

## November 2016 Report

### Estimated Recharge

Summer 2015 (April 1-October 31) rainfall at Shasta Dam was 18.7".

Keswick Dam released 3,242,499 acre-feet of water; Keswick Dam released 2,725,587 acre-feet of water over the same period in 2015.

It is estimated that groundwater recharge due to precipitation is approximately 86,800 acre-feet during this period.

### Estimated Annual Pumping

It is estimated that 40,000 acre-feet of water was withdrawn from the Groundwater Basin from March 2015 to March 2016.

### Estimated Annual Discharge Due to Surface Streams

It is estimated that 120,000 acre-feet of water was discharged to local surface streams from March 2015 to March 2016.

### Estimated Change in Water Levels

Developing this information is optional in the AB 3030 Plan, and has not been calculated at this time.

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## June 2016 Report

### Estimated Recharge

Winter 2016 (November-March) rainfall at Shasta Dam was 58.65 inches.

Keswick Dam released 1,316,000 acre-feet of water; Keswick Dam released 998,000 acre-feet of water from November to March in 2015.

It is estimated that groundwater recharge due to precipitation is approximately 211,000 acre-feet during this period.

### Estimated Annual Pumping

It is estimated that 44,000 acre-feet of water was withdrawn from the Groundwater Basin from March 2015 to March 2016.

### Estimated Annual Discharge Due to Surface Streams

It is estimated that 160,000 acre-feet of water was discharged to local surface streams from March 2015 to March 2016.

### Estimated Change in Water Levels

Developing this information is optional in the AB 3030 Plan, and has not been calculated at this time.

## November 2015 Report

### Estimated Recharge

Summer 2015 (April 1-October 31) rainfall at Shasta Dam was 5.96".

Keswick Dam released 2,725,587 acre-feet of water; Keswick Dam released 2,799,031 acre-feet of water over the same period in 2014.

It is estimated that groundwater recharge due to precipitation is approximately 25,500 acre-feet during this period.

### Estimated Annual Pumping

It is estimated that 44,000 acre-feet of water was withdrawn from the Groundwater Basin from March 2014 to March 2015.

### Estimated Annual Discharge Due to Surface Streams

It is estimated that 110,000 acre-feet of water was discharged to local surface streams from March 2014 to March 2015.

### Estimated Change in Water Levels

Developing this information is optional in the AB 3030 Plan, and has not been calculated at this time.

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## June 2015 Report

### Estimated Recharge

Winter 2015 (November-March) rainfall at Shasta Dam was 41.49 inches.

Keswick Dam released 998,000 acre-feet of water; Keswick Dam released 528,731 acre-feet of water from January to March in 2014.

It is estimated that groundwater recharge due to precipitation is approximately 154,000 acre-feet during this period.

### Estimated Annual Pumping

It is estimated that 44,000 acre-feet of water was withdrawn from the Groundwater Basin from March 2014 to March 2015.

### Estimated Annual Discharge Due to Surface Streams

It is estimated that 110,000 acre-feet of water was discharged to local surface streams from March 2014 to March 2015.

### Estimated Change in Water Levels

Developing this information is optional in the AB 3030 Plan, and has not been calculated at this time.

## November 2014 Report

### Estimated Recharge

Summer 2014 (April-October) rainfall at Shasta Dam was 8.86”.

Keswick Dam released 2,799,031 acre-feet of water; Keswick Dam released 4,175,000 acre-feet of water over the same period in 2013.

It is estimated that groundwater recharge due to precipitation is approximately 39,500 acre-feet during this period.

### Estimated Annual Pumping

It is estimated that 40,000 acre-feet of water was withdrawn from the Groundwater Basin from October 2013 to October 2014.

### Estimated Annual Discharge Due to Surface Streams

It is estimated that 110,000 acre-feet of water was discharged to local surface streams from October 2013 to October 2014.

### Estimated Change in Water Levels

Developing this information is optional in the AB 3030 Plan, and has not been calculated at this time.

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## June 2014 Report

### Estimated Recharge

Spring 2014 (January-March) delivered limited snow and rain. Rainfall at Shasta Dam was 27.08”.

Keswick Dam released 528,731 acre-feet of water; Keswick Dam released 776,495 acre-feet of water over the same period in 2013.

It is estimated that groundwater recharge due to precipitation is approximately 121,000 acre-feet during this period.

### Estimated Annual Pumping

It is estimated that 40,000 acre-feet of water was withdrawn from the Groundwater Basin from March 2013 to March 2014.

### Estimated Annual Discharge Due to Surface Streams

It is estimated that 205,000 acre-feet of water was discharged to local surface streams from March 2013 to March 2014.

### Estimated Change in Water Levels

Developing this information is optional in the AB 3030 Plan, and has not been calculated at this time.

## November 2013 Report

### Estimated Recharge

Summer 2013 (April-October) rainfall at Shasta Dam was 7.7".

Keswick Dam released 4,175,000 acre-feet of water; Keswick Dam released 4,068,000 acre-feet of water over the same period in 2012.

It is estimated that groundwater recharge due to precipitation is approximately 69,000 acre-feet during this period.

### Estimated Annual Pumping

It is estimated that less than 15,000 acre-feet of water was withdrawn from the Groundwater Basin.

### Estimated Annual Discharge Due to Surface Streams

It is estimated that 64,000 acre-feet of water was discharged to local surface streams

### Estimated Change in Water Levels

Developing this information is optional in the AB 3030 Plan, and has not been calculated at this time.

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## June 2013 Report

### Estimated Recharge

Spring 2013 (January-March) delivered very limited snow and rain. Rainfall at Shasta Dam was 5.82".

Keswick Dam released 776,495 acre-feet of water; Keswick Dam released 735,630 acre-feet of water over the same period in 2012.

It is estimated that groundwater recharge due to precipitation is approximately 20,000 acre-feet during this period.

### Estimated Annual Pumping

It is estimated that 14,000 acre-feet of water was withdrawn from the Groundwater Basin.

### Estimated Annual Discharge Due to Surface Streams

It is estimated that 15,000 acre-feet of water was discharged to local surface streams.

### Estimated Change in Water Levels

Developing this information is optional in the AB 3030 Plan, and has not been calculated at this time.

## November 2012 Report

### Estimated Recharge

Summer 2012 (April-October) rainfall at Shasta Dam was 8.5”.

Keswick Dam released 4,068,000 acre-feet of water; Keswick Dam released 4,485,000 acre-feet of water over the same period in 2011.

It is estimated that groundwater recharge due to precipitation is approximately 85,000 acre-feet during this period.

### Estimated Annual Pumping

It is estimated that less than 15,000 acre-feet of water was withdrawn from the Groundwater Basin.

### Estimated Annual Discharge Due to Surface Streams

It is estimated that 64,000 acre-feet of water was discharged to local surface streams

### Estimated Change in Water Levels

Developing this information is optional in the AB 3030 Plan, and has not been calculated at this time.

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## June 2012 Report

### Estimated Recharge

Spring 2012 (January-March) delivered adequate snow and rain. Rainfall at Shasta Dam was 29.73”.

Keswick Dam released 735,630 acre-feet of water; Keswick Dam released 1,986,000 acre-feet of water over the same period in 2011.

It is estimated that groundwater recharge due to precipitation is approximately 75,000 acre-feet during this period.

### Estimated Annual Pumping

It is estimated that 11,000 acre-feet of water was withdrawn from the Groundwater Basin.

### Estimated Annual Discharge Due to Surface Streams

It is estimated that 55,000 acre-feet of water was discharged to local surface streams.

### Estimated Change in Water Levels

Developing this information is optional in the AB 3030 Plan, and has not been calculated at this time.

## November 2011 Report

### Estimated Recharge

Summer 2011 (April-October) was a good season for rain. Rainfall at Shasta Dam was 15.44”.

Keswick Dam released 4,485,000 acre-feet of water; Keswick Dam released 3,709,000 acre-feet of water over the same period in 2010.

It is estimated that groundwater recharge due to precipitation is approximately 100,000 acre-feet during this period.

### Estimated Annual Pumping

It is estimated that less than 10,000 acre-feet of water was withdrawn from the Groundwater Basin.

### Estimated Annual Discharge Due to Surface Streams

It is estimated that 100,000 acre-feet of water was discharged to local surface streams

### Estimated Change in Water Levels

Developing this information is optional in the AB 3030 Plan, and has not been calculated at this time.

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## June 2011 Report

### Estimated Recharge

Spring 2011 (January-March) was a good season for snow and rain. Rainfall at Shasta Dam was 26.86”.

Keswick Dam released 1,986,000 acre-feet of water; Keswick Dam released 608,008 acre-feet of water over the same period in 2010.

It is estimated that groundwater recharge due to precipitation is approximately 100,000 acre-feet during this period.

### Estimated Annual Pumping

It is estimated that 10,000 acre-feet of water was withdrawn from the Groundwater Basin.

### Estimated Annual Discharge Due to Surface Streams

It is estimated that 75,000 acre-feet of water was discharged to local surface streams.

### Estimated Change in Water Levels

Developing this information is optional in the AB 3030 Plan, and has not been calculated at this time.

## **November 2010 Report**

**Report not available**

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## **June 2010 Report**

### **Estimated Recharge**

Spring 2010 (January-March) was a very good season for snow and rain. Rainfall at Shasta Dam was 38.18".

Keswick Dam released 608,008 acre-feet of water; Keswick Dam released 582,307 acre-feet of water over the same period in 2009.

It is estimated that groundwater recharge due to precipitation is approximately 120,000 acre-feet during this period.

### **Estimated Annual Pumping**

It is estimated that 10,000 acre-feet of water was withdrawn from the Groundwater Basin.

### **Estimated Annual Discharge Due to Surface Streams**

It is estimated that 90,000 acre-feet of water was discharged to local surface streams.

### **Estimated Change in Water Levels**

Developing this information is optional in the AB 3030 Plan, and has not been calculated at this time.

## November 2009 Report

### Estimated Recharge

Summer 2009 (April-September) was a poor season for snow rain. Rainfall at Shasta Dam was 11.92”.

Keswick Dam released 3,415,274 acre-feet of water; Keswick Dam released 3,495,520 acre-feet of water over the same period in 2008.

It is estimated that groundwater recharge due to precipitation was nominal during this period.

### Estimated Annual Pumping

It is estimated that less than 24,000 acre-feet of water was withdrawn from the Groundwater Basin.

### Estimated Annual Discharge Due to Surface Streams

It is estimated that 70,000 acre-feet of water was discharged to local surface streams

### Estimated Change in Water Levels

Developing this information is optional in the AB 3030 Plan, and has not been calculated at this time.

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## June 2009 Report

### Estimated Recharge

Spring 2009 (January-March) was a poor season for snow and rain. Rainfall at Shasta Dam was 28.66”.

Keswick Dam released 582,307 acre-feet of water; Keswick Dam released 623,976 acre-feet of water over the same period in 2008.

It is estimated that groundwater recharge due to precipitation is approximately 90,000 acre-feet during this period.

### Estimated Annual Pumping

It is estimated that 12,000 acre-feet of water was withdrawn from the Groundwater Basin.

### Estimated Annual Discharge Due to Surface Streams

It is estimated that 70,000 acre-feet of water was discharged to local surface streams.

### Estimated Change in Water Levels

Developing this information is optional in the AB 3030 Plan, and has not been calculated at this time.

## November 2008 Report

### Estimated Recharge

Summer 2008 (April-September) was a poor season for snow rain. Rainfall at Redding Airport was greater than 80% below normal.

Keswick Dam released 3,495,520 acre-feet of water.

It is estimated that groundwater recharge due to precipitation was nominal during this period.

### Estimated Annual Pumping

It is estimated that less than 20,000 acre-feet of water was withdrawn from the Groundwater Basin.

### Estimated Annual Discharge Due to Surface Streams

It is estimated that 65,000 acre-feet of water was discharged to local surface streams

### Estimated Change in Water Levels

Developing this information is optional in the AB 3030 Plan, and has not been calculated at this time. However, early operation of the Anderson-Cottonwood Irrigation System has likely supplemented the shallow, central aquifer(s).

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## June 2008 Report

### Estimated Recharge

Spring 2009 (January-March) was a very poor season for snow and rain. Rainfall at the Redding Airport was 22% below normal.

Keswick Dam released 623,976 acre-feet of water; Keswick Dam released 879,901 acre-feet of water over the same period in 2007.

It is estimated that groundwater recharge due to precipitation is approximately 100,000 acre-feet during this period.

### Estimated Annual Pumping

It is estimated that 11,000 acre-feet of water was withdrawn from the Groundwater Basin.

### Estimated Annual Discharge Due to Surface Streams

It is estimated that 75,000 acre-feet of water was discharged to local surface streams.

### Estimated Change in Water Levels

Developing this information is optional in the AB 3030 Plan, and has not been calculated at this time. However, early operation of the Anderson-Cottonwood Irrigation System has likely supplemented the shallow, central aquifer(s).