

PNNL-12345

# Title of Report

Subtitle

July 15, 2018

AJ McDonald  
RJ Reynolds

CM McMaster  
JK Rowlings

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Prepared for  
the U.S. Department of Energy  
Under Contract DE-AC05-76RL01830

Pacific Northwest National Laboratory  
Richland, Washington 99352

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## Abstract

Here is the abstract. Here is the abstract. Here is the abstract. Here is the abstract. Here is the abstract. Here is the abstract.

- Itemized List Bullet 1
    - ListBullet 2
      - List Bullet 3
1. Enumerate List Style
    - a. Second level
      - i. Third level
        - (1) Fourth level
          - (a) Fifth level
            - (i) Sixth level

## Executive Summary

Here is Executive Summary

$$f(x) = a_0 + \sum_{n=1}^{\infty} \left( a_n \cos \frac{n\pi x}{L} + BN_n \sin \frac{n\pi x}{L} \right) \quad (1)$$

where  $f$  = where statement where tabs should be placed before the variable and on both sides of the equal sign.

$x$  = definition of  $x$

$n$  = definition of  $n$

$a$  = definition of  $a$

$BN$  = definition of  $BN$

## Acronyms and Abbreviations

|             |  |
|-------------|--|
| <b>CDA</b>  | Communications Design and Architecture |
| <b>PNNL</b> | Pacific Northwest National Laboratory  |

## Acknowledgments

Here are acknowledgments.



## Contents

|  |        |
|--|--------|
| Abstract . . . . .                               | ii     |
| Executive Summary . . . . .                      | iii    |
| Acronyms and Abbreviations . . . . .             | iv     |
| Acknowledgments . . . . .                        | v      |
| 1.0 Introduction . . . . .                       | 1      |
| 1.1 Here is Heading 2 . . . . .                  | 1      |
| 1.1.1 Here is Heading 3 . . . . .                | 1      |
| 2.0 This is a test section . . . . .             | 4      |
| 2.1 This is a test subsection . . . . .          | 4      |
| 2.1.1 This is a test subsubsection . . . . .     | 4      |
| 3.0 Extending templates with functions . . . . . | 6      |
| Appendix A Deep Learning Workstation . . . . .   | A.1    |
| A.1 Appendix subsection . . . . .                | A.1    |
| A.1.1 Appendix subsubsection . . . . .           | A.1    |
| Appendix B Second Appendix . . . . .             | B.1    |
| B.1 An equation in Appendix . . . . .            | B.1    |
| B.2 A Table in Appendix . . . . .                | B.1    |
| Distribution . . . . .                           | Dist-1 |

## Figures

|     |   |     |
|-----|---|-----|
| 1   | Figure caption. . . . .   | 5   |
| 2   | Caption-Fig . . . . .   | 8   |
| A.1 | This little fellow likes to eat eucalyptus leaves. Thus, he and his fellow species members are found in eucalyptus forests. . . . . | A.1 |

## Tables

|     |  |     |
|-----|--|-----|
| 1   | Table Caption. . . . .   | 2   |
| 2   | This is a coppertop table. It is easy to make as you can see in the documentation. . .   | 2   |
| 3   | Sample Table Caption. If a caption stretches to multiple lines, it will wrap below with a hanging indent (as in this example). Tables may have alternating gray bands if it makes scanning information easier. . . . . | 3   |
| B.1 | Table in Appendix . . . . .  | B.1 |

## 1.0 Introduction

Here is a sample section, the highest level heading. Here is a sample section, the highest level heading. Here is a sample section, the highest level heading.

### 1.1 Here is Heading 2

Here is a sample subsection. Here is a sample subsection. Here is a sample subsection.

#### 1.1.1 Here is Heading 3

Here is a sample subsection. Here is a sample subsection. Here is a sample subsection.

##### 1.1.1.1 This is Heading 4

Here is text for Heading 4.

##### This is Heading 5

Here is text for Heading 5.

Table 1. Table Caption.

| Experiment <sup>(b)</sup> | $F$<br>( $cm^3/hr$ ) | $\rho_b$<br>( $g/cm^3$ ) | $\omega$ | $V_w$<br>( $mL$ ) | $v$<br>( $cm/hr$ ) | $t_o$<br>$V_w$ | $R$   | $K_d$<br>( $mL/g$ ) |
|---------------------------|----------------------|--------------------------|----------|-------------------|--------------------|----------------|-------|---------------------|
| Sodium orthophosphate     | 30.37                | 1.478                    | 0.386    | 20.89             | 16.01              | 11.22          | 5.54  | 1.19                |
| Sodium pyrophosphate      | 41.93                | 1.44                     | 0.385    | 20.33             | 22.18              | 15.90          | 7.61  | 1.76                |
| Sodium tripolyphosphate   | 40.80                | 1.460                    | 0.392    | 21.27             | 21.22              | 14.70          | 5.17  | 1.12                |
| Calcium                   | 31.41                | 1.478                    | 0.386    | 20.89             | 16.57              | 11.95          | 14.14 | 3.44                |

- (a)  $F$  = flow rate;  $\rho_b$  = bulk density;  $\omega$  =average volumetric water content (standard deviation);  
 $V_w$  =average pore volume;  $v$  =average pore water velocity;  $t_o$  =step input;  $R$  =retardation factor;  
 $K_d$  =sediment water distribution coefficient based on  $R$ .
- (b) Columns appeared saturated and had reached a stable water content.

Table 2. This is a coppertop table. It is easy to make as you can see in the documentation.

| Experiment <sup>(b)</sup> | $F$<br>( $cm^3/hr$ ) | $\rho_b$<br>( $g/cm^3$ ) | $\omega$ | $V_w$<br>( $mL$ ) | $v$<br>( $cm/hr$ ) | $t_o$<br>$V_w$ | $R$   | $K_d$<br>( $mL/g$ ) |
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 $K_d$  =sediment water distribution coefficient based on  $R$ .
- (b) Columns appeared saturated and had reached a stable water content.

Table 3. Sample Table Caption. If a caption stretches to multiple lines, it will wrap below with a hanging indent (as in this example). Tables may have alternating gray bands if it makes scanning information easier.

| Experiment(b)           | $F$<br>( $cm^3/hr$ ) | $\rho_b$<br>( $g/cm^3$ ) | $\omega$ | $V_w$<br>( $mL$ ) | $v$<br>( $cm/hr$ ) | $t_o$<br>$V_w$ | $R$<br>$K_d$ | $K_d$<br>( $mL/g$ ) |
|-------------------------|----------------------|--------------------------|----------|-------------------|--------------------|----------------|--------------|---------------------|
| Sodium orthophosphate   | 30.37                | 1.478                    | 0.386    | 20.89             | 16.01              | 11.22          | 5.54         | 1.19                |
| Sodium pyrophosphate    | 41.93                | 1.44                     | 0.385    | 20.33             | 22.18              | 15.90          | 7.61         | 1.76                |
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- (b) Columns appeared saturated and had reached a stable water content.

## 2.0 This is a test section

Here we are testing section heads so that we can see how they format. Here we are testing section heads so that we can see how they format. Here we are testing section heads so that we can see how they format. Here we are testing section heads so that we can see how they format.

### 2.1 This is a test subsection

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#### 2.1.1 This is a test subsection

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##### 2.1.1.1 This is a test paragraph

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##### This is a test subparagraph

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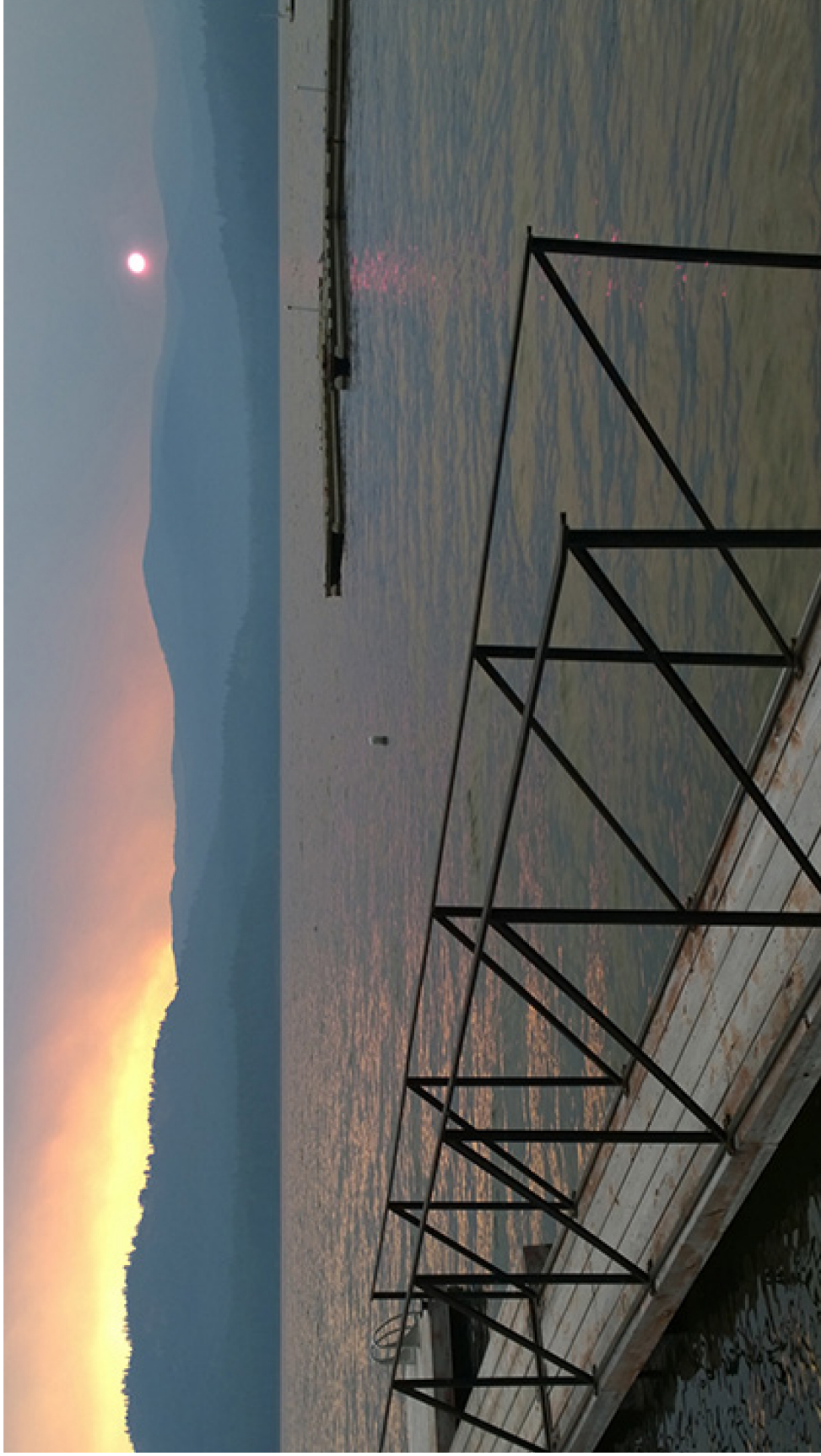


Figure 1. Figure caption.

This is a test section

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### 3.0 Extending templates with functions

Although templates provide quite a few features, often you need to extend them with your own functionality. The need to add features isn't uncommon or uncalled for. For example, we've often seen the need to display a date and time in an easy-to-read format. This common request could easily be implemented as part of the template system. This is just one common example, and template systems can be extended in many cases.

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#### Sidebar Headline

Here is where to enter text.



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### Copper Sidebar Headline

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Figure 2. Caption-Fig

## A Deep Learning Workstation

The process of setting up a deep-learning workstation is fairly involved. It consists of...

### A.1 Appendix subsection

#### A.1.1 Appendix subsubsection



Figure A.1. This little fellow likes to eat eucalyptus leaves. Thus, he and his fellow species members are found in eucalyptus forests.

## B Second Appendix

### B.1 An equation in Appendix

$$f(x) = a_0 + \sum_{n=1}^{\infty} \left( a_n \cos \frac{n\pi x}{L} + BN_n \sin \frac{n\pi x}{L} \right) \tag{B.1}$$

where  $f$  = where statement where tabs should be placed before the variable and on both sides of the equal sign.

$x$  = definition of  $x$

$n$  = definition of  $n$

$a$  = definition of  $a$

$BN$  = definition of  $BN$

### B.2 A Table in Appendix

Table B.1. Table in Appendix

| $\alpha$ | $\beta$ | $\gamma$ | $\delta$ | $\nabla$ |
|----------|---------|----------|----------|----------|
| 1        | 2       | 3        | 4        | 5        |

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