

## MPS/EHR Working Group :: Broadening Participation

### SUGGESTED ACTIONS FOR DISCUSSION/PRIORITIZATION

#### ACTION:

- **Adapt the MPS PREM model to other MPS disciplines**
- Charge:
- Broadening Participation
- National Impact?
- Yes
- Outcomes
- Formal, long-term, collaborative research and education **partnerships between minority-serving institutions and NSF supported groups, centers and facilities.** E.g., programs like DMR's Focused Research Groups (FRGs), Nanoscale Science Interdisciplinary Research Teams (NIRTS), Materials Research Science and Engineering Centers (MRSECs), and Nanoscale Science and Engineering Centers (NSECs)
  - Mutually beneficial research and education projects, support for graduate and undergraduate students, exchanges of faculty and students, participation of well-prepared high school students
- Players
- Minority serving institutions
  - MPS groups, centers and facilities
- Feasible?
- MPS PD's in charge of these programs would encourage
  - EHR HRD PD can make MSI's aware and encourage
- Budget Needed
- \$250,000 to \$750,000 per year for up to 5 years for each effort
- Leverages What?
- An existing model = MPS PREM – we already know how to do it & have examples

#### ACTION:

- **Encourage large facilities and MREFC projects to recruit under-represented minority students and researchers**
- Charge:
- Broadening Participation
- National Impact?
- Limited to large projects
- Outcomes
- Increased participation of under-represented students and researchers
- Players
- PI's of large MREFC-class projects
- Feasible?
- Yes. In fact, should be part of Criterion Two Broader Impacts now

Budget Needed

- No

Leverages What?

- EHR HRD's awareness of where the students and faculty are; ability to be specific about institutions and programs in MSI's

**ACTION:**

- **Jointly build capacity in MPS fields at HBCU's: promote to MPS grantees funding available**

Charge:

- Broadening Participation

National Impact?

- HBCU's primarily, with S&E undergraduate programs

Outcomes

- Departments at HBCU's obtain specialized accreditation, establish a new S&E program, or revamp an S&E program to meet discipline and industry standards. Esp. in NSF priority areas, and interdisciplinary areas.
- May include curriculum enhancement, travel, training, new course development, justifiable equipment purchases.

Players

- MPS grantees
- HBCU's

Feasible?

- Already available; need information flow to MPS grantees

Budget Needed

- Program already has budget

Leverages What?

- HBCU "Targeted Infusion Projects" initiative: five-year capacity building projects; up to \$150K for one to two years
- Initiative is funded for \$700K per FY 06 and FY 07
- Expect to fund four to seven each year

**ACTION:**

- **Encourage MPS grantees to recruit REU students from EHR grantees that are intensively supporting minority undergraduates**

Charge:

- Broadening Participation

National Impact?

- Yes, to the extent that MPS grantees are everywhere

Outcomes

- Percentage of REU students who are from under-represented groups is increased

Players

- Feasible?
  - All MPS grantees
  - Entails promotion of the opportunity, and information about schools from which to recruit
- Budget Needed
  - REU program covers this already
- Leverages What?
  - MPS grantee base, REU program, and HRD awareness of minority-serving institutions having relevant S&E undergraduate programs

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**ACTION:**

- Extend GK-12 program to GK-14 (community college level): have graduates in MPS fields enlist to teach at community colleges**
- Charge:
  - Broadening Participation
- National Impact?
  - Yes – community colleges are everywhere
- Outcomes
  - More community college students elect to enter MPS fields due to exposure to graduate students as part-time teachers
- Players
  - Graduate programs in MPS fields
  - Community colleges including programs in MPS fields
- Feasible?
  - Requires significant addition to a program or a new program
- Budget Needed
  - ? significant
- Leverages What?
  - NSF experience with GK-12 program & its outcomes, experience with costs, benefits, higher education interest in participating