Final Stabilization & the AZPDES Permit

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What is Stabilization?

- The state of being steady, firm, constant
- To be kept from fluctuation

...Successful stabilization frequently not achieved
(example above shows a private development)
How is final stabilization defined by AZPDES Permit?

- Uniform perennial vegetative cover - 70% of native background vegetative cover

  OR

- Permanent Stabilization measures (riprap, decomposed granite, gabions, textiles)
What if no background vegetation?

Before construction: No vegetation

After construction: No vegetation

70% of Nothing = Nothing
...NOT can be filed, AZPDES permit closed
What are typical stabilization materials used for Pima County roads?

- **Inorganic**
  - Riprap
  - Rock Mulch
  - Geotextiles

- **Organic**
  - Seeding
Inorganic

Riprap

Rock Mulch

Geotextiles
Organic
...especially grasses
Issues encountered in achieving final stabilization

- Failure of hydroseeded areas to germinate
- Design challenges
Failure of seed to germinate

Rock vs. Seeding

...same project, same conditions

Seeding only

Seeding over rock mulch
Failure of seeded areas to germinate

- Inadequate soil preparation
- Poor timing of application
- Inappropriate seed mix
- Misuse of application
- Proliferation of invasive species

Germination where irrigation emitter only
Design Challenges
…waging war against erosion

Downstream View
Upstream View

After rain event

After rain event
...during construction

1st rain event

another rain event

...yet another rain event
...post construction fixes
Design challenges

SWPPP delegate regularly follows up the site post construction and frequently encounters stabilization issues that can’t be solved by typical SWPPP solutions such as another application of seed or more riprap.
Best way to reduce stabilization issues on projects is to avoid excess clearing of vegetation at the start of construction.

- When vegetation is cleared, stormwater issues are introduced immediately.

- When vegetation is cleared, buffelgrass and other invasive species move in.
Preservation Fencing

Clearly defining limits of work area limits makes final stabilization easier to achieve
Buffelgrass invading
Stabilization from the start…

...avoid clearing more than necessary
Successful stabilization dependant upon project site

Some sites are easy
Some sites require a little more effort
Questions/Comments

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