# Fish Passage Plan (FPP) Change Request Form

**Change Form # & Title**: 17MCN008 – Spill Patterns during TSW Removal at Higher Spill

**Date Submitted**: May 31, 2017

**Project**: MCN

**Requester Name, Agency**: Ann Setter, NWW

**Final Action:**

**FPP Section**: Table MCN-10. Spill Patterns during TSW Removal.

**Justification for Change**:

Table MCN-10 defines spill patterns during TSW removal up to 239.3 kcfs spill. This year, the TSWs are scheduled to be closed and removed from bays 19-20 on Monday, June 12, as requested by FPOM at the May 11th meeting. In case flows at that time exceed patterns in the current Table MCN-10, this Change Form adds patterns up to 300.8 kcfs spill.

**Proposed Change**:

Expand Table MCN-10 for spill during TSW up to 300.8 kcfs (see table on following pages).

**Comments**: (listed oldest to newest)

**Record of Final Action**:

**Table MCN-10. McNary Dam Spill Patterns for Removal of TSWs in Bays 19-20.**

| **Table MCN-10 Spill Patterns During TSW Removal (# Gate Stops per Spillbay) - EXPANDED 6/1/2017 for spill > 239 kcfs** | | | | | | | | | | | | | | | | | | | | | | **Total Stops** | **Spill a** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **1 b** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22 b** | **(#)** | **(kcfs)** |
|  |  |  |  |  |  |  |  | 2 |  | 2 |  | 2 |  | 2 | 2 | 2 | CLOSE | CLOSE | CLOSE | CLOSE |  | **12** | **23.4** |
|  |  |  |  |  |  |  |  | 2 | 1 | 2 |  | 2 |  | 2 | 2 | 2 | CLOSE | CLOSE | CLOSE | CLOSE |  | **13** | **25.4** |
|  |  |  |  |  |  |  |  | 2 | 2 | 2 |  | 2 |  | 2 | 2 | 2 | CLOSE | CLOSE | CLOSE | CLOSE |  | **14** | **27.3** |
|  |  |  |  |  |  |  |  | 2 | 2 | 2 |  | 2 | 1 | 2 | 2 | 2 | CLOSE | CLOSE | CLOSE | CLOSE |  | **15** | **29.3** |
|  |  |  |  |  |  |  |  | 2 | 2 | 2 |  | 2 | 2 | 2 | 2 | 2 | CLOSE | CLOSE | CLOSE | CLOSE |  | **16** | **31.2** |
|  |  |  |  |  |  |  |  | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | CLOSE | CLOSE | CLOSE | CLOSE |  | **17** | **33.2** |
|  |  |  |  |  |  |  |  | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | CLOSE | CLOSE | CLOSE | CLOSE |  | **18** | **35.1** |
|  |  |  |  |  |  | 1 |  | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | CLOSE | CLOSE | CLOSE | CLOSE |  | **19** | **37.1** |
|  |  |  |  |  |  | 2 |  | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | CLOSE | CLOSE | CLOSE | CLOSE |  | **20** | **39.0** |
|  |  |  |  | 1 |  | 2 |  | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | CLOSE | CLOSE | CLOSE | CLOSE |  | **21** | **41.0** |
|  |  |  |  | 2 |  | 2 |  | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | CLOSE | CLOSE | CLOSE | CLOSE |  | **22** | **42.9** |
| 2.5 | 2 | 3.5 |  | 2 |  | 2 |  | 2 |  | 2 |  | 2 | 1 | 2 |  | 2 | CLOSE | CLOSE | CLOSE | CLOSE |  | **23** | **44.4** |
| 2.5 | 2 | 3.5 |  | 2 |  | 2 |  | 2 |  | 2 |  | 2 | 1 | 2 | 1 | 2 | CLOSE | CLOSE | CLOSE | CLOSE |  | **24** | **46.4** |
| 2.5 | 2 | 3.5 |  | 2 | 1 | 2 |  | 2 |  | 2 |  | 2 | 1 | 2 | 1 | 2 | CLOSE | CLOSE | CLOSE | CLOSE |  | **25** | **48.4** |
| 2.5 | 2 | 3.5 |  | 2 | 1 | 2 |  | 2 | 1 | 2 |  | 2 | 1 | 2 | 1 | 2 | CLOSE | CLOSE | CLOSE | CLOSE |  | **26** | **50.4** |
| 2.5 | 2 | 3.5 |  | 2 | 1 | 2 |  | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | CLOSE | CLOSE | CLOSE | CLOSE |  | **27** | **52.4** |
| 2.5 | 2 | 3.5 |  | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | CLOSE | CLOSE | CLOSE | CLOSE |  | **28** | **54.4** |
| 2.5 | 2 | 3.5 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | CLOSE | CLOSE | CLOSE | CLOSE |  | **29** | **56.4** |
| 2.5 | 2 | 3.5 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 1 | 2 | CLOSE | CLOSE | CLOSE | CLOSE |  | **30** | **58.3** |
| 2.5 | 2 | 3.5 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | CLOSE | CLOSE | CLOSE | CLOSE |  | **31** | **60.2** |
| 2.5 | 2 | 3.5 | 1 | 2 | 2 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | CLOSE | CLOSE | CLOSE | CLOSE |  | **32** | **62.1** |
| 2.5 | 2 | 3.5 | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | CLOSE | CLOSE | CLOSE | CLOSE |  | **33** | **64.0** |
| 2.5 | 2 | 3.5 | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | CLOSE | CLOSE | CLOSE | CLOSE |  | **34** | **65.9** |
| 2.5 | 2 | 3.5 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | CLOSE | CLOSE | CLOSE | CLOSE |  | **35** | **67.8** |
| 2.5 | 2 | 3.5 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | CLOSE | CLOSE | CLOSE | CLOSE |  | **36** | **69.7** |
| 2.5 | 2.5 | 4 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | CLOSE | CLOSE | CLOSE | CLOSE |  | **37** | **71.3** |
| 2.5 | 2.5 | 4 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2.5 | 2.5 | CLOSE | CLOSE | CLOSE | CLOSE |  | **38** | **73.0** |
| 2.5 | 2.5 | 4 | 2 | 2 | 2 | 2.5 | 2 | 2 | 2 | 2.5 | 2 | 2 | 2 | 2 | 2.5 | 2.5 | CLOSE | CLOSE | CLOSE | CLOSE |  | **39** | **74.7** |
| 2.5 | 2.5 | 4 | 2 | 2.5 | 2 | 2.5 | 2 | 2 | 2 | 2.5 | 2 | 2 | 2 | 2.5 | 2.5 | 2.5 | CLOSE | CLOSE | CLOSE | CLOSE |  | **40** | **76.4** |
| 2.5 | 2.5 | 4 | 2 | 2.5 | 2 | 2.5 | 2 | 2.5 | 2 | 2.5 | 2 | 2.5 | 2 | 2.5 | 2.5 | 2.5 | CLOSE | CLOSE | CLOSE | CLOSE |  | **41** | **78.1** |
| 2.5 | 2.5 | 4 | 2 | 2.5 | 2.5 | 2.5 | 2 | 2.5 | 2.5 | 2.5 | 2 | 2.5 | 2 | 2.5 | 2.5 | 2.5 | CLOSE | CLOSE | CLOSE | CLOSE |  | **42** | **79.8** |
| 2.5 | 2.5 | 4 | 2 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2 | 2.5 | 2.5 | 2.5 | CLOSE | CLOSE | CLOSE | CLOSE |  | **43** | **81.5** |
| 2.5 | 2.5 | 4 | 3 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2 | 2.5 | 2.5 | 2.5 | CLOSE | CLOSE | CLOSE | CLOSE |  | **44** | **83.2** |
| 2.5 | 2.5 | 4 | 3 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | CLOSE | CLOSE | CLOSE | CLOSE |  | **45** | **84.1** |
| 2.5 | 2.5 | 4 | 3 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 3 | 3 | CLOSE | CLOSE | CLOSE | CLOSE |  | **46** | **85.8** |
| 2.5 | 2.5 | 4.5 | 3 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 3 | 2.5 | 2.5 | 2.5 | 2.5 | 3 | 3 | CLOSE | CLOSE | CLOSE | CLOSE |  | **47** | **87.4** |
| 2.5 | 2.5 | 4.5 | 3 | 2.5 | 2.5 | 3 | 2.5 | 2.5 | 2.5 | 3 | 2.5 | 3 | 2.5 | 2.5 | 3 | 3 | CLOSE | CLOSE | CLOSE | CLOSE |  | **48** | **89.1** |
| 2.5 | 2.5 | 4.5 | 3 | 3 | 2.5 | 3 | 2.5 | 3 | 2.5 | 3 | 2.5 | 3 | 2.5 | 2.5 | 3 | 3 | CLOSE | CLOSE | CLOSE | CLOSE |  | **49** | **90.8** |
| 2.5 | 2.5 | 4.5 | 3 | 3 | 3 | 3 | 2.5 | 3 | 2.5 | 3 | 2.5 | 3 | 2.5 | 3 | 3 | 3 | CLOSE | CLOSE | CLOSE | CLOSE |  | **50** | **92.5** |
| 2.5 | 2.5 | 5 | 3 | 3 | 3 | 3 | 2.5 | 3 | 3 | 3 | 2.5 | 3 | 2.5 | 3 | 3 | 3 | CLOSE | CLOSE | CLOSE | CLOSE |  | **51** | **94.2** |
| 2.5 | 2.5 | 5 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2.5 | 3 | 3 | 3 | CLOSE | CLOSE | CLOSE | CLOSE |  | **52** | **95.9** |
| 3 | 3 | 5 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2.5 | 3 | 3 | 3 | CLOSE | CLOSE | CLOSE | CLOSE |  | **53** | **97.6** |
| 3 | 3 | 5 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | CLOSE | CLOSE | CLOSE | CLOSE |  | **53** | **98.4** |
| 3 | 3 | 5 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | CLOSE | CLOSE | CLOSE | CLOSE |  | **54** | **100.0** |
| 3 | 4 | 5 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | CLOSE | CLOSE | CLOSE | CLOSE |  | **55** | **101.6** |
| 4 | 4 | 5 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | CLOSE | CLOSE | CLOSE | CLOSE |  | **56** | **103.2** |
| 4 | 4 | 5 | 3 | 3 | 3 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | CLOSE | CLOSE | CLOSE | CLOSE |  | **57** | **104.8** |
| 4 | 4 | 5 | 3 | 3 | 3 | 4 | 3 | 3 | 3 | 4 | 3 | 3 | 3 | 3 | 3 | 4 | CLOSE | CLOSE | CLOSE | CLOSE |  | **58** | **106.4** |
| 4 | 4 | 5 | 3 | 4 | 3 | 4 | 3 | 3 | 3 | 4 | 3 | 3 | 3 | 3 | 3 | 4 | CLOSE | CLOSE | CLOSE | CLOSE |  | **59** | **108.0** |
| 4 | 4 | 5 | 3 | 4 | 3 | 4 | 3 | 3 | 3 | 4 | 3 | 3 | 3 | 4 | 3 | 4 | CLOSE | CLOSE | CLOSE | CLOSE |  | **60** | **109.6** |
| 4 | 4 | 5 | 3 | 4 | 3 | 4 | 3 | 4 | 3 | 4 | 3 | 3 | 3 | 4 | 3 | 4 | CLOSE | CLOSE | CLOSE | CLOSE |  | **61** | **111.2** |
| 4 | 4 | 5 | 3 | 4 | 3 | 4 | 3 | 4 | 3 | 4 | 3 | 4 | 3 | 4 | 3 | 4 | CLOSE | CLOSE | CLOSE | CLOSE |  | **62** | **112.8** |
| 4 | 4 | 5 | 3 | 4 | 4 | 4 | 3 | 4 | 3 | 4 | 3 | 4 | 3 | 4 | 3 | 4 | CLOSE | CLOSE | CLOSE | CLOSE |  | **63** | **114.4** |
| 4 | 4 | 5 | 3 | 4 | 4 | 4 | 3 | 4 | 4 | 4 | 3 | 4 | 3 | 4 | 3 | 4 | CLOSE | CLOSE | CLOSE | CLOSE |  | **64** | **116.0** |
| 4 | 4 | 5 | 3 | 4 | 4 | 4 | 3 | 4 | 4 | 4 | 4 | 4 | 3 | 4 | 3 | 4 | CLOSE | CLOSE | CLOSE | CLOSE |  | **65** | **117.6** |
| 4 | 4 | 5 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 4 | 3 | 4 | CLOSE | CLOSE | CLOSE | CLOSE |  | **66** | **119.2** |
| 4 | 4 | 5 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 4 | 4 | 4 | CLOSE | CLOSE | CLOSE | CLOSE |  | **67** | **120.8** |
| 4 | 4 | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 4 | 4 | 4 | CLOSE | CLOSE | CLOSE | CLOSE |  | **68** | **122.4** |
| 4 | 4 | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | CLOSE | CLOSE | CLOSE | CLOSE |  | **69** | **124.0** |
| 4 | 4 | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | CLOSE | CLOSE | CLOSE | CLOSE |  | **70** | **125.6** |
| 4 | 5 | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | CLOSE | CLOSE | CLOSE | CLOSE |  | **71** | **127.2** |
| 5 | 5 | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | CLOSE | CLOSE | CLOSE | CLOSE |  | **72** | **128.8** |
| 5 | 5 | 5 | 4 | 4 | 4 | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | CLOSE | CLOSE | CLOSE | CLOSE |  | **73** | **130.4** |
| 5 | 5 | 5 | 4 | 4 | 4 | 5 | 4 | 4 | 4 | 5 | 4 | 4 | 4 | 4 | 4 | 5 | CLOSE | CLOSE | CLOSE | CLOSE |  | **74** | **132.0** |
| 5 | 5 | 5 | 4 | 5 | 4 | 5 | 4 | 4 | 4 | 5 | 4 | 4 | 4 | 4 | 4 | 5 | CLOSE | CLOSE | CLOSE | CLOSE |  | **75** | **133.6** |
| 5 | 5 | 5 | 4 | 5 | 4 | 5 | 4 | 4 | 4 | 5 | 4 | 4 | 4 | 5 | 4 | 5 | CLOSE | CLOSE | CLOSE | CLOSE |  | **76** | **135.2** |
| 5 | 5 | 5 | 4 | 5 | 4 | 5 | 4 | 5 | 4 | 5 | 4 | 4 | 4 | 5 | 4 | 5 | CLOSE | CLOSE | CLOSE | CLOSE |  | **77** | **136.8** |
| 5 | 5 | 5 | 4 | 5 | 4 | 5 | 4 | 5 | 4 | 5 | 4 | 5 | 4 | 5 | 4 | 5 | CLOSE | CLOSE | CLOSE | CLOSE |  | **78** | **138.4** |
| 5 | 5 | 5 | 4 | 5 | 5 | 5 | 4 | 5 | 4 | 5 | 4 | 5 | 4 | 5 | 4 | 5 | CLOSE | CLOSE | CLOSE | CLOSE |  | **79** | **140.0** |
| 5 | 5 | 5 | 4 | 5 | 5 | 5 | 4 | 5 | 5 | 5 | 4 | 5 | 4 | 5 | 4 | 5 | CLOSE | CLOSE | CLOSE | CLOSE |  | **80** | **141.6** |
| 5 | 5 | 5 | 4 | 5 | 5 | 5 | 4 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 4 | 5 | CLOSE | CLOSE | CLOSE | CLOSE |  | **81** | **143.2** |
| 5 | 5 | 5 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 4 | 5 | CLOSE | CLOSE | CLOSE | CLOSE |  | **82** | **144.8** |
| 5 | 5 | 5 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 5 | 5 | CLOSE | CLOSE | CLOSE | CLOSE |  | **83** | **146.4** |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 5 | 5 | CLOSE | CLOSE | CLOSE | CLOSE |  | **84** | **148.0** |
| 5 | 5 | 6 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 5 | 5 | CLOSE | CLOSE | CLOSE | CLOSE |  | **85** | **149.6** |
| 5 | 5 | 6 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | CLOSE | CLOSE | CLOSE | CLOSE |  | **86** | **151.2** |
| 5 | 5 | 6 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | CLOSE | CLOSE | CLOSE | CLOSE |  | **87** | **152.8** |
| 5 | 6 | 6 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | CLOSE | CLOSE | CLOSE | CLOSE |  | **88** | **154.4** |
| 6 | 6 | 6 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | CLOSE | CLOSE | CLOSE | CLOSE |  | **89** | **156.0** |
| 6 | 6 | 6 | 5 | 5 | 5 | 6 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | CLOSE | CLOSE | CLOSE | CLOSE |  | **90** | **157.6** |
| 6 | 6 | 6 | 5 | 5 | 5 | 6 | 5 | 5 | 5 | 6 | 5 | 5 | 5 | 5 | 5 | 6 | CLOSE | CLOSE | CLOSE | CLOSE |  | **91** | **159.2** |
| 6 | 6 | 6 | 5 | 6 | 5 | 6 | 5 | 5 | 5 | 6 | 5 | 5 | 5 | 5 | 5 | 6 | CLOSE | CLOSE | CLOSE | CLOSE |  | **92** | **160.8** |
| 6 | 6 | 6 | 5 | 6 | 5 | 6 | 5 | 5 | 5 | 6 | 5 | 5 | 5 | 6 | 5 | 6 | CLOSE | CLOSE | CLOSE | CLOSE |  | **93** | **162.4** |
| 6 | 6 | 6 | 5 | 6 | 5 | 6 | 5 | 6 | 5 | 6 | 5 | 5 | 5 | 6 | 5 | 6 | CLOSE | CLOSE | CLOSE | CLOSE |  | **94** | **164.0** |
| 6 | 6 | 6 | 5 | 6 | 5 | 6 | 5 | 6 | 5 | 6 | 5 | 6 | 5 | 6 | 5 | 6 | CLOSE | CLOSE | CLOSE | CLOSE |  | **95** | **165.6** |
| 6 | 6 | 6 | 5 | 6 | 6 | 6 | 5 | 6 | 5 | 6 | 5 | 6 | 5 | 6 | 5 | 6 | CLOSE | CLOSE | CLOSE | CLOSE |  | **96** | **167.2** |
| 6 | 6 | 6 | 5 | 6 | 6 | 6 | 5 | 6 | 6 | 6 | 5 | 6 | 5 | 6 | 5 | 6 | CLOSE | CLOSE | CLOSE | CLOSE |  | **97** | **168.8** |
| 6 | 6 | 6 | 5 | 6 | 6 | 6 | 5 | 6 | 6 | 6 | 6 | 6 | 5 | 6 | 5 | 6 | CLOSE | CLOSE | CLOSE | CLOSE |  | **98** | **170.4** |
| 6 | 6 | 6 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 5 | 6 | 5 | 6 | CLOSE | CLOSE | CLOSE | CLOSE |  | **99** | **172.0** |
| 6 | 6 | 6 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 5 | 6 | 6 | 6 | CLOSE | CLOSE | CLOSE | CLOSE |  | **100** | **173.6** |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 5 | 6 | 6 | 6 | CLOSE | CLOSE | CLOSE | CLOSE |  | **101** | **175.2** |
| 6 | 6 | 7 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 5 | 6 | 6 | 6 | CLOSE | CLOSE | CLOSE | CLOSE |  | **102** | **176.8** |
| 6 | 6 | 7 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | CLOSE | CLOSE | CLOSE | CLOSE |  | **103** | **178.4** |
| 6 | 6 | 7 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | CLOSE | CLOSE | CLOSE | CLOSE |  | **104** | **180.0** |
| 6 | 7 | 7 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | CLOSE | CLOSE | CLOSE | CLOSE |  | **105** | **181.6** |
| 7 | 7 | 7 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | CLOSE | CLOSE | CLOSE | CLOSE |  | **106** | **183.2** |
| 7 | 7 | 7 | 6 | 6 | 6 | 7 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | CLOSE | CLOSE | CLOSE | CLOSE |  | **107** | **184.8** |
| 7 | 7 | 7 | 6 | 6 | 6 | 7 | 6 | 6 | 6 | 7 | 6 | 6 | 6 | 6 | 6 | 7 | CLOSE | CLOSE | CLOSE | CLOSE |  | **108** | **186.4** |
| 7 | 7 | 7 | 6 | 7 | 6 | 7 | 6 | 6 | 6 | 7 | 6 | 6 | 6 | 6 | 6 | 7 | CLOSE | CLOSE | CLOSE | CLOSE |  | **109** | **188.0** |
| 7 | 7 | 7 | 6 | 7 | 6 | 7 | 6 | 6 | 6 | 7 | 6 | 6 | 6 | 7 | 6 | 7 | CLOSE | CLOSE | CLOSE | CLOSE |  | **110** | **189.6** |
| 7 | 7 | 7 | 6 | 7 | 6 | 7 | 6 | 7 | 6 | 7 | 6 | 6 | 6 | 7 | 6 | 7 | CLOSE | CLOSE | CLOSE | CLOSE |  | **111** | **191.2** |
| 7 | 7 | 7 | 6 | 7 | 6 | 7 | 6 | 7 | 6 | 7 | 6 | 7 | 6 | 7 | 6 | 7 | CLOSE | CLOSE | CLOSE | CLOSE |  | **112** | **192.8** |
| 7 | 7 | 7 | 6 | 7 | 7 | 7 | 6 | 7 | 6 | 7 | 6 | 7 | 6 | 7 | 6 | 7 | CLOSE | CLOSE | CLOSE | CLOSE |  | **113** | **194.4** |
| 7 | 7 | 7 | 6 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 6 | 7 | 6 | 7 | 6 | 7 | CLOSE | CLOSE | CLOSE | CLOSE |  | **114** | **196.0** |
| 7 | 7 | 7 | 6 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 6 | 7 | CLOSE | CLOSE | CLOSE | CLOSE |  | **115** | **197.6** |
| 7 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 6 | 7 | CLOSE | CLOSE | CLOSE | CLOSE |  | **116** | **199.2** |
| 7 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | CLOSE | CLOSE | CLOSE | CLOSE |  | **117** | **200.8** |
| 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | CLOSE | CLOSE | CLOSE | CLOSE |  | **118** | **202.4** |
| 7 | 7 | 8 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | CLOSE | CLOSE | CLOSE | CLOSE |  | **119** | **204.1** |
| 7 | 7 | 8 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | CLOSE | CLOSE | CLOSE | CLOSE |  | **120** | **205.7** |
| 7 | 7 | 8 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 8 | CLOSE | CLOSE | CLOSE | CLOSE |  | **121** | **207.4** |
| 7 | 8 | 8 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 8 | CLOSE | CLOSE | CLOSE | CLOSE |  | **122** | **209.1** |
| 8 | 8 | 8 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 8 | CLOSE | CLOSE | CLOSE | CLOSE |  | **123** | **210.8** |
| 8 | 8 | 8 | 7 | 7 | 7 | 8 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 8 | CLOSE | CLOSE | CLOSE | CLOSE |  | **124** | **212.5** |
| 8 | 8 | 8 | 7 | 7 | 7 | 8 | 7 | 7 | 7 | 8 | 7 | 7 | 7 | 7 | 7 | 8 | CLOSE | CLOSE | CLOSE | CLOSE |  | **125** | **214.2** |
| 8 | 8 | 8 | 7 | 8 | 7 | 8 | 7 | 7 | 7 | 8 | 7 | 7 | 7 | 7 | 7 | 8 | CLOSE | CLOSE | CLOSE | CLOSE |  | **126** | **215.9** |
| 8 | 8 | 8 | 7 | 8 | 7 | 8 | 7 | 7 | 7 | 8 | 7 | 7 | 7 | 8 | 7 | 8 | CLOSE | CLOSE | CLOSE | CLOSE |  | **127** | **217.6** |
| 8 | 8 | 8 | 7 | 8 | 7 | 8 | 7 | 8 | 7 | 8 | 7 | 7 | 7 | 8 | 7 | 8 | CLOSE | CLOSE | CLOSE | CLOSE |  | **128** | **219.3** |
| 8 | 8 | 8 | 7 | 8 | 7 | 8 | 7 | 8 | 7 | 8 | 7 | 8 | 7 | 8 | 7 | 8 | CLOSE | CLOSE | CLOSE | CLOSE |  | **129** | **221.0** |
| 8 | 8 | 8 | 7 | 8 | 8 | 8 | 7 | 8 | 7 | 8 | 7 | 8 | 7 | 8 | 7 | 8 | CLOSE | CLOSE | CLOSE | CLOSE |  | **130** | **222.7** |
| 8 | 8 | 8 | 7 | 8 | 8 | 8 | 7 | 8 | 8 | 8 | 7 | 8 | 7 | 8 | 7 | 8 | CLOSE | CLOSE | CLOSE | CLOSE |  | **131** | **224.4** |
| 8 | 8 | 8 | 7 | 8 | 8 | 8 | 7 | 8 | 8 | 8 | 8 | 8 | 7 | 8 | 7 | 8 | CLOSE | CLOSE | CLOSE | CLOSE |  | **132** | **226.1** |
| 8 | 8 | 8 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 7 | 8 | 7 | 8 | CLOSE | CLOSE | CLOSE | CLOSE |  | **133** | **227.8** |
| 8 | 8 | 8 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 7 | 8 | 8 | 8 | CLOSE | CLOSE | CLOSE | CLOSE |  | **134** | **229.5** |
| 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 7 | 8 | 8 | 8 | CLOSE | CLOSE | CLOSE | CLOSE |  | **135** | **231.2** |
| 8 | 8 | 9 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 7 | 8 | 8 | 8 | CLOSE | CLOSE | CLOSE | CLOSE |  | **136** | **232.8** |
| 8 | 8 | 9 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | CLOSE | CLOSE | CLOSE | CLOSE |  | **137** | **234.5** |
| 8 | 8 | 9 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | CLOSE | CLOSE | CLOSE | CLOSE |  | **138** | **236.1** |
| 8 | 9 | 9 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | CLOSE | CLOSE | CLOSE | CLOSE |  | **139** | **237.7** |
| 9 | 9 | 9 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | CLOSE | CLOSE | CLOSE | CLOSE |  | **140** | **239.3** |
| 9 | 9 | 9 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | CLOSE | CLOSE | CLOSE | CLOSE |  | **141** | **240.9** |
| 9 | 9 | 9 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | CLOSE | CLOSE | CLOSE | CLOSE |  | **142** | **242.5** |
| 9 | 9 | 9 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | CLOSE | CLOSE | CLOSE | CLOSE |  | **143** | **244.1** |
| 9 | 9 | 9 | 9 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | CLOSE | CLOSE | CLOSE | CLOSE |  | **144** | **245.7** |
| 9 | 9 | 9 | 9 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | CLOSE | CLOSE | CLOSE | CLOSE |  | **145** | **247.3** |
| 9 | 9 | 9 | 9 | 9 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | CLOSE | CLOSE | CLOSE | CLOSE |  | **146** | **248.9** |
| 9 | 9 | 9 | 9 | 9 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | CLOSE | CLOSE | CLOSE | CLOSE |  | **147** | **250.5** |
| 9 | 9 | 9 | 9 | 9 | 9 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | CLOSE | CLOSE | CLOSE | CLOSE |  | **148** | **252.1** |
| 9 | 9 | 9 | 9 | 9 | 9 | 9 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | CLOSE | CLOSE | CLOSE | CLOSE |  | **149** | **253.7** |
| 9 | 9 | 9 | 9 | 9 | 9 | 9 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | CLOSE | CLOSE | CLOSE | CLOSE |  | **150** | **255.3** |
| 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | CLOSE | CLOSE | CLOSE | CLOSE |  | **151** | **256.9** |
| 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | CLOSE | CLOSE | CLOSE | CLOSE |  | **152** | **258.5** |
| 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | CLOSE | CLOSE | CLOSE | CLOSE |  | **153** | **260.1** |
| 10 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | CLOSE | CLOSE | CLOSE | CLOSE |  | **154** | **261.7** |
| 10 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 10 | CLOSE | CLOSE | CLOSE | CLOSE |  | **155** | **263.3** |
| 10 | 10 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 10 | CLOSE | CLOSE | CLOSE | CLOSE |  | **156** | **264.9** |
| 10 | 10 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 10 | 10 | CLOSE | CLOSE | CLOSE | CLOSE |  | **157** | **266.5** |
| 10 | 10 | 10 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 10 | 10 | CLOSE | CLOSE | CLOSE | CLOSE |  | **158** | **268.1** |
| 10 | 10 | 10 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 10 | 10 | 10 | CLOSE | CLOSE | CLOSE | CLOSE |  | **159** | **269.7** |
| 10 | 10 | 10 | 10 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 10 | 10 | 10 | CLOSE | CLOSE | CLOSE | CLOSE |  | **160** | **271.3** |
| 10 | 10 | 10 | 10 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 10 | 10 | 10 | 10 | CLOSE | CLOSE | CLOSE | CLOSE |  | **161** | **272.9** |
| 10 | 10 | 10 | 10 | 10 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 10 | 10 | 10 | 10 | CLOSE | CLOSE | CLOSE | CLOSE |  | **162** | **274.5** |
| 10 | 10 | 10 | 10 | 10 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 10 | 10 | 10 | 10 | 10 | CLOSE | CLOSE | CLOSE | CLOSE |  | **163** | **276.1** |
| 10 | 10 | 10 | 10 | 10 | 10 | 9 | 9 | 9 | 9 | 9 | 9 | 10 | 10 | 10 | 10 | 10 | CLOSE | CLOSE | CLOSE | CLOSE |  | **164** | **277.7** |
| 10 | 10 | 10 | 10 | 10 | 10 | 9 | 9 | 9 | 9 | 9 | 10 | 10 | 10 | 10 | 10 | 10 | CLOSE | CLOSE | CLOSE | CLOSE |  | **165** | **279.3** |
| 10 | 10 | 10 | 10 | 10 | 10 | 10 | 9 | 9 | 9 | 9 | 10 | 10 | 10 | 10 | 10 | 10 | CLOSE | CLOSE | CLOSE | CLOSE |  | **166** | **280.9** |
| 10 | 10 | 10 | 10 | 10 | 10 | 10 | 9 | 9 | 9 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | CLOSE | CLOSE | CLOSE | CLOSE |  | **167** | **282.5** |
| 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 9 | 9 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | CLOSE | CLOSE | CLOSE | CLOSE |  | **168** | **284.1** |
| 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 9 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | CLOSE | CLOSE | CLOSE | CLOSE |  | **169** | **285.7** |
| 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | CLOSE | CLOSE | CLOSE | CLOSE |  | **170** | **287.3** |
| 11 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | CLOSE | CLOSE | CLOSE | CLOSE |  | **171** | **288.8** |
| 11 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 11 | CLOSE | CLOSE | CLOSE | CLOSE |  | **172** | **290.3** |
| 11 | 11 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 11 | CLOSE | CLOSE | CLOSE | CLOSE |  | **173** | **291.8** |
| 11 | 11 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 11 | 11 | CLOSE | CLOSE | CLOSE | CLOSE |  | **174** | **293.3** |
| 11 | 11 | 11 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 11 | 11 | CLOSE | CLOSE | CLOSE | CLOSE |  | **175** | **294.8** |
| 11 | 11 | 11 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 11 | 11 | 11 | CLOSE | CLOSE | CLOSE | CLOSE |  | **176** | **296.3** |
| 11 | 11 | 11 | 11 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 11 | 11 | 11 | CLOSE | CLOSE | CLOSE | CLOSE |  | **177** | **297.8** |
| 11 | 11 | 11 | 11 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 11 | 11 | 11 | 11 | CLOSE | CLOSE | CLOSE | CLOSE |  | **178** | **299.3** |
| 11 | 11 | 11 | 11 | 11 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 11 | 11 | 11 | 11 | CLOSE | CLOSE | CLOSE | CLOSE |  | **179** | **300.8** |