices reasonable.

- A significant amount of new generation has been constructed in the Pacific Northwest as well as in California helping to keep electricity market prices reasonable.

Although unlikely, a shortage in power resources could result from a number of causes or combination of circumstances, such as a prolonged drought, severe operational constraints, and/or the unexpected loss of the Columbia Generating Station. Under most circumstances, BPA is able to handle energy shortages by buying from the market. However, as seen in 2001, the combination of generation scarcity and inordinately high market prices can pose serious power reliability and financial issues for the region.

C. PROVISION FOR PERIODIC UPDATES

The need for a Dry Year Strategy continues after 2006. Therefore, BPA will periodically update the Dry Year Strategy. At the very least, updates will occur after every new BPA power rate case. It may even be desirable to update the Strategy more often as new tools are developed, or as significant changes in the electricity landscape occur.

IV. Triggering Conditions

Planning of FCRPS operations is based in part on projections of the January through July flow at The Dalles, which are updated frequently throughout the operating year. Forecasts of January through July flows at The Dalles of 80 to 85 MAF or below, indicate dry water conditions are expected. Federal operators are then faced with making tradeoffs among competing objectives for the flows.

Although the Dry Year Strategy might be triggered in years with a forecasted January through July runoff of greater than 85 MAF if BPA's power resources became sufficiently constrained, a forecasted runoff of 85 MAF or below places BPA and other agencies on alert that the FCRPS may not be able to meet all fish and power objectives. Given a dry year prognosis, BPA will decide whether and the extent to which to trigger the Dry Year Strategy to meet its firm load obligations. The decision will be based on whether one, some, or all of the following factors pose a significant risk to the FCRPS meeting its load obligations in a financially and environmentally viable manner:

- **Amount, location, and timing of precipitation and runoff:** A forecast of 85 MAF or below is a warning that the FCRPS may not meet all of its fish and power objectives.
- **BiOp hydro-operations implementation:** The BiOp currently favors abandonment of the chum operation in favor of refill if the risk to refill exceeds a certain threshold; the continuation of chum operations is much more conducive to allowing BPA to meet its load obligations than abandoning chum in favor of refill.
- **Market conditions:** If market prices are low, it is unlikely that the Dry Year Strategy would be triggered irrespective of hydro conditions; however, high prices normally accompany low hydro conditions.
- **BPA and regional load/resource balances:** If loads exceed resources for BPA and/or the region, market prices are likely to be high and volatile; tools other than purchasing from the market are likely to be necessary to achieve a load/resource balance.
- **Availability of power resources:** If the availability of power resources available for BPA to meet its load obligations is severely constrained, the Dry Year Strategy may be triggered even in normal runoff years.
- **Transmission system constraints:** Transmission system constraints might cause location-specific imbalances in loads and resources requiring a limited triggering of the Dry Year Strategy.

A primary reason that a runoff volume of between 80 and 85 MAF is identified as a potential delineation of a "dry year" is the problem of satisfying competing biological objectives as well as power objectives at that volume. An example of competing biological objectives is the desire to keep chum reds at Ives Island covered during their incubation period at the same time that the BiOp calls for refilling the Federal system to flood control levels by April 10 to maximize spring and summer flows for migrating salmon and steelhead. Each BiOp objective results in a different set of resource actions for the Federal system, which affect the hydroelectric system's capability to produce

electricity in different seasons. As mentioned above, the chum operation is much more compatible with meeting load obligations than a decision to abandon chum in favor of refill. Decisions on these BiOp objectives will result in different combinations of tools being implemented under a Dry Year Strategy. The use of a combination of tools could increase the likelihood that the Federal operators are able to achieve both objectives simultaneously.

As the discussion above suggests, BPA may implement some tools without triggering the full Dry Year Strategy. These tools include normal marketing or reliability-enhancing actions that are used in any water year. Other tools are specifically dedicated to the years in which BPA determines that it is in the midst of an energy crisis and that unusual actions are necessary to maintain power system stability and reliability and to meet its load obligations in an economically and environmentally viable manner. BPA will make decisions on implementing these tools consistent with the Dry Year Principles and any agreements with regard to fishery operations and other non-power constraints.

Decisions regarding the priority and magnitude of tools to be used once the Dry Year Strategy has been triggered will be made based on the specific circumstances at hand and will depend on the benefit achieved and the economic feasibility of implementing the tool. The Dry Year Principles will serve as the criteria by which to evaluate decisions on choices of tools. Once the Dry Year Strategy has been triggered, BPA will inform its customers, constituents, tribes, and other regional stakeholders about the status of the “dry year,” the choices of tools and other pertinent matters using the process outlined in the Communications/Regional Coordination section.

V. Principles

The Dry Year Principles serve as overarching criteria for decisions regarding the magnitude and priority of Dry Year Tools that BPA will use to meet its load obligations in a "dry year." These criteria are intended to embody the most important mandates contained in the 1980 Northwest Power Act as well as other important legislation governing FCRPS operations. BPA's challenge consists of selecting Dry Year Tools that allow BPA to meet its obligations in a "dry year" while satisfying each of the Dry Year Principles as best as possible. The key concept here is one of balance. BPA, in coordination with the Federal Action Agencies (COE and the Reclamation) and other regional stakeholders, when feasible, will attempt to satisfy the set of principles in a balanced fashion understanding that tradeoffs are unavoidable when operating a large, complex hydropower system serving multiple purposes.

BPA will make decisions on tools to maintain power system stability and reliability while meeting other statutory responsibilities, including responsibilities to:

- Protect fish and wildlife consistent with the Endangered Species Act, the Northwest Power Act, and other laws;
- Act in a sound and business-like manner;
- Provide an adequate, efficient, economical, and reliable power supply;
- Maintain rates as low as possible to minimize the economic impact on the region while avoiding any adverse impact to the long-term financial health of the FCRPS.

BPA will communicate in a timely and forthright manner both internally and externally while striving to maintain high customer, constituent, and tribal satisfaction.

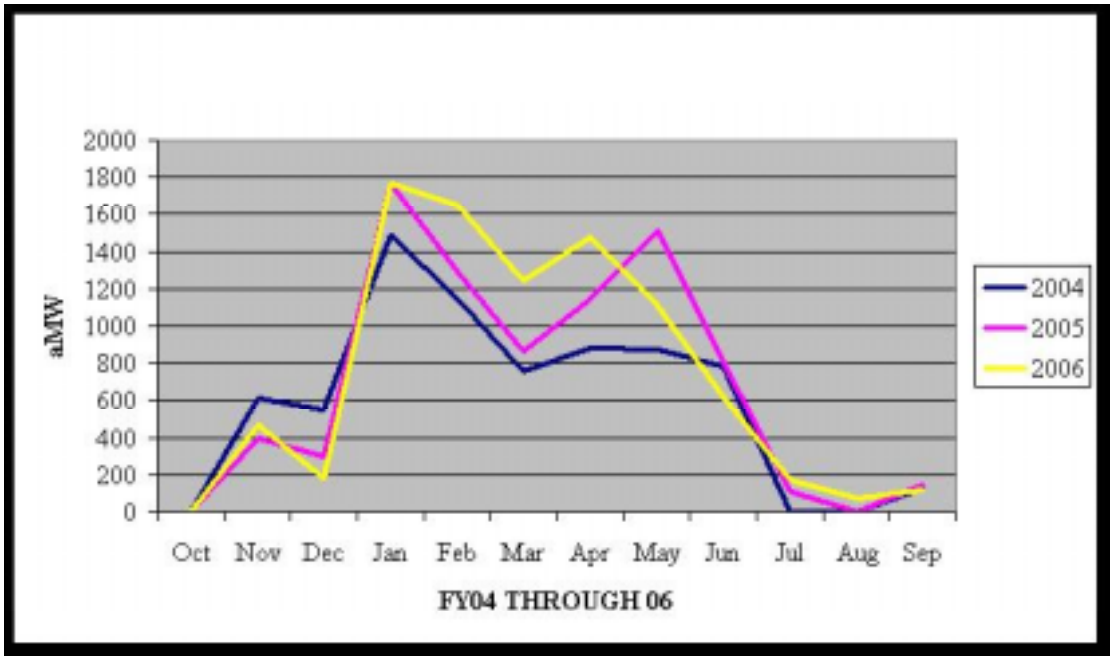
VI. Description of Tools

This document focuses on the Dry Year Tools available to help achieve BPA's goal of meeting its load obligations in a "dry year" in an environmentally and financially sound, and regionally balanced manner. The Dry Year Strategy builds on the lessons learned in 2001 in terms of providing the foundation of Dry Year Tools, while concurrently seeking new tools for the Dry Year Toolbox. This document identifies and evaluates these tools for their compliance with the Dry Year Principles, and their potential effectiveness in meeting or reducing BPA's load obligation in a "dry year." Some of the tools described are available in all years. Following are the attributes of the Dry Year Tools that are involved in the evaluation process:

- Seasonal timing when the load reduction/resource addition of the tool is available relative to when the tool is needed;
- Time and effort required to prepare for and implement the tool;
- Cost and financial risk associated with implementing the tool;
- Effectiveness of the tool as measured by the magnitude of the potential contribution of the tool toward helping BPA meet its load obligations;
- Conditions under which the tool is most and least useful;
- Third party impacts of deploying the tool.

Analysis shows that through 2006, the probability of experiencing significant deficits is less than 5 percent. Deficits would likely be confined to some of those years where the projected runoff is 85 MAF or less. Figure 2 shows the seasonal time frame when deficits are likely to occur if chum flows are abandoned as currently called for in the BiOp when refill is at risk.

Figure 2: Potential Need for Dry Year Tools

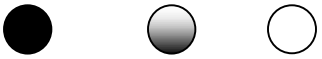


This document identifies a set of Dry Year Tools (other than fishery operations and financial tools) from which BPA could choose in order to meet its load obligations under critically dry hydro conditions, or other critical situations. The Dry Year Principles that are also being developed as part of this document will guide the decisions on which combination of tools (Dry Year Tools, Fishery Operations, and Financial Tools) to use under various circumstances. Dry Year Tools have been identified in the areas of load reductions, reliability enhancements, and increases in energy/resources. Table 2 includes brief descriptions of each of these tools. A more detailed description of each tool is included in the Appendix A with background information available in Appendix B. As new tools are identified, they will be evaluated and added to the list.

Table 2: Summary of Dry Year Tools

Four Rating Areas
Help – measure of the tool, ability to reduce deficits
Reliability – measure availability of the tool on demand
Cost – measure cost to BPA to implement the tool
Ease – measure degree of ease to set up and implement the tool

RATING KEY:



Excellent Good Poor

TOOL	DESCRIPTION	MAGNITUDE OF LOAD REDUCTION/ RESOURCE ADDITION	TIMING WHEN TOOL IS AVAILABLE	Qualitative rating of the tool in the following four areas: Help Reliable Cost Ease
Demand Exchange Program	BPA buys power from program participants to reduce peak load	15aMW – 240aMW Allows peak demand to be reduced 150MW – 1,200MW	Available any time that the peak hour price is above BPA's bid price	
Distributed Generation	Small portable generation sites i.e. diesel and natural gas	20aMW – 100aMW	Once the generation is sited, the energy is available as needed	
DSI Buy Down	Pay the DSIs to shut down their plants	500aMW – 1,000aMW depending on what DSI plants are running	Available as DSIs are willing assuming DSI plants are operating	

TOOL	DESCRIPTION	MAGNITUDE OF LOAD REDUCTION/ RESOURCE ADDITION	TIMING WHEN TOOL IS AVAILABLE	Qualitative rating of the tool in the following four areas: Help Reliable Cost Ease
Irrigation Buy-Down	BPA buys back irrigation water from farmers. Farmers must let the land go fallow	50aMW – 62 aMW Approximately 1,050 KWH/Acre	Available April – September. Needs to be implemented prior to planting	 Help = LOW based on projected winter need through 2006
Long-Term Market Purchase	Purchase energy from the market for those quartiles with the highest probability of being short	100aMW – 1,000aMW	Available as needed, as long as the product is available on the market	 Cost is dependent on market conditions, so may be excellent sometimes, but not others
Option Purchases	Purchase the option to call on energy if the market is above the strike price	100aMW – 1,000aMW	Available as needed, as long as the product is available on the market. There is a time period in which a decision to strike must be made. This could lead to some erroneous strike/no strike decisions	
Power Exchanges	Energy from one period is exchanged for energy in another period California is generally energy long in the winter. Therefore a summer-to-winter exchange could benefit both as long as BPA is long in the summer	Could be an energy increase if there is a ratio associated with the exchange	Available as needed as long as an exchange partner is available	
Public Awareness for Conserva-tion	Public announcement in newspapers or from the governors asking people to reduce energy consumption	5% of system load	Available as needed, but should only be used in a true emergency	

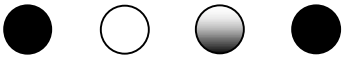
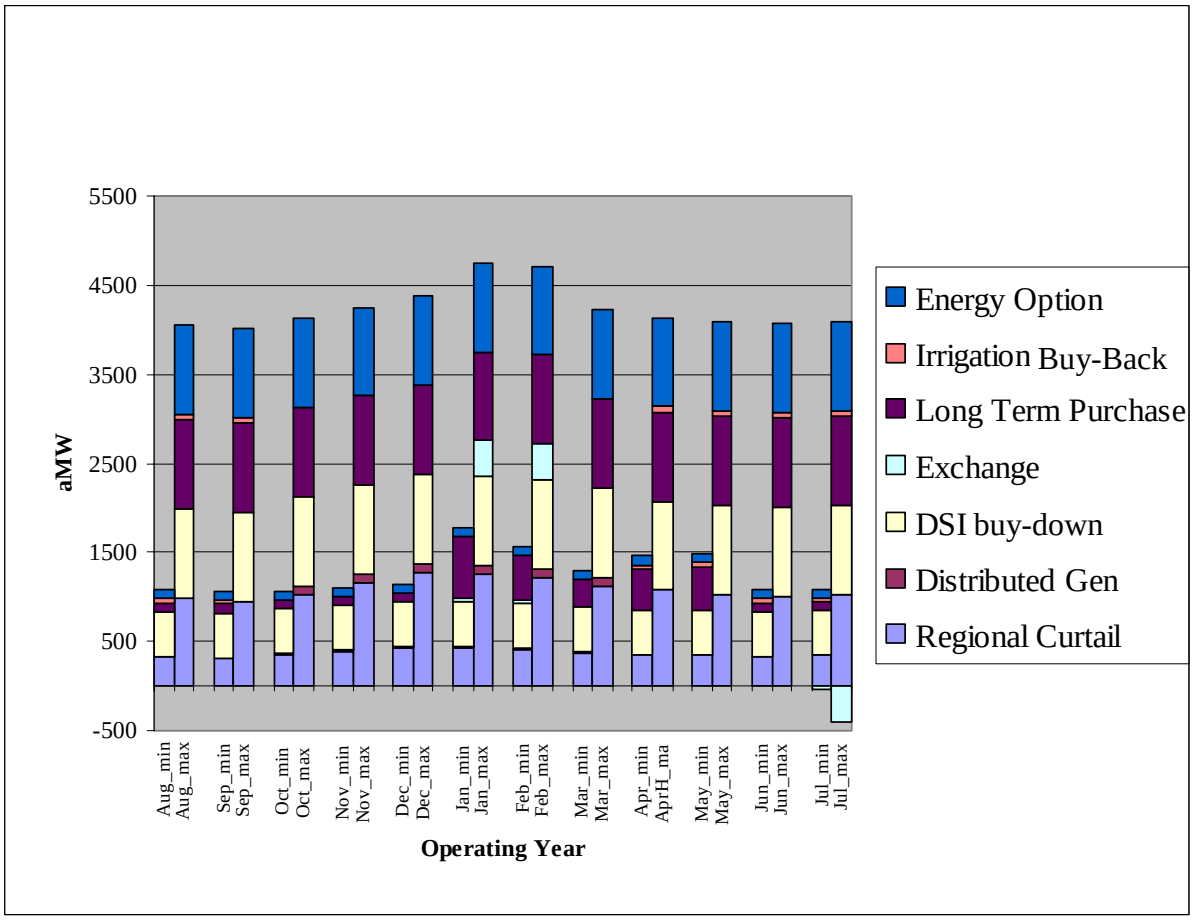
TOOL	DESCRIPTION	MAGNITUDE OF LOAD REDUCTION/ RESOURCE ADDITION	TIMING WHEN TOOL IS AVAILABLE	Qualitative rating of the tool in the following four areas: Help Reliable Cost Ease
Regional Curtailment	Governor's emergency powers. During a power emergency, governors impose load reductions	15% of firm regional load It requires the governors to declare power emergencies. So can only be used as a last resort	Available as needed, but should only be used as last resort (dependent on the governors of each state).	 Cost = MEDIUM (However, there could be a large cost to the economy)
Summer Storage Agreement	An agreement between BPA and B.C. Hydro allows water to be stored in Canada to improve the reliability of the year following a "dry year."	3,000 MW-Mo	Is available only when there is room in Canadian projects for the storage	 Help = HIGH for the next year's reliability
Additional potential tools identified that will need further analysis				
Purchasing Water Insurance				
Using wetlands, meadows, and aquifers for water storage				

Figure 3 depicts the cumulative month-by-month availability of these tools, stacked assuming both a minimum and a maximum availability. As indicated, the tools identified are sufficient to cover any potential energy need through 2006 shown in Figure 2.

Analysis of the Dry Year Tools, through 2006, shows that most of the tools would only be deployed if the Northwest wholesale energy market was once again to experience order of magnitude increases in wholesale energy market prices. Otherwise, market purchases are the best tools to meet load/resource imbalances.

Figure 3: Accumulation of Dry Year Tools



VII. Dry Year Decision-Making Process

The events of 2001 demonstrate the ability of the BPA-customer partnership to greatly reduce the financial impact of the energy crisis on BPA's customers. These events also demonstrate the ability of the Federal Action Agencies (BPA, COE, and Reclamation) to work with the National Marine Fisheries Service (NMFS) and the Fish and Wildlife Service (FWS) to make decisions on the operation of the FCRPS in such a way as to balance the multiple benefits that the system provides to the Pacific Northwest. Although decisions to address the drought of 2001 were made by the Technical Management Team, Implementation Team, and/or Regional Federal Executives—all of which are different levels of the NMFS Regional Forum Process, the region was asked to participate in the decisions on a number of occasions.

- In December 2000, the Emergency Response Team (subsequently renamed the Energy Response Team [ERT]) of which BPA is a member, declared a pending power emergency in anticipation of a cold snap on December 11. Concurrently, BPA, in coordination with other members of the Federal Caucus, declared a power emergency. Under the provisions of the BiOp, BPA may suspend some component of fish operations such as spill if an emergency exists in its system. Such decisions are generally made in coordination with the other members of the Federal Caucus.

- However, in January, the ERT did not agree to BPA's request to declare a power emergency. This forced BPA to unilaterally declare a power emergency under the provisions of the BiOp. The ERT's decision not to declare an emergency was based on the fact that it did not have consensus that an emergency existed on a regional level (e.g., Idaho did not have power problems). However, the ERT did not object to BPA's declaration of an emergency on BPA's own system.

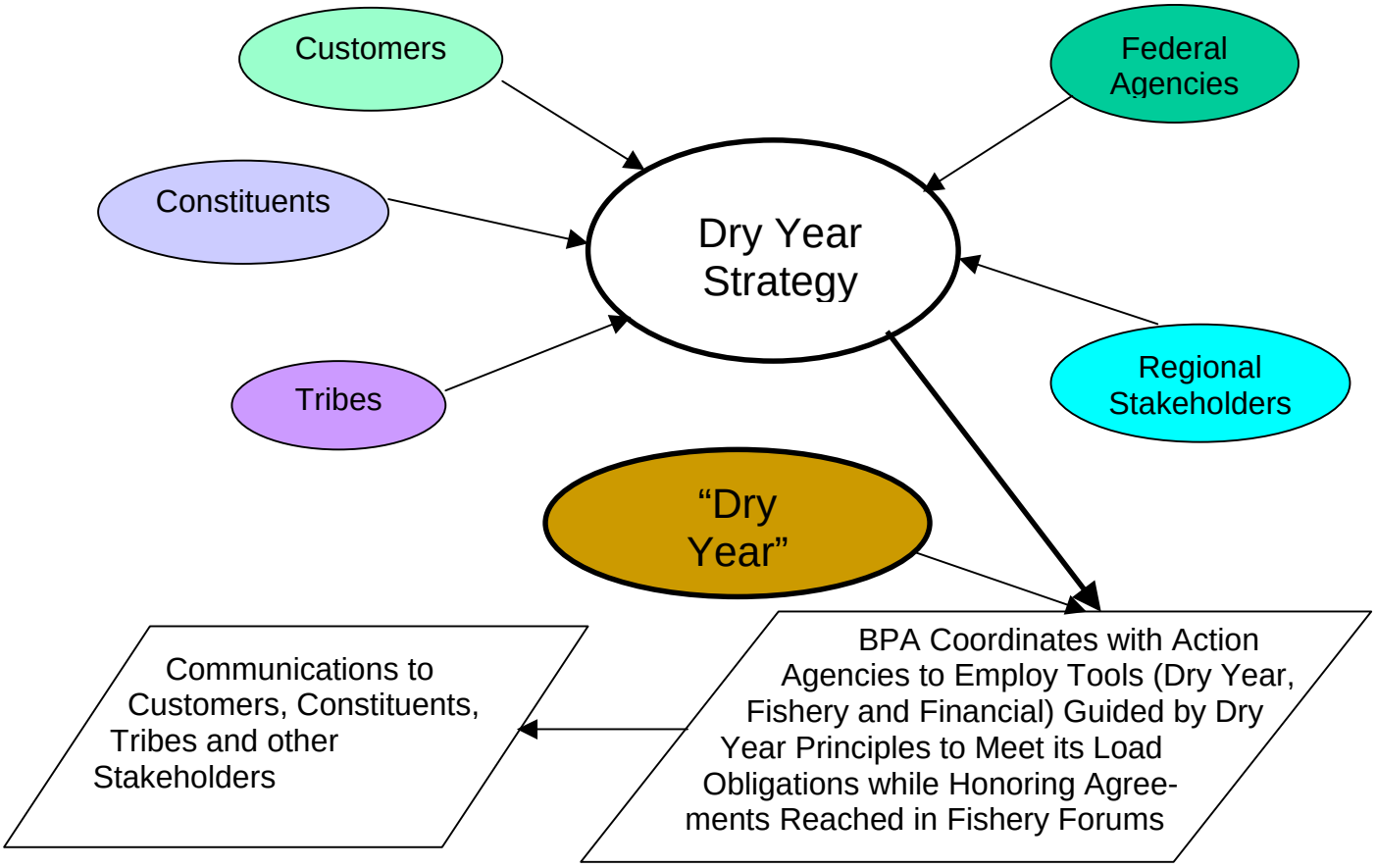
- Key regional partners were included in discussions regarding regional reliability, fish operations, and BPA's financial situation through a Northwest Power Planning Council process in the March through April 2001 timeframe.

- In June 2001, Federal executives asked the region to help explore alternatives that could provide comparable or better biological benefit if summer spill were eliminated or significantly decreased. The Federal agencies incorporated the feedback received into their decision-making process on summer spill.

One of the reasons for formulating a Dry Year Strategy in advance of an actual "dry year" is to provide the opportunity for a more extensive review of Dry Year Principles and Tools to the region than would likely be possible during a critically dry water year or other energy crisis situation. As described above, the need for real-time decisions in 2001 limited broad participation by the region in the "dry year" decision-making process to only a few occasions. It is anticipated that in future dry years, the decision-making process would likely mimic the one in 2001 with the Federal Action Agencies (BPA, COE, and Reclamation) making decisions in short order due to the need for real-time decisions. However, in future years, such decisions would be guided by the Principles

and Tools contained in the Dry Year Strategy. Figure 4 depicts this decision-making process and the opportunity for regional stakeholders to influence that process now.

Figure 4: Dry Year Decision-Making Process



VIII. Communications/Regional Coordination

Once BPA determines that it is in the midst of a "dry year" during which unusual actions may be required to meet its load obligations in an environmentally and financially sound, and regionally balanced manner, BPA will work with the other Federal Action Agencies (COE and Reclamation) to make those decisions. In addition, BPA will coordinate with NMFS and FWS on an operation of the FCRPS compatible with all existing fishery agreements.

Because energy crisis situations rarely affect only BPA, coordination with other load-serving entities and regional organizations will be essential to ensure that there is no undue economic impact on the Pacific Northwest Region. The ERT has been set up to deal with regional power emergencies of both short-term and long-term durations. However, concerns regarding the potential impacts of ERT actions on the deregulated market may limit the effectiveness of this group. BPA and the Northwest Power Planning Council may wish to examine mechanisms to maximize the ERT's effectiveness in addressing regional energy crises.

BPA will communicate with its customers, constituents, tribal representatives, and other regional stakeholders through an appropriate communication process. The choice of media for communication will be a function of the situation. Radio and newspapers are always a good choice for reaching a large and diverse audience. Some situations are likely to develop gradually, and therefore, there will be incremental announcements. Others may arrive more dramatically, and announcements of such situations may therefore be different. Irrespective of the type of situation, customers and constituents will be kept informed by their respective account executives.

In general, BPA is committed to forthright and frequent communications regarding actions during a "dry year." The method of communication will be one that BPA believes will work best to provide fast and clear communication. Communication will occur through BPA senior management, account executives, constituent account executives, and/or the press, as appropriate to the situation. BPA is committed to keeping all interested parties up to date on the status of the system and actions that BPA is taking, or plans to take.

That said, BPA cannot in every case promise to provide information prior to actions being taken. It is entirely possible that decisions will need to be made on a relatively short planning horizon, thus making advance communication difficult if not impossible. In fact, this is one of the reasons for the formulation of the Dry Year Strategy, so that BPA, customers, constituents, tribal representatives, and other regional stakeholders can talk through the possible responses to a "dry year" prior to it happening. In this way, when BPA takes appropriate action, surprises will be kept to a minimum.