Office of Satellite and Product Operations (OSPO)

OSPO CRITICAL WEATHER DAY POLICY

September 2013
Version 1.0

Prepared by:

U.S. Department of Commerce
National Oceanic and Atmospheric Administration (NOAA)
National Environmental Satellite, Data, and Information Service (NESDIS)
Office of Satellite and Product Operations (OSPO)

Office of Satellite and Product Operations (OSPO)

OSPO CRITICAL WEATHER DAY POLICY

September 2013

Prepared by:

U.S. Department of Commerce
National Oceanic and Atmospheric Administration (NOAA)
National Environmental Satellite, Data, and Information Service (NESDIS)
Office of Satellite and Product Operations (OSPO)

Approval Page

Office of Satellite and Product Operations (OSPO)

OSPO CRITICAL WEATHER DAY POLICY

PROGRAM: OSPO	**DOCUMENT RELEASE DATE**: (CMO Approval Date)
APPROVALS	
GROUP: OSPO Date Signature on file. NAME: **David Benner** Satellite Products and Services Division Manager	GROUP: OSPO Date 1/29/14 NAME: **Bruce Plott** IT Administrator
GROUP: OSPO Date 1/23/2014 NAME: **Ron Mahmot** Mission Operations Division Manager	GROUP: OSPO Date 1/23/2014 NAME: **Keith Amburgey** Corporate Services Manager
GROUP: OSPO Date Signature on file. NAME: **Doug Crawford** WCDAS Site Manager	GROUP: OSPO Date Signature on file. NAME: **Larry Ledlow** FCDAS Site Manager
GROUP: OSPO Date 1/23/14 NAME: **Sharolyn Young** National Ice Center Manager	GROUP: OSPO Date 27 Jan 14 NAME: **Patrick M. Condray** OSPO Deputy Director
CMO RELEASE APPROVAL: Date 2/4/2014 NAME: **Vanessa L. Griffin** OSPO Director	

DOCUMENT HISTORY

DOCUMENT REVISION LOG

The Document Revision Log identifies the series of revision to the OSPO Critical Weather Day Policy since the baseline release. This page will become a permanent part of this document.

DOCUMENT TITLE: OSPO <Title>				
DOCUMENT CHANGE HISTORY				
Revision No.	**Date**	**Section/Pages updated**	**Description of Change(s)**	**Approval Authority/ Revision Originator**
1.0	9/2013	All	Document development	Ron Mahmot 2020/Acentia

Preface

This document comprises the National Oceanic and Atmospheric Administration (NOAA) National Environmental Satellite, Data, and Information Service (NESDIS), Office of Satellite and Product Operations (OSPO) Critical Weather Day Policy for all OSPO systems.

NOAA/NESDIS/OSPO acknowledges the efforts of OSPO personnel for their preparation of the original version of this document. Future updates and revisions to this document will be produced and controlled by NOAA/OSPO.

The purpose of this document is to identify the scope of work which is post-poned during critical weather days as declared by the National Weather Service and to provide guidance for obtaining critical weather day waivers.

Table of Contents

List of Figures

Section 1.0 Introduction

1.1 Background

When the National Weather Service (NWS) declares a Critical Weather Day (CWD) the OSPO Director limits testing or non-routine changes to ground systems or spacecraft operations at OSPO's Satellite Operations Control Center (SOCC), Environmental Satellite Products Center (ESPC), and the Fairbanks and Wallops Command and Data Acquisitions (CDA) Stations. However, a CWD Waiver provides an option to proceed with changes if the risk of not proceeding exceeds the potential impact to OSPO's ability to deliver critical products, or if the risk to operations of proceeding with the proposed changes is low.

1.2 Purpose

The purpose of this OSPO CWD Policy is to ensure the continued production and dissemination of OSPO products necessary to protect life and property during identified critical weather events as declared by NOAA's NWS, in accordance with the NWS CWD policy[1].

This OSPO CWD policy describes the circumstances for which a CWD Waiver may be invoked to prevent adverse delivery of products to the NWS.

1.3 Scope

The scope of this document is limited to CWD policy guidance specifically for the CWD Waiver request. It establishes responsibilities and the submission process that personnel within OSPO will follow to submit a request for a CWD Waiver. The CWD Waiver process applies to all facility work where OSPO operational systems are located (e.g., NSOF, CDAs), operational Information Technology systems, spacecraft configuration changes, and any other major change in work during a CWD. This policy becomes effective immediately.

1.4 Definitions

According to the NWS CWD Instruction, 10-2203[2]:

Critical Weather Day event - A critical weather day event may be any of the following, occurring within the United States, on/near the coast of the United States and its territories or possessions (including Puerto Rico, the Virgin Islands, and Guam):

- A widespread tornado or severe weather outbreak;
- A storm system causing a major precipitation event;
- A severe cold-season storm affecting a large area with widespread heavy snow, freezing rain, or blizzard conditions;

[1] NWS Policy Directive 10-10, 18 November 2009, http://www.nws.noaa.gov/directives/010/010.htm

[2] NWS CWD Instruction, 10-2203, 31 December, 2008, http://www.nws.noaa.gov/directives/sym/pd01022003curr.pdf

- A tropical cyclone threatening the United States and its territories or possessions or producing excessive rainfall after moving inland; or

- A significant non-weather related event, e.g., wildfire, large-scale disaster, National Special Security Event (any event which the Department of Homeland Security believes could be an attractive target for terrorists), etc.

1.5 Declaration of CWD

A CWD will be declared by the NWS Senior Duty Meteorologist (SDM) based on the potential for, or existence of, a critical weather event as defined above. At the time of declaration, the NWS will determine the CWD starting time and duration, and announce the information on the National Centers for Environmental Protection (NCEP) website:

http://www.nco.ncep.noaa.gov/pmb/cwd/

As a backup, the SDM may be contacted directly to obtain CWD information:

Email: sdm@noaa.gov
Office: (301) 683-1500
Mobile: (240) 832-1751

Once a CWD is declared, no changes, other than those specified in Section 2.0 of this document, will be made to operational OSPO satellites, computers, facilities infrastructure, or communications infrastructure *without a CWD Waiver signed by the OSPO Director or delegated approval authority*. Appendix A of this document outlines the procedure for writing and submitting a waiver.

1.6 Notification

Details about the circumstances and process for declaring or changing a CWD can be found in the National Weather Service Instruction 10-2203[3]. The NWS Senior Duty Meteorologist (SDM) provides email notification to the OSPO offices/personnel listed below when a CWD is declared:

- NESDIS/OSPO Satellite Operations Control Center (SOCC) Shift Supervisor
- NESDIS/OSPO Satellite Analysis Branch (SAB) Shift Supervisor
- ESPC Help Desk

OSPO government employees, responsible for work being performed, are responsible for knowing when a CWD has been declared. Current CWD status is also available on the web site:

http://www.nco.ncep.noaa.gov/pmb/cwd/

In addition to the above NCEP link, OSPO has the following means for obtaining notification of a CWD:

- ESPC Helpdesk sends email notification to the ESPC Notification list

[3] NWS CWD Instruction, 10-2203, 31 December, 2008, http://www.nws.noaa.gov/directives/sym/pd01022003curr.pdf

- SOCC Shift Supervisor can be consulted
- The NCEP link also appears on the OSPO intranet homepage: http://www.ospo.nesdis.noaa.gov/index.html

  This URL is accessible only when logged in or, logged in via VPN to the NSOF LAN.
- Announcements made at standing daily OSPO meetings
  - (8:45 am – SOCC, 9:30 am – ESPC)

1.7 Roles and Responsibilities

- **NWS Senior Duty Meteorologist** – Declare and coordinate Critical Weather Day requests.
- **OSPO Deputy Director** – Delegated authority by the OSPO Director to approve or deny a "CWD Waiver," which serves as permission for OSPO to conduct changes to operations while CWD status is in effect. Ensures Director is briefed on any waivers with associated significant impact or risk
- **Division Manager** – Review the draft CWD Waiver request, and the risk assessment. Request more information from the Technical Coordination Team submitting the waiver, if necessary. Submit the division-level approved Waiver request to the OSPO Deputy Director. Division Managers are identified as a Site Manager, Station Manager, Division Manager, or Deputy Division Manager.
- **Branch Manager** – Review the draft CWD Waiver, coordinating with the Operations Coordinator and Technical Team.
- **Technical Coordination Team**
  - **Operations Coordinator** – Responsible for coordinating with the Technical Team to generate the CWD Waiver, continuously check in with the team performing the work to ensure compliance to the waiver, and report status and/or anomalies to the Division Manager.
- **Technical Team** – Generate the CWD Waiver with the Operations Coordinator and deliver to MOD, CDA or SPSD Division Manager. Submit additional information, if requested. Proceed with work as stated in the CWD Waiver (Waiver approved) or stop work in progress (Waiver denied) until the CWD is no longer in effect.

1.8 Document References

- NATIONAL WEATHER SERVICE POLICY DIRECTIVE 10-10, Operations and Services, CLIMATE SERVICES, November 18, 2009:
  - http://www.nws.noaa.gov/directives/010/010.htm
- NATIONAL WEATHER SERVICE INSTRUCTION 10-2203, Critical Weather Day, Operations and Services, Readiness 10-22, December 31, 2008:
  - http://www.nws.noaa.gov/directives/sym/pd01022003curr.pdf

Section 2.0 Authority and Exclusion

2.1 Waiver Authority

During a declared CWD, non-routine activities and configuration changes, including but not limited to building construction and IT system testing that directly affect OSPO operational systems, will be postponed. The exception to this requirement is determined on a case-by-case basis, through the submission of a CWD Waiver. The waiver request is drafted by the Technical Coordination Team requesting to continue their work through the CWD, and submitted to the Division Manager, who in turn submits the waiver to the OSPO Director or delegated approval authority. The OSPO Director or delegate has the authority to permit facility work, system tests, and planned outages if a greater risk is created by not completing these activities, or if there is minimal to zero impact to operations.

2.2 Exclusions

Satellite launch and commissioning activities, such as orbit raising maneuvers and deployments, do not require a waiver and may proceed as planned, unaffected by the declaration of a CWD.
The following systems do not produce data for the NWS; therefore, a waiver is not required and these systems can continue to perform operations, configuration changes and system tests as planned, unaffected by the declaration of a CWD:

- Defense Meteorological Satellite Program (DMSP) ground system
- Air Force Weather Agency (AFWA) Suomi-National Polar-Orbiting Partnership (SNPP) Interface Data Processing Segment (IDPS)

2.2.1 Emergency Repairs

Emergency repairs, identified as imminent threat to life and property or the satellite, are allowed to occur without the CWD Waiver in order to restore operations, as long as they follow established system emergency configuration management (CM) processes, and do not risk disabling another operational satellite, computer or communications infrastructure.

Emergency repairs, identified as imminent threat to life and property or the satellite, are allowed to occur without the CWD Waiver in order to restore operations, as long as they follow established system emergency CM processes, and do not risk disabling another operational satellite, computer or communications infrastructure.

2.2.2 GOES Exclusions

Geostationary Operational Environmental Satellites (GOES) NOP series satellites have a unique maneuver rule upon declaration of a CWD by NWS for GOES spacecraft. When a station keeping maneuver is planned, OSPO provides NWS a scheduled maneuver date and a backup date. If CWD is declared, NWS has the option to either allow the maneuver on the scheduled maneuver date or to request OSPO to move the maneuver to the backup date. NWS allows GOES operations to perform a maneuver on the CWD after evaluating all impacts to NWS and GOES operations. SDM sends written notification to OSPO to allow such GOES maneuver while in a declared CWD. A waiver is not required for GOES operations to perform a NWS approved maneuver on a CWD.

GOES Yaw flip maneuver does not require a CWD Waiver as operations are critical and

should not be shifted. However, NWS can discuss the need to delay a Yaw flip maneuver for one or two days with OSPO in CWD.

Execution of a collision avoidance maneuver, the process of preventing the spacecraft from colliding with other objects, does not require a CWD Waiver. CWD will be one factor in the collision avoidance maneuver risk analysis.

2.2.3 Jason-2/Ocean Surface Topography Mission (OSTM) Exclusions

Center Nationale D'Etudes Spatiale (CNES) directed spacecraft commanding is excluded from needing a CWD Waiver.

Jason-2 and Jason-3 ground system changes are not excluded from CWD restrictions due to Operational Geophysical Data Records (OGDRs) being ingested into the NCEP models. For NOAA Jason-2/3 ground system changes, a CWD Waiver is necessary.

2.2.4 Suomi-NPP Exclusions

2.2.4.1 Maneuvers

The following is a list of Suomi-NPP maneuvers that do not require a CWD Waiver due to the criticality of the maneuver:

- Collision avoidance maneuvers - the process of preventing the spacecraft from colliding with any other vehicle or object.
- Station keeping maneuvers - the orbital maneuvers made by thruster burns that are needed to keep the spacecraft in a particular assigned orbit.
- Visible/Infrared Imager Radiometer Suite (VIIRS) roll calibration maneuver (VIIRS is an instrument on Suomi-NPP) - the difference between the Solar Diffuser Stability Monitor (SDSM)-based monitoring of VIIRS degradation and the Lunar-calibration-based monitoring of VIIRS degradation is critical for accurate calibration of the VIIRS data. The quasi-continuous and continued monthly VIIRS Lunar Roll observations are critical for this calibration, as well as time-critical (one opportunity per month).

With regards to VIIRS Lunar Roll maneuver, a waiver is only required when the maneuver is scheduled to occur over the continental United States. The CWD Waiver for this specific activity needs to be completed and routed for approval approximately two weeks before the maneuver in order to avoid added risk for operations. The CWD Waiver in this instance will serve only as a notification for direct readout users over the U.S. allowing them to plan accordingly during the outage.

2.2.4.2 Other Activities

Instrument calibrations - The process of adjusting the output or indication on a measurement instrument to agree with the value of the applied standard, within a specified accuracy. Instruments calibration commands are part of the SNPP routine command load (DAS) and once built into the load there is greater risk in changing the load than in deferring the commanding. To ensure continued accuracy and validity of the data from the five instruments on SNPP, periodic calibration

activities are performed by each instrument. These activities affect the nominal science data being generated during the calibration activity, but are critical activities for continual production of high quality science data and must not be interrupted. Examples of these calibration activities include, and are not limited to, VIIRS Emissive Band calibration and Clouds and Earth's Radiant Energy System (CERES) Solar Calibration observations.

2.2.5 POES Exclusions

Instrument calibrations - The process of adjusting the output or indication on a measurement instrument to agree with the value of the applied standard, within a specified accuracy. Instrument calibration commands are built into the stored command table load (similar to SNPP) and are a part of routine operations. Once the weekly stored command table has been built and tested there is more risk to changing the upload than deferring the calibration commanding. To ensure continued accuracy and validity of the data from the five instruments on POES, periodic calibration activities are performed on each instrument through the stored command table. These activities affect the nominal science data being generated during the calibration activity, but are critical activities for continual production of high quality science data and must not be interrupted. Examples of these calibration activities include, and are not limited to, SEM MEPED/TED calibration for electron and proton particle detection, SBUV wavelength calibration for Ozone concentration in the Stratosphere and Solar Spectral Irradiance, MHS calibration for Vertical Distribution of Humidity in the atmosphere and AMSU-A calibration for radiance profile in Microwave Spectrum.

2.3 Risk Assessment of Waiver Request

The CWD Waiver request requires a risk assessment. The Risk Management process is designed to determine and evaluate risks that may occur with regard to any aspect of the OSPO operation. The Technical Coordination Team, and Division Manager, analyzes the potential likelihood and consequence of the identified risk. Risk Management details can be found in Appendix B: Risk Assessment.

Acronyms

AFWA	Air Force Weather Agency
CDAS	Command and Data Acquisition Station
CCR	Configuration Change Request
CDA	Command and Data Acquisition
CDAS	Command and Data Acquisition Station
CERES	Clouds and Earth's Radiant Energy System
CM	Configuration Management
CNES	Center Nationale D'Etudes Spatiale
CWD	Critical Weather Day
DMSP	Defense Meteorological Satellite Program
DSB	Direct Services Branch
FCDAS	Fairbanks Command and Data Acquisition Station
GOES	Geostationary Operational Environmental Satellites
IDPS	Interface Data Processing Segment
MOD	Mission Operations Division
NCEP	National Centers for Environmental Prediction
NCWCP	NOAA Center for Weather and Climate Prediction
NESDIS	National Environmental Satellite, Data, and Information Service
NIC	National Ice Center
NOAA	National Oceanic and Atmospheric Administration
NSOF	NOAA Satellite Operations Facility
NWS	National Weather Service
O&M	Operations and Maintenance
OGDR	Operational Geophysical Data Records
OSPO	Office of Satellite and Product Operations
POES	Polar-Orbiting Environmental Satellite
PR	Problem Report
RATS	Request for Action Tracking System
SAB	Satellite Analysis Branch
SOCC	Satellite Operations Control Center

SNPP	Suomi National Polar-orbiting Partnership
SPB	Satellite Products Branch
SPSD	Satellite Products and Services Division
SDM	Senior Duty Meteorologist
VIIRS	Visible/Infrared Imager Radiometer Suite
WCDAS	Wallops Command and Data Acquisition Station
WR	Work Request

Appendix A: CWD Waiver Process

1.0 CWD Waiver Process

The official Critical Weather Day (CWD) Waiver is located on the OSPO intranet at:

http://www.ospo.nesdis.noaa.gov/

This URL is accessible only when logged in or, logged in via VPN to the NSOF LAN.

The following activities detail the OSPO CWD Waiver submittal procedures:

1. Technical Coordination Team drafts a CWD Waiver request, as described in preceding sections of this document, and includes the Risk Assessment (upon the determination of a significant risk (likelihood and consequence) of not continuing the scheduled work on that day). Appendix B provides Risk Assessment information and Appendix C Waiver Field Descriptions.

2. The Technical Coordination Team provides the CWD Waiver to the Branch Chief for review.

3. Upon Branch Chief review, the Waiver is provided to the Division Manager.

    a. The Division Managers have delegated authority to defer some, or all, of the requested work in the CWD Waiver based on operational risk and relative impact to the requesting project. If there is significant impact to the requesting project by deferring work (Red area of the Risk matrix), the Division Manager will bring the recommendation to defer the request to the Director's attention for concurrence.

4. The Division Manager reviews the CWD Waiver and either (1) requests more information from the Technical Coordination Team, or (2) approves and submits the Waiver to the OSPO Director.

5. The OSPO Director either (1) requests more information from the Division Manager, (2) denies the CWD Waiver, or (3) approves the CWD Waiver.

    a. If multiple changes are requested within the waiver, those changes will be approved or denied individually and will be stated as such on the CWD Waiver.

    b. If more information is requested from the Division Manager, the CWD Waiver may still be approved or denied after receipt and review of the additional requested information.

6. If the CWD Waiver is approved,

    a. The Technical Coordination Team continues the work as scheduled for that CWD period, as specified on the waiver.

b. CWD Waiver is sent to the OSPO management notification list as an "Approved Waiver" by Support Branch personnel.

c. Signed CWD Waivers are attached to SOCC procedures that require a CWD Waiver in order to proceed. Personnel executing the procedure are responsible for verifying the CWD Waiver is in place before proceeding.

7. Upon completion of CWD Waiver decision (approved or denied),

   a. The CWD Waiver is saved as a *.pdf and uploaded to the G: Drive folder by the Operations and Maintenance (O&M) Technical Documentation Contractor.

      i. G:\Common\ESPC Library\Forms\OSPO_CWD_Waiver_ Forms_Signed

   b. If the work is associated with a Request for Action Tracking System (RATS) task (Work Request [WR], Problem Report [PR], CCR), the Primary assignee is responsible for ensuring the Waiver is added as an attachment to the task using the configuration management process, regardless of approval or denial of the CWD Waiver.

8. The following figure, (Figure 1) shows the CWD Waiver submission process flow.

2.0 CWD Waiver Submission Process Flow

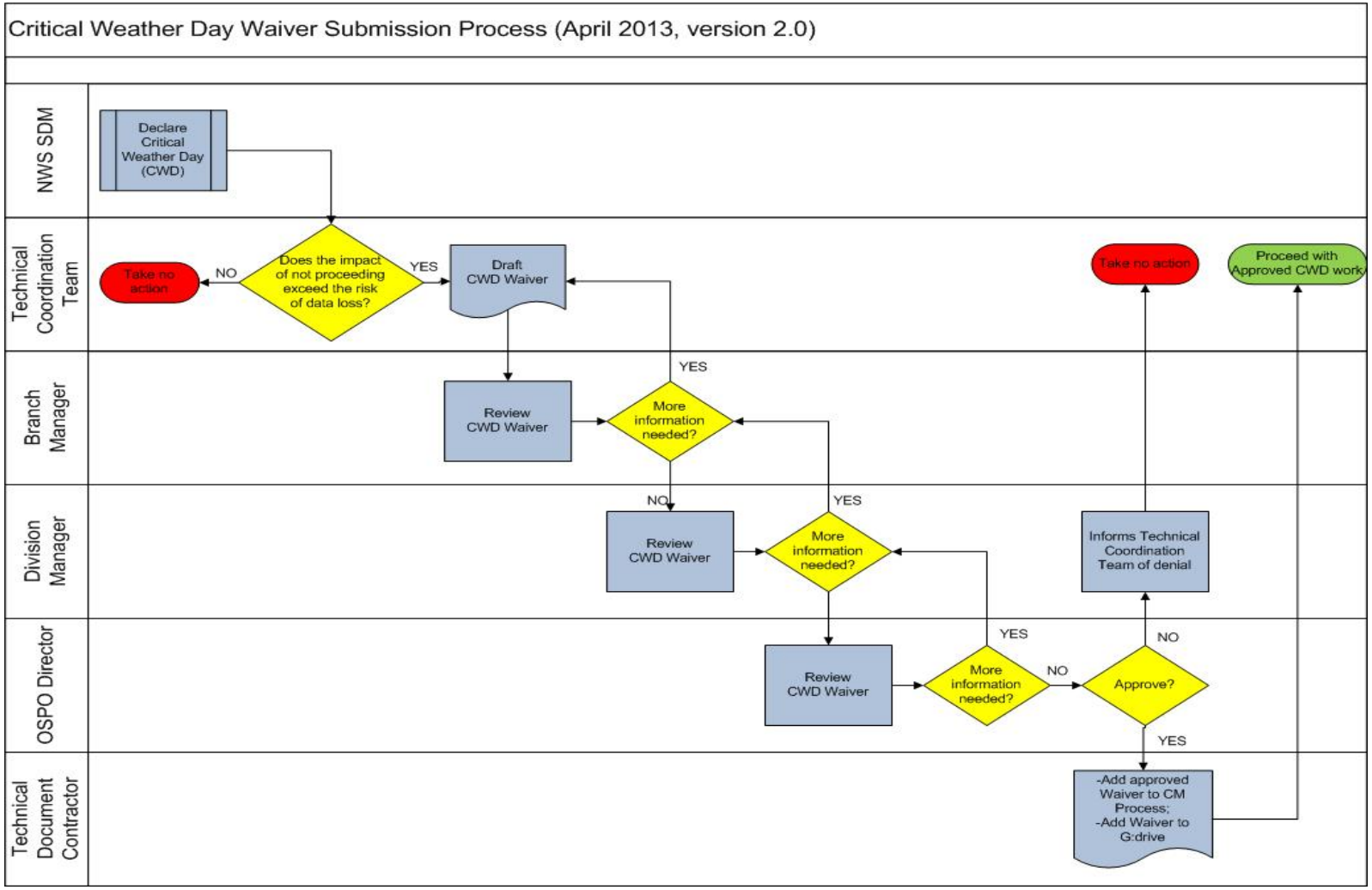
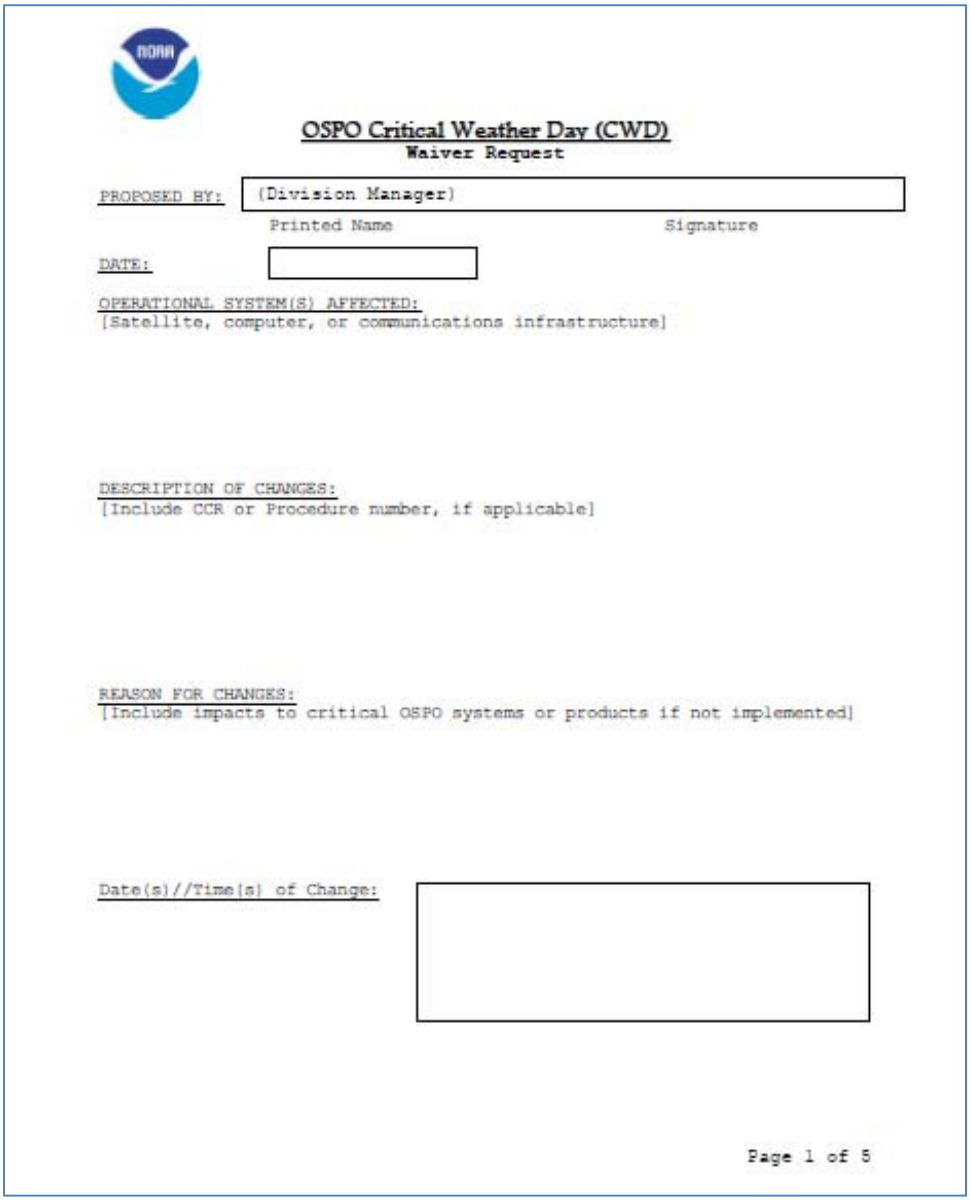


Figure 1: CWD Waiver Submission Process Flow

3.0 Sample - CWD Waiver

The following figures, (Figure 2 through Figure 6) show a sample CWD Waiver[4] form.



OSPO Critical Weather Day (CWD)
Waiver Request

PROPOSED BY: (Division Manager)
Printed Name Signature

DATE:

OPERATIONAL SYSTEM(S) AFFECTED:
[Satellite, computer, or communications infrastructure]

DESCRIPTION OF CHANGES:
[Include CCR or Procedure number, if applicable]

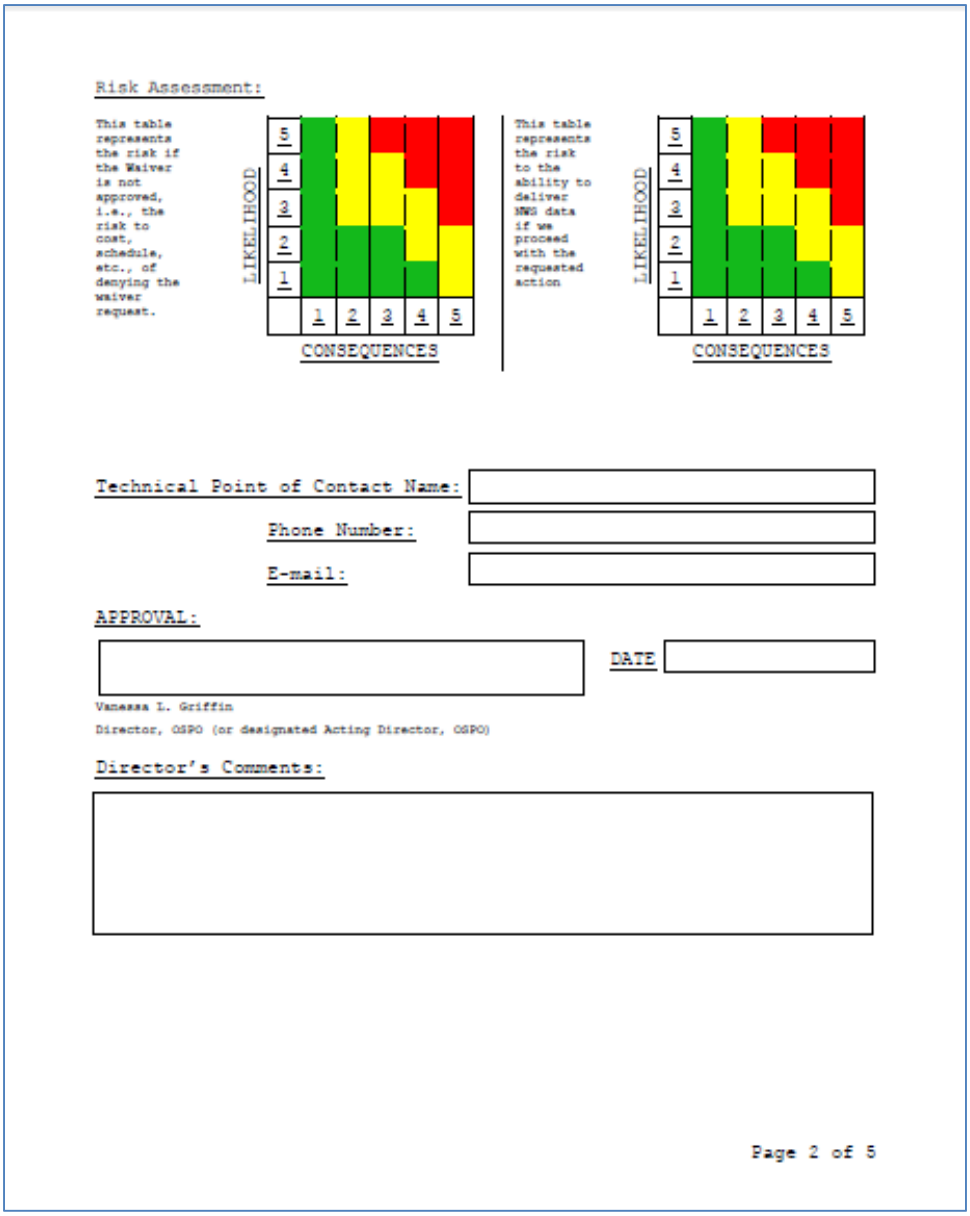
REASON FOR CHANGES:
[Include impacts to critical OSPO systems or products if not implemented]

Date(s)//Time(s) of Change:

Page 1 of 5

Figure 2: OSPO CWD Waiver Form, Page 1

[4] The official CWD Waiver is located on the OSPO intranet at: http://www.ospo.nesdis.noaa.gov/


Risk Assessment:

This table represents the risk if the Waiver is not approved, i.e., the risk to cost, schedule, etc., of denying the waiver request.

This table represents the risk to the ability to deliver NWS data if we proceed with the requested action

Technical Point of Contact Name:

Phone Number:

E-mail:

APPROVAL:

DATE

Vanessa L. Griffin

Director, OSPO (or designated Acting Director, OSPO)

Director's Comments:

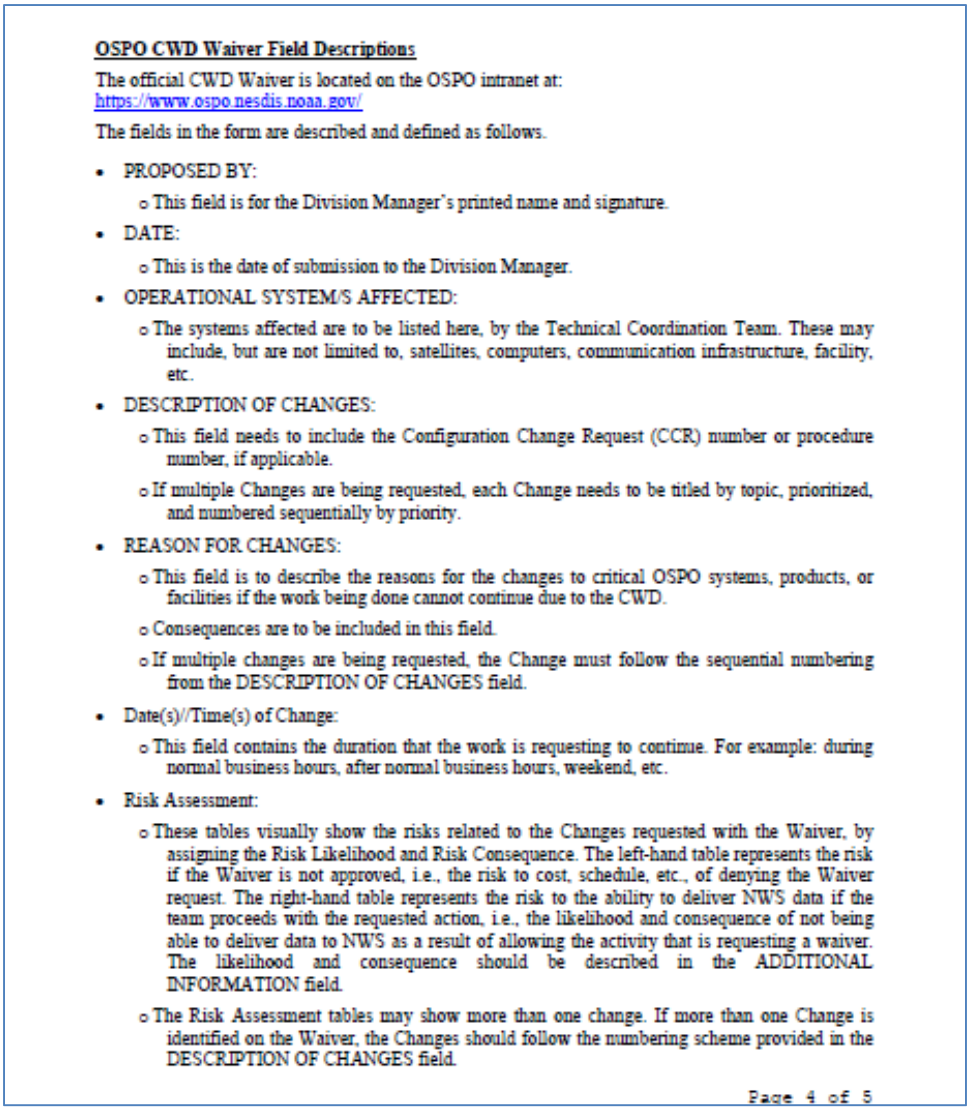
Page 2 of 5

Figure 3: OSPO CWD Waiver Form, Page 2

ADDITIONAL INFORMATION:
[Risk likelihood and consequences must be explained here. Add any additional information.]

Page 3 of 5

Figure 4: OSPO CWD Waiver Form, Page 3



OSPO CWD Waiver Field Descriptions

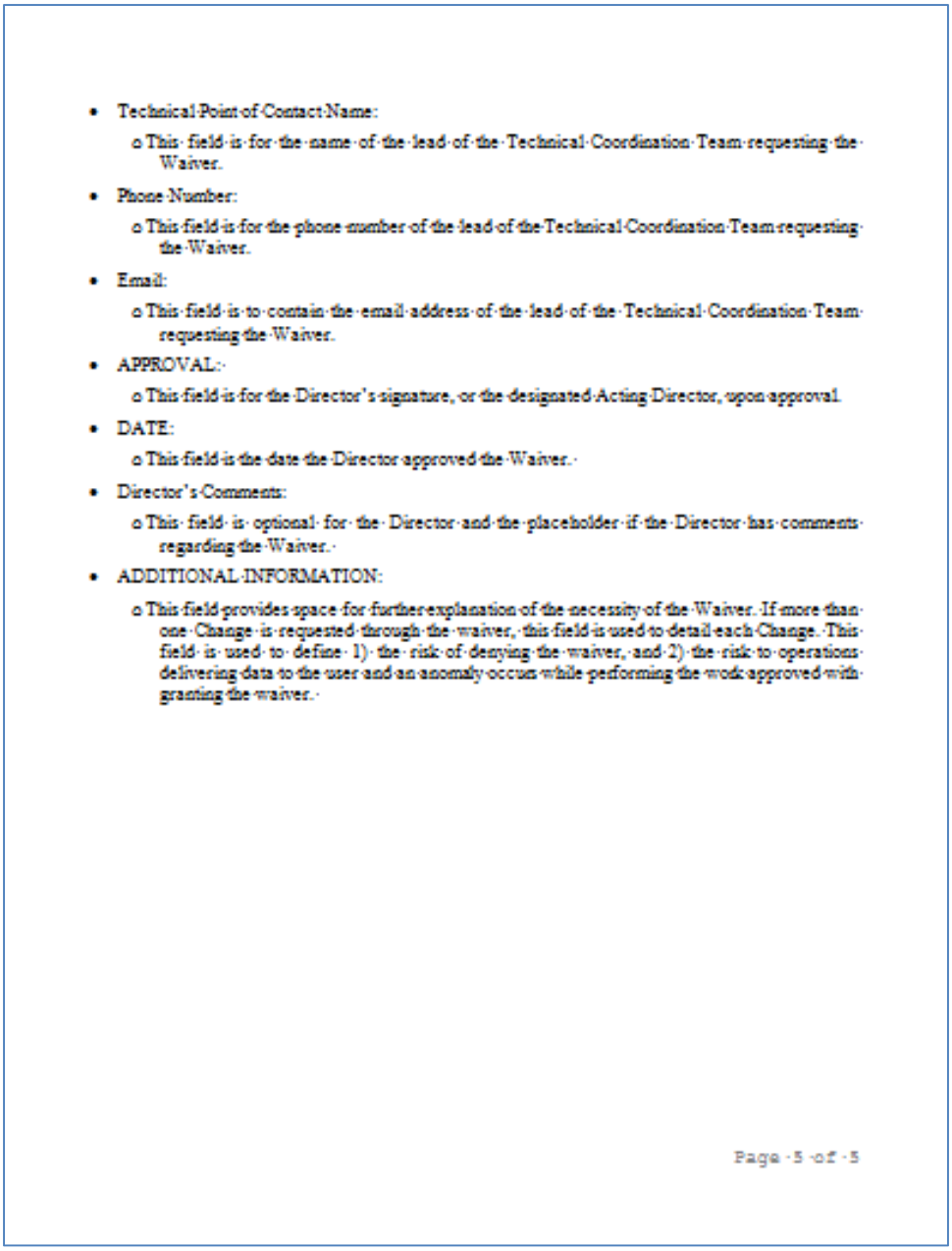
The official CWD Waiver is located on the OSPO intranet at:
https://www.ospo.nesdis.noaa.gov/

The fields in the form are described and defined as follows.

- PROPOSED BY:
  - This field is for the Division Manager's printed name and signature.
- DATE:
  - This is the date of submission to the Division Manager.
- OPERATIONAL SYSTEM/S AFFECTED:
  - The systems affected are to be listed here, by the Technical Coordination Team. These may include, but are not limited to, satellites, computers, communication infrastructure, facility, etc.
- DESCRIPTION OF CHANGES:
  - This field needs to include the Configuration Change Request (CCR) number or procedure number, if applicable.
  - If multiple Changes are being requested, each Change needs to be titled by topic, prioritized, and numbered sequentially by priority.
- REASON FOR CHANGES:
  - This field is to describe the reasons for the changes to critical OSPO systems, products, or facilities if the work being done cannot continue due to the CWD.
  - Consequences are to be included in this field.
  - If multiple changes are being requested, the Change must follow the sequential numbering from the DESCRIPTION OF CHANGES field.
- Date(s)//Time(s) of Change:
  - This field contains the duration that the work is requesting to continue. For example: during normal business hours, after normal business hours, weekend, etc.
- Risk Assessment:
  - These tables visually show the risks related to the Changes requested with the Waiver, by assigning the Risk Likelihood and Risk Consequence. The left-hand table represents the risk if the Waiver is not approved, i.e., the risk to cost, schedule, etc., of denying the Waiver request. The right-hand table represents the risk to the ability to deliver NWS data if the team proceeds with the requested action, i.e., the likelihood and consequence of not being able to deliver data to NWS as a result of allowing the activity that is requesting a waiver. The likelihood and consequence should be described in the ADDITIONAL INFORMATION field.
  - The Risk Assessment tables may show more than one change. If more than one Change is identified on the Waiver, the Changes should follow the numbering scheme provided in the DESCRIPTION OF CHANGES field.

Page 4 of 5

Figure 5: OSPO CWD Waiver Form, Page 4



- Technical Point of Contact Name:
  - This field is for the name of the lead of the Technical Coordination Team requesting the Waiver.
- Phone Number:
  - This field is for the phone number of the lead of the Technical Coordination Team requesting the Waiver.
- Email:
  - This field is to contain the email address of the lead of the Technical Coordination Team requesting the Waiver.
- APPROVAL:
  - This field is for the Director's signature, or the designated Acting Director, upon approval.
- DATE:
  - This field is the date the Director approved the Waiver.
- Director's Comments:
  - This field is optional for the Director and the placeholder if the Director has comments regarding the Waiver.
- ADDITIONAL INFORMATION:
  - This field provides space for further explanation of the necessity of the Waiver. If more than one Change is requested through the waiver, this field is used to detail each Change. This field is used to define 1) the risk of denying the waiver, and 2) the risk to operations delivering data to the user and an anomaly occurs while performing the work approved with granting the waiver.

Page 5 of 5

Figure 6: OSPO CWD Waiver Form, Page 5

Appendix B: Risk Assessment

1.0 Risk Matrix and Rating

Assigning values to risk likelihood and consequence determines the risk rating. The risk matrix in the following figure (see Figure 7) helps identify, prioritize and manage key risks for OSPO.

Risk likelihood and consequence are rated with a number scale, 1 being Very Low and 5 being Very High. The scoring of risks is not an exact science. These attributes are basic, providing an idea of the likelihood of a risk rather than an exact prediction. Once the likelihood and consequence have been determined, an overall risk level can be assigned.

Unique elements, or several changes combined onto one Waiver, need to be identified and correlated accordingly on the Risk Matrices on the Waiver; i.e., 1) Change 1 is labeled as "1" on the risk matrix. As applicable, a narrative should be included in the ADDITIONAL INFORMATION section to describe the rationale with the Risk Table entry.

2.0 Risk Likelihood

Likelihood is defined as the probability that a risk will come to fruition. Likelihood (probability) is determined by considering threat capability and remediation effectiveness. In addition, the estimated earliest date at which the risk could occur and the estimated latest date that the risk could occur is taken into account for risk likelihood determination. Events that could occur sooner should receive a higher risk threat or likelihood.

3.0 Risk Consequence

To accurately and effectively quantify the consequence of a risk, the impact assessment should include availability of NWS products, as well as the effect on the spacecraft health and safety. The cost and schedule implication to NESDIS programs and projects must also be taken into account.

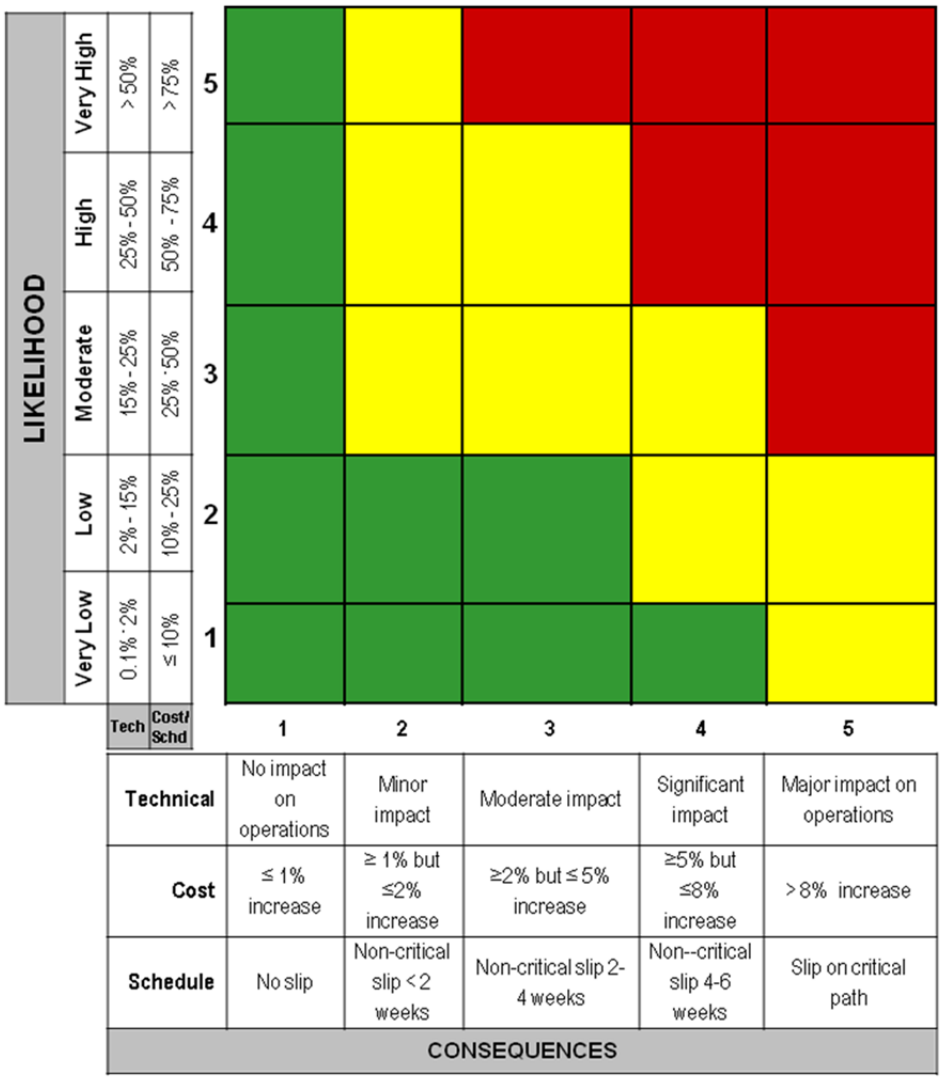


Figure 7: Risk Rating Matrix

Appendix C: OSPO CWD Waiver Field Descriptions

The official CWD Waiver is located on the OSPO intranet at: http://www.ospo.nesdis.noaa.gov/. The following form fields are defined below.

- PROPOSED BY:
  - This field is for the Division Manager's printed name and signature.
- DATE:
  - This is the date of submission to the Division Manager.
- OPERATIONAL SYSTEM/S AFFECTED:
  - The systems affected are to be listed here, by the Technical Coordination Team. These may include, but are not limited to, satellites, computers, communication infrastructure, facility, etc.
- DESCRIPTION OF CHANGES:
  - This field needs to include the Configuration Change Request (CCR) number or procedure number, if applicable.
  - If multiple changes are being requested, each change needs to be titled by topic, prioritized, and numbered sequentially by priority.
- REASON FOR CHANGES:
  - This field is to describe the reasons for the changes to critical OSPO systems, products, or facilities if the work being done cannot continue due to the CWD.
  - Consequences are to be included in this field.
  - If multiple changes are being requested, the change must follow the sequential numbering from the DESCRIPTION OF CHANGES field.
- DATE(S)/TIME(S) OF CHANGE:
  - This field contains the duration that the work is requesting to continue. For example: during normal business hours, after normal business hours, weekend, etc.
- RISK ASSESSMENT:
  - These tables visually show the risks related to the Changes requested with the Waiver, by assigning the Risk Likelihood and Risk Consequence. The left-hand table represents the risk if the Waiver is not approved, i.e., the risk to cost, schedule, etc., of denying the Waiver request. The right-hand table represents the risk to the ability to deliver NWS data if the team proceeds with the requested action, i.e., the likelihood and consequence of not being able to deliver data to NWS as a result of allowing the activity that is requesting a waiver. The likelihood and consequence should be described in the ADDITIONAL INFORMATION field.
  - The Risk Assessment tables may show more than one change. If more than one Change is identified on the Waiver, the Changes should follow the numbering scheme provided in the DESCRIPTION OF CHANGES field.

- TECHNICAL POINT OF CONTACT NAME:
  - This field is for the name of the lead of the Technical Coordination Team requesting the Waiver.
- PHONE NUMBER:
  - This field is for the phone number of the lead of the Technical Coordination Team requesting the Waiver.
- EMAIL:
  - This field is to contain the email address of the lead of the Technical Coordination Team requesting the Waiver.
- APPROVAL:
  - This field is for the Director's signature, or the designated Acting Director, upon approval.
- DATE:
  - This field is the date the Director approved the Waiver.
- DIRECTOR'S COMMENTS:
  - This field is optional for the Director and the placeholder if the Director has comments regarding the Waiver.
- ADDITIONAL INFORMATION:
  - This field provides space for further explanation of the necessity of the Waiver. If more than one Change is requested through the waiver, this field is used to detail each Change. This field is used to define 1) the risk of denying the waiver, and 2) the risk to operations delivering data to the user and an anomaly occurs while performing the work approved with granting the waiver.

Appendix D: Signatures on File

David Benner

Benner Approval - CWD

Van D. Crawford

Crawford Approval - CWD

Larry Ledlow

Ledlow Approval - CWD