Proposal Planning and Writing

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New Mexico EPSCoR

Proposal planning and writing

1) Establish a network of contacts and sources of information to learn in advance of opportunities – do as much preparatory work as you can
2) **Read the RFP at least 2-3X**
   - Identify and collect external references and assemble all related information into descriptive folders (electronic and/or hard copy)
   - Identify help that will be needed to respond to the RFP
3) Complete a requirements matrix (compliance matrix) (Sections C, L, &M)
   - Identify conflicts, issues and questions – ask questions if allowed and within stated time frame
   - Develop calendar with critical milestones – include enough time for final approvals and submission through your organization (e.g. for approvals, submission conduit)
4) Create a logic model (see Kellogg Foundation)
   - Use the logic model to develop your assessment and evaluation plan
   - Conduct reviews, Pink Team, Red Team, Gold Team, Green Team
5) Develop effective writing habits (7+) and always ask for help (e.g. English or Technical Writing majors)

Requirements Matrix (or Compliance Matrix)

- ❑ *Helps to organize your response, keeps you from missing important requirements*
- ❑ *Grant applications are different from traditional government RFIs, RFQs and RFPs,* but all require the same attention to detail*

Requirement (from RFP)	Comments	Proposal Reference (page #, Section, or Attachment #)
is required, should, must, it is expected, it is important, shall, may not	How requirement was responded to in project description or elsewhere, what else needs to be done, etc.	Where the requirement is specified
*"In all instances, specification of performance milestones and a timetable for achieving such milestones **is a requirement** for EPSCoR support."*	Created Gantt chart and included discussion of major milestones	Pages 14-15 in proposal plus Milestones in Appendix B (evaluation and assessment)
Also include Review Criteria		

A **Grant** is a funding mechanism for a particular scientific inquiry that you generate. *You* come up with the idea, *they* decide if it's a good idea, and they provide funding for you to do it. Grant announcements often take the form of a Program Announcement (PA) or Request for Application (RFA). These initials refer to the document that describes the government's area of interest, with general guidelines for conducting the research

A **Request for Information (RFI)** is used when you think you know what you want but need more information from the vendors. It will typically be followed by an RFQ or RFP.

A **Request for Quote (RFQ)** is commonly used when you know what you want but need information on how vendors would meet your requirements and/or how much it will cost.

A **Request for Proposal (RFP)** is used when you know you have a problem but don't know how you want to solve it. This is the most formal of the "Request for" processes and has strict procurement rules for content, timeline and vendor responses. The appendices in the Guide to Successful Software Acquisition <link> provide templates for this approach.

Why plan using a logic model ?

- *If you don't know where you're going, how are you gonna' know when you get there?*

  – Yogi Berra

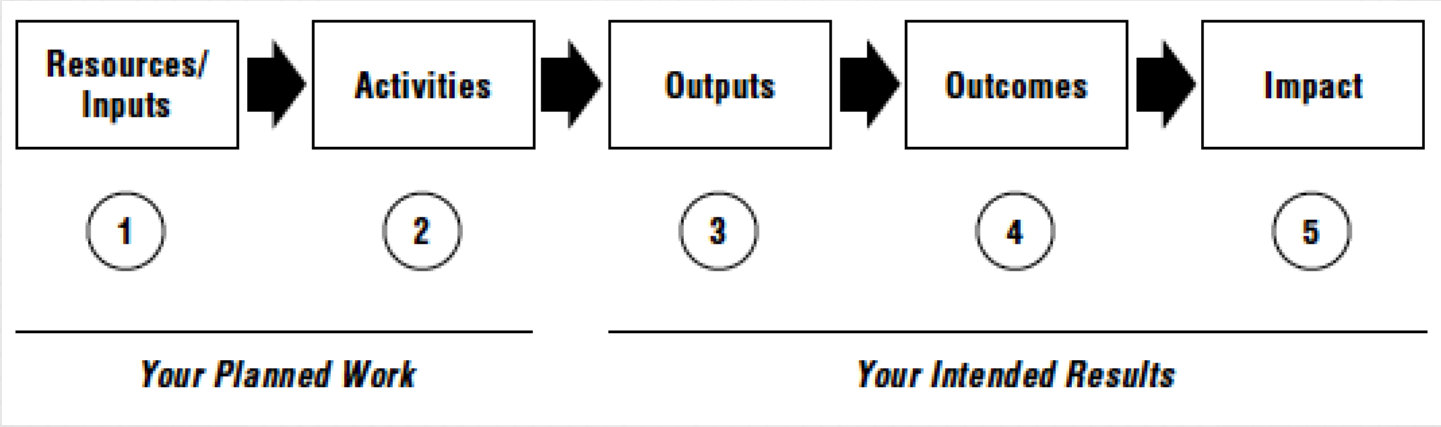
- "the logic model and its processes facilitate thinking, planning, and communications about program objectives and actual accomplishments"
- "Good evaluation reflects clear thinking and responsible program management."

  -from the W.K. Kellogg Foundation Logic Model Development Guide, 1998 - Updated January 2004

http://www.wkkf.org/resource-directory/resource/2006/02/wk-kellogg-foundation-logic-model-development-guide

The basic logic model

What Why



1. Resources include the human, financial, organizational, and community resources a program has available to direct toward doing the work. Sometimes this component is referred to as ***Inputs.***

2. Program Activities are what the program does with the resources. Activities are the processes, tools, events, technology, and actions that are an intentional part of the program implementation. These interventions are used to bring about the intended program changes or results.

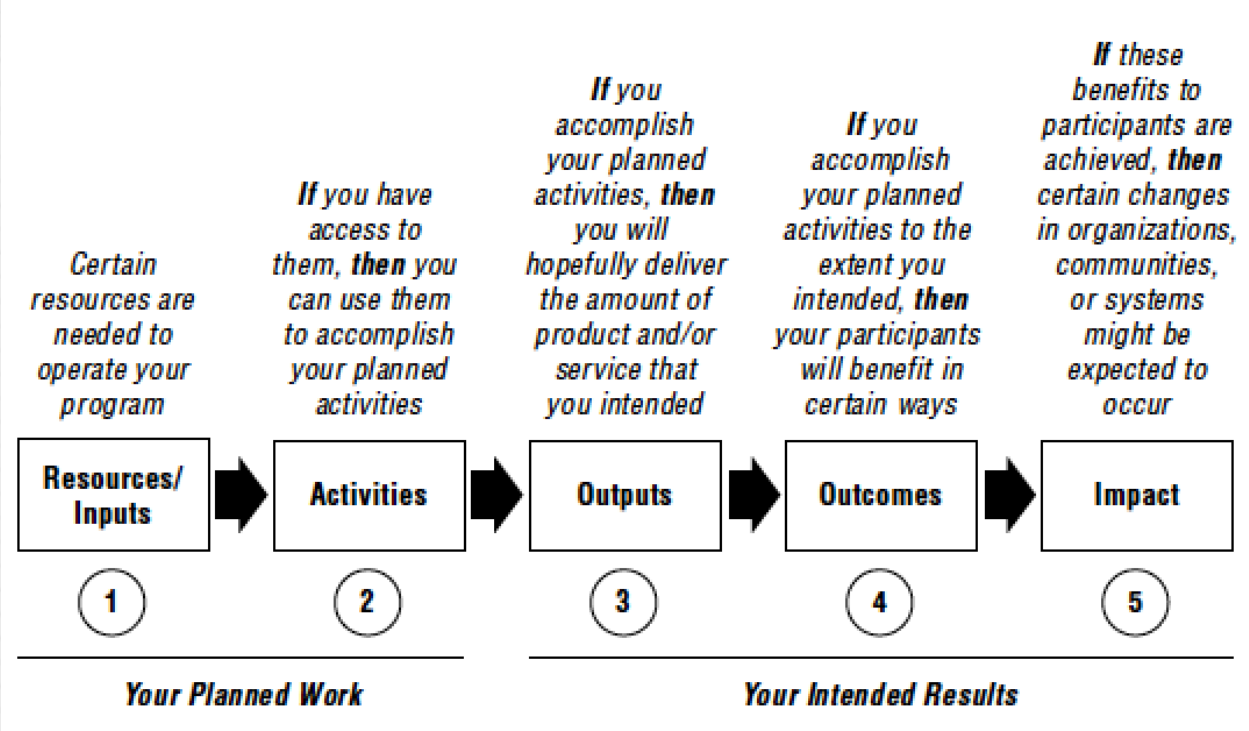
3. Outputs are the direct products of program activities and may include types, levels and targets of services to be delivered by the program.

4. Outcomes are the specific changes in program participants' behavior, knowledge, skills, status and level of functioning. Short-term outcomes should be attainable within 1 to 3 years, while longer-term outcomes should be achievable within a 4 to 6 year timeframe.
The logical progression from short-term to long-term outcomes should be reflected in impact occurring within about 7 to 10 years.

5. Impact is the fundamental intended or unintended change occurring in organizations, communities or systems as a result of program activities within 7 to 10 years. In the current model of WKKF grant-making and evaluation, impact often occurs after the conclusion
of project funding.

- from the W.K. Kellogg Foundation Logic Model Development Guide, 2004

How to read a logic model…

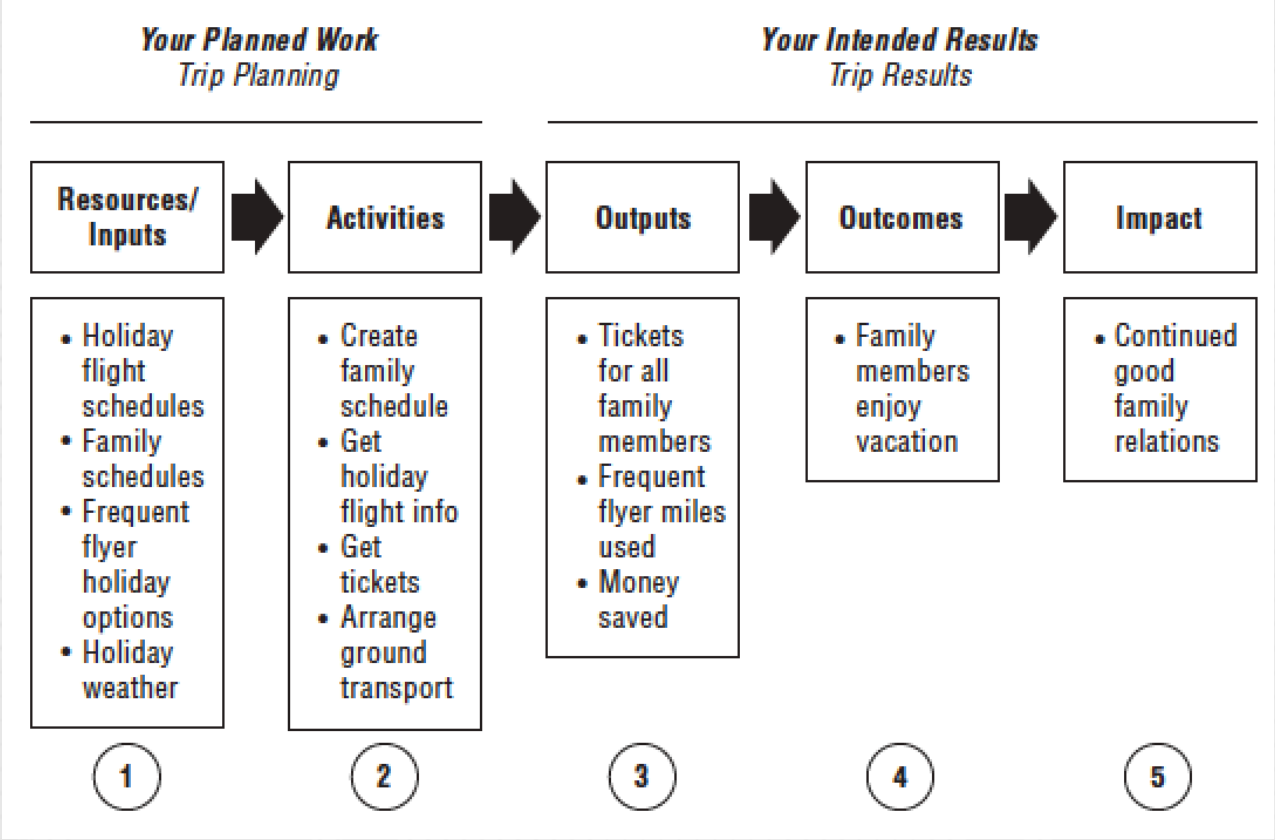


- from the W.K. Kellogg Foundation Logic Model Development Guide, 2004

Outcomes and impacts should be SMART:

- Specific
- Measurable
- Action-oriented
- Realistic
- Timed

An example …



- from the W.K. Kellogg Foundation Logic Model Development Guide, 2004

How logic models position you for success …

Program Elements	Criteria for Program Success[1]	Benefits of Program Logic Models[2]
Planning and Design	Program goals and objectives, and important side effects are well defined ahead of time.	Finds "gaps" in the theory or logic of a program and work to resolve them.
	Program goals and objectives are both plausible and possible.	Builds a shared understanding of what the program is all about and how the parts work together.
Program Implementation and Management	Relevant, credible, and useful performance data can be obtained.	Focuses attention of management on the most important connections between action and results.
Evaluation, Communication, and Marketing	The intended users of the evaluation results have agreed on how they will use the information.	Provides a way to involve and engage stakeholders in the design, processes, and use of evaluation.

- from the W.K. Kellogg Foundation Logic Model Development Guide, 2004

Engagement in determining questions/ approaches

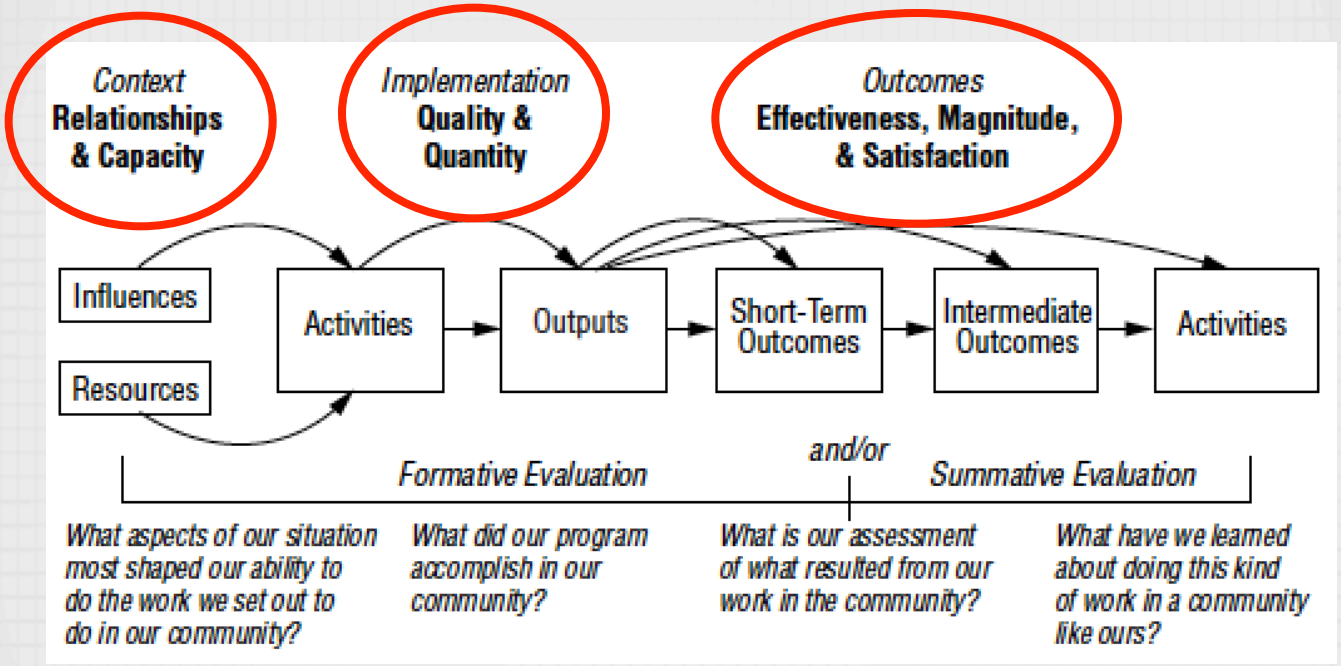
Logic Model—Problem: Documenting & Understanding Changing Water Quality in NM Streams/Rivers Affected by Snowmelt Runoff

RESOURCES	ACTIVITIES	OUTPUTS	SHORT- AND LONG-TERM OUTCOMES	IMPACT
In order to accomplish our set of activities we will need the following:	***In order to address our problem or asset we will accomplish the following activities:***	***We expect that once accomplished these activities will produce the following evidence or service delivery:***	***We expect that if accomplished these activities will lead to the following changes in 1-3 and then 4-6 years:***	***We expect that if accomplished these activities will lead to the following changes in 7-10 years:***
• Funding for *in situ* water quality sensing system ($__,000) • Support for graduate and/or undergraduate student(s) to install and monitor systems, and to integrate and synthesize results • Established "Climate Change" web site for dissemination of results	• Specify system requirements • Purchase sensor system • Install, test and calibrate sensors • Develop and implement maintenance and operations plan • Develop database schema and QA/QC plan and make data available via web	• # locations instrumented • # megabytes available and online • # theses based on data • # publications based on data • # presentations at National meetings	• Increased use of water quality portion of web site • Increase in number of streams instrumented with water quality sensor systems • Increase in externally funded research projects focused on water quality questions	• Incorporation of water quality info into State water monitoring and mgmnt plans • Incorporation of water quality info into education exhibits and State curricula and teacher training • State-sustained water quality monitoring program

Logic Model—Problem: Creating a Citizenry that is Informed about Climate Change and its Impact on New Mexico's Natural Resources (#1—updating the NMNH&S Climate exhibit)

RESOURCES	ACTIVITIES	OUTPUTS	SHORT- AND LONG-TERM OUTCOMES	IMPACT
In order to accomplish our set of activities we will need the following:	***In order to address our problem or asset we will accomplish the following activities:***	***We expect that once accomplished these activities will produce the following evidence or service delivery:***	***We expect that if accomplished these activities will lead to the following changes in 1-3 and then 4-6 years:***	***We expect that if accomplished these activities will lead to the following changes in 7-10 years:***
• Funding ($ --,000) for *Sphere of Science (SoS)* infrastructure • Support for 1 workshop that involves climatologists in developing exhibit content	• Specify system requirements •Purchase SoS • Install and customize # SoS content modules • Develop # new SoS content modules focused on NM climate change	• # user visits to SoS • # new content modules	• Increased visitation to climate change exhibit • Independent NSF (e.g., 1 or more ISE grants) and other funding for creation of new content modules and, possibly, the addition of one or more small SoS systems that can travel around State to other museums	• Increased recognition of importance of climate change and its impacts in NM • Increased use of SoS in informal science education throughout State

Assessment and Evaluation



- from the W.K. Kellogg Foundation Logic Model Development Guide, 2004

Examples and Use of Evaluation Indicators

Focus Area	Indicators	How to Evaluate[1]
Influential Factors	Measures of influential factors – may require general population surveys and/or comparison with national data sets[2].	Compare the nature and extent of influences before (baseline) and after the program.
Resources	Logs or reports of financial/staffing status.	Compare actual resources acquired against anticipated.
Activities	Descriptions of planned activities. Logs or reports of actual activities. Descriptions of participants.	Compare actual activities provided, types of participants reached against what was proposed.
Outputs	Logs or reports of actual activities. Actual products delivered.	Compare the quality and quantity of actual delivery against expected.
Outcomes & Impacts	Participant attitudes, knowledge, skills, intentions, and/or behaviors thought to result from your activities[3].	Compare the measures before and after the program[4].

- from the W.K. Kellogg Foundation Logic Model Development Guide, 2004

CI Example – Data

Goal: Accelerate integrated watershed scale modeling through streamlined data access, transfer of outputs and associated metadata to data management systems, visualization, model configuration.				
Activity	**Year 1**	**Year 2**	**Year 3**	**Output**
•Define data required by models and visualization tools •Define model and visualization tool data format requirements •Define model configuration options to be exposed through the virtual watershed and visualization tool	Complete			Documentation
Define model integration workflow	Manual integration	Coordinated integration through pre-built configuration files	Automated integration through sequential configuration construction	Bi-directional transfer of data and model products between the virtual watershed platform and models, definition of execution sequence through configuration file(s)
Deploy Virtual Watershed data and service platform	Develop data model; develop data in/out services; develop configuration services	Deploy	Iterate	Virtual watershed platform is operational as a mediator between models, visualization system and data providers
Deploy Data Source <-> Virtual Watershed platform adapters	Deploy CUAHSI adapter; begin development of OpenTopography adapter	Deploy OpenTopography adapter; Deploy DataONE adapter; data streamer adapter	Iterate	Functional abstraction of heterogeneous data providers into a unified virtual watershed service
Deploy Virtual Watershed <-> Model adapters (through integration with OpenMI and/or CSDMS frameworks)	Develop test adapter for one model based on manual integration	Deploy 1 model adapter Develop 3 additional adapters	Deploy 3 additional adapters; iterate	Operational model adapters for bi-directional communication with the virtual watershed platform
Deploy Virtual Watershed <-> Visualization Environment adapter		Develop visualization adapter	Deploy visualization adapter	Operational adapter for linking data from multiple sources into visualization environment. Configuration transfer from visualization environment to virtual watershed.
Goal: Enable accelerated and broad access to research products, data and metadata through integration with national networks through interoperable data services				
Activity	**Year 1**	**Year 2**	**Year 3**	**Output**
Integrate data management system with CUAHSI HIS WaterOneFlow service network	NV-Develop NM-Deploy ID-Deploy	NV-Deploy		Availability of point-time-series data from each consortium state through CUAHSI network
Integrate data management system with DataONE network as Tier 4 member nodes	NM-Develop	NM-Deploy NV-Develop ID-Develop	NV-Deploy ID-Deploy	Availability of data and associated metadata search and download services, authenticated data access and replication with other DataONE Member Nodes
Goal: Streamline data intensive research through improved data management skills				
Activity	**Year 1**	**Year 2**	**Year 3**	**Outcome**
Provide annual data management workshops for EPSCoR researchers and their students	Present workshop in conjunction with project kick-off	Present workshop in conjunction with annual Tri-state meeting	Present workshop in conjunction with annual Tri-state meeting	All participating researchers and their student participants will have participated in at least one data management workshop

Visualization

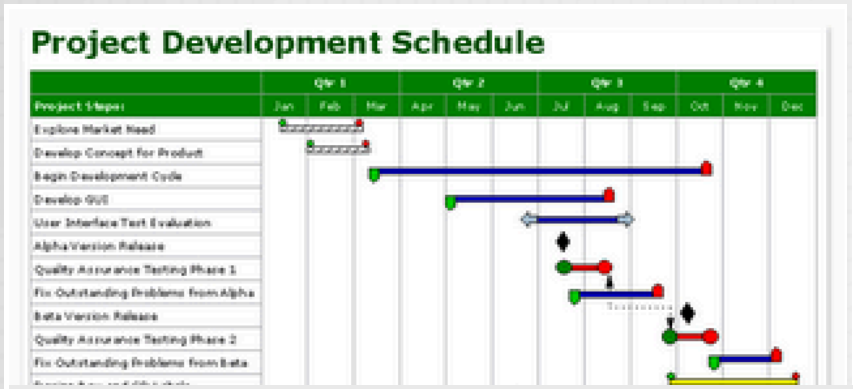
Goal: Accelerate collaborative, interdisciplinary watershed research and discovery by creating innovative visualization environments.

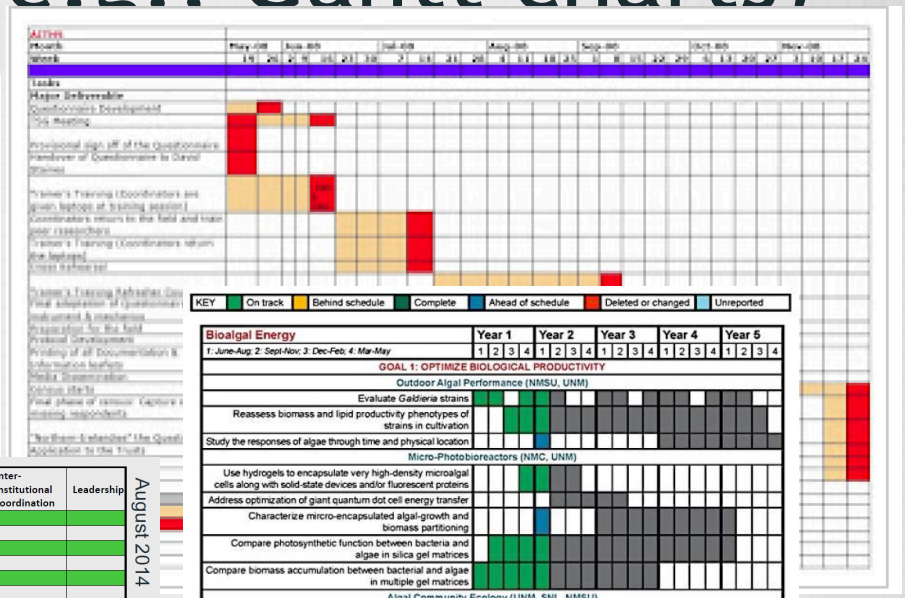
Activity	Year 1	Year 2	Year 3	Expected Final Accomplishments
Develop and deploy Visualization Environment <-> Virtual Watershed Platform adapters	Start development of VE-VWS adapter for the Desktop visualization environment	Complete development and deploy VE-VWS adapter for the Desktop visualization environment	Iterate (revise and refine) developed adapter for the Desktop visualization environment	Operational adapters for interfacing visualization environments (desktop, web, immersive) with the Virtual Watershed Platform
	Start development of VE-VWS adapter for the Web-based visualization environment	Complete development and deploy VE-VWS adapter for the Web-based visualization environment	Iterate (revise and refine) developed adapter for the Web-based visualization environment	
	Start development of VE-VWS adapter for the Immersive visualization environment	Complete development and deploy VE-VWS adapter for the Immersive visualization environment	Iterate (revise and refine) developed adapter for the Immersive visualization environment	
Develop user interfaces ("front end interfaces") for the visualization environments	Define functional and non-functional requirements for the front end interfaces of the visualization environments	Conduct usability study for visualization front ends		Documentation: software requirements specification & usability study reports to inform the development of visualization front end interfaces
	Create rapid prototype of the front end interface of the Desktop visualization environment	Develop and deploy full prototype of the front end interface of the Desktop visualization environment	Iterate (revise and refine) developed front end interface of the Desktop visualization environment	Operational front end interfaces for the visualization environments (desktop, web, immersive) that will enable users to interact with the virtual watersheds
	Create rapid prototype of the front end interface of the Web-based visualization environment	Develop and deploy full prototype of the front end interface of the Web-based visualization environment	Iterate (revise and refine) developed front end interface of the Web-based visualization environment	
	Create rapid prototype of the front end interface of the Immersive visualization environment	Develop and deploy full prototype of the front end interface of the Immersive visualization environment	Iterate (revise and refine) developed front end interface of the Immersive visualization environment	
Train users on how to use the visualization environments		Prepare and conduct CI training workshop at the Annual Tri-State Consortium Meeting (held in Year 2)	Prepare and conduct CI training workshop at the Annual Tri-State Consortium Meeting (held in Year 3)	Users (researchers and students) who know how to use the visualization environments for interacting with the virtual watersheds

Assessment and Evaluation

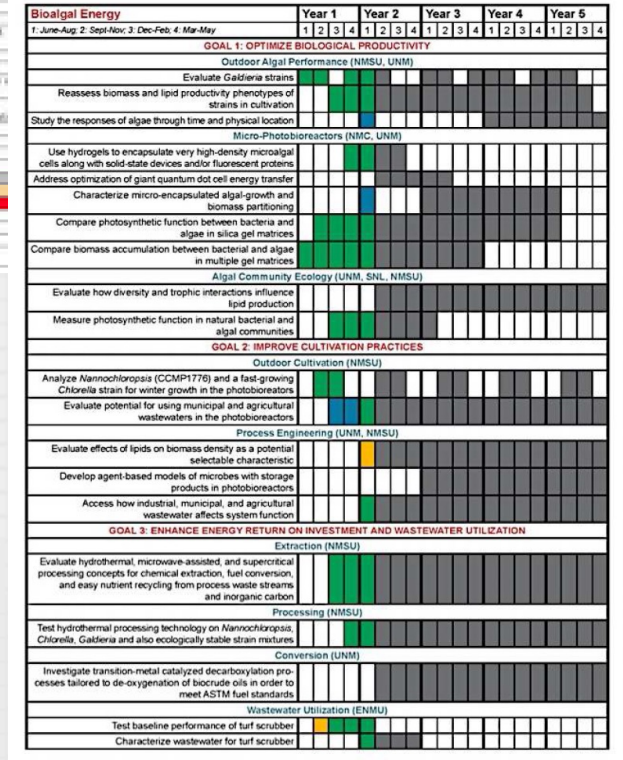
Strategies by Component	Output Metrics	Year 1				Year 2				Year 3				Outcomes and [Metrics]
Watershed Science		1	2	3	4	1	2	3	4	1	2	3	4	Faculty more competitive for R&D funds (10%/yr) [(awards, $)/yr]; increase model usage by adding model adapters to community repositories (2 adapters/yr; documented downloads/yr); increase in student proficiency with watershed models surveys)
Paramaterize and validate watershed models	# models	■	■	■	■	■	■	■	■	■	■	■	■	
Develop CSDMS adapters for models	# adapters	■	■	■	■	■	■	■	■	■	■	■	■	
Coordinate model runs with students	# models and students	■	■	■	■	■	■	■	■	■	■	■	■	
Disseminate findings and products	# theses, publications, data	■	■	■	■	■	■	■	■	■	■	■	■	
Snow Camp for students and faculty	# participants	■												
CI Visualization and Data														Increased speed and ease of accessing data and integrating data and models (testing, surveys); increased ability to interpret results and generate findings based on 3D tools (testing, surveys); sustainability of CI through community adoption
Tri-state coordination	# monthly/quarterly mtgs.	■	■	■	■	■	■	■	■	■	■	■	■	
VW user requirements gathering and prototyping	# users engaged	■	■	■	■									
Develop and deploy VW visualization adapters	# adapters					■	■	■	■	■	■	■	■	
Design VW immersive env. and desktop frontends	% design completed	■	■	■	■									
VW interface frontend rapid prototyping	protype completed					■	■	■	■					
VW interface frontend deployment	deployment									■	■	■	■	
Data and model requirements gathering (faculty/students)	# faculty/students engaged	■	■	■	■									
Develop and deploy VW data and service platform	platform deployed	■	■	■	■	■	■	■	■					
Develop and deploy VW platform adapters	# adapters	■	■	■	■	■	■	■	■					
Develop and deploy VW model adapters	# adapters	■	■	■	■	■	■	■	■	■	■	■	■	
Integration with CUAHSI and WaterOneFlow services	integration completed	■	■	■	■	■	■	■	■					
Integration of state data centers as DataONE Nodes	# Nodes deployed	■	■	■	■	■	■	■	■	■	■	■	■	
Data management workshops for faculty and students	# participants		■				■				■			

Project Schedules (e.g., Gantt charts)





"Traffic Light" Analysis



Strategic Plan Assessment

7 effective writing habits:

1. Set aside time for thinking, outlining, and writing during most productive time of day (e.g., 1 hour every day)
2. Make extensive use of outlines (from high to low level)
3. Set manageable goals and sub-goals (e.g., 1 paragraph or 1 page) and review daily
4. Use google docs for collaborative writing (back up)*

https://www.google.com/intl/en/docs/about/

5. Version documents with numbers/dates
6. Do boilerplate work during non-productive hours
7. Let others read, review and edit early on and frequently

*Share Point is another service that can provide more secure information sharing
http://office.microsoft.com/en-001/sharepoint/