



# Remote Sensing Applications Division (RSAD)

## CDR Program Office

Weekly Report for Jan 8, 2015  
Ed Kearns, Chief



# CDR Program Office

## OISST Rejuvenation Project

Team Lead:  
Drew Saunders

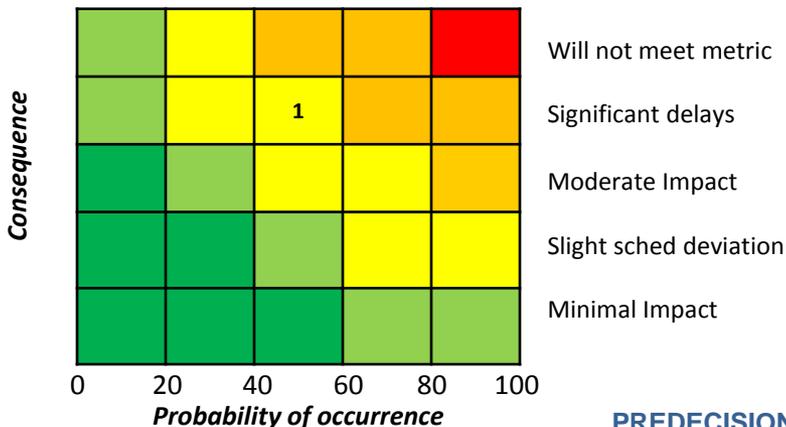
### Weekly Report – January 9, 2014

#### 1 OISST – Optimum Interpolated Sea Surface Temperature

- OISST software running on the oisst-dev container.
- Resolving issue with GRADs on oisst-dev.
- Resolving differences in high res ice code to convert to low res ice for SST.
- Submitted ATRAC entry for archive of Navy SST files from NAVO.
- Test validation took longer than expected need to update schedule.
- Resolved differences in 32 and 64 bit runs. Discussed with PI.
- DEV container created.
- Performing dry runs for the System Acceptance Test (SAT).
- Successfully completed 30 day parallel test.
- Comparing NCDC GTS with NCEP ship/buoy data for use. GCAD is resolving issues but requires new operational code.
- AVHRR data for the 15 day delay product is available from CLASS.
- GSTWG discussing inputs and production of preliminary OISST.
- Created a SOP for operational OISST.
- Completed refactoring of each component.
- Conducted Technology Assessment Review.

Monitor Project	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	NOV	
Test	[Red bar]																
Dry Run SAT	[Red bar]																
Setup DEV		[Red bar]															
Verify DEV				[Red bar]													
Setup TEST					[Red bar]												
Dry Run TEST					[Red bar]												
SAT					[Red bar]												
FOC																	
Reprocessing																	
SAs																	
SLA																	
OAD																	

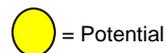
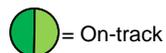
#### Risk Matrix



#### Risk and Mitigation

1 Time to progress through the three tier environment. ITB support is required.

#### PREDECISIONAL DRAFT INFORMATION





# CDR Program Office

## Federated Archive Search Tool (FAST)

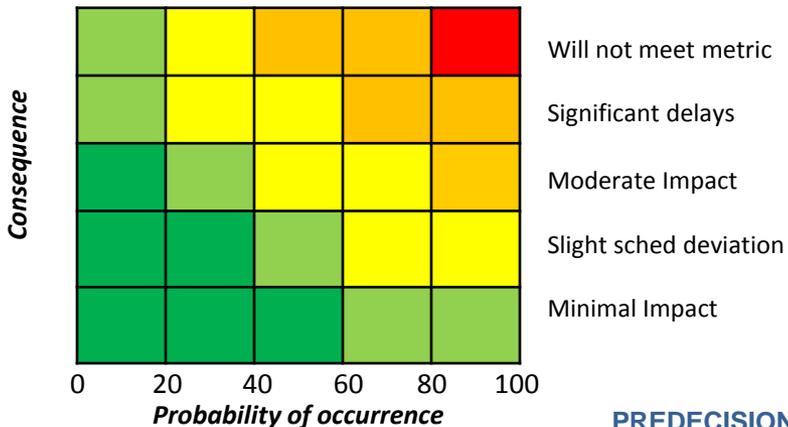
Team Lead:  
Linda Copley

### Weekly Report January 9, 2014

- 1 Federated Archive Search Tool proof-of-concept**
- Adding CDR collection level metadata to query CDRs.
  - Adding VIIRS thumbnail images.
  - Added VIIRS query capability.
  - Working on display application to demonstrate query capabilities.
  - Connected all data to geographic and date references.
  - Designed and loaded VIIRS catalog graph data.
  - Designed and loaded Storm Events graph data.
  - Loaded FIPS geographic data.
  - Installed Neo4j graph database with spatial extension.

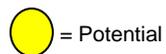
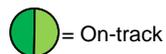
FAST Prototype	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	NOV	
Proof-of-concept	[Red bar]																
Demonstrate	[Red bar]																
Analysis			[Red bar]														
Recommendation				[Red bar]													

### Risk Matrix



### Risk and Mitigation

PREDECISIONAL DRAFT INFORMATION





# CDR Program Office

## Ingest Monitoring Tool

Team Lead:  
Linda Copley

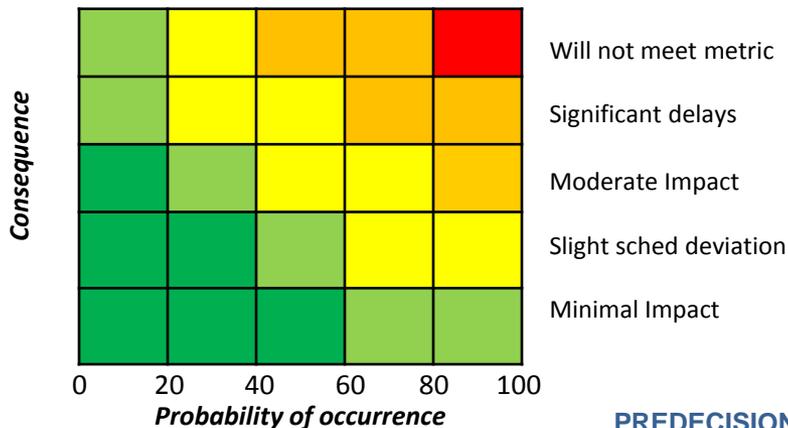
### Weekly Report – January 9, 2014

#### 1 Operations Monitoring Tool development

- **Implementing error log monitoring for ingest.**
- Re-engineered design to be compatible with other status monitoring efforts.
- Utilizing SIPGenSys infrastructure.
- Designing module to collect status data from iRODS.
- Working on database design.
- Defined requirements for Phase 1 of the project.
- Phase 1 implements basic functionality.
- Additional datasets can be added in later phases.
- Updated the monitoring project plan.
- Monitoring of operational ingest.

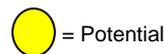
Monitor Project	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	NOV	
Phase 1	[Red bar]																
Status View	[Red bar]																
Dashboard					[Red bar]												
Email Notification						[Red bar]											
Phase II																	

### Risk Matrix



### Risk and Mitigation

PREDECISIONAL DRAFT INFORMATION





# CDR Program Office

## Reprocessing VIIRS SDRs

Team Lead:  
Jim Biard

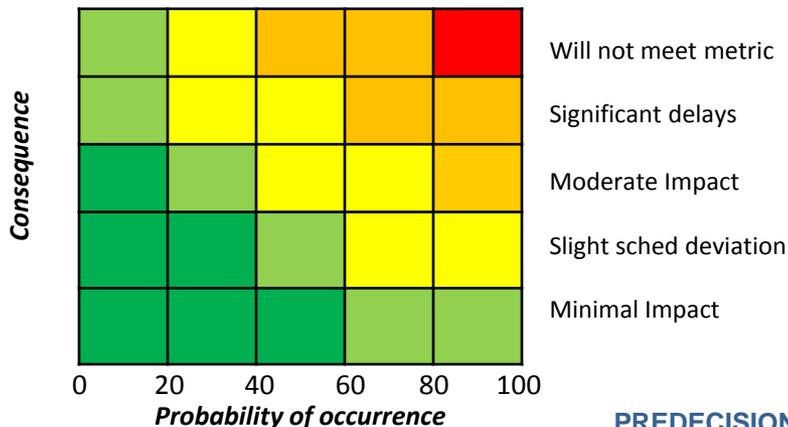
### Weekly Report – January 9, 2014

#### 1 Reprocessing VIIRS SDRs

- **On hold as work Obs4MIBs and FAST application.**
- Defined schedule estimates for project.
- Talking with STAR scientists (Changyong Cao, etc) to identify parallelization capability of VIIRS algorithms.
- Developed draft white paper to identify issues and scope.
- Have identified parts of the algorithm that need to 'conditioned' during runtime and will affect reprocessing estimates.
- Discussed scope and goals of the project with CDRP scientist.

Milestone	Begin Date	End Date	Effort (Days)
Develop VIIRS SDR granule comparator	TBD	TBD	10
Obtain data and software	TBD	TBD	5
Configure ADL	TBD	TBD	10
Produce matching reprocessed VIIRS SDR granules	TBD	TBD	20
Analyze requirements for parallel reprocessing	TBD	TBD	5
Develop parallel reprocessing management system	TBD	TBD	10
Determine practical limits on parallel reprocessing	TBD	TBD	20
Write a final report	TBD	TBD	5

### Risk Matrix



### Risk and Mitigation

#### PREDECISIONAL DRAFT INFORMATION

1/13/2015



= On-track      = Potential management action required      = Management attention required



# CDR Program Office

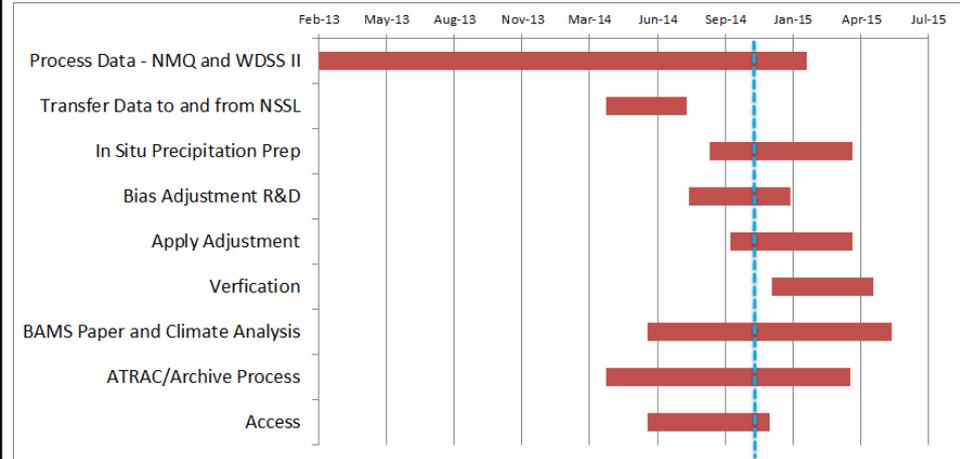
## NOAA NEXRAD Reanalysis

Project Manager:  
B. Nelson  
updated: Dec 18

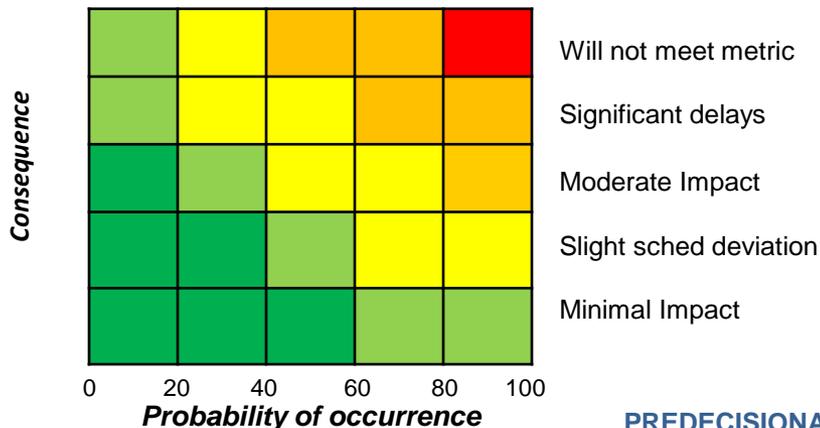
### Weekly Report

#### NNR – NOAA NEXRAD Reanalysis

- Bias assessment for 10 yrs of data at hourly scale
- Bias assessment for 10 yrs of data at daily scale
- 5-minute data is being processed
- Hourly IDW procedure is being implemented
- Assessment of bias at hourly scale is underway for full years (2008-2011)
- Hourly scale IDW is being tested and set up for processing for pilot domains
- Re-do daily gauge-radar processing to consider obs time for COOP data - Only minor improvement for daily
- Hourly data for HADS locs has been processed for 4 full years



### Risk Matrix



### Risk and Mitigation

No Risk at this time

12/11/2014

PREDECISIONAL DRAFT INFORMATION

= On-track   
 = Potential management action required   
 = Management attention required



# CDR Program Office

## ISCCP Processing @ NCDC

Project Manager:  
A. Young/K. Knapp  
Updated: Jan. 8

### Weekly Status Update

- Alisa is back so progress should accelerate.
- Updated project timeline.
- Preparing for QC of input satellite data for 2000s
- Awaiting final ancillary data delivery
- Inter-comparing test month run at NCDC and CCNY
- Continuing to pre-process data.
- Ordering replacement data from EUMETSAT
- Sent beta data to users for feedback.
- Preparing ancillary calibration data for processing.
- Working on ISCCP Website for NCDC
- Preparing data for Beta users (preliminary output)
- Prepared space and scripts for ISCCP processing on CICS server.
- Received pre-processing software to QC input files (GEO/B1 & LEO/AVHRR)

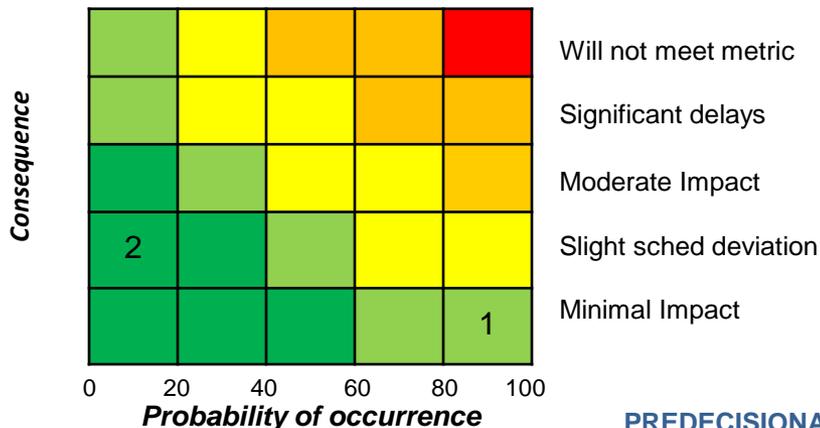
### Objectives

Produce ISCCP cloud products at NCDC following IOC R20 procedures. Plan for routine updates to follow.

### Schedule

- |                         |               |      |
|-------------------------|---------------|------|
| • Start Date            | 1983          |      |
| • Input Data QC         | Jan-Feb. 2015 |      |
| • Data Processing       | Feb-Mar 2015  |      |
| • QC & Analysis         | Mar-Apr 2015  |      |
| • Ext. PoR              | Apr-May 2015  |      |
| • Archive               | June          | 2015 |
| • Routine updates start | Oct. 2015     |      |

### Risk Matrix



### Risk and Mitigation

1. Delivery of software late and other delays.  
[Revised schedule](#)
2. CICS server space  
[Meeting with O. Brown to discuss.](#)

8/7/2014

**PREDECISIONAL DRAFT INFORMATION**

= On-track    
  = Potential management action required    
  = Management attention required





# CDR Program Office

## UW HIRS Processing @ NCDC

Project Manager:  
A. Young  
Updated: Jan 8

### Weekly Status Update

- Alisa is back so progress should accelerate. Still waiting for 10 yr dataset delivery.
- Final code delivered from UW.
- S. Stevens has begun preparing scripts for integrated reprocessing.
- Found space to temporarily store 10 TB of 10 yrs of product.
- Waiting for final code delivery from Wisconsin.
- Preparing plan for processing on CICS server.
- Working on finding space for the 10TB of input data (pixel level cloud data).

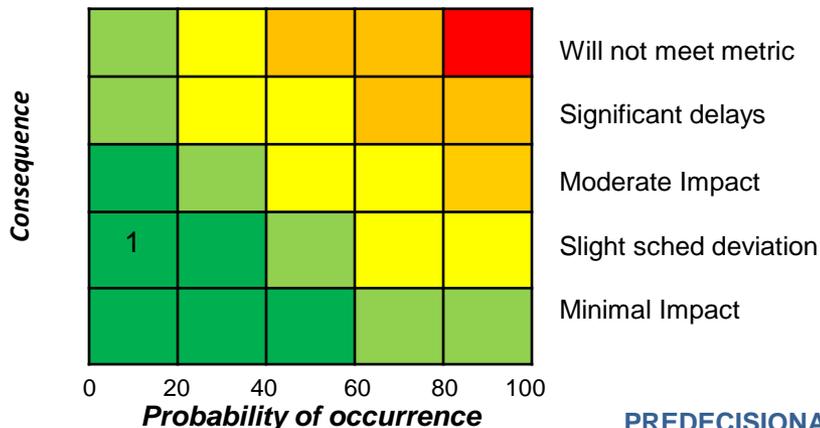
### Objectives

Produce global total precipitable water and cloud top pressure estimates from HIRS data using the UW algorithm (P. Menzel).

### Schedule

- Start Date                      December 2014
- End Date                         March 2014

### Risk Matrix



### Risk and Mitigation

1. Disk space may not be available.  
Impact: Could delay processing.

8/7/2014



PREDECISIONAL DRAFT INFORMATION



= Potential management action required



= Management attention required



# CDR Program Office

## Albedo of the Americas

Project Manager:  
J. Matthews  
Updated: Jan 8

### Weekly Status Update

- Meeting planned to discuss RSAD space needs for CICS
- Continued validation via collaboration with SAMSI (at NCSU).
- Loaned 42 TB of disk space allocation to ISCCP Project

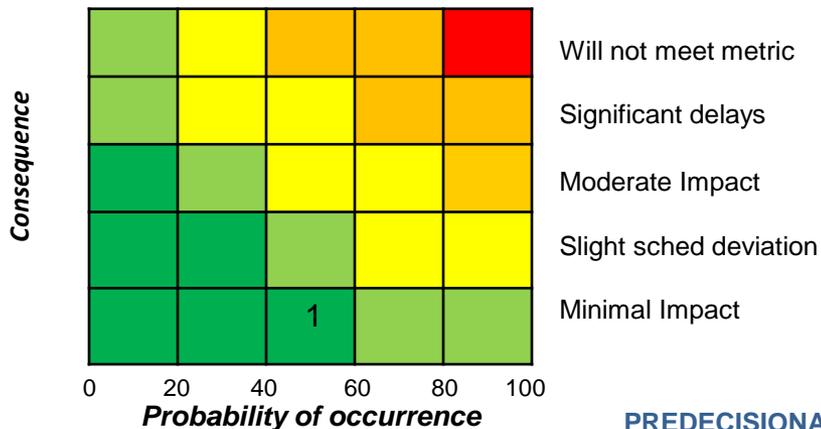
### Objectives

Produce a daily land surface albedo product over North and South America from GOES-GVAR observations for 1995-2014.

### Schedule (to be updated soon)

- Start Date                      January 2015
- End Date                         June 2016

### Risk Matrix

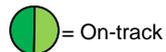


### Risk and Mitigation

1. Loaned disk space is not available  
Meeting with O. Brown to discuss disk space usage.

8/7/2014

PREDECISIONAL DRAFT INFORMATION



= On-track      = Potential management action required      = Management attention required



# CDR Program Office

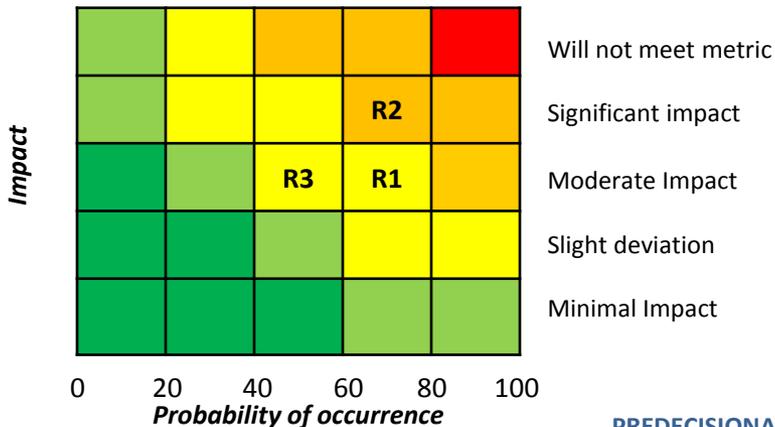
## 01B-06 Outgoing Longwave Radiation – Monthly Outsourced Software Rejuvenation Project

### Deliverables Report – January 8, 2015

- 7. Rejuvenated source code of one software component for initial assessment**
  - Received 10/24/2014. CDRP has not performed any s/w engineering assessment.
- 6. Data Flow Diagram**
  - Received 10/24/2014 as Slide 6 of Deliverable 5.
- 5. Code Design Diagrams**
  - Received 10/24/2014. Not in CDRP Library.
- 4. Implementation Plan**
  - Received 11/6/2014. No CDRP approval record, not in Library.
- 3. Code Static Analysis Report on Updated Baseline Code**
  - Received 8/29/2014 as zip file of Understand results. CDRP has not performed any s/w engineering assessment.
- 2. VDD Draft**
  - Received 7/29/2014. BN sent review comments to PI.
- 1. Report on Updated Baseline Source Code**
  - Received 8/1/2014. In Library as CDRP-RPT-0545. A better VDD!

01B-06DLR Monthly s/w Rejuvenation		2014						2015		
Deliverable		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
1	Report on Updated Baseline	█	█							
2	VDD Draft		█							
3	Code Static Analysis Report		█							
4	Implementation Plan			█	█	█				
5	Code Design Diagrams			█	█	█				
6	Data Flow Diagram			█	█	█				
7	Rejuvenated Code Sample			█	█	█				
8	Package of all Rejuvenated Code						█	█		
9	Test Data Package						█	█		
10	OAD Draft								█	
11	SAT plan & procedure									█
12	Rejuvenated Code Static Analysis Report									█
13	Finalized Rejuvenated Software Package									
14	Finalized Test Data Package									
15	Finalized Engineering Documentation									
16	Finalized C-ATBD and Maturity Matrix									
17	Report PI Support for NCDC test runs									
18	Report PI Support for NCDC operational runs									
19	Final Report									

### Risk Matrix



### Top Risks and Mitigation

- R1. Potential for rework as a result of not assigning software engineering resources to review PI deliverables in a timely fashion. [Cost & schedule impacts]
- R2. Potential for rework as a result of pending FOC requirement D-0008 regarding number of dataset epochs per file. [Cost, schedule, & scope impacts]
- R3. Unclear project manager authority. [No project charter].