OUTLINE FOR PRESENTATION:

1. 2012-2013 Recap
2. Current Groundwater and Surface Water Conditions
3. Expectations and/or Concerns for 2013
Gavins Point Dam released a record 150,000 cfs on June 14, 2011.
Meanwhile... in Iowa

Up to 20” above normal

Up to 6” below normal

(October 1 thru June 18, 2011) - Departure from Normal
2012-2013 RECAP

CURRENT DROUGHT BEGAN IN LATE SUMMER/EARLY FALL OF 2011

2012 STATEWIDE PRECIPITATION WAS ABOUT 9 INCHES BELOW NORMAL (~ 1/3 OF NORMAL)

HOW DOES THIS FIT IN HISTORICALLY?
Precipitation Deficit for 2012

Source: National Weather Service
HOW DOES 2012 FIT INTO HISTORICAL CONTEXT?

Statewide Annual Precipitation (inches)

1930’s: 6 of 10 years
1950’s: 4 of 6 years
1988-89: 2 years in a row
2012

Source: IDALS - State Climatologist
Northwest Iowa August 23, 2012
Central Iowa – August 20, 2012
**Storm Lake now at lowest level since ’70s**

Friday, October 19, 2012
By Dana Larsen, Special to the Daily Reporter

**Will the dredge be able to make port?**

When veteran lake watcher Mike Brecher took his last depth reading on the lake for the season Oct. 8, the day the dock that he uses for his measurements came out, there wasn’t much left to read.

Only 8 inches of water remained at the end of the dock near Sleepy Hollow.

Brecher figures the lake to be more than 35 inches below normal.
North Shore of Clear Lake September 2012
Trumbull Lake Clay County, Iowa September 2012
CURRENT GROUNDWATER AND SURFACE WATER CONDITIONS
Feet of Water Above Pump Rock River Well Field

Each line is one year apart.

Feb. 2011 to Feb. 2013: ~10 foot drop
7-Day average streamflow.
Des Moines River Upstream of Saylorville
Chariton River near the Missouri border.
West Nishnabotna at Hancock, IA.
EXPECTATIONS AND/OR CONCERNS FOR 2013

AREAS WHERE WATER SUPPLY CONCERNS OVERLAP WITH LIVESTOCK WATER NEEDS.
ACTIONS

DNR CONTINUES TO MONITOR THE SITUATION

OUR HYDROGEOLOGISTS WORK WITH COMMUNITIES AND WATER UTILITIES TO MODEL POTENTIAL SUPPLY OR CONFLICT AREAS

DNR, IN COLLABORATION WITH IDALS, IGOV, HSEMD, USGS AND OTHERS WILL CONTINUE TO ISSUE WATER SUMMARY UPDATES THROUGHOUT 2013
A snapshot of water resource trends during January 3 through February 6, 2013

Drought Monitor
National Drought Mitigation Center and partners
Feb. 5, 6 a.m. CDT

Precipitation
State Climatologist
Precipitation is shown as a percent of normal precipitation for the month of January. Normal is 100 percent. Normal precipitation for the period is 0.92 inch.

Streamflow
US Geological Survey
Seven-day average streamflow ending Feb. 6, 7 a.m.

Shallow Groundwater
Iowa DNR
For the four weeks ending Feb. 6, 7 a.m.
Recent Developments and Changes

Overall Conditions
Precipitation in January was above normal for Iowa, although normal is less than an inch. As the state moves into typically wetter months, above normal precipitation will be much more meaningful. Streamflows are improved and there are some streams of southeast Iowa that are showing above normal flow. Again, it should be pointed out that average flows are fairly low in January and small amounts of precipitation this time of year can change average flows rapidly. Of greatest concern are continued low groundwater levels in shallow sand and gravel in river valleys. Normal low demand in January usually results in rising groundwater levels, but those rising levels are not observed in many locations this year. If this trend continues, some water systems will begin the 2013 growing season with lower groundwater reserves than at the start of 2012.

Drought Monitor
Over the past month, conditions as reported on the drought monitor have remained essentially unchanged. About a third of the state remains in at least the D3, or extreme drought designation, while just over half the state is in at least D2, or severe drought designation.

It is interesting to note that just one year ago — as Iowa headed into the 2012 drought — there were no areas designated D3 or D4, and the designation D2 (severe drought), affected only a quarter of the state. One year ago over 60 percent of the state not in any drought condition, while today the entire state is designated in some state of drought.

Streamflow
Streamflow conditions have generally improved since the last water summary and areas that had flows below average (over a seven-day period) have improved to the normal flows. The lowest streamflow conditions are within the Des Moines and Skunk River basins which are less than 24 percent of normal streamflow. Streamflow conditions in western Iowa remain at the lower end of normal. However, USGS field measurements over the past week (Feb. 4-7) show that current flows in eastern Iowa are moving back into the below normal range.

USGS reminds Iowans that during the winter season, streamflow data may be impacted by ice formation and backwater, and that their data should be used as preliminary information only.

Shallow Groundwater
Shallow groundwater levels in the southeast two-thirds of the state improved slightly during January. Static water levels across the northwest third of Iowa were at or near seasonal and historic lows. Static water levels in the sand and gravel aquifers along the Osceola and West Fork of the Des Moines, and Rock rivers were at two-year lows, and are approximately one to four feet lower than January 2012.

The next Water Summary Update will be published March 7, 2013.

Notable Events for the Period

The following observations were made by Iowa DNR and other agency technical and field staff:

In some parts of northwest Iowa creeks without wastewater discharge flow are dry, most wetlands are dry, and most field tiles are not running.

Several observation wells located in shallow alluvial materials in northwest Iowa show water levels at two-year lows — lower than last summer. This is unusual due to the fact that this is the time of the year with the lowest typical water demand.

Lake levels are low and getting lower across much of the state. The water level at Saylorville Reservoir is below 930 feet, and continues to drop.

Water supplies, private wells and anyone using shallow aquifers should have a contingency plan in place for other sources. Iowa DNR water supply programs are working with communities to review and update water conservation plans in advance of the summer months.

Precipitation
Statewide January precipitation totaled 0.96 inches or 0.04 inches above normal, while temperatures averaged 21.6°F to 2.2°F above normal. The new year got off to a very dry start with a near-record low pace of precipitation until late in the month. January 19-27 had two larger statewide rain events. Thunderstorms over most of the southeast two-thirds of Iowa brought over an inch of rain to much of eastern Iowa.

Heavy snow that fell from south central through northeast Iowa January 29-30 helped push the snow totals to a statewide average of 3.6 inches — 4.1 inches below normal. This was the lowest January snow total since 2006 and ranks 19th lowest for the month among 126 years of records.

Temperatures were variable throughout the month with no extended periods of mild or unusually cold weather.

Prepared by the Iowa DNR in collaboration with the Iowa Department of Agriculture and Land Stewardship, the U.S. Geological Survey, and The Iowa Homeland Security and Emergency Management Division.

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Water Summary Updates:

www.dnr.gov search for “Water Summary Update”