



## HWM Formulas

### Contract High Water Mark:

$$CHWM_i = (2010ActualLoad_{(adjusted)} - 2010resources_{(2007defined)})$$

where load adjustments consist of:  
weather normalization  
force majeure and anomalies  
2007-2011 conservation  
2007-2011 renewables

once determined,  $CHWM_i$  changes only for annexations (plus or minus)

### Rate Period High Water Mark:

$$RHWM_i = \frac{CHWM_i}{\sum CHWM} \times (FBS + AUG)$$

where:  $FBS$  is the named resources used for Tier 1 service  
and  $AUG = f(FBS, RHWM, Netreq) \leq \alpha$  aMW

where:  $\alpha \leq \alpha_{2012}$   
 $(FBS + AUG) \leq 7400$  aMW, and  
 $\alpha_{2012} \leq 300$  aMW

while  $CHWM_i$  changes only for annexations,  $\sum CHWM$  may also change due to new publics

### Annual Tier 2 Amount:

$$Tier2 = \max(Netreq - \min(RHWM, Netreq), 0)$$

### Tier 2 Billing:

$$Tier2rev = (Tier2 \times Tier2rate) + remarket$$

where:  $remarket = \min(Netreq_1 - Netreq_0, 0) \times marketprice$

where:  $Netreq_0$  is the rate period annual net requirement

$Netreq_1$  is a within rate period annual net requirement

### Hourly Tier 1 Amount:

$$Tier1 = ActualLoad - Tier2$$

where  $ActualLoad$  is the customer's load on BPA.