

**The Environmental Management Skillset:
A balance between engineering/science and management.**

Moderator: Scott Wolcott, PE

Overview

Some say that a good environmental manager needs to be a good business manager with a little scientific and technical environmental knowledge. An argument in support of this contention is that the environmental field is too broad for any one person to be an expert in all of them and thus a good manager would rely on specialists to solve environmental problems.

Others believe that a lack of technical or scientific skills might render an otherwise great business manager ineffective when working in the environmental arena. Relying principally on technical specialists seems not to be enough because they may lack the technical background needed for the much broader environmental discipline.

Perhaps what are needed are environmental managers who have a moderate amount of scientific and technical background and also good organizational management skills. A good environmental manager would know how to get things done in the organization and what specific questions to ask and how to work with specialists to determine the most effective and efficient solution.

The questions we want to ask and answer here are:

1. What is an appropriate balance of skills?
2. What, at a minimum, is specifically needed on each side of this balance?
3. Based on this balance, what should undergraduate curriculum contain to prepare students for a career in environmental management?

Proposed Discussion (Plan A)

- 1) Introduction
 - a) Introductions
 - b) Overview
 - c) Methodology
 - i) Determine the balance between business manager and engineer/scientist.
 - ii) Recommend curriculum content for Environmental Management program.
- 2) Determining the Balance
 - a) Defining Professional Characteristics
 - i) Business manager
 - ii) Engineer/scientist
 - b) Environmental Manager job description
 - i) List tasks & responsibilities
 - ii) Rate importance and/or frequency
 - c) "Quantify" the balance
 - i) Associate task/responsibility with profession
 - ii) Review and qualify the results
- 3) Recommend Environmental Management curriculum
 - a) Initial framework assumptions
 - i) 3 semester credit hours per course
 - ii) Approximately 120 total credit hours
 - iii) 4 year program
 - (1) cooperative education or internships?
 - iv) 50% general education courses
 - (1) Liberal arts, sciences, and mathematics
 - v) 50% program specific courses
 - (1) Technical, applied, business...