Unit 06 GeoMations: How Dams Work

So let's take a look, a strange look, at a river. This is going along the river towards the sea. And this river happens to have trees that grow up on the riverbank. So you can get an idea how we're looking at this.

And what we want to do is ask what happens when we build a dam on this river? And we're concerned about the future of a couple of houses that used to be along the river, one just below the dam right down here, and the other one up above the dam up here, sitting along the riverbank. Well, they build the dam, and the dam fills with water, and it doesn't quite take out the house up above.

But the river's carrying mud. It's carrying sediment. And the sediment starts to deposit out into the lake to fill it with a delta.

Now, rivers have to go downhill. So as the lake is replaced with the mud, if the river were to hit a perfectly flat spot like this, you know what it has to do. It has to build up so that it's headed downhill. And so as the river builds the delta out into the lake to fill the lake, why, you have to bury the house, and that makes the person who lives there mad.

Now, at the other side, it's even more interesting. There's no floods anymore, so the river loses the ability to carry gimongous rocks, which might make the homeowner happy. But the water coming out from the dam is clean. It has no sediment in it. And if there's sand below the dam, why, the water will start washing that sand away.

And that will do a number of things. Your house, now, rather than sitting there right next to the riverbank-- you'll look out some morning and you're ready to fall into a giant hole that's been cut. And you get out there and you fall and then you say, oh, no, and you're very unhappy.

You are not nearly as unhappy as the salmon that are trying to come upstream, because as you may know, salmon like to get really amorous around sand and gravel bars. And if the river has washed away the sand, then you can't have fun with your honey and then leave your eggs there to do well. And so you have a big loss in salmon, as well as getting people's houses unhappy. And so putting a dam on a river makes a big difference.