

Proposed Skill Sets for Effective Natural Resource Managers of the Future¹

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Abstract: The sequence of finding mineable minerals, securing license to extract, extracting and restoring land to a sound ecologically functioning condition is the ultimate challenge to natural resource managers. Whether managers are regulators, practitioners or end users, objectives for the extractive and resources industry are to profitably provide the extracted product while maintaining environmental conditions, within a framework of cultural and social sensitivity, before, during and the after the operation. Thus, the educational and experiential transformation of persons to fully engaged, natural resource managers whom can successfully negotiate the mining life cycle and secure the industry objectives is increasingly multidimensional. Therefore, a rigid successional education model is functionally being replaced by more of an agile educational model for natural resource managers. In this model, trainees may follow a diversity of educational pathway as they become versed in a diversity of sciences, arts, engineering, legal, social, cultural, ethical, and environmental to provide a more “global” context applied to meet the industry objectives. Ultimately, the quality of these skill sets become tested in decision-making. Three tenets habits of effective decision-making are: use the best information available, understand the laws that apply, and take into account the immediate, short-, medium-, and long-term public interest in the decision. Support for these tenets overlap with one another but include multi-disciplinary scientific studies, economic imperatives, knowledge of legal risks, aesthetics, ethics, and socio-cultural values. There have been shifts in societal values especially as the newest generation has developed deep relationships with technologies. They are re-creating our world, and demand co-created educational frameworks. Several case studies will highlight the use and misuse of these precepts in the decision-making process. The tensions that challenge the integrity of the process will be highlighted using an example of a mine-land reclamation course conducted in a country (Mongolia) that is struggling with disturbed land reclamation issues. The presentation will conclude with a listing of a proposed skill set needed by natural resource managers of the future.

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