STAR METRICS™

UPDATE FOR FDP Meeting
Washington DC

George Chacko

Sep 16, 2013

National Institutes of Health
Office of Extramural Research

STAR METRICS

- Multi-agency program aimed at documenting a partial set of outputs from federal science investments.
- Agencies:
  - WH OSTP
  - NIH
  - NSF
  - USDA
  - EPA

In Today's Presentation

- Update on **STAR METRICS**
  - Level I
  - Level II
  - Data Access Policy
- Communications & Outreach
- Governance
- Management Plan for FY 2014

Current Activities

Measuring the economic impact of science funding

- **Level I**: Estimating jobs created by federal science awards.

Enabling studies of the portfolio of federal science investments

- **Level II**: A searchable database of science awards from federal agencies

Current Activities

Measuring the economic impact of science funding

- **Level I**: Estimating jobs created by federal science awards.

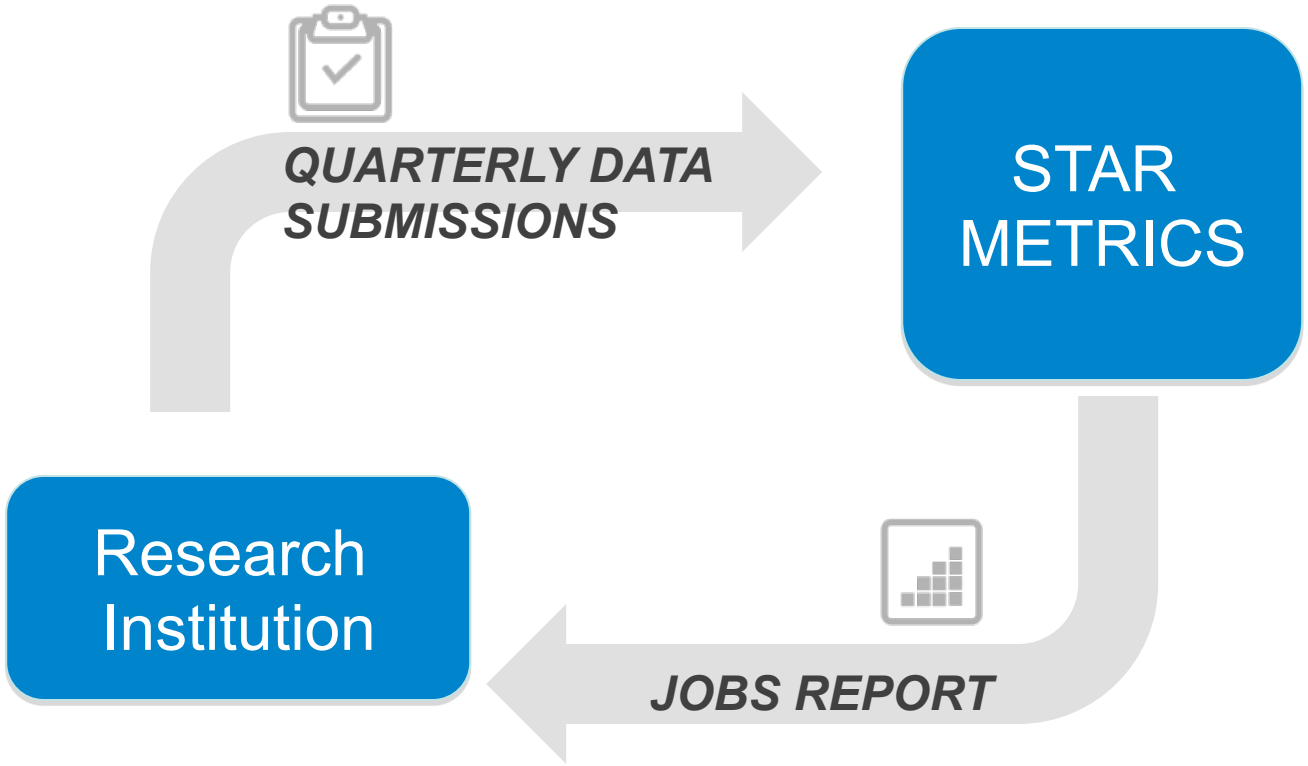
ACTIVE

Enabling studies of the portfolio of federal science investments

- **Level II**: A searchable database of science awards from federal agencies

IN PILOT

Level I


QUARTERLY DATA SUBMISSIONS
STAR METRICS
Research Institution
JOBS REPORT

Level I Questions

QUALITY

– *What have we done?*

ANALYSIS

– *What have we done?*

JOB CALCULATIONS

– *What have we done?*

ACCESS

– *What are we doing?*

Level I

QUALITY

– *What have we done?*

King (USDA)

ANALYSIS

– *What have we done?*

Workshop (SM Consortium)

JOB CALCULATIONS

– *What have we done?*

ACCESS

– *What are we doing?*

Rosenbloom (NSF)

Level I Enrollment

- Total Enrolled **102**
- Discontinued participation **2**
- Enrolled **3**

In 2013

- Submitted data **68**
- ~23% of NIH FY12 disbursements ~ **$5.4b**

Level I Activities

- Enrollment
- Evaluation of Representativeness
- Data Quality
- Level I Workshop- Nov 2013
  - Review of methodology
  - Uses for Level I data
    - Federal
    - Research Institutions
  - Enhancement of Level I Report

King, Pece, & Rosenbloom

Interagency Working Group

Using Level I Data

- National workforce projections
- Benchmarking impact
- Communications
- Other- Reporting?

<u>Importance of</u>

  - Data quality
  - Quality of job estimates
  - Representative sampling

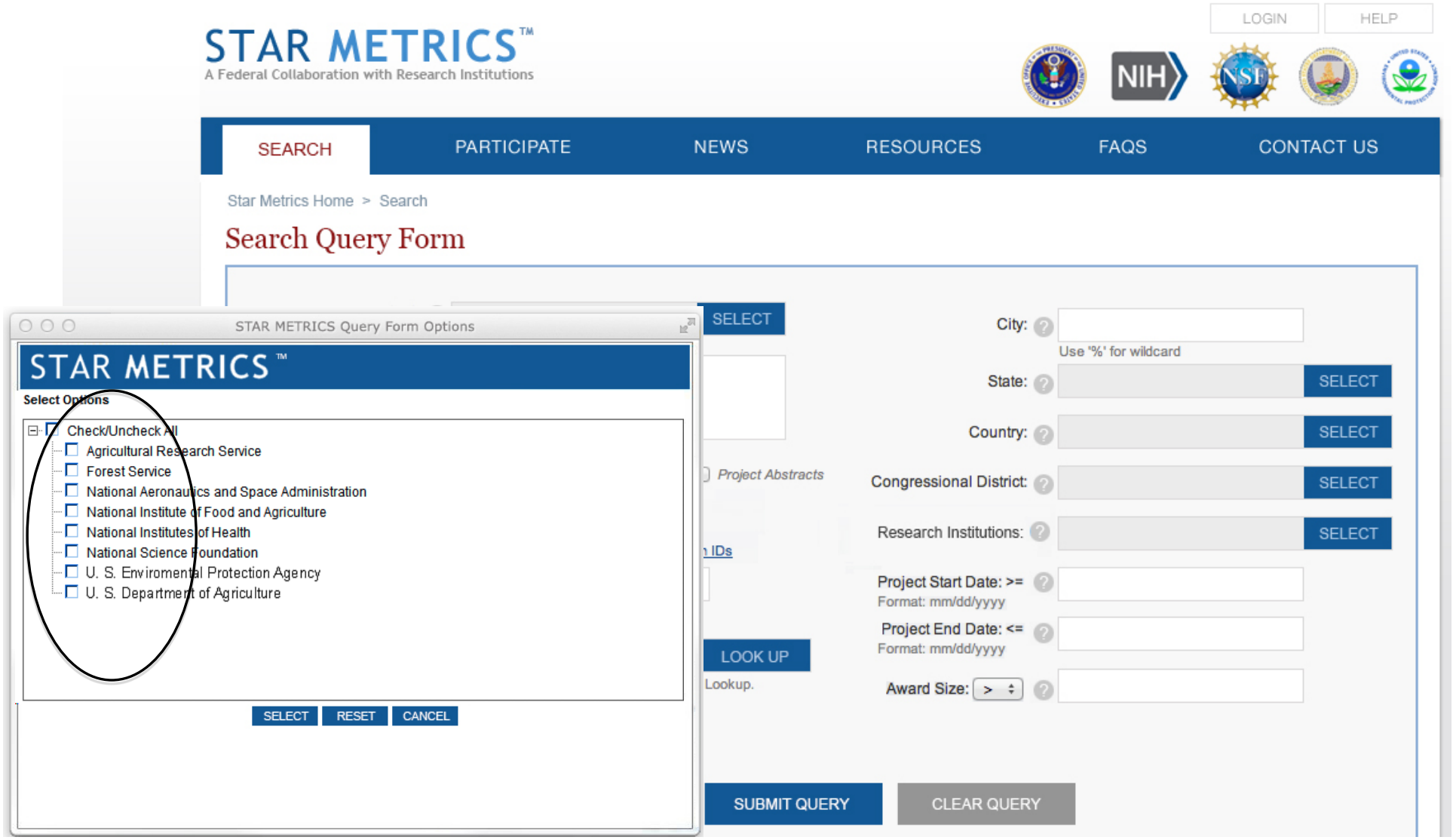
Level II Pilot

- Level II Pilot (FY 12 data)
  - No. of records

NIFA	1,614
FS	159
ARS	400
NSF	11,813
NIH	64,084
NASA	1,379

  - Scientific categorization
  - Access and dissemination
- Expansion to 5 year dataset
- Review of Data Dictionary
- Uses for Level II Data

Level II Pilot Website



Hit List

SEARCH | PARTICIPATE | NEWS | RESOURCES | FAQS | CONTACT US

STAR METRICS Home > Search > Search Results

BACK TO QUERY FORM | SHARE QUERY

Search Results

PROJECTS | DATA & VISUALIZE | PUBLICATIONS | MAPS

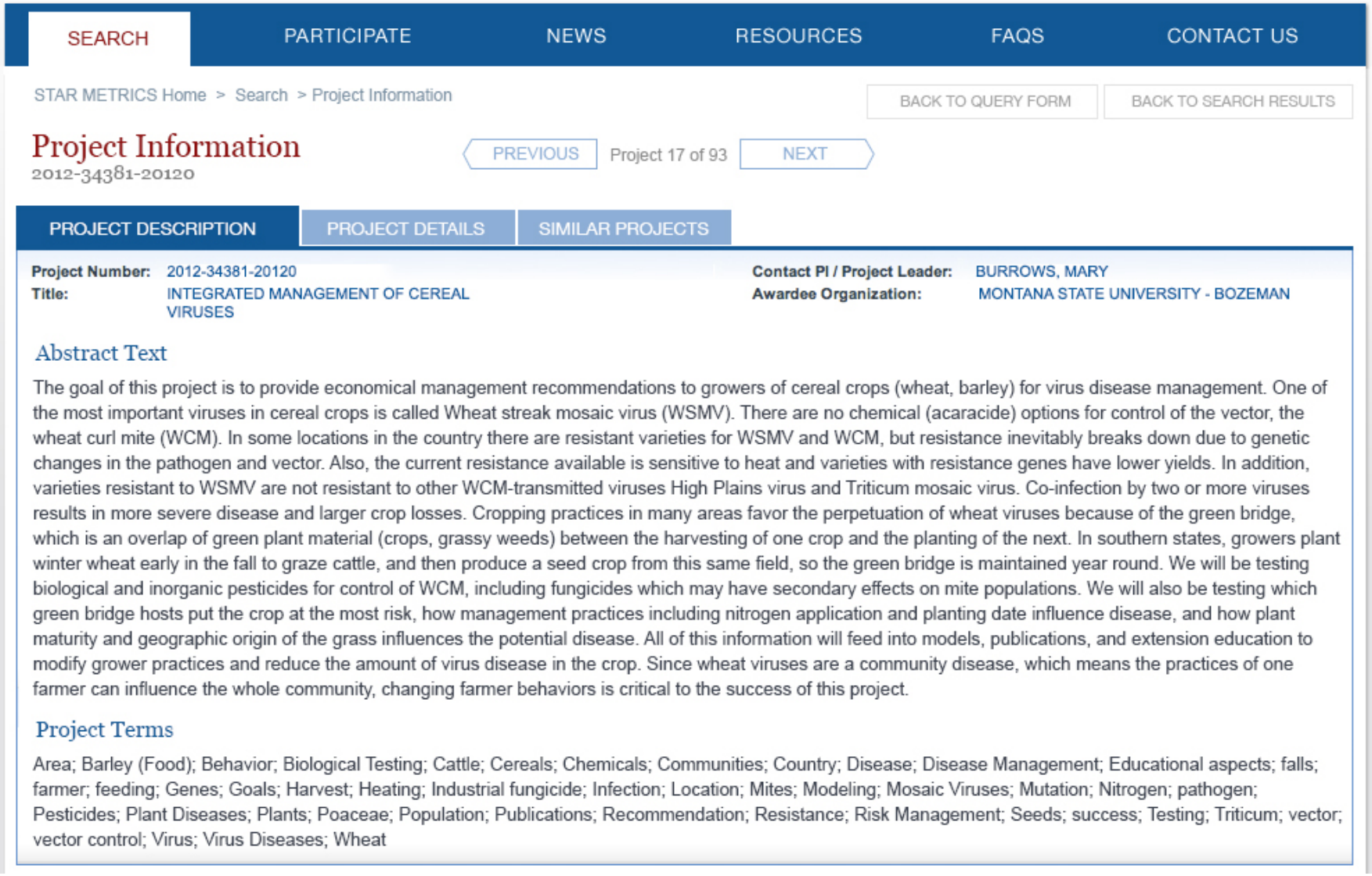
EXPORT All Projects GO

There were **79449** results matching your search criteria. Records per page 25 Show/Hide Search Criteria

Click on the column header to sort the results 1 2 3 4 5 ... First Previous Page 2 of 3178 Next Last

Project	Year	Project Title	Contact PI/ Project Leader	Research Institutions	FY	Admin IC	Funding IC	FY Total Cost by Institution	Similar Projects
ARS-0420804		ECOLOGY AND MANAGEMENT OF GRASSHOPPERS AND OTHER INSECT PESTS IN THE NORTHERN GREAT PLAINS	BRANSON, DAVID H	PEST MANAGEMENT RESEARCH UNIT	2012	ARS	ARS	$0	
ARS-0413026		SMALL GRAINS GENETICS AND GERMPLASM ENHANCEMENT	BREGITIZER, PAUL P	SMALL GRAINS AND POTATO GERMPLASM RESEARCH	2012	ARS	ARS	$0	
2009-41580-05339		FLATHEAD FEDERALLY RECOGNIZED TRIBES EXTENSION PROGRAM	BRENCE, LARRY	MONTANA STATE UNIVERSITY - BOZEMAN	2012	NIFA	NIFA	$97,000	
2012-67013-19413		PEPTIDE SIGNALING IN MAIZE IMMUNITY	BRIGGS, STEVEN	UNIVERSITY OF CALIFORNIA SAN DIEGO	2012	NIFA	NIFA	$500,000	
ARS-0413051		EVALUATION AND IMPROVEMENT OF CEREAL GERMPLASM FOR DISEASE RESISTANCE AND WINTER-HARDINESS	BROWN GUEDIRA, GINA L	PLANT SCIENCE RESEARCH	2012	ARS	ARS	$0	
		UNRAVELING THE HETEROZYGOSITY							

Project Information



SEARCH | PARTICIPATE | NEWS | RESOURCES | FAQS | CONTACT US

STAR METRICS Home > Search > Project Information

BACK TO QUERY FORM | BACK TO SEARCH RESULTS

Project Information

2012-34381-20120

PREVIOUS | Project 17 of 93 | NEXT

PROJECT DESCRIPTION | PROJECT DETAILS | SIMILAR PROJECTS

Project Number: 2012-34381-20120
Title: INTEGRATED MANAGEMENT OF CEREAL VIRUSES

Contact PI / Project Leader: BURROWS, MARY
Awardee Organization: MONTANA STATE UNIVERSITY - BOZEMAN

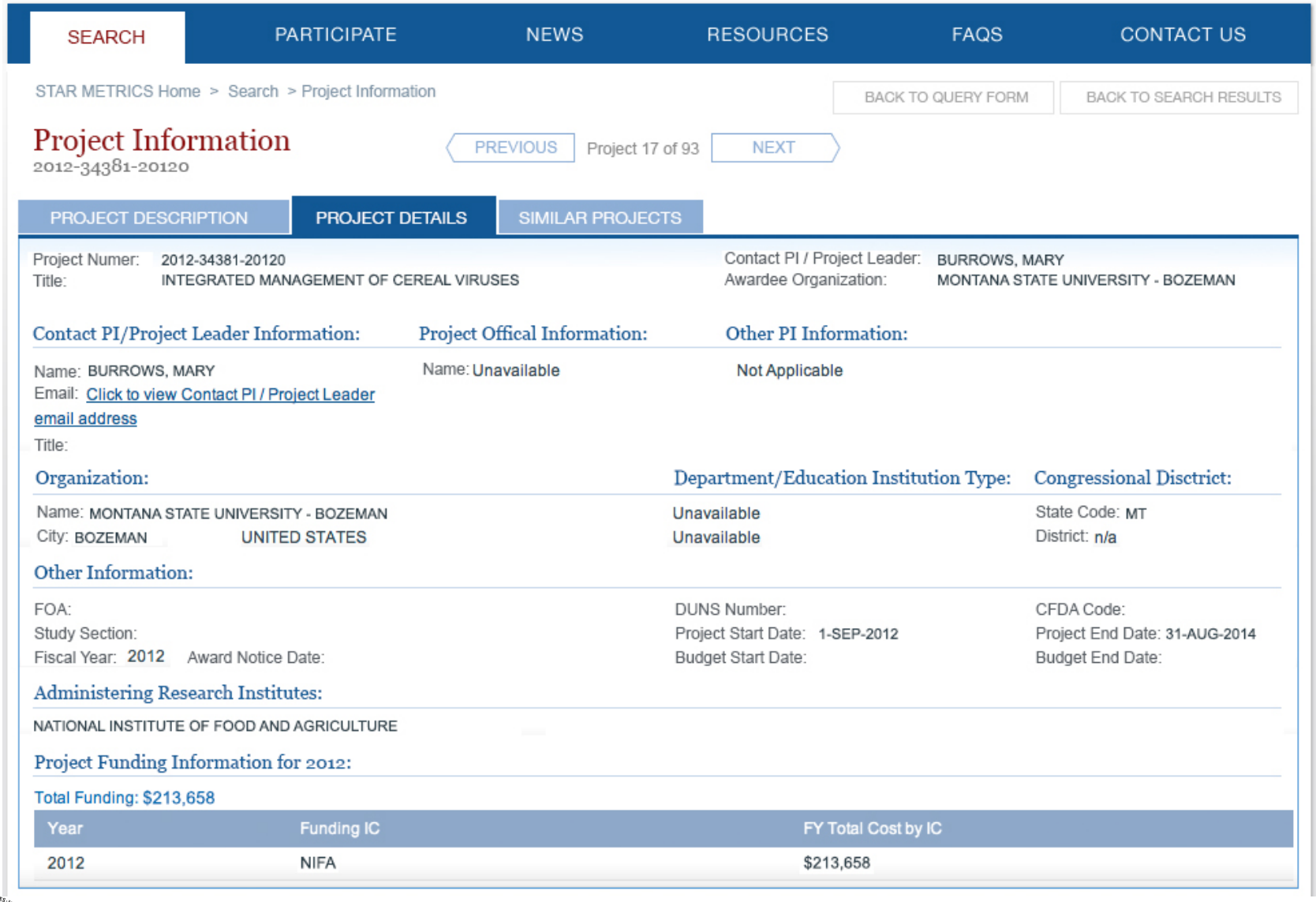
Abstract Text

The goal of this project is to provide economical management recommendations to growers of cereal crops (wheat, barley) for virus disease management. One of the most important viruses in cereal crops is called Wheat streak mosaic virus (WSMV). There are no chemical (acaracide) options for control of the vector, the wheat curl mite (WCM). In some locations in the country there are resistant varieties for WSMV and WCM, but resistance inevitably breaks down due to genetic changes in the pathogen and vector. Also, the current resistance available is sensitive to heat and varieties with resistance genes have lower yields. In addition, varieties resistant to WSMV are not resistant to other WCM-transmitted viruses High Plains virus and Triticum mosaic virus. Co-infection by two or more viruses results in more severe disease and larger crop losses. Cropping practices in many areas favor the perpetuation of wheat viruses because of the green bridge, which is an overlap of green plant material (crops, grassy weeds) between the harvesting of one crop and the planting of the next. In southern states, growers plant winter wheat early in the fall to graze cattle, and then produce a seed crop from this same field, so the green bridge is maintained year round. We will be testing biological and inorganic pesticides for control of WCM, including fungicides which may have secondary effects on mite populations. We will also be testing which green bridge hosts put the crop at the most risk, how management practices including nitrogen application and planting date influence disease, and how plant maturity and geographic origin of the grass influences the potential disease. All of this information will feed into models, publications, and extension education to modify grower practices and reduce the amount of virus disease in the crop. Since wheat viruses are a community disease, which means the practices of one farmer can influence the whole community, changing farmer behaviors is critical to the success of this project.

Project Terms

Area; Barley (Food); Behavior; Biological Testing; Cattle; Cereals; Chemicals; Communities; Country; Disease; Disease Management; Educational aspects; falls; farmer; feeding; Genes; Goals; Harvest; Heating; Industrial fungicide; Infection; Location; Mites; Modeling; Mosaic Viruses; Mutation; Nitrogen; pathogen; Pesticides; Plant Diseases; Plants; Poaceae; Population; Publications; Recommendation; Resistance; Risk Management; Seeds; success; Testing; Triticum; vector; vector control; Virus; Virus Diseases; Wheat

Project Details



SEARCH | PARTICIPATE | NEWS | RESOURCES | FAQS | CONTACT US

STAR METRICS Home > Search > Project Information

BACK TO QUERY FORM | BACK TO SEARCH RESULTS

Project Information
2012-34381-20120

PREVIOUS | Project 17 of 93 | NEXT

PROJECT DESCRIPTION | PROJECT DETAILS | SIMILAR PROJECTS

Project Numer: 2012-34381-20120
Title: INTEGRATED MANAGEMENT OF CEREAL VIRUSES

Contact PI / Project Leader: BURROWS, MARY
Awardee Organization: MONTANA STATE UNIVERSITY - BOZEMAN

Contact PI/Project Leader Information:

Name: BURROWS, MARY
Email: Click to view Contact PI / Project Leader email address
Title:

Project Offical Information:

Name: Unavailable

Other PI Information:

Not Applicable

Organization:

Name: MONTANA STATE UNIVERSITY - BOZEMAN
City: BOZEMAN UNITED STATES

Department/Education Institution Type:

Unavailable
Unavailable

Congressional Disctrict:

State Code: MT
District: n/a

Other Information:

FOA:
Study Section:
Fiscal Year: 2012 Award Notice Date:

DUNS Number:
Project Start Date: 1-SEP-2012
Budget Start Date:

CFDA Code:
Project End Date: 31-AUG-2014
Budget End Date:

Administering Research Institutes:

NATIONAL INSTITUTE OF FOOD AND AGRICULTURE

Project Funding Information for 2012:

Total Funding: $213,658

Year	Funding IC	FY Total Cost by IC
2012	NIFA	$213,658

Similar Projects

SEARCH | PARTICIPATE | NEWS | RESOURCES | FAQS | CONTACT US

STAR METRICS Home > Search > Project Information

BACK TO QUERY FORM | BACK TO SEARCH RESULTS

Project Information

1R01DK089201-01A1

PROJECT DESCRIPTION | PROJECT DETAILS | SIMILAR PROJECTS

Project Number: 2012-34381-20120
Title: INTEGRATED MANAGEMENT OF CEREAL VIRUSES

Contact PI / Project Leader: BURROWS, MARY
Awardee Organization: MONTANA STATE UNIVERSITY - BOZEMAN

299 projects similar to 1R01DK089201-01A1 (100 maximum). Modify List of Similar Projects

Click on the column header to sort the results | Records per page 25 | Page 1 of 12 Next Last

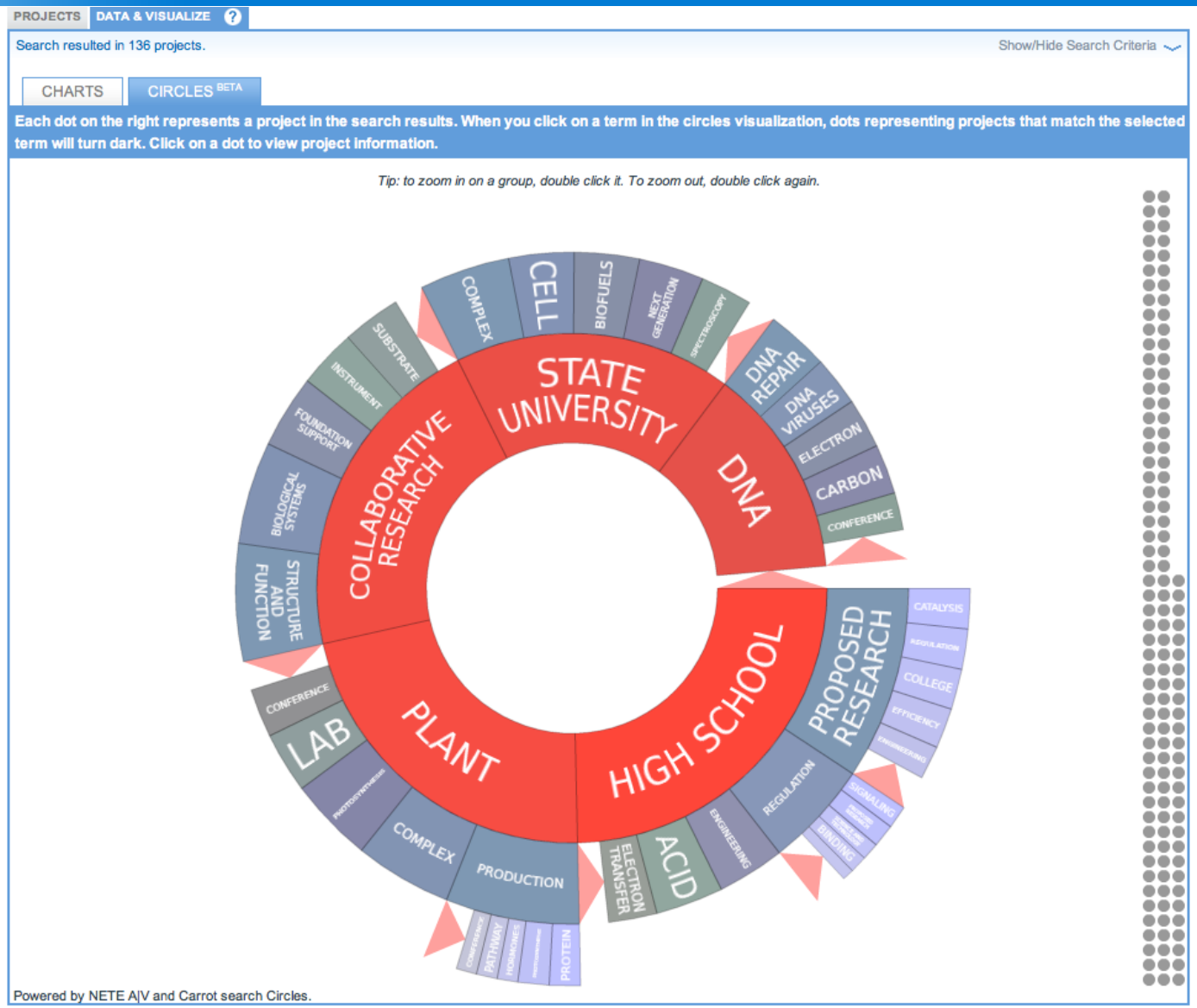
Match Score	Project Number	Sub #	Project Title	Contact PI / Project Leader	Organization	FY	Admin IC	Funding IC	FY Total Cost by IC
320	ARS-0413305		GENETICS AND GENETIC IMPROVEMENT OF DISEASE RESISTANCE AND QUALITY TRAITS IN WATERMELON, BROCCOLI, AND LEAFY GREEN BRASSICAS	FARNHAM , MARK W	VEGETABLE RESEARCH	2012	ARS	ARS	$0
308	ARS-0423066		HOST-PATHOGEN INTERACTIONS IN BARLEY AND WHEAT	EDWARDS , MICHAEL CHARLES	CEREAL CROPS RESEARCH	2012	ARS	ARS	$0
301	ARS-0422895		WHEAT VIRUS INTERACTIONS WITH HOST AND VECTOR	FRENCH , ROY C	GRAIN FORAGE AND BIOENERGY RESEARCH	2012	ARS	ARS	$0
300	ARS-0413203		IMPROVING RUST AND FHB RESISTANCE IN HARD RED SPRING WHEAT THROUGH GENETICS AND GENOMICS	GARVIN , DAVID FRANCIS	PLANT SCIENCE RESEARCH	2012	ARS	ARS	$0

Search on “enzyme”

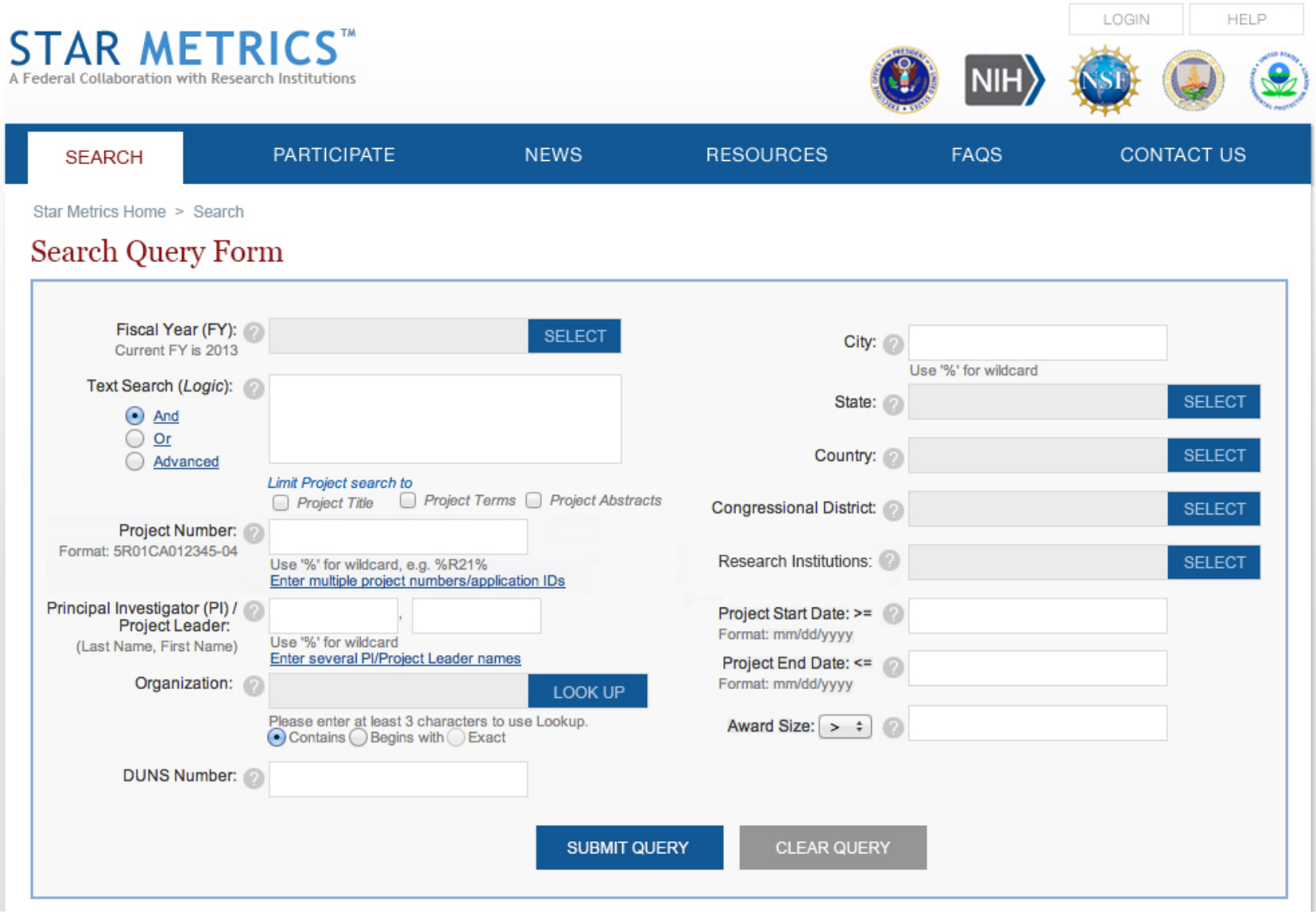
Please note that if the hit list contains both a subproject and its parent grant, the subproject funding is already included in the parent project funding amount.

Administering Institute/Center	Projects ▲	Total Funding	Sub Projects	Sub Project Funding
NIH	5,643	$1,930,269,518		
NSF	125	$34,479,587		
NIFA	7	$876,697		
ARS	2			
NASA	1	$71,996		
FS	1			
Total	5,779	$1,965,697,798		

“enzyme” no NIH



Level II Query Form



Data Access Policy

WHY WE NEED A DATA ACCESS POLICY

- Participating institutions value comparative data
- Using data will identify anomalies and improve data quality
- Federal agencies need clear guidelines for data use
- Researchers need access to the data

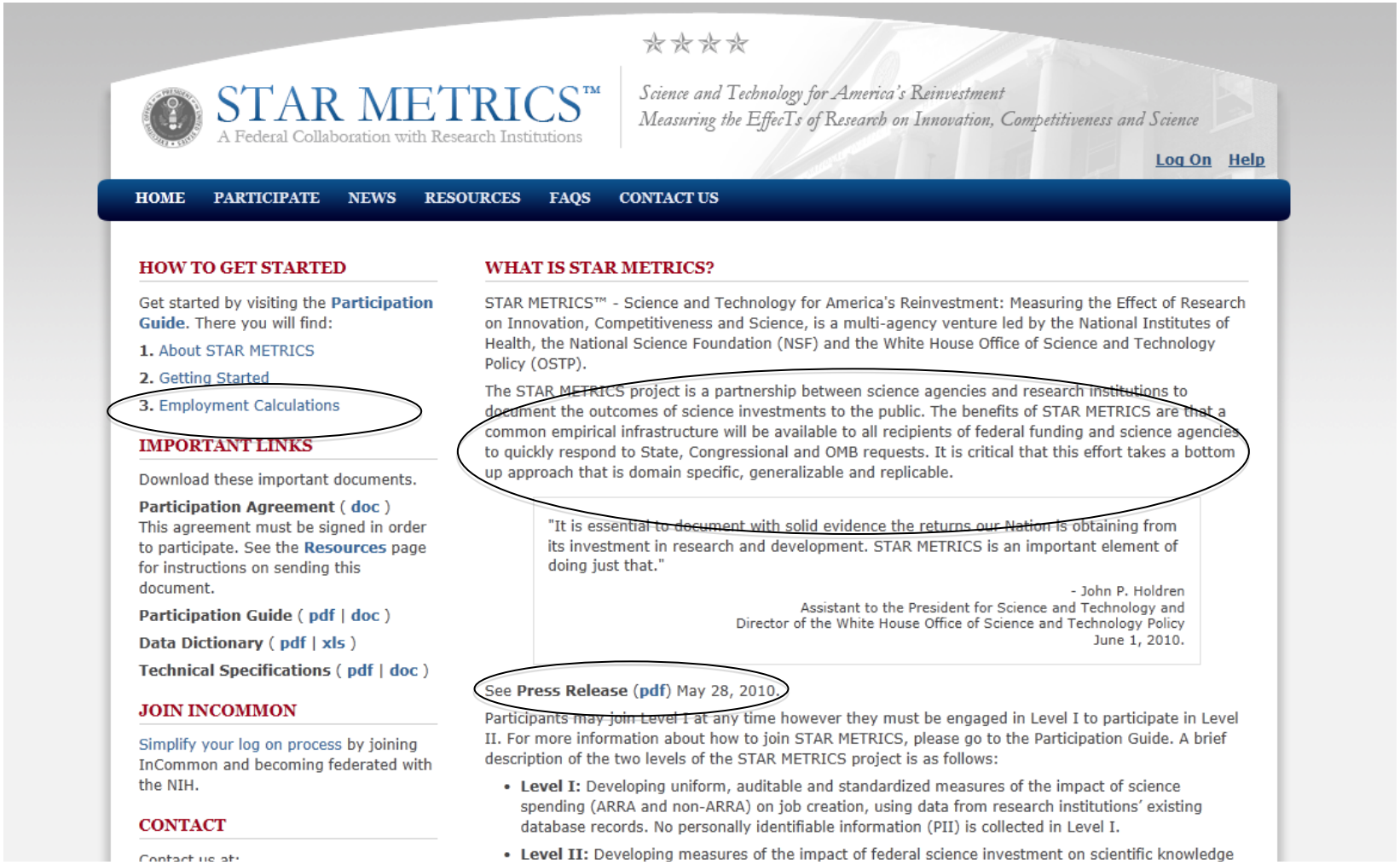
WHAT WE PROPOSE

- Publicly available aggregated institutional data
- Develop a data enclave for access to disaggregated data
- Governance structure to allow institutions to manage access to disaggregated data

Communications & Outreach

- STAR METRICS-users-L@mail.nih.gov
- Redesigning STAR METRICS Web Site
- Partners
  - FDP
  - APLU
  - AAU
  - AAMC
  - CIC

Legacy Web Site



STAR METRICS™
A Federal Collaboration with Research Institutions

Science and Technology for America's Reinvestment
Measuring the EffecTs of Research on Innovation, Competitiveness and Science

Log On Help

HOME | PARTICIPATE | NEWS | RESOURCES | FAQS | CONTACT US

HOW TO GET STARTED

Get started by visiting the **Participation Guide**. There you will find:

1. About STAR METRICS
2. Getting Started
3. Employment Calculations

IMPORTANT LINKS

Download these important documents.

Participation Agreement (**doc**)
This agreement must be signed in order to participate. See the **Resources** page for instructions on sending this document.

Participation Guide (**pdf** | **doc**)

Data Dictionary (**pdf** | **xls**)

Technical Specifications (**pdf** | **doc**)

JOIN INCOMMON

Simplify your log on process by joining InCommon and becoming federated with the NIH.

CONTACT

Contact us at:

WHAT IS STAR METRICS?

STAR METRICS™ - Science and Technology for America's Reinvestment: Measuring the Effect of Research on Innovation, Competitiveness and Science, is a multi-agency venture led by the National Institutes of Health, the National Science Foundation (NSF) and the White House Office of Science and Technology Policy (OSTP).

The STAR METRICS project is a partnership between science agencies and research institutions to document the outcomes of science investments to the public. The benefits of STAR METRICS are that a common empirical infrastructure will be available to all recipients of federal funding and science agencies to quickly respond to State, Congressional and OMB requests. It is critical that this effort takes a bottom up approach that is domain specific, generalizable and replicable.

"It is essential to document with solid evidence the returns our Nation is obtaining from its investment in research and development. STAR METRICS is an important element of doing just that."

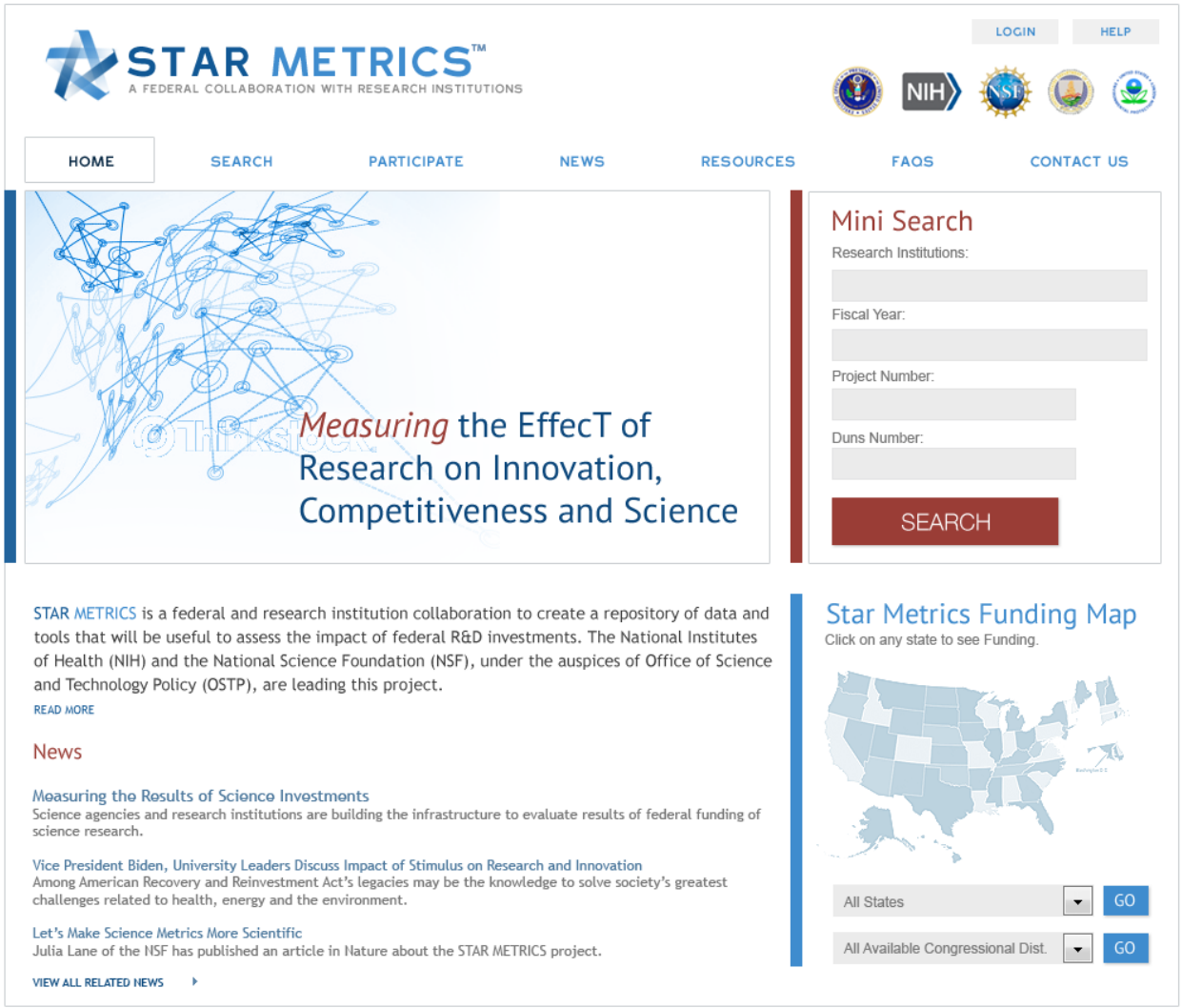
- John P. Holdren
Assistant to the President for Science and Technology and
Director of the White House Office of Science and Technology Policy
June 1, 2010.

See **Press Release** (**pdf**) May 28, 2010.

Participants may join Level I at any time however they must be engaged in Level I to participate in Level II. For more information about how to join STAR METRICS, please go to the Participation Guide. A brief description of the two levels of the STAR METRICS project is as follows:

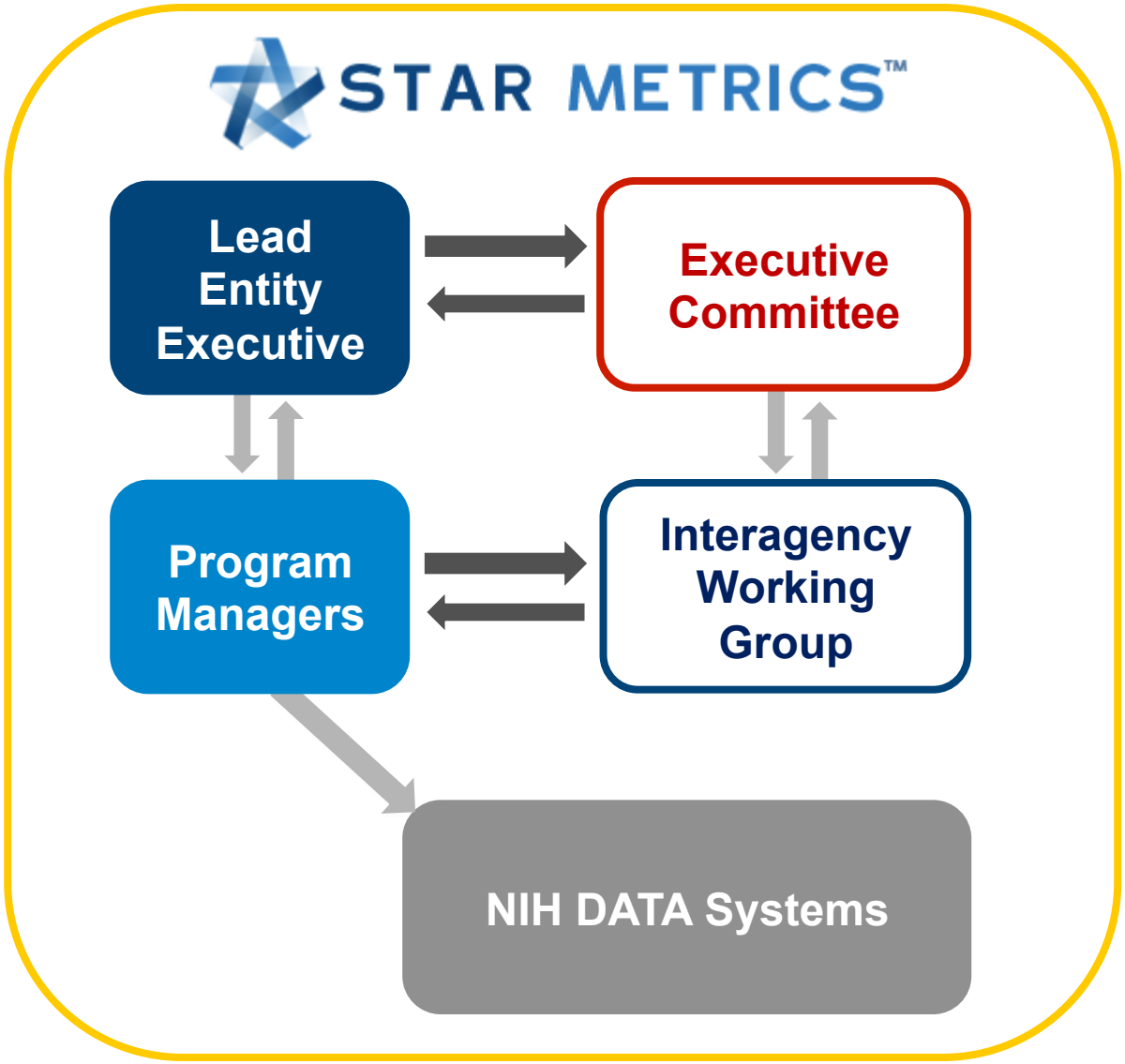
- **Level I:** Developing uniform, auditable and standardized measures of the impact of science spending (ARRA and non-ARRA) on job creation, using data from research institutions' existing database records. No personally identifiable information (PII) is collected in Level I.
- **Level II:** Developing measures of the impact of federal science investment on scientific knowledge

Updating the SM Web Site



National Institutes of Health
Office of Extramural Research

Governance

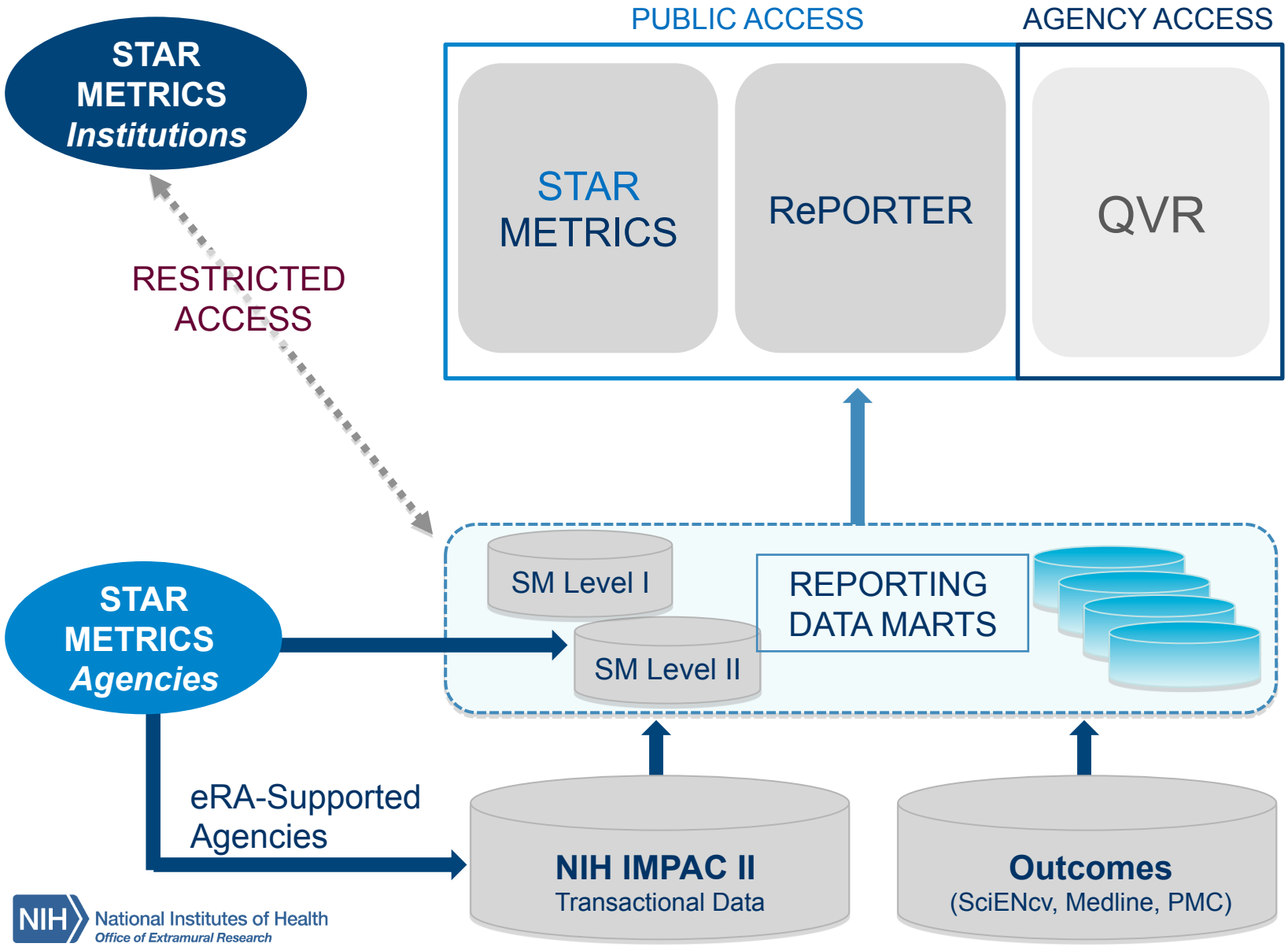

STAR METRICS™
Lead Entity Executive
Executive Committee
Program Managers
Interagency Working Group
NIH DATA Systems

Management Plan

- Reorganization at NIH
  - NIH DATA Systems
    - NIH RePORTER

- Milestones for FY 2014
  - Replicating Level I calculations
  - Level I Workshop- Nov 12, 2013
  - Level II Technical Workshop- Tentative Oct/Nov
  - Disseminating a 5 year Level II dataset
  - Improved Website

An Emerging Vision



National Institutes of Health
Office of Extramural Research

Shared Interests

Portfolio Analysis

Research Evaluation

Economic Impact

Communications

National Institutes of Health
Office of Extramural Research

Executive Committee

- **Sally Rockey** (NIH)
- Philip Rubin (OSTP)
- Myron Gutmann (NSF)
- Catherine Woteki (USDA)
- Bill Benson (EPA)

Interagency WG & Extended Workforce

NIH: Jim Onken, Jack Vinner

NSF: Joshua Rosenbloom, Chris Pece

USDA: John King, Sharon Drumm

EPA: Viktoriya Plotkin

OSTP: Kei Koizumi

FDP

- Marietta Harrison
- Jim English
- Susie Sedwick
- Dick Seligman
- David Wright
- Steve Beguin

Sapient

Synthosys

NETE

National Institutes of Health
Office of Extramural Research

Thank You

George Chacko, PhD

Program Manager, STAR METRICS

Office of Extramural Research &

Director, Office of Planning, Analysis, and Evaluation

Center for Scientific Review

National Institutes of Health, US DHHS

Tel: 301-435-1111

george.chacko@nih.hhs.gov

Questions?

- State of **STAR METRICS?**
  - Level I ?
  - Level II ?
  - Data Access Policy ?
- Communications & Outreach ?
- Management Plan for FY 2014 ?
- Governance ?