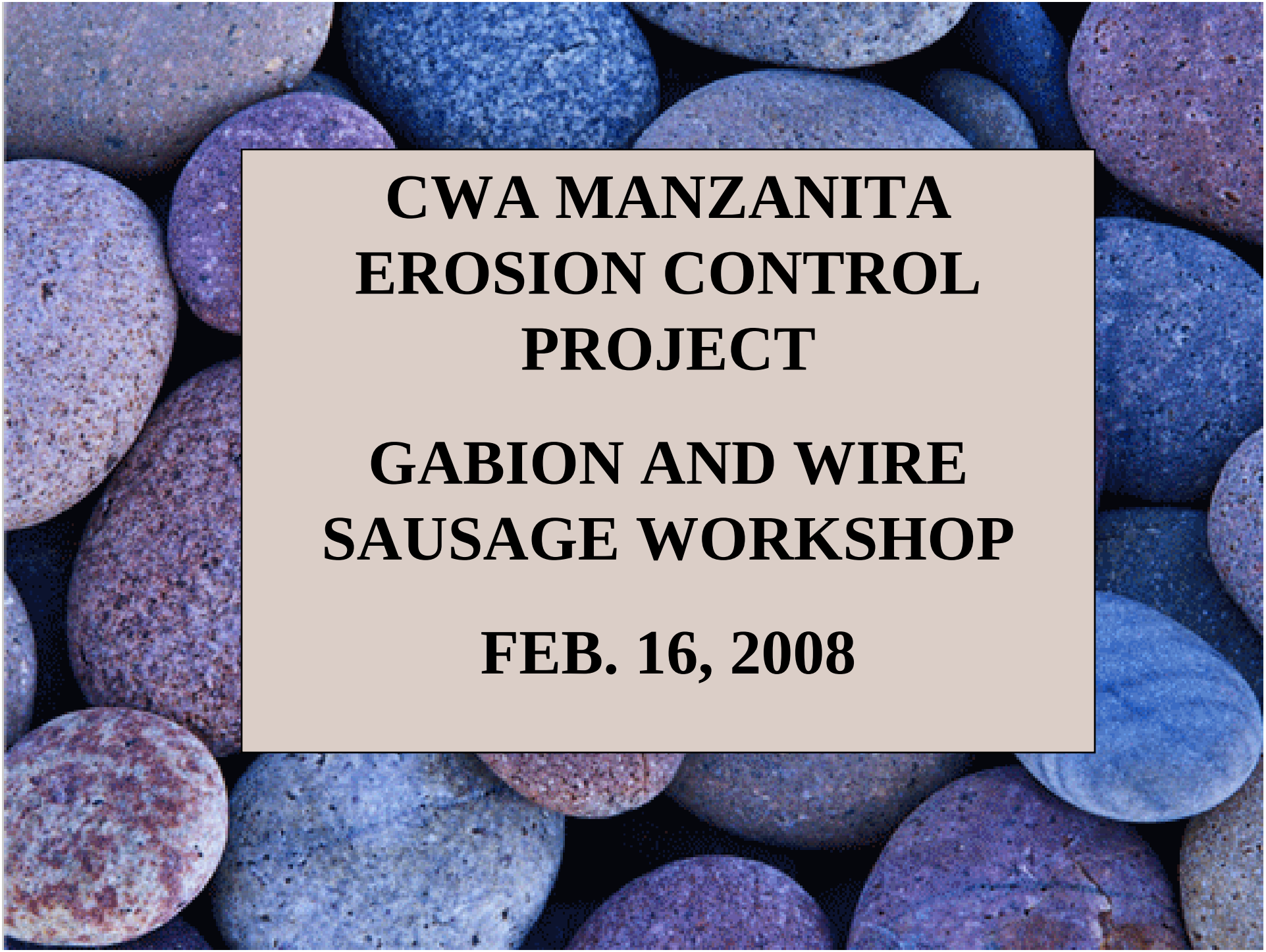
CWA MANZANITA
EROSION CONTROL
PROJECT
GABION AND WIRE
SAUSAGE WORKSHOP
FEB. 16, 2008

THANKS TO OUR PARTNERS!

- NRCS
- MACCAFERRI GABIONS
- WATERWISE
- LIL DON'S DIGGIN
- ROCKING R

• Funded by a grant from the United States Environmental Protection Agency and the Arizona Department of Environmental Quality

PHOTO GALLERY

<u>Problem</u>: Main channel developed two head cuts that were advancing up gradient 2 feet per rain event prior to interventions.

Channel measurements: Approximately 18’ wide, 5’ deep.

FEB. 16TH, 2008

7:00 A.M.

Rob Myers, Maccaferri Gabions, and backhoe operator check schematic and identify area to begin excavating for installation of gabion baskets.

While excavation begins, Rob explains how to use ring gun.

Insert ring into gun and add elbow grease to clamp together the sides of the gabion basket.

Using galvanized rings is easier than lacing wire to assemble baskets.

WHAT A TEAM!!!!

Nine baskets ready to go...

Gabions selected for strength and flexibility:

- **double twisted hexagonal mesh of steel wire**
- **reinforced by selvedges of heavier wire running along the edges**
- **transverse diaphragms.**

Extended-arm backhoe excavates according to NRCS, Maccaferri specs.

Josh, operator, adds finishing touches to trench keyed into bank approximately 18” on each side and into the floor of the channel approximately 12”.

FILTER FABRIC

Geotextile cloth is cut.

FILTER FABRIC

Geotextile cloth is cut. The fabric is placed underneath the gabions to limit the possibility of washout of fine material from underneath the units due to residual slow-flow of water that will exist beneath the erosion protection during storm events.

Two 9’ x 3’ x 3’ baskets are creatively telescoped and clamped together to form upstream side.

Three 9’ x 3’ x 1’ gabions are attached to upstream baskets to form apron. Apron will prevent scouring by dissipating the energy of water flowing over weir.

26 tons of rock – one at a time?

A BRILLIANT IDEA!!

WAY TO GO, JOSH!

Upstream view. Rocks are 6”-8” to prevent washing through mesh with four inch openings.

Seven hours later, only touchup to be done.

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SO WHERE WERE THE OTHER 25 PEOPLE??

Listening to resource speakers and dividing into work teams to hand build wire sausages.

Dave Matthews, NRCS , gives tips on using 12 gauge, hinged-joint wire to build structures.

Two strips of 4’ tall wire are laid side by side and connected with hog rings.

The wire is then laid across the gully in a trench that is keyed into the side and floor of the channel.

Smaller rock can be used since openings are only 2” x 4” .

An assembly line was just too much fun!

Edges of wire are folded over and hog ringed closed. The 8’ wide strip of wire when keyed into floor of channel created a sausage approximately 18” high.

An apron was added on the downstream side, and the project is complete!!

Edges of wire are folded over and hog ringed closed. The 8’ wide strip of wire when keyed into floor of channel created a sausage approximately 18” high.

Add an apron on the downstream side, and project is complete!!

AND TEAM B IS WHERE?

ON THE ROAD WITH THE BOY TOYS!

The road washout is expected to fill in as sediment is captured behind the new structure.

Another wire sausage and apron in place!

A REMARKABLE DAY!