

# BOULDER DAM CHIEF SPEEDS TUNNEL WORK

Crowe Expects to Have Colorado River Diverted From Its Course by October 12

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"Columbus discovered America on October 12. That happens to be my birthday, and it is my ambition to have the Colorado River discover a new course for itself at Black Canyon on that day."

That is what Frank T. Crowe, superintendent of construction on Boulder Dam, said today as he watched the crews at work lining with concrete the great diversion tunnels that will be the Colorado's "new course," in order that the great dam may be built where the flood flows now.

## DIVERSION DAM SLATED.

Crowe expects to have No. 3 and No. 4 tunnels, on the Arizona side, lined and ready for use by early October. In the meantime, when the present flood passes and low water stage is reached he will be constructing a diversing dam, just below the upper ends of the tunnels.

This diversion dam is not to be confused with the stronger and higher coffer dam that will be built by running a trestle bridge across the river and dumping stone, with height kept uniform as this temporary dam rises. Gradually and understandingly, the river's low-stage flow will be turned into the two tunnels. Crowe confidently expects that October 12 all the river will be going through the tunnels.

Just as soon as this end is accomplished, work on the coffer dam will begin. This dam must be in, strong enough and high enough to divert next year's flood through the tunnels when it comes in May and June with the melting of snows. The four will be able to take care of 200,000 second feet.

## SILT TO BE PROBLEM.

Construction men have wondered how the Six Companies, Inc., Boulder Dam contractors, will handle the huge mass of silt that must be excavated for the dam's foundation. Wet silt will "creep" and fill the hole as fast as it is scooped out.

Crowe and the directors and engineers of the contracting corporation have figured out a way. They will handle the silt dry—that is, dry enough.

"We will sink two shafts in the canyon walls, one on either side, drive tunnels under the river bed from them and run shafts from them up into the silt. We will put pumps to work, with engines placed back in the canyon walls, safe from falling rock as it is scaled from the walls in preparing the dam. We are confident we can dry out the silt to the stage that it will handle to best advantage," Crowe said today.

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The coffer dam will be a huge earth dam, with its upstream face covered with slabs of concrete. It will be built as speedily as possible after the river is diverted into the tunnels in October. It will go in just below the temporary, low-stage diversion dam, and must be virtually watertight. The purpose of the coffer dam is to do for the largest flood what the first, make-shift diversion dam will do for the river at low stage. That is, it must turn the river through the tunnels and keep the dam site dry.

Just now the river is at spring high stage. In the middle of the week 90,000 second feet was running swiftly through Black Canyon, with much driftwood on its muddy surface.

But it was no menace to the tunnels, for arch dams of concrete had been erected at the tunnels' ends. From the tops of these dams ramps lead down into the tunnels. Crews worked steadily at concreting the giant tunnels—fifty feet in diameter after being lined—with tunnel floors on which they worked from 20 to 30 feet below the surface of the flood that roared down the canyon.

The flood menaces only the trestle bridge, seven miles up the river, on which gravel for concrete is hauled from the Arizona side. If the bridge goes out, there is plenty of gravel piled in reserve, so there will be no stoppage of work.