



1

PROTECT Training Core Presentation

Dr. Thomas Sheahan, Training Core Leader

Ms. Kristin Hicks, Core Director

January 23, 2013



Organization

2

PROTECT: 4 institutions

Northeastern - Ms. Kristin Hicks, Core Director
- Ms. Melanie Smith, Educ. Asst.

Michigan

UPR Mayaguez - Dr. Aidsa Santiago Roman

UPR-MSU

Internal Trainee Advisory Group – from all institutions

Internal Investigators Advisory Group

External Advisor Board

External Evaluator – SageFox Consulting, Amherst, MA



Guiding Principles

3

Core is dedicated to:

- Providing high quality training opportunities to our trainees
- Differentiating training experiences for different trainee levels
- Serving as a strong integrating force for the whole program
- Continuously improving the trainee core offerings and opportunities

Unique to PROTECT

- Multiple institutions
- Geographically spread out
- Cultural/language diversity

Common for all SRP Centers

- Busy investigators & trainees – balancing act
- Biomed/non-biomed spread
- Budget constraints

- Original Proposal Training Core Aim

The aim of the training core is to provide high quality interdisciplinary biomedical and non-biomedical training, education and mentoring for the diverse group of students at the institutions participating in the PROTECT program.

- Proposed Revised Core Aims

The aim of the training core is to 1) provide high quality interdisciplinary biomedical and non-biomedical training, education and mentoring **experiences** for **trainees** at the institutions participating in the PROTECT program; 2) **with the RTC, extend applicable PROTECT training experiences to the greater SRP/EPA community, and 3) coordinate training activities with, and trainee participation in, the Community Engagement and Research Translation Cores.**



Training Core Objectives

6

- **Revised** Training Core Program Objectives **will provide opportunities/experiences for** students to:
 - **understand and integrate** problems and concepts of health impacts assessment of contaminated systems, contaminant detection, fate and transport, exposure routes, remediation, and information management;
 - **develop competence** in the applied methods underlying research core activities;
 - advance their technical, professional and personal **skills/knowledge/attitudes** to motivate and prepare them for successful careers in these fields.
 - participate in and contribute to the CEC and RTC activities, **including serving as a resource to the RTC for the greater SRP/EPA community**
- **In addition, the TC will**
 - **promote environmental health fields to underrepresented populations through recruitment activities**

Trainee Statistics

- 36 Trainees as of January 2013
 - 8 from NU, 10 from UMich, 9 from UPRM, 8 from UPR-MS and 1 from WVU
 - 2 BS candidates, 14 MS candidates, 2 MPH candidates, 12 PhD, and 6 PostDocs
 - 23 women and 13 men
- 9 Trainee Graduates as of October 2012
 - 4 PhD, 1 MS, 4 BS; 3 faculty members from our alums
- Trainee Awards
 - Cassie Korte – 2 poster awards in Spring 2012
 - Amanda Laskoskie – Karst Scholarship in Spring 2012
 - Celys Irizarry – KC Donnelly Externship Award in Summer 2011
 - Juan Manuel Paz-Garcia poster competition in Summer 2011

Training Core Presentations and Activities

- Webinars - 25 to 50 attendees per presentation
 - 12 presentations from Fall of 2010 – Spring of 2012
 - 6 presentations planned from Fall 2012 – Spring 2013
 - Technical Topics alternate with history, community engagement, risk management
- Town Meetings – critical to build community
 - 6 meetings in 2010/2012
 - 6 meetings to be held in 2012/2013
 - Led by senior-level Trainees
- Trainee Skill Builders
 - 7 presentations in 2011/2012

Training Core Presentations and Activities Cont.

- Let's Talk About Water Symposium in 2011 – with RTC
 - Over 200 attendees
- PROTECT Orientations
 - 2010 and 2012 Events – most recent focused on Trainee presentations
- Research Training Card Presentations
 - 13 Trainees presented at the 2012 PROTECT Retreat
 - 23 Trainees presented at a March 2012 Webinar
- Research Poster Presentations
 - SRP Annual Meetings – 7 – 10 presentations per year
 - 2012 PROTECT Retreat - > 20 presentations
 - 2010 and 2011 Research and Industrial Collaboration Conferences - 12 presentations



SageFox Consulting Evaluation

10

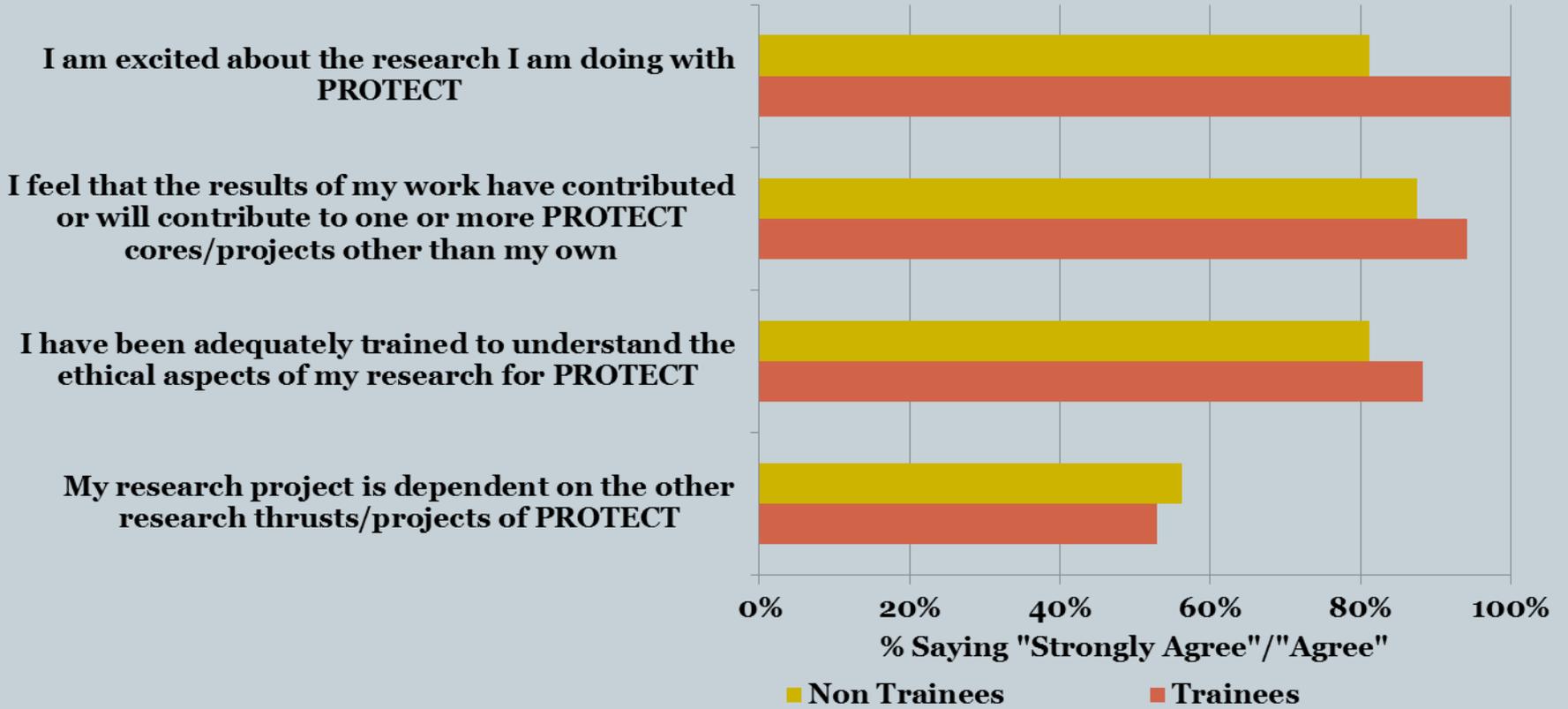
- Data collection:
 - Program Retreat Interviews (Feb./March 2012)
 - Participant Survey (Sept./Oct. 2012)
 - Various meetings with Training Core in 2012
- Produced evaluation report in Dec. 2012
- Follow-on survey planned for longitudinal analysis
- Publications based on results



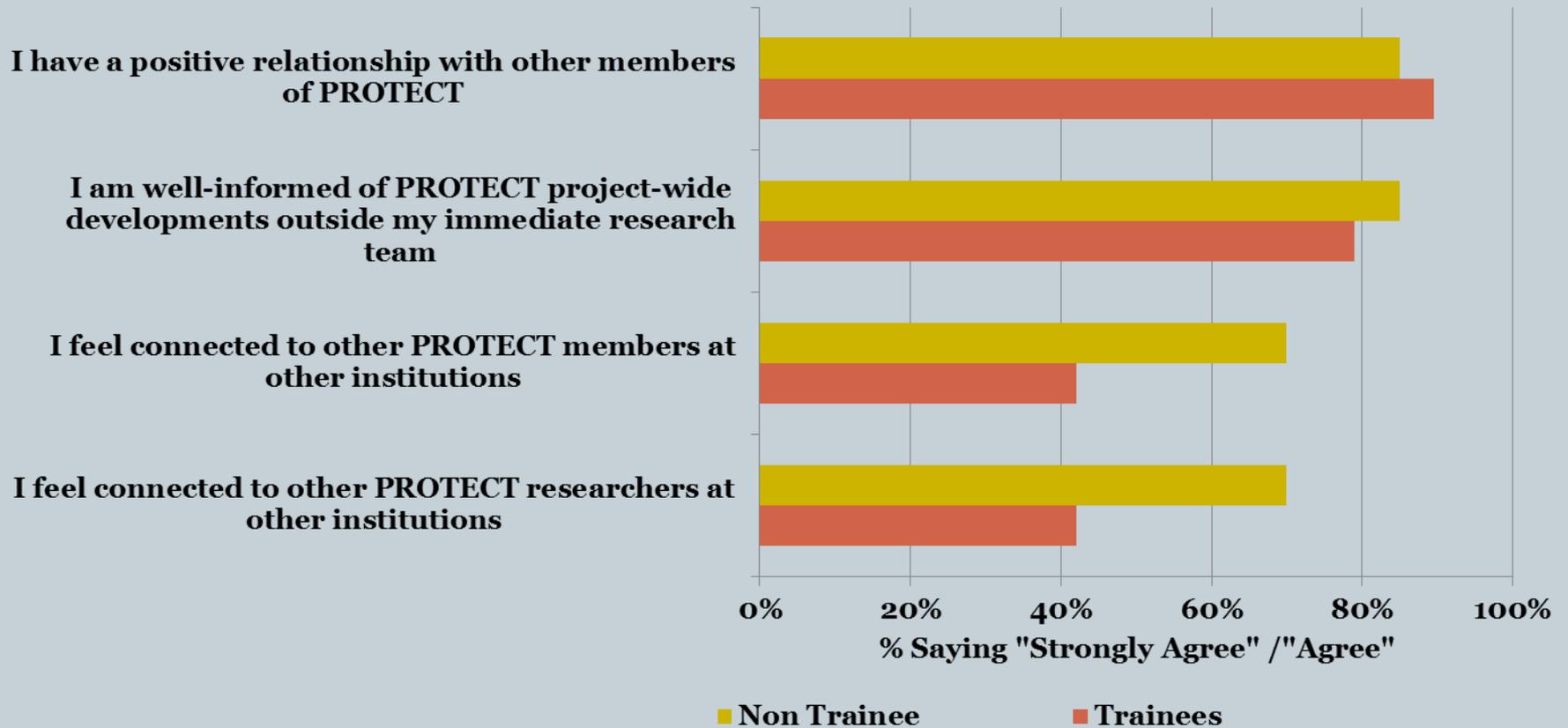
Sage Fox Evaluation

Excitement & Engagement in Research

ABOUT THE RESEARCH EXPERIENCE



INTERDISCIPLINARY CONNECTIONS

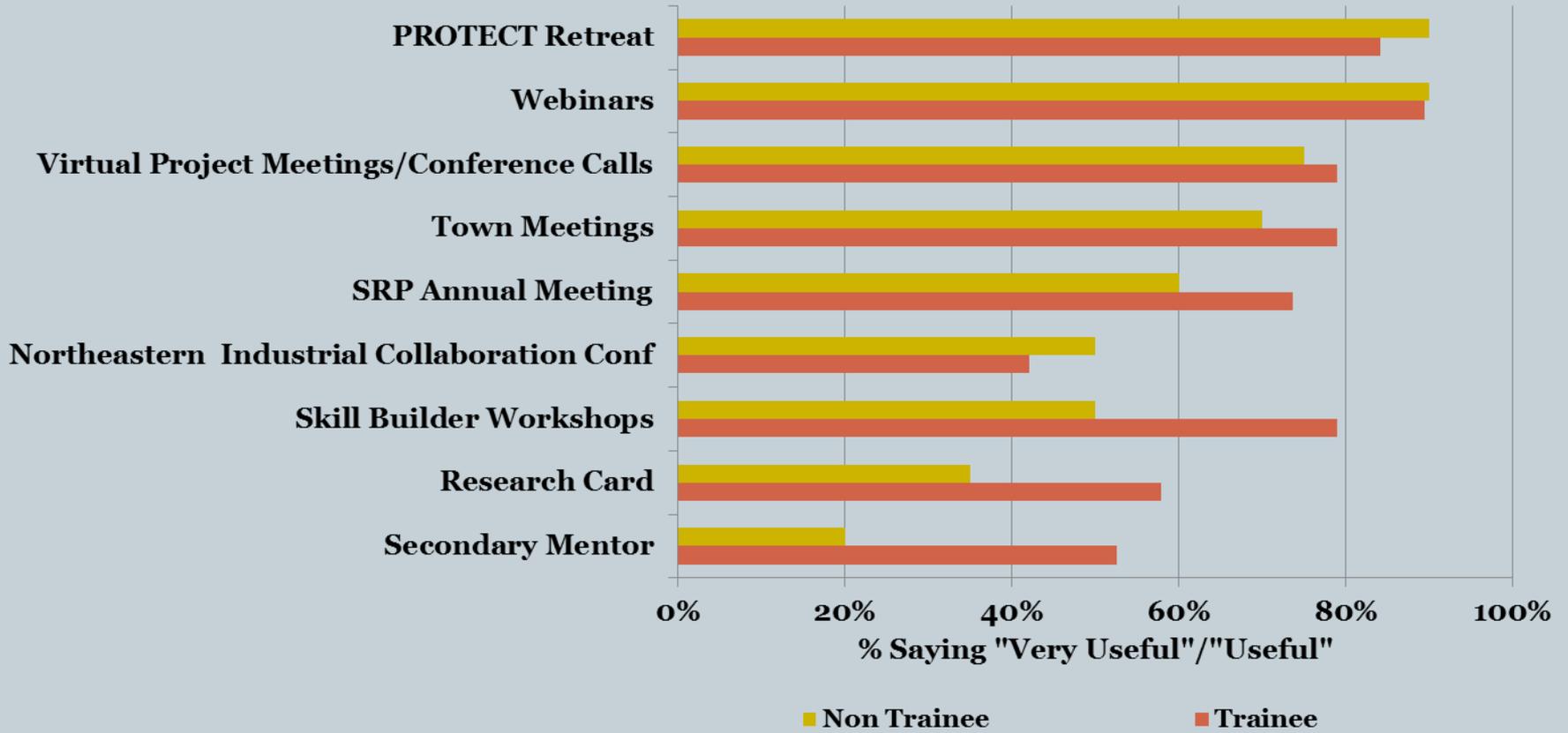




Sage Fox Evaluation

Training Core Activities

USEFULNESS OF PROTECT ACTIVITIES/RESOURCES



Continuing Activities

- Webinars – part of our “brand” – Shows link with RTC
- September Orientation (with changes)
- Town Meetings
 - emphasize “Town Commons” nature – key for connections
 - critical for trainee participation
- Maintain investigator liaison group, student committee, and SRP SPAN participation
- External Advisory Board – Emma Fernandez (UPR); Dawn Terkla and Donna Qualters (Tufts)

Changes to implement

- Develop a more robust Recruitment Plan
 - Spanish-speaking students
 - SACNAS, MAES, and SHPE
 - Recruiting for environmental health, not just PROTECT
- Continuous improvement of Orientation experience
- Promoting fellowship/training grants
- Modified cross-disciplinary mentoring plan
- Differentiated Training Experiences
- Offering “menu” of various TC activities – PIs & trainees



PROTECT Training Core Objectives Satisfied

Activity	1. Integration	2. Research methods	3. Career Skills	4. Trainee RTC/CEC participation	5. Recruitment	6. Resource for RTC dissemination
Webinar attendance	X	X				
Town meeting prep/attendance			X			
Assist with PROTECT Academy and other training module prep/delivery			X			X
Contribute to interdisciplinary publication/presentation	X	X	X			
Present on environmental health research, etc. at recruitment events			X		X	
Presentation at discipline-specific meeting/conference		X	X			
Participate in external and internal networks	X		X			
Proposal		X	X			



Continuous Improvement

17

- PROTECT Academy – audience: EPA, SRPs, public?
 - Interdisciplinary Modules – 1.5 hours, every Friday in June 2013
 - Proposed topics – Contaminant Transport, Epidemiology, Toxicology, Remediation, Risk Assessment
 - Combine and propose one-day workshop at 2013 Annual SRP Meeting
 - Interaction with RTC
 - Seminar course or Professional M.S. based on this?

- Evaluation
 - Continue with SageFox
 - Obtain more data on trainee experiences – mentoring, integration
 - Produce publications for other journals
 - ✦ Higher Education
 - ✦ Environmental Health Education
 - ✦ EHP Commentary
 - SageFox provides good input on activities, organization, integration

IOWA SUPERFUND TRAINING CORE

Gabriele Ludewig, Tom Cook, Larry W. Robertson

Emphasis: multidisciplinary, international,
holistic → without borders

GOALS

- Recruiting
- Multidisciplinary Research Training
- Personal Skills Training (writing, communicating, etc)
- Preparing for a job: a good CV and good connections
- Training Program Outreach to Stakeholders
- New Connections - the Future
- Tools - Budget

Recruiting - what works, what doesn't

- Recruiting at meetings (SOT etc)
 - ▣ so-so
- Recruitment by UI recruiters at recruitment meetings
 - ▣ We give them flyers - I have not seen any success yet
- Through our degree programs (Tox, Eng, others)
 - ▣ Excellent! Applicants want a degree in something and then see the interdisciplinary options and possibilities of the Superfund → great SYNERGISM!
- Student-to-student
 - ▣ mouth-to-mouth works, they trust each other, send students to undergrad recruitment events at meetings

Recruiting - what works, what doesn't

– cont.

- Summer Research Experience (SROP)
 - ▣ Highly motivated students
- Biosciences Recruitment – 1 year before committing to a program
 - ▣ Excellent domestic students!
- Faculty-to-faculty/alumni
 - ▣ got some great students this way, particularly from abroad

**Overall: we get excellent students, but
to attract minorities to UI is difficult**

Multidisciplinary Research Training

WORKS SUPER!

- IA Superfund has great multidisciplinary team!
 - ▣ PI's are participants on each others projects
 - ▣ UI's one-fund policy helps, no administrator in the way
- Open labs – shared equipment and expertise
 - ▣ Whatever a trainee needs – if it's present, it's available
- Multidisciplinary Thesis Committee
 - ▣ A requirement, but actually a natural consequence
 - ▣ Example: Brita (Human Tox, Occupat. Env Health, Industrial Hygiene, Internal Medicine, Environmental Engineering)

Personal Skills Training

So multifaceted - use every tool available

- Training in Communication Skills
 - ▣ Monthly joint Superfund Meeting
 - Trainees present the research
 - ▣ Journal/research club
 - Trainees analyze paper of their choice
 - Trainees present their research
 - ▣ Seminar Series
 - Students have to give talk before graduating
 - Experts give talks about “How to ..”

Personal Skills Training cont. 1

- Training in presentation skills - Trainees present posters and oral presentations at
 - ▣ Local Meetings (UI Research Week, GS Research Week)
 - ▣ Regional Meetings (CS-SOT, others)
 - ▣ National and International Meetings (SOT, ... Superfund Meeting)
- Training in Presentation Skills
 - ▣ Instructions in poster preparation
 - ▣ 'Dry-runs' of poster and oral presentations

Personal Skills Training – cont. 2

- Writing papers
 - ▣ Seminar talks from Pro's
 - ▣ Workshops from UI
 - ▣ Trainees help with manuscript reviewing
 - ▣ First draft from trainee
- Grant writing
 - ▣ Workshops and one-on-one with Grad College staff
 - ▣ Availability of pilot grants
- Teaching
 - ▣ Limited resources – trainees focus on research

Preparing for a job: a good CV and good connections

Student placement - the latest demand on faculty

How to approach this task

- Facilitate Networking
 - ▣ Students invite seminar speaker and organize visit
 - Students love it/work together/built connections for life
 - ▣ Student lunches with invited seminar speakers
 - Lot's of pizza – for the students, speaker often gets nothing
 - ▣ Alumni invited as seminar speakers
 - Great hit with trainees (not only ours)!

Preparing for a job: a good CV and good connections, cont.

- Networking cont.
 - ▣ Take trainees to meetings
 - Lot's of driving
 - Lot's of money
 - but it is VERY important part of their training
- UI workshops in CV preparation, interviewing, etc
- Facilitate Internships ?! - companies, EPA, ...
- Encourage use /create Societies resources (SOT, CS-SOT provide workshops, seminars etc)

Training Program supports Outreach to Stakeholders

- We help and cooperate with Superfund Outreach Core and others (David Osterberg, Craig Just, others)
 - ❖ High School student (middle school?) Research Field Trip to UI
 - Also great training for our Trainees!
 - ❖ Teach the Legislatures

Training Program supports Outreach to Stakeholders, cont

- Undergraduate (summer) Research Experience
 - Potential future student?! Minority recruiting?!
- Serve as Experts to Lay persons – Service – has not been an emphasis yet (sporadic)
 - ▣ Media, local gov and ngo's

These are kind-of “Non-Traditional” training activities, which still need to be better explored

New Connections - the Future

- Exchange with other universities – example Netherlands
 - ▣ Alumni send good students
 - ▣ Formal exchange program is in the works
- Provide support for emerging programs in developing countries – example Africa
 - ▣ PCB Workshop (every other year, different place)
 - this time (2012) with special symposium “PCBs in Africa” – unique opportunity for African scientists
 - ▣ The Gambia – help for a fledgling
 - Tom Cook exploring, UI alumnus as local connection

New Connections - the Future, cont.

- Seek more interaction with other Superfund programs
 - ▣ K.C. Donnelly awards and beyond
 - We encourage trainees - More is possible
 - ▣ Small cooperation projects
 - Like the stimulus grants! Great idea, we need more
 - ▣ Serve as external reviewer (LW Robertson)
 - It provides help for sister programs and could ...?

Environmental problems can only be solved together

**Training international students is a first step,
establishing cooperations a necessary next step**

Tools

What helps, what works

- Great team
- Support from UI (Grad College, others – they listen!)
- Monthly Superfund Meetings – student’s run the show
- Weekly Seminars – with student participation
- Challenges: Meetings – Competition – Awards – Outreach
- Connections

Budget

Concerns for the future

- Partial Fellowships and tuition from NIEHS are very generously matched by Grad. College!
 - ▣ If we cannot use funds for fellowship and tuition
 - we will lose the matching funds
 - we cannot support student exchanges
- How do I pay for other activities with rising constraints?
 - ▣ food, computers, teaching, reimbursement for outside stakeholders, ...

Outlook: tips and suggestions

- We have to be more than PI on a Training grant, i.e.
 - for holistic training we need to
 - use all resources that may be available

- ▣ Be an active member in your Society, regional chapter in your society
- ▣ Be involved in University administration
- ▣ Get involved in seminar planning, ...
- ▣ Keep in contact with Alumni
- ▣ Use your imagination, creativity, intuition (- and the NIEHS Superfund team/SPAN).