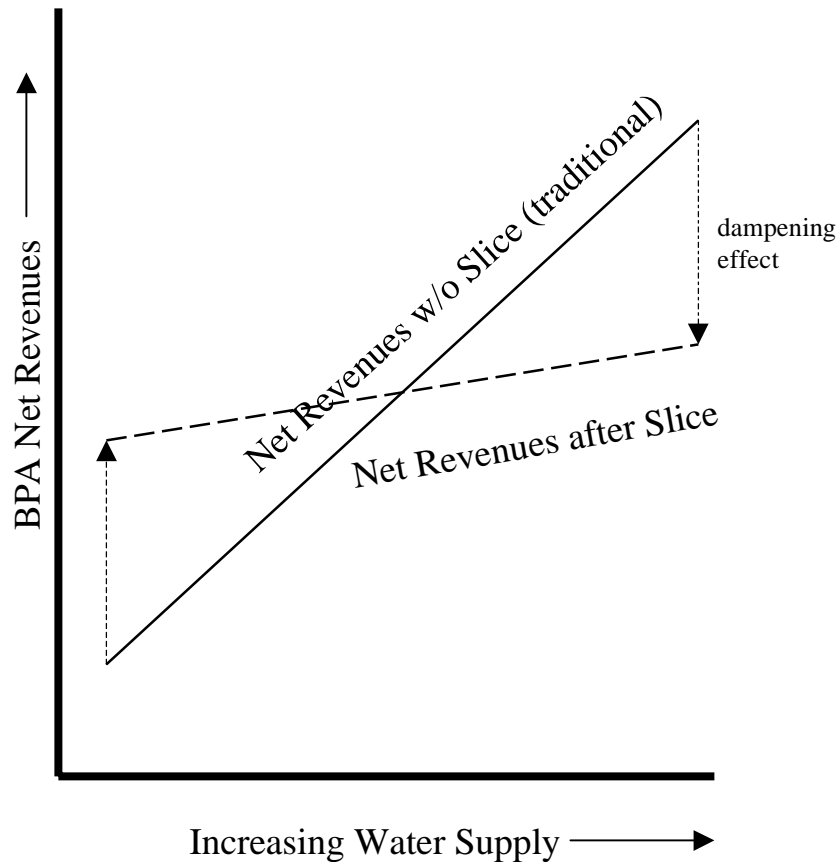


# Slice Impacts on BPA's Revenues



- BPA's traditional revenue stream varies with water supply (higher water conditions, higher revenues)
- BPA's revenues from Slice are independent of water condition. With Slice, BPA's revenues will vary less with varying water conditions.
- If BPA signs Slice contracts, BPA's ability to meet its treasury payment obligations under poor water conditions should improve. This comes at the expense of higher revenues during times of above average water conditions.

# Slice Customer Profiles

- Three utilities were randomly selected for detailed evaluation
  - Utility A gets 14% of its load served by BPA (which translates to 1.0% Slice).
  - Utility B gets 80% of its load served by BPA (which translates to 1.1% Slice).
  - Utility C gets 65% of its load served by BPA (which translates to 3.8% Slice).
- For each customer three charts are provided to profile how Slice would work for the customer.
  - A chart of the customer's Net Requirement overlaid with three different levels of Slice (low, average, and high)
  - A chart that shows the sensitivity of the customer's cash flow to the timing of the runoff.
  - A chart that shows the customer's accumulated cash flow for high, median, and low water conditions.
- The Accumulated Cash Flow graphs represent (throughout the year) how the customer's accumulated benefit/cost compares to the alternative of serving its Net Requirement with PF (please note that contract and risk management expenses as well as transmission costs on surplus Slice sales have not been reflected and would lower the net benefits even further)

# Accumulated Cash Flow

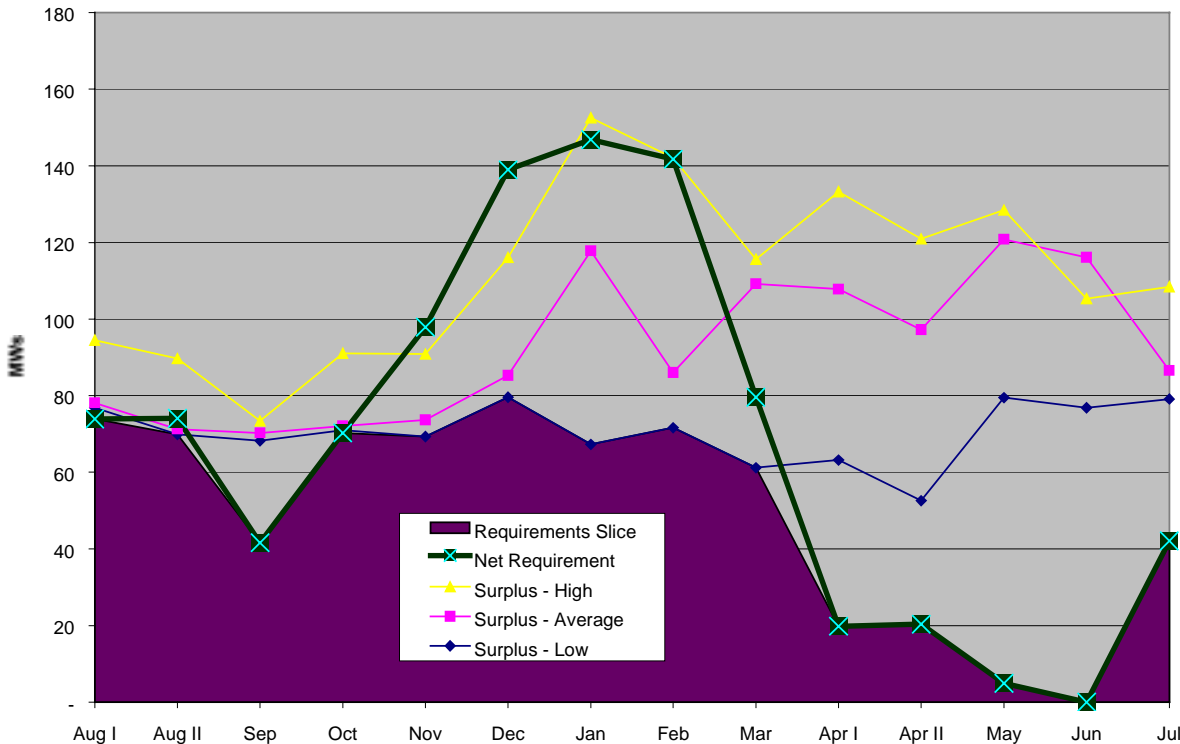
- The Accumulated Cash Flow graphs represent (throughout the year) how the customer's accumulated benefit/cost compares to the alternative of serving its Net Requirement with PF.
- Accumulated cash flow is similar in concept to a checking account balance, if by July the result is positive the customer would have a net benefit from Slice for the year.
- These charts are based on hydro-regulation and market price assumptions similar to those used in BPA's '02 Power Rate Case.
- Hydro-regulation studies simulate the operation of the Federal resources under the reoccurrence of 50 historical water conditions (1929-78).
- Although BPA has attempted to do a comprehensive economic analysis, certain costs have not been included that would have an impact on the overall economics (excluded expenses include contract implementation, risk management, as well as transmission costs on surplus Slice sales)

# Slice Requirements/Surplus Deliveries

Slice Service (Utility A)

## Customer A

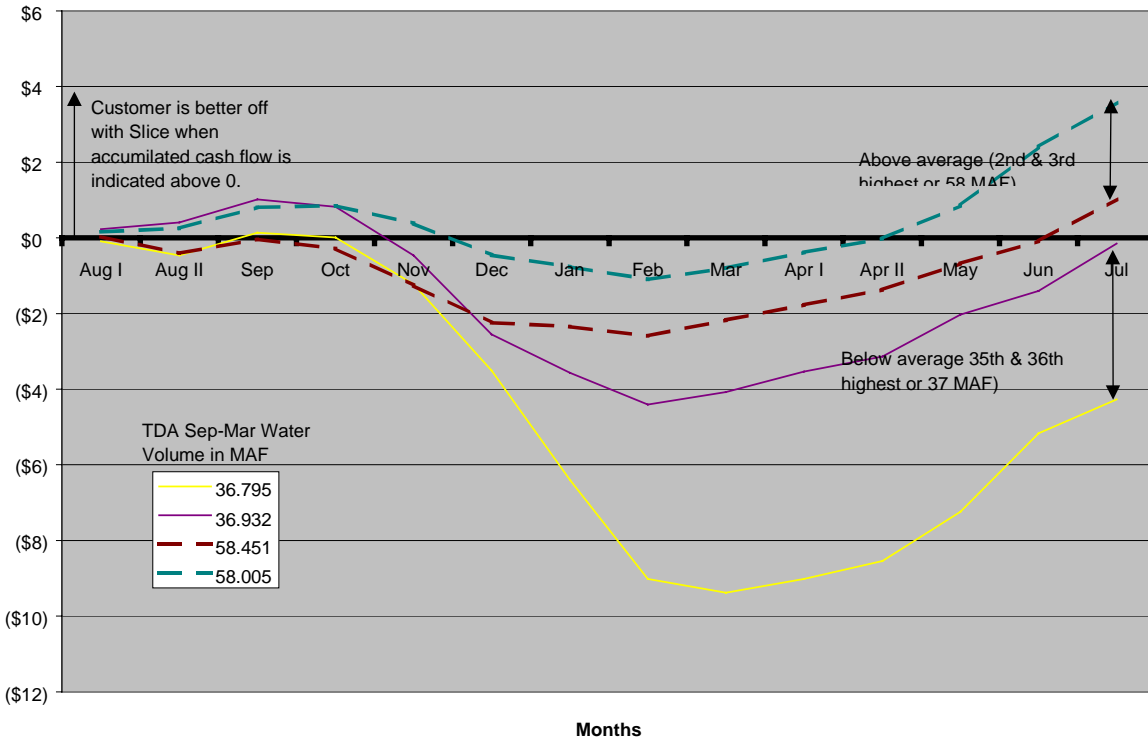
- Customer A gets 14% of its load service from BPA.
- The filled in area is the requirements portion of Slice.
- The surplus portion of Slice is shown for high, average, and low water.
- The customer's Net Requirement is indicated by the heavy line.



# Slice Impacts on Customer's Accumulated Cash Flow (within the year)

Customer A Accumulated Cash Flow

## Customer A



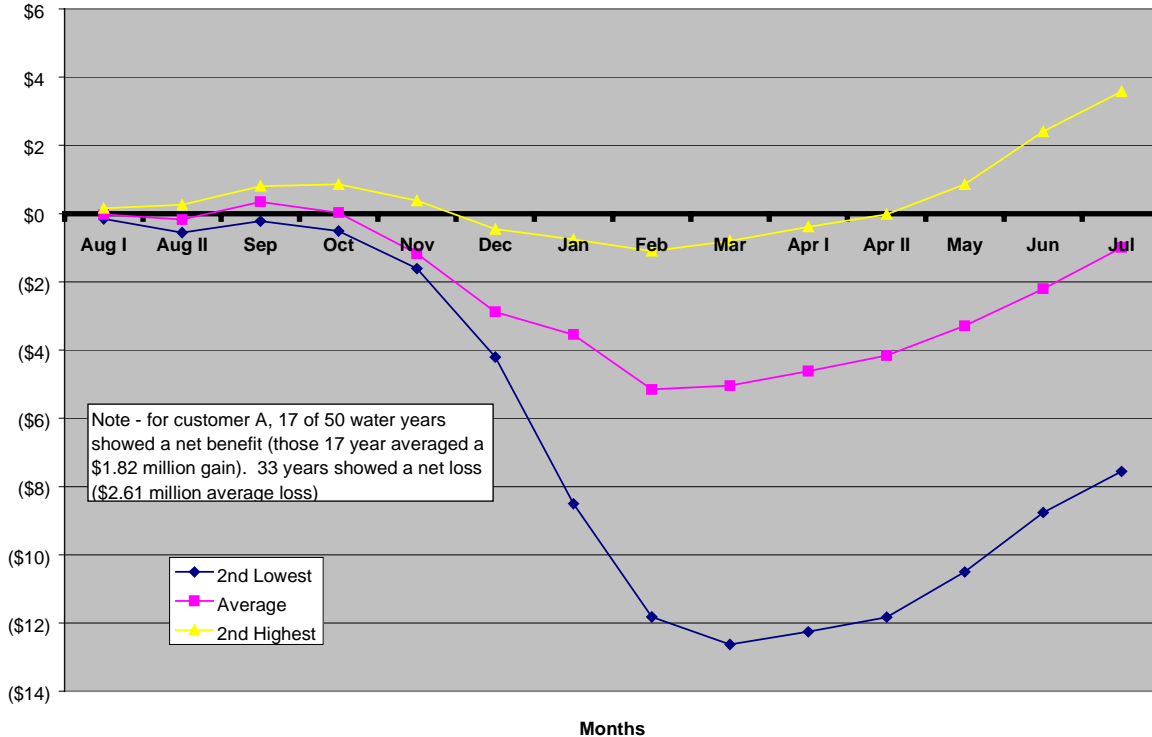
- Customer's ability to realize secondary revenue credits similar to that of PF customers is a function of market prices, the water supply, as well as the timing of the runoff.
- This graph illustrates for two pairs of similar water conditions (very high and slightly below average) how much effect the timing of the runoff has.

# Slice Impacts on Customer's Accumulated Cash Flow (within the year)

Customer A Accumulated Cash Flow  
for Selected Water Conditions (ranked by benefit/cost)

## Customer A

- This graph illustrates the Customer's accumulated cash flow for three different water conditions.
- The Customer's net benefit/cost for the year was sorted from highest to lowest, the water years selected were the 2nd highest benefit, the median, and the 2nd worst cost.

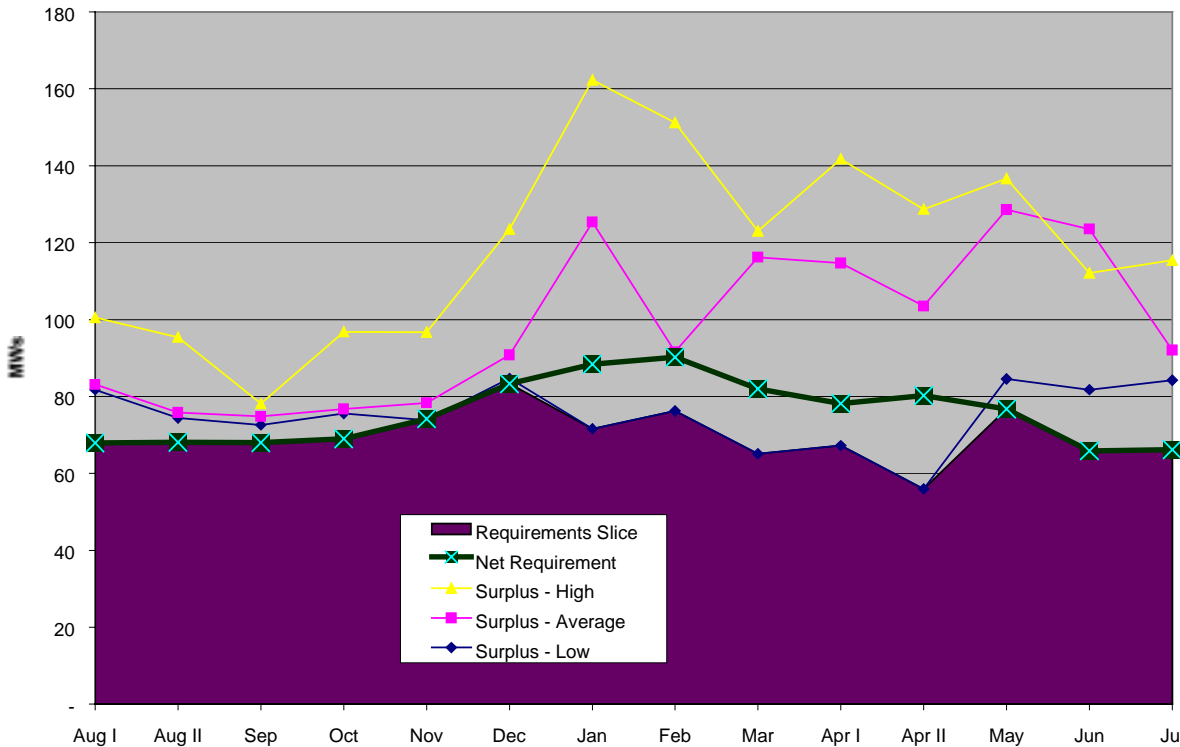


# Slice Requirements/Surplus Deliveries

Slice Service (Utility B)

## Customer B

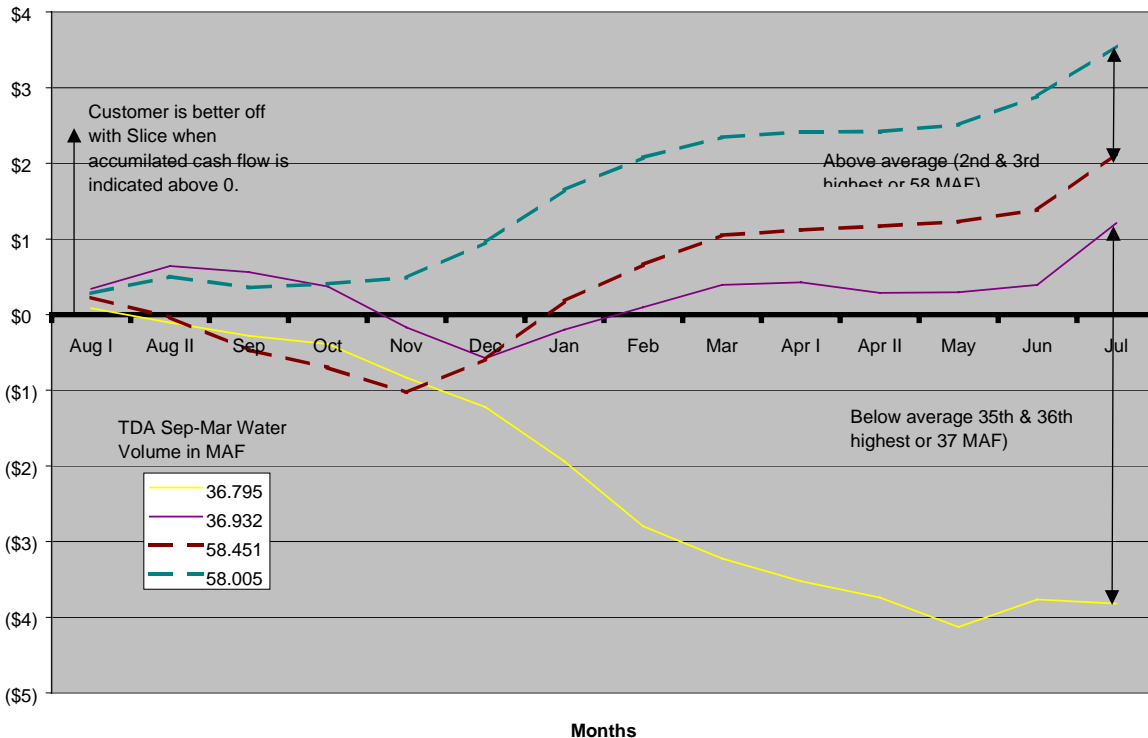
- Customer B gets 80% of its load service from BPA.
- The filled in area is the requirements portion of Slice.
- The surplus portion of Slice is shown for high, average, and low water.
- The customer's Net Requirement is indicated by the heavy line.



# Slice Impacts on Customer's Accumulated Cash Flow (within the year)

Customer B Accumulated Cash Flow

## Customer B



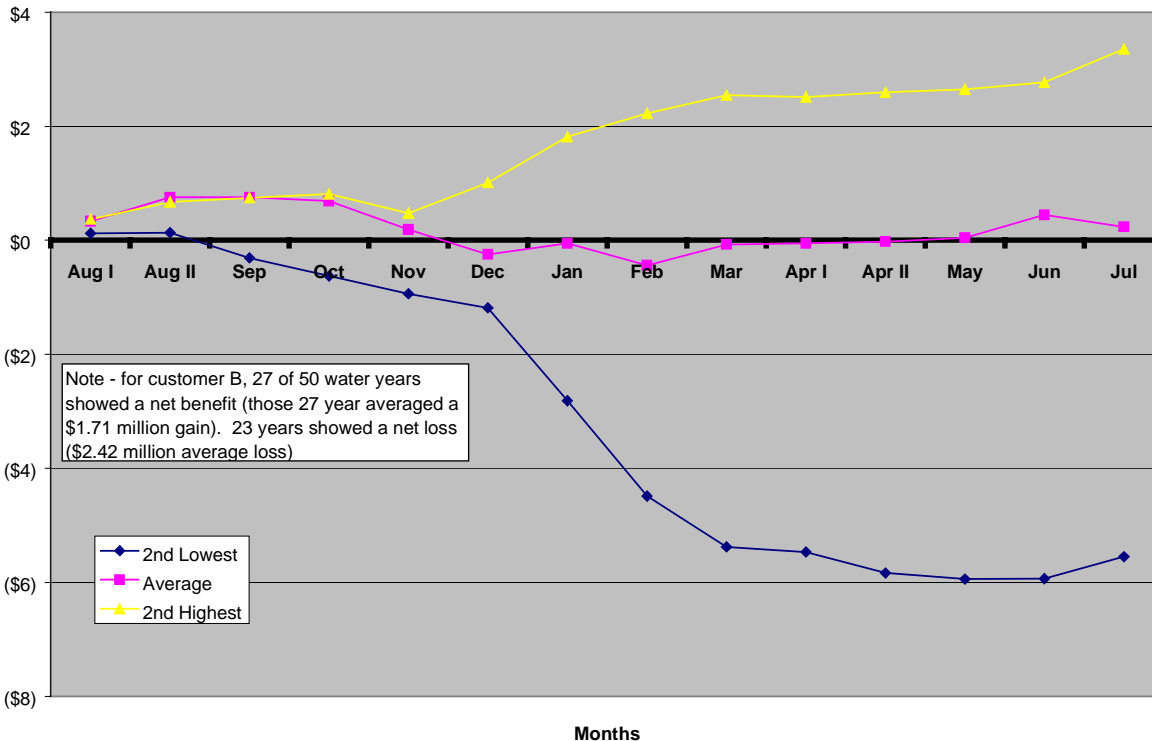
- Customer's ability to realize secondary revenue credits similar to that of PF customers is a function of market prices, the water supply, as well as the timing of the runoff.
- This graph illustrates for two pairs of similar water conditions (very high and slightly below average) how much effect the timing of the runoff has.



# Slice Impacts on Customer's Accumulated Cash Flow (within the year)

Customer B Accumulated Cash Flow  
for Selected Water Conditions (ranked by benefit/cost)

## Customer B

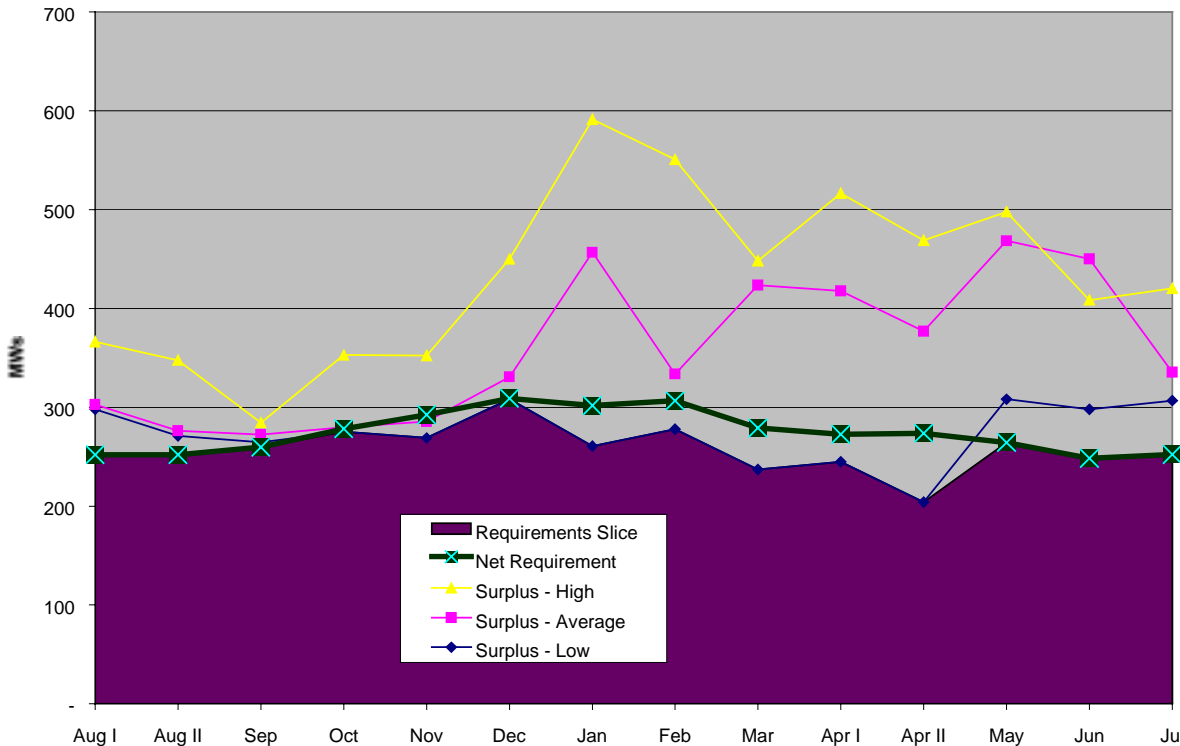


- This graph illustrates the Customer's accumulated cash flow for three different water conditions.
- The Customer's net benefit/cost for the year was sorted from highest to lowest, the water years selected were the 2nd highest benefit, the median, and the 2nd worst cost.

# Slice Requirements/Surplus Deliveries

Slice Service (Utility C)

Customer C

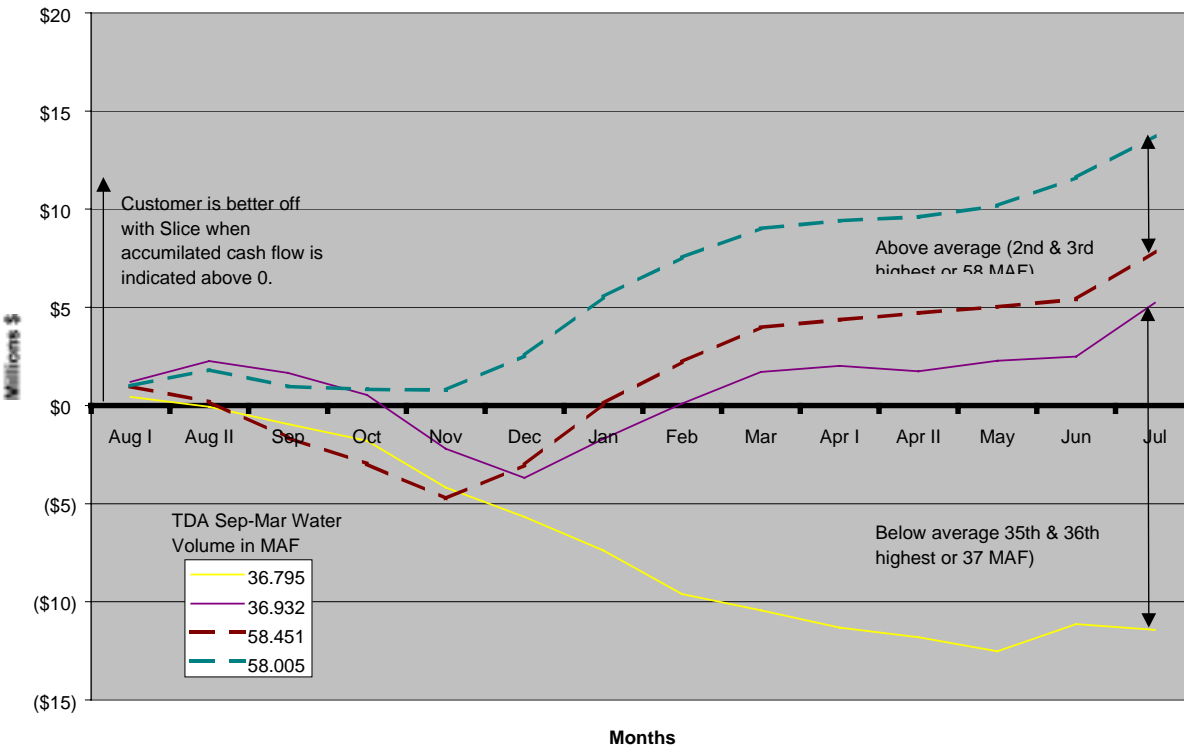


- Customer C gets 65% of its load service from BPA.
- The filled in area is the requirements portion of Slice.
- The surplus portion of Slice is shown for high, average, and low water.
- The customer's Net Requirement is indicated by the heavy line.

# Slice Impacts on Customer's Accumulated Cash Flow (within the year)

Customer C Accumulated Cash Flow

## Customer C



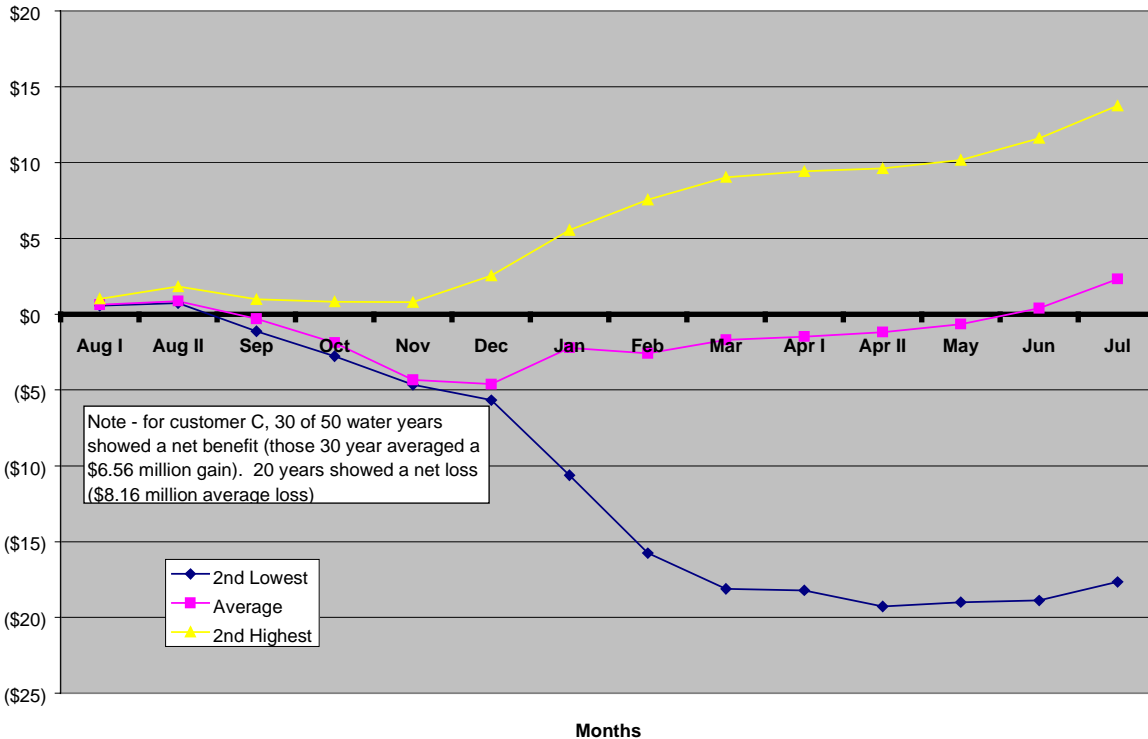
- Customer's ability to realize secondary revenue credits similar to that of PF customers is a function of market prices, the water supply, as well as the timing of the runoff.
- This graph illustrates for two pairs of similar water conditions (very high and slightly below average) how much effect the timing of the runoff has.

# Slice Impacts on Customer's Accumulated Cash Flow (within the year)

Customer C Accumulated Cash Flow  
for Selected Water Conditions (ranked by benefit/cost)

## Customer C

- This graph illustrates the Customer's accumulated cash flow for three different water conditions.
- The Customer's net benefit/cost for the year was sorted from highest to lowest, the water years selected were the 2nd highest benefit, the median, and the 2nd worst cost.



# Slice System Obligations

- The amount of Slice power delivered to a customer is indexed to the generation of the Federal Base System after all System Obligations of the Federal System are satisfied. This is being done to prevent the Slice customer from avoiding the impacts of BPA's System Obligations.
- By taking System Obligations off the top, the Slice customers assume their proportionate share of the impacts of the System Obligations. The net of all these obligations will reduce the total power they have available under the Slice contract.

# Slice System Obligations Cont.

- Canadian Entitlement - The Canadian Entitlement is an obligation of the United States to return one-half of the benefits in the United States that result from building Mica, Arrow and Duncan Dams in Canada. These benefits increase over the life of the Slice contract. To satisfy this obligation, the Slice customers will receive less surplus energy over the life of the Slice contract.
- Hourly Coordination - The Hourly Coordination increases the efficient operation of Grand Coulee through Priest Rapids Dams. There is a constant exchange of energy between Bonneville and the owners of Wells, Rocky Reach Rock Island, Wanapum and Priest Rapids Dams. At times, Bonneville will receive energy and at other times, Bonneville will deliver energy. To satisfy this obligation, the Slice customers will need to be prepared to have their entitlements under Slice adjusted consistent with the impact to Bonneville. This will reduce their ability to market a portion of their Slice energy more than an hour in advance.
- Pacific Northwest Coordination Agreement (PNCA) - The PNCA increases the efficiency of all projects in the Northwest, both Federal and non-Federal. It provides certain rights and obligations, which vary over time, to all generating utilities in the Northwest. A Slice customer's entitlement to Slice energy will be increased when Bonneville receives energy under the PNCA and decreased when Bonneville delivers energy under the PNCA. The Slice customer has no independent rights under the PNCA but must do whatever Bonneville chooses to do under the PNCA (receiving or delivering energy).

# Slice System Obligations Cont.

- Non-Treaty Storage Agreement (NTS) - The NTS utilizes storage space at Mica and Arrow Dams in Canada. The Slice customers have no direct rights under the NTS but must do whatever Bonneville chooses to do under the NTS (receiving or delivering energy).
- Biological Opinion - The Biological Opinion will reduce the generating capability in certain times of the year to promote the rebuilding of the fishery stocks in the Northwest. Having the Biological Opinion be a System Obligation prevents the Slice customers from getting out of the Federal System reductions for fish.
- System Commitments to the Transmission Business Line (TBL) - The TBL is the load control operator for most of the Northwest. The Federal System provides all the necessary inputs to maintaining the reliability of the energy deliveries to the Northwest. The Slice customers will be obligated to provide their share of this obligation that will reduce the amount of surplus they receive under the Slice contract.

# Proposed Slice Ten-Year Contract Minimum

- Normal Subscription contracts are being offered for 3, 5 or 10-year periods. BPA expect that the Slice contract will only be offered for a 10-year period.
- Slice shifts the risks that Bonneville faces directly (including weather, water supply variability, and fish costs) to the Slice customer.
- Over a 10 year period, BPA and the Slice purchaser can expect a balancing of those risks. A shorter term would be less likely to experience that balance.
- The Slice contracts will include a right for the customer to convert all or a portion of the customer's Slice requirements purchase to other Subscription products if the contract is non-functional (i.e. if FERC doesn't approve Slice rate or if future Slice rate is inconsistent with FERC approved Slice rate methodology, not "if the product is uneconomic")