

ITRC PROJECT PROPOSAL: FIELD MANUAL FOR SELECTING AND DESIGNING ECOLOGICAL SYSTEMS INTO REMEDIATION OR OTHER CLEAN-UP SITES

PROPOSAL DATE: May 2007 [*Proposals are due to ITRC Program Administrator by June 1 each year*]

Please use brief statements or bullet items to input the requested information.

Proposal Contact:

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Problem Statement (why is this project necessary?)

There is no clear field related guidance for practitioners to use to apply ecological land-reuse to remediated sites. As reported in the previous guidance the proposal must "Tell the Story" and expect that many of the parameters evaluated during a proposal for ecological land re-use are qualitative and semi-qualitative. The Forest Service (describe the research branch) has completed research regarding the social values of habitat and ecological landscapes. The social values can be used as part of the design selection criteria to help ensure successful long-term project solutions. These value parameters can now be incorporated into a how-to manual prepared by the new ITRC Ecological Land Use Team.

Solution / Impact (how will the project impact the environmental marketplace?)

This new Ecological Land Use Team Will develop a field manual describing how, following site characterization, one would design an ecological reuse compatible with the surrounding service capacity of a site. Equally important is establishing numeric values for the social benefits of the ecological enduse.

These additional values will further encourage the consideration and application of ecological elements into remediated or mitigated sites. The integration of social value evaluation into the design selection process will benefit mitigation and remediation sites, especially in the voluntary cleanup and Brownfields arena. We will the opportunity to combine multiple ITRC teams' activities and resources.

Success Measures (how you determine the project impact to the market place)

1. 5 new and documented proposed designs which include Eco land use as an endpoint
2. Additional concurrence by states after understanding the application during the training.
3. 5 new consultants who use the field manual and classroom training to design an application where ecological land reuse is the proposed endpoint

Summary of Deliverables (primary project outputs)

The team will develop a concurrence document that will be best described as a "Field manual for selecting and designing ecological systems into remediation or other clean-up sites. We will follow-up with a classroom training as need is recognized.

Project Schedule

Project Schedule:

1. Year 1 & 2
 - a. Team final scoping, design and development of **Field Manual For Selecting And Designing Ecological Systems Into Remediation Or Other Clean-Up Site** (e.q. Technical and Regulatory Guidance)
 - b. Information compilation and development of the basis for a decision flow diagram
2. Year 2
 - a. simultaneous preparation of the classroom curriculum (as need defines) and completion of the Field manual)
3. Year 3 and 4
 - a. Classroom training delivery
4. Year 5
 - a. Evaluation and modification as necessary of Field manual and classroom training too stay up-to-date with current research and developments.

Target Audience

State and Federal Regulators, State Clean up staff, state and federal Brownfield's staff, State natural resource management staff, local land use planners and resource engineers, stakeholders

Training Resources Required

States Interested in Supporting Project

Charles Johnson, Colorado; Kenneth Beard, Pennsylvania; Van Kiesler, South Carolina; Rafael McDonald, Massachusetts; Mark Searfoss, New Jersey; Rick Thompson, Montana

Personnel:

Instructors

- States
 - Charles Johnson, Colorado DHEP, (Original Team leader)
 - Kenneth Beard, Pennsylvania
- Federal agencies
 - Letitia O’Conor, DOE (Tentative)
 - Social scientists from Forest ‘Service R&D
- Industry
 - Chuck Harman, AMEC
- Academia
 - (TBD from Original Team)

ITRC Program Support

- Technical Team Program Advisor during development and testing of the course and overall implementation evaluation.
- Classroom Training Program Support for strategy development, quality assurance, course planning and delivery, and success evaluation.
- Outreach Support maintains the ITRC website for course advertisement and internal training program website for course development needs utilizes existing advertising opportunities, facilitates shipping and printing of documents to training venues and related programmatic support.
- State Engagement provides quality assurance and testing (identify state students for Dry Run testing).
- ITRC/ECOS management support provides classroom training venue coordination and contract implementation.

Financial Resources

| Year | TRAVEL ⁽¹⁾ | | | CONTRACT SUPPORT ⁽²⁾ | | MATERIALS & FACILITIES | TOTALS | |
|--|-------------------------|-------------------------|-----------------------------|---------------------------------|--|------------------------|--|-----------------------|
| | Instructor | Proctor | State Regulator Scholarship | Team PA (labor & travel) | Training ⁽³⁾ Program (labor & travel) | | Materials ⁽⁴⁾ , Printing, Calls | Facilities & Catering |
| 2008 Curriculum Development & Testing | \$25,200 ⁽⁵⁾ | \$0.00 | \$11,000 ⁽⁶⁾ | \$68,000 | \$46,000 | \$9,000 | \$2,000 | \$161,200 |
| 2009-2011 Public Course Delivery (10 courses) ⁽⁷⁾ | \$48,000 ⁽⁸⁾ | \$22,000 ⁽⁹⁾ | \$220,000 ⁽¹⁰⁾ | \$0 | \$330,000 | \$82,000 | \$320,000 ⁽¹¹⁾ | \$1,022,000 |

| | | | | | | | | |
|--|----------|----------|-----------|----------|-----------|-----------|-----------|-------------|
| 2012 Evaluation & Update Guidance and Classroom Training Curriculum | \$23,100 | \$0 | \$0 | \$25,000 | \$10,000 | \$15,000 | \$0 | \$73,100 |
| TOTALS | \$96,300 | \$22,000 | \$231,000 | \$93,000 | \$386,000 | \$106,000 | \$322,000 | \$1,256,300 |

- ⁽¹⁾ Based on ECOS/ITRC assumption of \$1200 average per trip
- ⁽²⁾ Outreach Program support beyond what is already a part of their general outreach activities may not included. Additional resources (if any) to be determined.
- ⁽³⁾ See ITRC Training Program Strategy (Aug. 2006) for Classroom Training Development and Delivery Functions
- ⁽⁴⁾ Assumes associated ITRC guidance document and course booklet provided to each participant
- ⁽⁵⁾ Based on 7 instructors to 3 meetings. 4 principle instructors and 3 alternates during development
- ⁽⁶⁾ Based on 10 state regulator travel scholarships for dry run
- ⁽⁷⁾ Includes projection of 120 participants per course for 10 courses (2.5 days), an approximate per person cost of \$1050 for development and delivery.
- ⁽⁸⁾ Based on 4 instructors per public delivery
- ⁽⁹⁾ Based on 2 state regulator training proctors per public delivery
- ⁽¹⁰⁾ Based on 20 state regulator travel scholarships per public delivery
- ⁽¹¹⁾ Includes continental breakfasts, lunch, breaks and one reception for attendees
- ⁽¹⁰⁾ Based on 20 state regulator travel scholarships per public delivery
- ⁽¹¹⁾ Includes continental breakfasts, lunch, breaks and one reception for attendees

Related Work:

- **ALT-1, 2003; and ALT-2, 2003 on [Design, Installation and Monitoring of Alternative Final Covers](#)**
- **ALT-3, 2006, [Technical and Regulatory Guidance for Characterization, Design, Construction and Monitoring of Bioreactor Landfills](#);**
- **ALT-4, 2006, [Technical and Regulatory Guidance for Optimizing and Ending Post Closure Care at Landfills](#);**
- **ECO-2, 2006, [Design of Ecological Land Reuse of Remediated Sites](#);**
- **Phyto-2, 2001, [Technical and Regulatory Guidance for Phytotechnologies](#)**
- **Wetlands-1, 2003, [Technical and Regulatory Guidance for Constructed Treatment Wetlands](#)**
- **Wetland-2, 2005, [Technical and Regulatory Guidance for Characterization, Design, and Monitoring of Mitigation Wetlands](#);**
- **[Rad-3, Issues of Long Term Stewardship, State Regulator's Perspective](#)**
- **DSP-3, 2003, [Technical and Regulatory Guidance for Using Polyethylene Diffusion Bag Samplers to Monitor Volatile Organic Compounds in Groundwater](#)**
- **BRNFLD-2, 2006, [Property Revitalization– Lessons Learned from BRAC and Brownfields](#)**