

Survival of the Fittest

The Evolution of Mitigation Measures From Keyboard to the Construction Site

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Background

- Essex Environmental
 - Based in Half Moon Bay with offices in San Luis Obispo, Carlsbad, and Salt Lake City
 - Primary focus is work on linear projects for the energy sector
 - Take projects from planning to permitting and through compliance

How it All Starts

“Environmental mitigation is too often a perpetuation of past errors . . . a recycling of what may or may not have worked on other projects ...”

What makes a good mitigation measure?

- Relevant
- Adjustable
- Responsive
- Measurable
- Feasible
- Enforceable

Relevant

- Project specific
- Resource specific
- Site specific

Responsive

- Respond to concerns
 - Regulatory
 - Resource
 - Public
- Timely

Feasible

- Can it be done (safely)?
- Is it financially responsible/ reasonable?
- Does it pass the laugh test?

Adjustable

- Get input from construction
- Focus on intent
- Make provisions for field changes

Enforceable

- Be specific
- Avoid “weasel words”
 - If possible
 - Where practicable
 - If necessary
- Adopt contract language

Measurable

- Be clear about end results
- Monitor during implementation; track compliance
- Keep data and report on success

The Weak Links

The Mitigation Measure

- Install and maintain exclusion zones around cultural resources
 - Standard mitigation

The Intent

- Ensure cultural resources are
 - Identified
 - Protected during construction
- The exception...

The Mitigation Measure

- Dewater to vegetated upland areas
 - Standard mitigation

The Intent

- Protect water resources and contain sediments during dewatering operations
- Use vegetation to filter turbid water
- The exception...

The Mitigation Measure

- Install silt fence on the right-of-way boundary when constructing through wetlands
 - Standard mitigation

The Intent

- Protect wetlands from fill during construction
- The exception...

The Mitigation Measure

- No construction is allowed within 1,000 feet of schools during school hours
 - Standard noise mitigation

The Intent

- Eliminate potential noise impacts to students
- The exception...

Evolution of the Fittest

The Mitigation Measure

- Refueling shall occur 100 feet away from wetlands and waterbodies, unless otherwise approved by the Environmental Inspector
 - Standard mitigation

The Difference

- Flexibility to make decisions in the field
- An example...

The Mitigation Measure

- Debris, soil, silt, bark, rubbish, creosote-treated wood, raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances which could be hazardous to aquatic life, resulting from project related activities, shall be prevented from contaminating the soil and/or entering the waters of the state...

The Mitigation Measure (continued)

- Any of these materials, placed within or where they may enter a stream or lake, by Operator or any party working under contract, or with the permission of the Operator, shall be removed immediately

The Mitigation Measure

- The cover and composition of reseeded areas should be similar to adjacent areas (with 70 percent cover)
 - Standard mitigation

The Difference

- Allows for actual conditions
- Doesn't try to create an "island" of native plants in a sea of non-native plants

Food for Thought

- Lessons learned
- Constructability review
- Get out into the field
- Peer review
- Review variances from past projects
- Hire experts