# Fish Passage Plan (FPP) Change Form

**Change Form # & Title**: 24MCN003 – New Spill Patterns

**Date Submitted**: 22-Mar-2024

**Project**: McNary

**Requester Name, Agency**: Chris Peery, Corps NWW

**Final Action:**

**FPP Section**:

Chapter 5 (MCN), Section 2.2.5 and new spill pattern tables MCN-8 and MCN-8-ALT.

**Justification for Change**:

See MFR 24MCN02, emailed to FPOM on 3/22/24.

This FPP Change Form adds the modified spill gate/hoist operation in section 2.2.5 and new spill patterns in Tables MCN-8 and MCN-8-ALT.

The original (pre-2021) patterns in Table MCN-7 will be re-added to the FPP to have a reference for spill patterns under normal operating conditions, per Conder’s request.

**Proposed Changes**: See following pages.

**COMMENTS**:

**RECORD OF FINAL ACTION**:

**2.2.5. Interim Modified Spillway Operation**

The overloaded condition of McNary Dam spillway cranes and hoists limit their use until they can be replaced. As a result, Cranes 6 and 7 and seven of the 20 hoists can only be used twice per year to move a double-leaf (full) gate, while 13 hoists cannot be used to move a double-leaf gate. Lifting the top leaf of the spill gates will not overload cranes and hoists.

Starting in spring 2024, a total of 13 spill gates and hoists will be operated in the upstream slot in split-leaf configuration. These gates may be adjusted hourly as needed to adjust spill according to patterns in **Table MCN-8**. The remaining 7 spillbays (1, 2, 3, 5, 8, 15, and 18) will remain closed in the downstream slot in the double-leaf configuration and only opened if needed to pass high flows using the first of two overloaded movements allowed each year. After the high flow event, each gate will be closed using the second overloaded movement allowed that year.

If lower flows are forecasted and meet *all* hydrologic criteria below, gates 1 and 2 will remain in the downstream slot and opened to 4 stops (~7 kcfs spill) each and spill will be distributed according to patterns in **Table MCN-8-ALT**:

1. Official April water supply forecast for The Dalles April-August runoff below 90 MAF, and
2. STP forecast for McNary inflow below 350 kcfs through the spring, and
3. Internal weekly Corps system flood risk management (FRM) analyses indicates high probability of McNary inflows below 350 kcfs through the spring.

If the April WSF for The Dalles is greater than 90 MAF, or either the STP or internal Corps FRM analyses indicate flows peaking above 350 kcfs, gates 1 and 2 will remain closed in the downstream slot. Once the risk of inflows exceeding 350 kcfs has passed, and if spill gates 1 and 2 have not yet been opened, the gates will be opened to 4 stops each. Additional downstream gates can be used with a set (e.g., 4 stop) opening after the peak flow period has passed, as coordinated with FPOM. If gates 1 and 2 are needed to pass higher flows, they will be opened to a level that is expected to be sustained through spring and early summer spill based on the STP and ESP forecasts. Additional gates in the downstream slots will be used to pass higher flows as needed.

If gates 1 and 2 are opened, they will be closed using the second of two allowed overloaded movements at the end of early summer spill on July 31 or once spill is forecast to be below 70 kcfs for the remainder of the spill season.

**Table MCN-8. McNary Dam INTERIM Spill Patterns with TSWs in Bays 19-20 and 13 Bays in Split-Leaf in Upstream Slot. a**

| **Table MCN-8. Interim Patterns w/ 13 Gates in Split Leaf in Upstream Slot (# Gate Stops per Spillbay)** | | | | | | | | | | | | | | | | | | | | | | **Total Stops** | **Spill** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19 b** | **20 b** | **21** | **22** | **(#)** | **(kcfs)** |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | TSW | TSW |  |  | **0** | **20.0** |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 4 |  | TSW | TSW |  |  | **4** | **25.0** |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 5 |  | TSW | TSW |  |  | **5** | **26.0** |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 5 |  | TSW | TSW | 4 |  | **9** | **31.0** |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 5 |  | TSW | TSW | 5 |  | **10** | **32.0** |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 5 |  | TSW | TSW | 5 | 4 | **14** | **37.0** |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 5 |  | TSW | TSW | 5 | 5 | **15** | **38.0** |
|  |  |  |  |  |  |  |  |  |  |  |  |  | 4 |  |  | 5 |  | TSW | TSW | 5 | 5 | **19** | **43.0** |
|  |  |  |  |  |  |  |  |  |  |  |  |  | 5 |  |  | 5 |  | TSW | TSW | 5 | 5 | **20** | **44.0** |
|  |  |  |  |  |  |  |  |  |  |  |  |  | 5 |  |  | 6 |  | TSW | TSW | 5 | 5 | **21** | **45.0** |
|  |  |  |  |  |  |  |  |  |  |  |  |  | 5 |  |  | 7 |  | TSW | TSW | 5 | 5 | **22** | **46.0** |
|  |  |  |  |  |  |  |  |  |  |  | 4 |  | 5 |  |  | 7 |  | TSW | TSW | 5 | 5 | **26** | **51.0** |
|  |  |  |  |  |  |  |  |  |  |  | 5 |  | 5 |  |  | 7 |  | TSW | TSW | 5 | 5 | **27** | **52.0** |
|  |  |  |  |  |  |  |  |  |  |  | 5 |  | 6 |  |  | 7 |  | TSW | TSW | 5 | 5 | **28** | **53.0** |
|  |  |  |  |  |  |  |  |  |  |  | 5 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **29** | **54.0** |
|  |  |  |  |  |  |  |  |  | 4 |  | 5 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **33** | **59.0** |
|  |  |  |  |  |  |  |  |  | 5 |  | 5 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **34** | **60.0** |
|  |  |  |  |  |  |  |  |  | 5 |  | 6 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **35** | **61.0** |
|  |  |  |  |  |  |  |  |  | 5 |  | 7 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **36** | **62.0** |
|  |  |  | 4 |  |  |  |  |  | 5 |  | 7 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **40** | **67.0** |
|  |  |  | 5 |  |  |  |  |  | 5 |  | 7 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **41** | **68.0** |
|  |  |  | 5 |  |  |  |  |  | 6 |  | 7 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **42** | **69.0** |
|  |  |  | 5 |  |  |  |  |  | 7 |  | 7 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **43** | **70.0** |
|  |  |  | 6 |  |  |  |  |  | 7 |  | 7 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **44** | **71.0** |
|  |  |  | 7 |  |  |  |  |  | 7 |  | 7 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **45** | **72.0** |
|  |  |  | 7 |  | 4 |  |  |  | 7 |  | 7 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **49** | **77.0** |
|  |  |  | 7 |  | 5 |  |  |  | 7 |  | 7 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **50** | **78.0** |
|  |  |  | 8 |  | 5 |  |  |  | 7 |  | 7 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **51** | **79.0** |
|  |  |  | 9 |  | 5 |  |  |  | 7 |  | 7 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **52** | **79.9** |
|  |  |  | 10 |  | 5 |  |  |  | 7 |  | 7 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **53** | **80.8** |
|  |  |  | 10 |  | 6 |  |  |  | 7 |  | 7 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **54** | **81.8** |
|  |  |  | 10 |  | 7 |  |  |  | 7 |  | 7 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **55** | **82.8** |
|  |  |  | 10 |  | 8 |  |  |  | 7 |  | 7 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **56** | **83.8** |
|  |  |  | 10 |  | 9 |  |  |  | 7 |  | 7 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **57** | **84.7** |
|  |  |  | 10 |  | 10 |  |  |  | 7 |  | 7 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **58** | **85.6** |
|  |  |  | 10 |  | 10 |  |  | 4 | 7 |  | 7 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **62** | **90.6** |
|  |  |  | 10 |  | 10 |  |  | 5 | 7 |  | 7 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **63** | **91.6** |
|  |  |  | 10 |  | 10 |  |  | 6 | 7 |  | 7 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **64** | **92.6** |
|  |  |  | 10 |  | 10 |  |  | 7 | 7 |  | 7 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **65** | **93.6** |
|  |  |  | 10 |  | 10 | 4 |  | 7 | 7 |  | 7 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **69** | **98.6** |
|  |  |  | 10 |  | 10 | 5 |  | 7 | 7 |  | 7 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **70** | **99.6** |
|  |  |  | 10 |  | 10 | 6 |  | 7 | 7 |  | 7 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **71** | **100.6** |
|  |  |  | 10 |  | 10 | 7 |  | 7 | 7 |  | 7 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **72** | **101.6** |
|  |  |  | 10 |  | 10 | 7 |  | 7 | 7 |  | 7 |  | 7 |  | 4 | 7 |  | TSW | TSW | 5 | 5 | **76** | **106.6** |
|  |  |  | 10 |  | 10 | 7 |  | 7 | 7 |  | 7 |  | 7 |  | 5 | 7 |  | TSW | TSW | 5 | 5 | **77** | **107.6** |
|  |  |  | 10 |  | 10 | 7 |  | 7 | 7 |  | 7 |  | 7 |  | 6 | 7 |  | TSW | TSW | 5 | 5 | **78** | **108.6** |
|  |  |  | 10 |  | 10 | 7 |  | 7 | 7 |  | 7 |  | 7 |  | 7 | 7 |  | TSW | TSW | 5 | 5 | **79** | **109.6** |
|  |  |  | 10 |  | 10 | 7 |  | 7 | 7 |  | 7 | 4 | 7 |  | 7 | 7 |  | TSW | TSW | 5 | 5 | **83** | **114.6** |
|  |  |  | 10 |  | 10 | 7 |  | 7 | 7 |  | 7 | 5 | 7 |  | 7 | 7 |  | TSW | TSW | 5 | 5 | **84** | **115.6** |
|  |  |  | 10 |  | 10 | 7 |  | 7 | 7 |  | 7 | 6 | 7 |  | 7 | 7 |  | TSW | TSW | 5 | 5 | **85** | **116.6** |
|  |  |  | 10 |  | 10 | 7 |  | 7 | 7 |  | 7 | 7 | 7 |  | 7 | 7 |  | TSW | TSW | 5 | 5 | **86** | **117.6** |
|  |  |  | 10 |  | 10 | 7 |  | 7 | 7 | 4 | 7 | 7 | 7 |  | 7 | 7 |  | TSW | TSW | 5 | 5 | **90** | **122.6** |
|  |  |  | 10 |  | 10 | 7 |  | 7 | 7 | 5 | 7 | 7 | 7 |  | 7 | 7 |  | TSW | TSW | 5 | 5 | **91** | **123.6** |
|  |  |  | 10 |  | 10 | 7 |  | 7 | 7 | 6 | 7 | 7 | 7 |  | 7 | 7 |  | TSW | TSW | 5 | 5 | **92** | **124.6** |
|  |  |  | 10 |  | 10 | 7 |  | 7 | 7 | 7 | 7 | 7 | 7 |  | 7 | 7 |  | TSW | TSW | 5 | 5 | **93** | **125.6** |
|  |  |  | 10 |  | 10 | 8 |  | 7 | 7 | 7 | 7 | 7 | 7 |  | 7 | 7 |  | TSW | TSW | 5 | 5 | **94** | **126.6** |
|  |  |  | 10 |  | 10 | 9 |  | 7 | 7 | 7 | 7 | 7 | 7 |  | 7 | 7 |  | TSW | TSW | 5 | 5 | **95** | **127.5** |
|  |  |  | 10 |  | 10 | 10 |  | 7 | 7 | 7 | 7 | 7 | 7 |  | 7 | 7 |  | TSW | TSW | 5 | 5 | **96** | **128.4** |
|  |  |  | 10 |  | 10 | 10 |  | 7 | 7 | 7 | 7 | 7 | 7 |  | 7 | 7 |  | TSW | TSW | 6 | 5 | **97** | **129.4** |
|  |  |  | 10 |  | 10 | 10 |  | 7 | 7 | 7 | 7 | 7 | 7 |  | 7 | 7 |  | TSW | TSW | 7 | 5 | **98** | **130.4** |
|  |  |  | 10 |  | 10 | 10 |  | 7 | 7 | 7 | 7 | 7 | 7 |  | 7 | 7 |  | TSW | TSW | 7 | 6 | **99** | **131.4** |
|  |  |  | 10 |  | 10 | 10 |  | 7 | 7 | 7 | 7 | 7 | 7 |  | 7 | 7 |  | TSW | TSW | 7 | 7 | **100** | **132.4** |
|  |  |  | 11 |  | 10 | 10 |  | 7 | 7 | 7 | 7 | 7 | 7 |  | 7 | 7 |  | TSW | TSW | 7 | 7 | **101** | **133.3** |
|  |  |  | 11 |  | 11 | 10 |  | 7 | 7 | 7 | 7 | 7 | 7 |  | 7 | 7 |  | TSW | TSW | 7 | 7 | **102** | **134.2** |
|  |  |  | 11 |  | 11 | 11 |  | 7 | 7 | 7 | 7 | 7 | 7 |  | 7 | 7 |  | TSW | TSW | 7 | 7 | **103** | **135.1** |
|  |  |  | 11 |  | 11 | 11 |  | 7 | 7 | 7 | 7 | 7 | 7 |  | 7 | 8 |  | TSW | TSW | 7 | 7 | **104** | **136.1** |
|  |  |  | 11 |  | 11 | 11 |  | 7 | 7 | 7 | 7 | 7 | 7 |  | 8 | 8 |  | TSW | TSW | 7 | 7 | **105** | **137.1** |
|  |  |  | 11 |  | 11 | 11 |  | 8 | 7 | 7 | 7 | 7 | 7 |  | 8 | 8 |  | TSW | TSW | 7 | 7 | **106** | **138.1** |
|  |  |  | 11 |  | 11 | 11 |  | 8 | 8 | 7 | 7 | 7 | 8 |  | 8 | 8 |  | TSW | TSW | 7 | 7 | **108** | **140.1** |
|  |  |  | 11 |  | 11 | 11 |  | 8 | 8 | 7 | 7 | 8 | 8 |  | 8 | 8 |  | TSW | TSW | 7 | 7 | **109** | **141.1** |
|  |  |  | 11 |  | 11 | 11 |  | 8 | 8 | 8 | 7 | 8 | 8 |  | 8 | 8 |  | TSW | TSW | 7 | 7 | **110** | **142.1** |
|  |  |  | 11 |  | 11 | 11 |  | 8 | 8 | 8 | 8 | 8 | 8 |  | 8 | 8 |  | TSW | TSW | 7 | 7 | **111** | **143.1** |
|  |  |  | 11 |  | 11 | 11 |  | 8 | 8 | 8 | 8 | 8 | 8 |  | 8 | 8 |  | TSW | TSW | 8 | 7 | **112** | **144.1** |
|  |  |  | 11 |  | 11 | 11 |  | 8 | 8 | 8 | 8 | 8 | 8 |  | 8 | 8 |  | TSW | TSW | 8 | 8 | **113** | **145.1** |
|  |  |  | 12 |  | 11 | 11 |  | 8 | 8 | 8 | 8 | 8 | 8 |  | 8 | 8 |  | TSW | TSW | 8 | 8 | **114** | **146.0** |
|  |  |  | 12 |  | 12 | 11 |  | 8 | 8 | 8 | 8 | 8 | 8 |  | 8 | 8 |  | TSW | TSW | 8 | 8 | **115** | **146.9** |
|  |  |  | 12 |  | 12 | 12 |  | 8 | 8 | 8 | 8 | 8 | 8 |  | 8 | 8 |  | TSW | TSW | 8 | 8 | **116** | **147.8** |
|  |  |  | 12 |  | 12 | 12 |  | 8 | 8 | 8 | 8 | 8 | 8 |  | 8 | 9 |  | TSW | TSW | 8 | 8 | **117** | **148.7** |
|  |  |  | 12 |  | 12 | 12 |  | 8 | 8 | 8 | 8 | 8 | 8 |  | 9 | 9 |  | TSW | TSW | 8 | 8 | **118** | **149.6** |
|  |  |  | 12 |  | 12 | 12 |  | 9 | 8 | 8 | 8 | 8 | 8 |  | 9 | 9 |  | TSW | TSW | 8 | 8 | **119** | **150.5** |
|  |  |  | 12 |  | 12 | 12 |  | 9 | 9 | 8 | 8 | 8 | 9 |  | 9 | 9 |  | TSW | TSW | 8 | 8 | **121** | **152.3** |
|  |  |  | 12 |  | 12 | 12 |  | 9 | 9 | 8 | 8 | 9 | 9 |  | 9 | 9 |  | TSW | TSW | 8 | 8 | **122** | **153.2** |
|  |  |  | 12 |  | 12 | 12 |  | 9 | 9 | 9 | 8 | 9 | 9 |  | 9 | 9 |  | TSW | TSW | 8 | 8 | **123** | **154.1** |
|  |  |  | 12 |  | 12 | 12 |  | 9 | 9 | 9 | 9 | 9 | 9 |  | 9 | 9 |  | TSW | TSW | 8 | 8 | **124** | **155.0** |
|  |  |  | 12 |  | 12 | 12 |  | 9 | 9 | 9 | 9 | 9 | 9 |  | 9 | 9 |  | TSW | TSW | 9 | 8 | **125** | **155.9** |
|  |  |  | 12 |  | 12 | 12 |  | 9 | 9 | 9 | 9 | 9 | 9 |  | 9 | 9 |  | TSW | TSW | 9 | 9 | **126** | **156.8** |
|  |  |  | 13 |  | 12 | 12 |  | 9 | 9 | 9 | 9 | 9 | 9 |  | 9 | 9 |  | TSW | TSW | 9 | 9 | **127** | **157.5** |
|  |  |  | 13 |  | 13 | 12 |  | 9 | 9 | 9 | 9 | 9 | 9 |  | 9 | 9 |  | TSW | TSW | 9 | 9 | **128** | **158.2** |
|  |  |  | 13 |  | 13 | 13 |  | 9 | 9 | 9 | 9 | 9 | 9 |  | 9 | 9 |  | TSW | TSW | 9 | 9 | **129** | **158.9** |
|  |  |  | 13 |  | 13 | 13 |  | 9 | 9 | 9 | 9 | 9 | 9 |  | 9 | 10 |  | TSW | TSW | 9 | 9 | **130** | **159.8** |
|  |  |  | 13 |  | 13 | 13 |  | 9 | 9 | 9 | 9 | 9 | 9 |  | 10 | 10 |  | TSW | TSW | 9 | 9 | **131** | **160.7** |
|  |  |  | 13 |  | 13 | 13 |  | 10 | 9 | 9 | 9 | 9 | 9 |  | 10 | 10 |  | TSW | TSW | 9 | 9 | **132** | **161.6** |
|  |  |  | 13 |  | 13 | 13 |  | 10 | 10 | 9 | 9 | 9 | 10 |  | 10 | 10 |  | TSW | TSW | 9 | 9 | **134** | **163.4** |
|  |  |  | 13 |  | 13 | 13 |  | 10 | 10 | 9 | 9 | 10 | 10 |  | 10 | 10 |  | TSW | TSW | 9 | 9 | **135** | **164.3** |
|  |  |  | 13 |  | 13 | 13 |  | 10 | 10 | 10 | 9 | 10 | 10 |  | 10 | 10 |  | TSW | TSW | 9 | 9 | **136** | **165.2** |
|  |  |  | 13 |  | 13 | 13 |  | 10 | 10 | 10 | 10 | 10 | 10 |  | 10 | 10 |  | TSW | TSW | 9 | 9 | **137** | **166.1** |
|  |  |  | 13 |  | 13 | 13 |  | 10 | 10 | 10 | 10 | 10 | 10 |  | 10 | 10 |  | TSW | TSW | 10 | 9 | **138** | **167.0** |
|  |  |  | 13 |  | 13 | 13 |  | 10 | 10 | 10 | 10 | 10 | 10 |  | 10 | 10 |  | TSW | TSW | 10 | 10 | **139** | **167.9** |
|  |  |  | 14 |  | 13 | 13 |  | 10 | 10 | 10 | 10 | 10 | 10 |  | 10 | 10 |  | TSW | TSW | 10 | 10 | **140** | **168.7** |
|  |  |  | 14 |  | 14 | 13 |  | 10 | 10 | 10 | 10 | 10 | 10 |  | 10 | 10 |  | TSW | TSW | 10 | 10 | **141** | **169.5** |
|  |  |  | 14 |  | 14 | 14 |  | 10 | 10 | 10 | 10 | 10 | 10 |  | 10 | 10 |  | TSW | TSW | 10 | 10 | **142** | **170.3** |
|  |  |  | 14 |  | 14 | 14 |  | 10 | 10 | 10 | 10 | 10 | 10 |  | 10 | 11 |  | TSW | TSW | 10 | 10 | **143** | **171.2** |
|  |  |  | 14 |  | 14 | 14 |  | 10 | 10 | 10 | 10 | 10 | 10 |  | 11 | 11 |  | TSW | TSW | 10 | 10 | **144** | **172.1** |
|  |  |  | 14 |  | 14 | 14 |  | 11 | 10 | 10 | 10 | 10 | 10 |  | 11 | 11 |  | TSW | TSW | 10 | 10 | **145** | **173.0** |
|  |  |  | 14 |  | 14 | 14 |  | 11 | 11 | 10 | 10 | 10 | 11 |  | 11 | 11 |  | TSW | TSW | 10 | 10 | **147** | **174.8** |
|  |  |  | 14 |  | 14 | 14 |  | 11 | 11 | 10 | 10 | 11 | 11 |  | 11 | 11 |  | TSW | TSW | 10 | 10 | **148** | **175.7** |
|  |  |  | 14 |  | 14 | 14 |  | 11 | 11 | 11 | 10 | 11 | 11 |  | 11 | 11 |  | TSW | TSW | 10 | 10 | **149** | **176.6** |
|  |  |  | 14 |  | 14 | 14 |  | 11 | 11 | 11 | 11 | 11 | 11 |  | 11 | 11 |  | TSW | TSW | 10 | 10 | **150** | **177.5** |
|  |  |  | 14 |  | 14 | 14 |  | 11 | 11 | 11 | 11 | 11 | 11 |  | 11 | 11 |  | TSW | TSW | 11 | 10 | **151** | **178.4** |
|  |  |  | 14 |  | 14 | 14 |  | 11 | 11 | 11 | 11 | 11 | 11 |  | 11 | 11 |  | TSW | TSW | 11 | 11 | **152** | **179.3** |
|  |  |  | 15 |  | 14 | 14 |  | 11 | 11 | 11 | 11 | 11 | 11 |  | 11 | 11 |  | TSW | TSW | 11 | 11 | **153** | **180.1** |
|  |  |  | 15 |  | 15 | 14 |  | 11 | 11 | 11 | 11 | 11 | 11 |  | 11 | 11 |  | TSW | TSW | 11 | 11 | **154** | **180.9** |
|  |  |  | 15 |  | 15 | 15 |  | 11 | 11 | 11 | 11 | 11 | 11 |  | 11 | 11 |  | TSW | TSW | 11 | 11 | **155** | **181.7** |
|  |  |  | 15 |  | 15 | 15 |  | 11 | 11 | 11 | 11 | 11 | 11 |  | 11 | 12 |  | TSW | TSW | 11 | 11 | **156** | **182.6** |
|  |  |  | 15 |  | 15 | 15 |  | 11 | 11 | 11 | 11 | 11 | 11 |  | 12 | 12 |  | TSW | TSW | 11 | 11 | **157** | **183.5** |
|  |  |  | 15 |  | 15 | 15 |  | 12 | 11 | 11 | 11 | 11 | 11 |  | 12 | 12 |  | TSW | TSW | 11 | 11 | **158** | **184.4** |
|  |  |  | 15 |  | 15 | 15 |  | 12 | 12 | 11 | 11 | 11 | 12 |  | 12 | 12 |  | TSW | TSW | 11 | 11 | **160** | **186.2** |
|  |  |  | 15 |  | 15 | 15 |  | 12 | 12 | 11 | 11 | 12 | 12 |  | 12 | 12 |  | TSW | TSW | 11 | 11 | **161** | **187.1** |
|  |  |  | 15 |  | 15 | 15 |  | 12 | 12 | 12 | 11 | 12 | 12 |  | 12 | 12 |  | TSW | TSW | 11 | 11 | **162** | **188.0** |
|  |  |  | 15 |  | 15 | 15 |  | 12 | 12 | 12 | 12 | 12 | 12 |  | 12 | 12 |  | TSW | TSW | 11 | 11 | **163** | **188.9** |
|  |  |  | 15 |  | 15 | 15 |  | 12 | 12 | 12 | 12 | 12 | 12 |  | 12 | 12 |  | TSW | TSW | 12 | 11 | **164** | **189.8** |
|  |  |  | 15 |  | 15 | 15 |  | 12 | 12 | 12 | 12 | 12 | 12 |  | 12 | 12 |  | TSW | TSW | 12 | 12 | **165** | **190.7** |
|  |  |  | 15 |  | 15 | 15 |  | 12 | 12 | 12 | 12 | 12 | 12 |  | 12 | 13 |  | TSW | TSW | 12 | 12 | **166** | **191.4** |
|  |  |  | 15 |  | 15 | 15 |  | 12 | 12 | 12 | 12 | 12 | 12 |  | 13 | 13 |  | TSW | TSW | 12 | 12 | **167** | **192.1** |
|  |  |  | 15 |  | 15 | 15 |  | 13 | 12 | 12 | 12 | 12 | 12 |  | 13 | 13 |  | TSW | TSW | 12 | 12 | **168** | **192.8** |
|  |  |  | 15 |  | 15 | 15 |  | 13 | 13 | 12 | 12 | 12 | 13 |  | 13 | 13 |  | TSW | TSW | 12 | 12 | **170** | **194.2** |
|  |  |  | 15 |  | 15 | 15 |  | 13 | 13 | 12 | 12 | 13 | 13 |  | 13 | 13 |  | TSW | TSW | 12 | 12 | **171** | **194.9** |
|  |  |  | 15 |  | 15 | 15 |  | 13 | 13 | 13 | 12 | 13 | 13 |  | 13 | 13 |  | TSW | TSW | 12 | 12 | **172** | **195.6** |
|  |  |  | 15 |  | 15 | 15 |  | 13 | 13 | 13 | 13 | 13 | 13 |  | 13 | 13 |  | TSW | TSW | 12 | 12 | **173** | **196.3** |
|  |  |  | 15 |  | 15 | 15 |  | 13 | 13 | 13 | 13 | 13 | 13 |  | 13 | 13 |  | TSW | TSW | 13 | 12 | **174** | **197.0** |
|  |  |  | 15 |  | 15 | 15 |  | 13 | 13 | 13 | 13 | 13 | 13 |  | 13 | 13 |  | TSW | TSW | 13 | 13 | **175** | **197.7** |
|  |  |  | 15 |  | 15 | 15 |  | 13 | 13 | 13 | 13 | 13 | 13 |  | 13 | 14 |  | TSW | TSW | 13 | 13 | **176** | **198.5** |
|  |  |  | 15 |  | 15 | 15 |  | 13 | 13 | 13 | 13 | 13 | 13 |  | 14 | 14 |  | TSW | TSW | 13 | 13 | **177** | **199.3** |
|  |  |  | 15 |  | 15 | 15 |  | 14 | 13 | 13 | 13 | 13 | 13 |  | 14 | 14 |  | TSW | TSW | 13 | 13 | **178** | **200.1** |
|  |  |  | 15 |  | 15 | 15 |  | 14 | 14 | 13 | 13 | 13 | 14 |  | 14 | 14 |  | TSW | TSW | 13 | 13 | **180** | **201.7** |
|  |  |  | 15 |  | 15 | 15 |  | 14 | 14 | 13 | 13 | 14 | 14 |  | 14 | 14 |  | TSW | TSW | 13 | 13 | **181** | **202.5** |
|  |  |  | 15 |  | 15 | 15 |  | 14 | 14 | 14 | 13 | 14 | 14 |  | 14 | 14 |  | TSW | TSW | 13 | 13 | **182** | **203.3** |
|  |  |  | 15 |  | 15 | 15 |  | 14 | 14 | 14 | 14 | 14 | 14 |  | 14 | 14 |  | TSW | TSW | 13 | 13 | **183** | **204.1** |
|  |  |  | 15 |  | 15 | 15 |  | 14 | 14 | 14 | 14 | 14 | 14 |  | 14 | 14 |  | TSW | TSW | 14 | 13 | **184** | **204.9** |
|  |  |  | 15 |  | 15 | 15 |  | 14 | 14 | 14 | 14 | 14 | 14 |  | 14 | 14 |  | TSW | TSW | 14 | 14 | **185** | **205.7** |
|  |  |  | 15 |  | 15 | 15 |  | 14 | 14 | 14 | 14 | 14 | 14 |  | 14 | 15 |  | TSW | TSW | 14 | 14 | **186** | **206.5** |
|  |  |  | 15 |  | 15 | 15 |  | 14 | 14 | 14 | 14 | 14 | 14 |  | 15 | 15 |  | TSW | TSW | 14 | 14 | **187** | **207.3** |
|  |  |  | 15 |  | 15 | 15 |  | 15 | 14 | 14 | 14 | 14 | 14 |  | 15 | 15 |  | TSW | TSW | 14 | 14 | **188** | **208.1** |
|  |  |  | 15 |  | 15 | 15 |  | 15 | 15 | 14 | 14 | 14 | 15 |  | 15 | 15 |  | TSW | TSW | 14 | 14 | **190** | **209.7** |
|  |  |  | 15 |  | 15 | 15 |  | 15 | 15 | 14 | 14 | 15 | 15 |  | 15 | 15 |  | TSW | TSW | 14 | 14 | **191** | **210.5** |
|  |  |  | 15 |  | 15 | 15 |  | 15 | 15 | 15 | 14 | 15 | 15 |  | 15 | 15 |  | TSW | TSW | 14 | 14 | **192** | **211.3** |
|  |  |  | 15 |  | 15 | 15 |  | 15 | 15 | 15 | 15 | 15 | 15 |  | 15 | 15 |  | TSW | TSW | 14 | 14 | **193** | **212.1** |
|  |  |  | 15 |  | 15 | 15 |  | 15 | 15 | 15 | 15 | 15 | 15 |  | 15 | 15 |  | TSW | TSW | 15 | 14 | **194** | **212.9** |
|  |  |  | 15 |  | 15 | 15 |  | 15 | 15 | 15 | 15 | 15 | 15 |  | 15 | 15 |  | TSW | TSW | 15 | 15 | **195** | **213.7** |
|  |  |  | 19 |  | 15 | 15 |  | 15 | 15 | 15 | 15 | 15 | 15 |  | 15 | 15 |  | TSW | TSW | 15 | 15 | **199** | **217.4** |
|  |  |  | 19 |  | 15 | 15 |  | 15 | 15 | 15 | 15 | 15 | 15 |  | 15 | 15 |  | TSW | TSW | 15 | 19 | **203** | **221.1** |
|  |  |  | 19 |  | 19 | 15 |  | 15 | 15 | 15 | 15 | 15 | 15 |  | 15 | 15 |  | TSW | TSW | 15 | 19 | **207** | **224.8** |
|  |  |  | 19 |  | 19 | 15 |  | 15 | 15 | 15 | 15 | 15 | 15 |  | 15 | 15 |  | TSW | TSW | 19 | 19 | **211** | **228.5** |
|  |  |  | 19 |  | 19 | 19 |  | 15 | 15 | 15 | 15 | 15 | 15 |  | 15 | 15 |  | TSW | TSW | 19 | 19 | **215** | **232.2** |
|  |  |  | 19 |  | 19 | 19 |  | 15 | 15 | 15 | 15 | 15 | 15 |  | 15 | 19 |  | TSW | TSW | 19 | 19 | **219** | **235.9** |
|  |  |  | 19 |  | 19 | 19 |  | 19 | 15 | 15 | 15 | 15 | 15 |  | 15 | 19 |  | TSW | TSW | 19 | 19 | **223** | **239.6** |
|  |  |  | 19 |  | 19 | 19 |  | 19 | 15 | 15 | 15 | 15 | 15 |  | 19 | 19 |  | TSW | TSW | 19 | 19 | **227** | **243.3** |
|  |  |  | 19 |  | 19 | 19 |  | 19 | 19 | 15 | 15 | 15 | 15 |  | 19 | 19 |  | TSW | TSW | 19 | 19 | **231** | **247.0** |
|  |  |  | 19 |  | 19 | 19 |  | 19 | 19 | 15 | 15 | 15 | 19 |  | 19 | 19 |  | TSW | TSW | 19 | 19 | **235** | **250.7** |
|  |  |  | 19 |  | 19 | 19 |  | 19 | 19 | 19 | 15 | 15 | 19 |  | 19 | 19 |  | TSW | TSW | 19 | 19 | **239** | **254.4** |
|  |  |  | 19 |  | 19 | 19 |  | 19 | 19 | 19 | 15 | 19 | 19 |  | 19 | 19 |  | TSW | TSW | 19 | 19 | **243** | **258.1** |
|  |  |  | 19 |  | 19 | 19 |  | 19 | 19 | 19 | 19 | 19 | 19 |  | 19 | 19 |  | TSW | TSW | 19 | 19 | **247** | **261.8** |
|  | 20 |  | 19 |  | 19 | 19 |  | 15 | 15 | 15 | 15 | 15 | 15 |  | 15 | 15 |  | TSW | TSW | 19 | 19 | **235** | **264.3** |
|  | 20 |  | 19 |  | 19 | 19 |  | 15 | 15 | 15 | 15 | 15 | 15 |  | 15 | 19 |  | TSW | TSW | 19 | 19 | **239** | **268.0** |
|  | 20 |  | 19 |  | 19 | 19 |  | 19 | 15 | 15 | 15 | 15 | 15 |  | 15 | 19 |  | TSW | TSW | 19 | 19 | **243** | **271.7** |
|  | 20 |  | 19 |  | 19 | 19 |  | 19 | 15 | 15 | 15 | 15 | 15 |  | 19 | 19 |  | TSW | TSW | 19 | 19 | **247** | **275.4** |
|  | 20 |  | 19 |  | 19 | 19 |  | 19 | 19 | 15 | 15 | 15 | 15 |  | 19 | 19 |  | TSW | TSW | 19 | 19 | **251** | **279.1** |
|  | 20 |  | 19 |  | 19 | 19 |  | 19 | 19 | 15 | 15 | 15 | 19 |  | 19 | 19 |  | TSW | TSW | 19 | 19 | **255** | **282.8** |
|  | 20 |  | 19 |  | 19 | 19 |  | 19 | 19 | 19 | 15 | 15 | 19 |  | 19 | 19 |  | TSW | TSW | 19 | 19 | **259** | **286.5** |
|  | 20 |  | 19 |  | 19 | 19 |  | 19 | 19 | 19 | 15 | 19 | 19 |  | 19 | 19 |  | TSW | TSW | 19 | 19 | **263** | **290.2** |
|  | 20 |  | 19 |  | 19 | 19 |  | 19 | 19 | 19 | 19 | 19 | 19 |  | 19 | 19 |  | TSW | TSW | 19 | 19 | **267** | **293.9** |
|  | 20 |  | 19 | 20 | 19 | 19 |  | 15 | 15 | 15 | 15 | 15 | 15 |  | 15 | 15 |  | TSW | TSW | 19 | 19 | **255** | **296.4** |
|  | 20 |  | 19 | 20 | 19 | 19 |  | 15 | 15 | 15 | 15 | 15 | 15 |  | 15 | 19 |  | TSW | TSW | 19 | 19 | **259** | **300.1** |
|  | 20 |  | 19 | 20 | 19 | 19 |  | 19 | 15 | 15 | 15 | 15 | 15 |  | 15 | 19 |  | TSW | TSW | 19 | 19 | **263** | **303.8** |
|  | 20 |  | 19 | 20 | 19 | 19 |  | 19 | 15 | 15 | 15 | 15 | 15 |  | 19 | 19 |  | TSW | TSW | 19 | 19 | **267** | **307.5** |
|  | 20 |  | 19 | 20 | 19 | 19 |  | 19 | 19 | 15 | 15 | 15 | 15 |  | 19 | 19 |  | TSW | TSW | 19 | 19 | **271** | **311.2** |
|  | 20 |  | 19 | 20 | 19 | 19 |  | 19 | 19 | 15 | 15 | 15 | 19 |  | 19 | 19 |  | TSW | TSW | 19 | 19 | **275** | **314.9** |
|  | 20 |  | 19 | 20 | 19 | 19 |  | 19 | 19 | 19 | 15 | 15 | 19 |  | 19 | 19 |  | TSW | TSW | 19 | 19 | **279** | **318.6** |
|  | 20 |  | 19 | 20 | 19 | 19 |  | 19 | 19 | 19 | 15 | 19 | 19 |  | 19 | 19 |  | TSW | TSW | 19 | 19 | **283** | **322.3** |
|  | 20 |  | 19 | 20 | 19 | 19 |  | 19 | 19 | 19 | 19 | 19 | 19 |  | 19 | 19 |  | TSW | TSW | 19 | 19 | **287** | **326.0** |
|  | 20 |  | 19 | 20 | 19 | 19 |  | 15 | 15 | 15 | 15 | 15 | 15 |  | 15 | 15 | 20 | TSW | TSW | 19 | 19 | **275** | **328.5** |
|  | 20 |  | 19 | 20 | 19 | 19 |  | 15 | 15 | 15 | 15 | 15 | 15 |  | 15 | 19 | 20 | TSW | TSW | 19 | 19 | **279** | **332.2** |
|  | 20 |  | 19 | 20 | 19 | 19 |  | 19 | 15 | 15 | 15 | 15 | 15 |  | 15 | 19 | 20 | TSW | TSW | 19 | 19 | **283** | **335.9** |
|  | 20 |  | 19 | 20 | 19 | 19 |  | 19 | 15 | 15 | 15 | 15 | 15 |  | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **287** | **339.6** |
|  | 20 |  | 19 | 20 | 19 | 19 |  | 19 | 19 | 15 | 15 | 15 | 15 |  | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **291** | **343.3** |
|  | 20 |  | 19 | 20 | 19 | 19 |  | 19 | 19 | 15 | 15 | 15 | 19 |  | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **295** | **347.0** |
|  | 20 |  | 19 | 20 | 19 | 19 |  | 19 | 19 | 19 | 15 | 15 | 19 |  | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **299** | **350.7** |
|  | 20 |  | 19 | 20 | 19 | 19 |  | 19 | 19 | 19 | 15 | 19 | 19 |  | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **303** | **354.4** |
|  | 20 |  | 19 | 20 | 19 | 19 |  | 19 | 19 | 19 | 19 | 19 | 19 |  | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **307** | **358.1** |
| 20 | 20 |  | 19 | 20 | 19 | 19 |  | 15 | 15 | 15 | 15 | 15 | 15 |  | 15 | 15 | 20 | TSW | TSW | 19 | 19 | **295** | **360.6** |
| 20 | 20 |  | 19 | 20 | 19 | 19 |  | 15 | 15 | 15 | 15 | 15 | 15 |  | 15 | 19 | 20 | TSW | TSW | 19 | 19 | **299** | **364.3** |
| 20 | 20 |  | 19 | 20 | 19 | 19 |  | 19 | 15 | 15 | 15 | 15 | 15 |  | 15 | 19 | 20 | TSW | TSW | 19 | 19 | **303** | **368.0** |
| 20 | 20 |  | 19 | 20 | 19 | 19 |  | 19 | 15 | 15 | 15 | 15 | 15 |  | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **307** | **371.7** |
| 20 | 20 |  | 19 | 20 | 19 | 19 |  | 19 | 19 | 15 | 15 | 15 | 15 |  | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **311** | **375.4** |
| 20 | 20 |  | 19 | 20 | 19 | 19 |  | 19 | 19 | 15 | 15 | 15 | 19 |  | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **315** | **379.1** |
| 20 | 20 |  | 19 | 20 | 19 | 19 |  | 19 | 19 | 19 | 15 | 15 | 19 |  | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **319** | **382.8** |
| 20 | 20 |  | 19 | 20 | 19 | 19 |  | 19 | 19 | 19 | 15 | 19 | 19 |  | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **323** | **386.5** |
| 20 | 20 |  | 19 | 20 | 19 | 19 |  | 19 | 19 | 19 | 19 | 19 | 19 |  | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **327** | **390.2** |
| 20 | 20 |  | 19 | 20 | 19 | 19 |  | 15 | 15 | 15 | 15 | 15 | 15 | 20 | 15 | 15 | 20 | TSW | TSW | 19 | 19 | **315** | **392.7** |
| 20 | 20 |  | 19 | 20 | 19 | 19 |  | 15 | 15 | 15 | 15 | 15 | 15 | 20 | 15 | 19 | 20 | TSW | TSW | 19 | 19 | **319** | **396.4** |
| 20 | 20 |  | 19 | 20 | 19 | 19 |  | 19 | 15 | 15 | 15 | 15 | 15 | 20 | 15 | 19 | 20 | TSW | TSW | 19 | 19 | **323** | **400.1** |
| 20 | 20 |  | 19 | 20 | 19 | 19 |  | 19 | 15 | 15 | 15 | 15 | 15 | 20 | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **327** | **403.8** |
| 20 | 20 |  | 19 | 20 | 19 | 19 |  | 19 | 19 | 15 | 15 | 15 | 15 | 20 | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **331** | **407.5** |
| 20 | 20 |  | 19 | 20 | 19 | 19 |  | 19 | 19 | 15 | 15 | 15 | 19 | 20 | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **335** | **411.2** |
| 20 | 20 |  | 19 | 20 | 19 | 19 |  | 19 | 19 | 19 | 15 | 15 | 19 | 20 | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **339** | **414.9** |
| 20 | 20 |  | 19 | 20 | 19 | 19 |  | 19 | 19 | 19 | 15 | 19 | 19 | 20 | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **343** | **418.6** |
| 20 | 20 |  | 19 | 20 | 19 | 19 |  | 19 | 19 | 19 | 19 | 19 | 19 | 20 | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **347** | **422.3** |
| 20 | 20 | 20 | 19 | 20 | 19 | 19 |  | 15 | 15 | 15 | 15 | 15 | 15 | 20 | 15 | 15 | 20 | TSW | TSW | 19 | 19 | **335** | **424.8** |
| 20 | 20 | 20 | 19 | 20 | 19 | 19 |  | 15 | 15 | 15 | 15 | 15 | 15 | 20 | 15 | 19 | 20 | TSW | TSW | 19 | 19 | **339** | **428.5** |
| 20 | 20 | 20 | 19 | 20 | 19 | 19 |  | 19 | 15 | 15 | 15 | 15 | 15 | 20 | 15 | 19 | 20 | TSW | TSW | 19 | 19 | **343** | **432.2** |
| 20 | 20 | 20 | 19 | 20 | 19 | 19 |  | 19 | 15 | 15 | 15 | 15 | 15 | 20 | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **347** | **435.9** |
| 20 | 20 | 20 | 19 | 20 | 19 | 19 |  | 19 | 19 | 15 | 15 | 15 | 15 | 20 | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **351** | **439.6** |
| 20 | 20 | 20 | 19 | 20 | 19 | 19 |  | 19 | 19 | 15 | 15 | 15 | 19 | 20 | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **355** | **443.3** |
| 20 | 20 | 20 | 19 | 20 | 19 | 19 |  | 19 | 19 | 19 | 15 | 15 | 19 | 20 | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **359** | **447.0** |
| 20 | 20 | 20 | 19 | 20 | 19 | 19 |  | 19 | 19 | 19 | 15 | 19 | 19 | 20 | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **363** | **450.7** |
| 20 | 20 | 20 | 19 | 20 | 19 | 19 |  | 19 | 19 | 19 | 19 | 19 | 19 | 20 | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **367** | **454.4** |
| 20 | 20 | 20 | 19 | 20 | 19 | 19 | 20 | 15 | 15 | 15 | 15 | 15 | 15 | 20 | 15 | 15 | 20 | TSW | TSW | 19 | 19 | **355** | **456.9** |
| 20 | 20 | 20 | 19 | 20 | 19 | 19 | 20 | 15 | 15 | 15 | 15 | 15 | 15 | 20 | 15 | 19 | 20 | TSW | TSW | 19 | 19 | **359** | **460.6** |
| 20 | 20 | 20 | 19 | 20 | 19 | 19 | 20 | 19 | 15 | 15 | 15 | 15 | 15 | 20 | 15 | 19 | 20 | TSW | TSW | 19 | 19 | **363** | **464.3** |
| 20 | 20 | 20 | 19 | 20 | 19 | 19 | 20 | 19 | 15 | 15 | 15 | 15 | 15 | 20 | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **367** | **468.0** |
| 20 | 20 | 20 | 19 | 20 | 19 | 19 | 20 | 19 | 19 | 15 | 15 | 15 | 15 | 20 | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **371** | **471.7** |
| 20 | 20 | 20 | 19 | 20 | 19 | 19 | 20 | 19 | 19 | 15 | 15 | 15 | 19 | 20 | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **375** | **475.4** |
| 20 | 20 | 20 | 19 | 20 | 19 | 19 | 20 | 19 | 19 | 19 | 15 | 15 | 19 | 20 | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **379** | **479.1** |
| 20 | 20 | 20 | 19 | 20 | 19 | 19 | 20 | 19 | 19 | 19 | 15 | 19 | 19 | 20 | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **383** | **482.8** |
| 20 | 20 | 20 | 19 | 20 | 19 | 19 | 20 | 19 | 19 | 19 | 19 | 19 | 19 | 20 | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **387** | **486.5** |
| 20 | 20 | 20 | 19 | 20 | 19 | 19 | 20 | 19 | 19 | 19 | 19 | 19 | 19 | 20 | 19 | 19 | 20 | 21 | TSW | 19 | 19 | **408** | **496.5** |
| 20 | 20 | 20 | 19 | 20 | 19 | 19 | 20 | 19 | 19 | 19 | 19 | 19 | 19 | 20 | 19 | 19 | 20 | 21 | 21 | 19 | 19 | **429** | **506.5** |
| 20 | Free | 20 | 19 | 20 | 19 | 19 | 20 | 19 | 19 | 19 | 19 | 19 | 19 | 20 | 19 | 19 | 20 | 21 | 21 | 19 | 19 | **409** | **536.6** |
| 20 | Free | 20 | 19 | 20 | 19 | 19 | 20 | 19 | 19 | 19 | 19 | 19 | 19 | 20 | 19 | 19 | Free | 21 | 21 | 19 | 19 | **389** | **566.7** |
| 20 | Free | 20 | 19 | Free | 19 | 19 | 20 | 19 | 19 | 19 | 19 | 19 | 19 | 20 | 19 | 19 | Free | 21 | 21 | 19 | 19 | **369** | **596.8** |
| 20 | Free | 20 | 19 | Free | 19 | 19 | 20 | 19 | 19 | 19 | 19 | 19 | 19 | Free | 19 | 19 | Free | 21 | 21 | 19 | 19 | **349** | **626.9** |
| 20 | Free | 20 | 19 | Free | 19 | 19 | Free | 19 | 19 | 19 | 19 | 19 | 19 | Free | 19 | 19 | Free | 21 | 21 | 19 | 19 | **329** | **657.0** |
| Free | Free | 20 | 19 | Free | 19 | 19 | Free | 19 | 19 | 19 | 19 | 19 | 19 | Free | 19 | 19 | Free | 21 | 21 | 19 | 19 | **309** | **687.1** |
| Free | Free | Free | 19 | Free | 19 | 19 | Free | 19 | 19 | 19 | 19 | 19 | 19 | Free | 19 | 19 | Free | 21 | 21 | 19 | 19 | **289** | **717.2** |

1. A total of 13 spill gates and hoists will be operated in the upstream slot in split-leaf configuration and adjusted hourly as needed to adjust spill. The remaining 7 spillbays (1, 2, 3, 5, 8, 15, and 18) will remain closed in the downstream slot in double-leaf and only opened if needed to pass high flows using the first of two overloaded movements allowed each year. After the high flow event, open double-leaf gates will be closed using the second of two allowed overloaded movements.
2. Bays 19-20 with TSWs spill approx 19.2 kcfs (9.6 kcfs/bay) at forebay 339'. The upper TSW gates will be raised 3-5 ft above the water surface to ensure free flow over the TSW crests.

**Table MCN-8-ALT. McNary Dam INTERIM Spill Patterns with TSWs in Bays 19-20 and 13 Bays in Split-Leaf (upstream slot) and Bays 1&2 Available. a, b**

| **Table MCN-8-ALT. Interim Patterns w/ 13 Gates in Split Leaf in Upstream Slot and Bays 1&2 Available (# Gate Stops per Spillbay)** | | | | | | | | | | | | | | | | | | | | | | **Total Stops** | **Spill** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19 c** | **20 c** | **21** | **22** | **(#)** | **(kcfs)** |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | TSW | TSW |  |  | **0** | **19.4** |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 4 |  | TSW | TSW |  |  | **4** | **24.4** |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 5 |  | TSW | TSW |  |  | **5** | **25.4** |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 5 |  | TSW | TSW | 4 |  | **9** | **30.4** |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 5 |  | TSW | TSW | 5 |  | **10** | **31.4** |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 5 |  | TSW | TSW | 5 | 4 | **14** | **36.4** |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 5 |  | TSW | TSW | 5 | 5 | **15** | **37.4** |
|  |  |  |  |  |  |  |  |  |  |  |  |  | 4 |  |  | 5 |  | TSW | TSW | 5 | 5 | **19** | **42.4** |
|  |  |  |  |  |  |  |  |  |  |  |  |  | 5 |  |  | 5 |  | TSW | TSW | 5 | 5 | **20** | **43.4** |
|  |  |  |  |  |  |  |  |  |  |  |  |  | 5 |  |  | 6 |  | TSW | TSW | 5 | 5 | **21** | **44.4** |
|  |  |  |  |  |  |  |  |  |  |  |  |  | 5 |  |  | 7 |  | TSW | TSW | 5 | 5 | **22** | **45.4** |
|  |  |  |  |  |  |  |  |  |  |  | 4 |  | 5 |  |  | 7 |  | TSW | TSW | 5 | 5 | **26** | **50.4** |
|  |  |  |  |  |  |  |  |  |  |  | 5 |  | 5 |  |  | 7 |  | TSW | TSW | 5 | 5 | **27** | **51.4** |
|  |  |  |  |  |  |  |  |  |  |  | 5 |  | 6 |  |  | 7 |  | TSW | TSW | 5 | 5 | **28** | **52.4** |
|  |  |  |  |  |  |  |  |  |  |  | 5 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **29** | **53.4** |
|  |  |  |  |  |  |  |  |  | 4 |  | 5 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **33** | **58.4** |
|  |  |  |  |  |  |  |  |  | 5 |  | 5 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **34** | **59.4** |
|  |  |  |  |  |  |  |  |  | 5 |  | 6 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **35** | **60.4** |
|  |  |  |  |  |  |  |  |  | 5 |  | 7 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **36** | **61.4** |
|  |  |  | 4 |  |  |  |  |  | 5 |  | 7 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **40** | **66.4** |
|  |  |  | 5 |  |  |  |  |  | 5 |  | 7 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **41** | **67.4** |
|  |  |  | 6 |  |  |  |  |  | 5 |  | 7 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **42** | **68.4** |
|  |  |  | 7 |  |  |  |  |  | 5 |  | 7 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **43** | **69.4** |
| 4 | 4 |  | 5 |  |  |  |  |  | 4 |  | 4 |  | 4 |  |  | 4 |  | TSW | TSW | 5 | 5 | **39** | **71.4** |
| 4 | 4 |  | 5 |  |  |  |  |  | 4 |  | 4 |  | 5 |  |  | 5 |  | TSW | TSW | 5 | 5 | **41** | **73.4** |
| 4 | 4 |  | 5 |  |  |  |  |  | 5 |  | 5 |  | 5 |  |  | 5 |  | TSW | TSW | 5 | 5 | **43** | **75.4** |
| 4 | 4 |  | 5 |  |  |  |  |  | 5 |  | 5 |  | 5 |  |  | 7 |  | TSW | TSW | 5 | 5 | **45** | **77.4** |
| 4 | 4 |  | 5 |  |  |  |  |  | 5 |  | 5 |  | 7 |  |  | 7 |  | TSW | TSW | 5 | 5 | **47** | **79.4** |
| 4 | 4 |  | 5 |  | 4 |  |  |  | 5 |  | 5 |  | 5 |  |  | 5 |  | TSW | TSW | 5 | 5 | **47** | **80.4** |
| 4 | 4 |  | 6 |  | 5 |  |  |  | 5 |  | 5 |  | 5 |  |  | 5 |  | TSW | TSW | 5 | 5 | **49** | **82.4** |
| 4 | 4 |  | 7 |  | 5 |  |  |  | 5 |  | 5 |  | 5 |  |  | 5 |  | TSW | TSW | 5 | 5 | **50** | **83.4** |
| 4 | 4 |  | 7 |  | 6 |  |  |  | 5 |  | 5 |  | 5 |  |  | 5 |  | TSW | TSW | 5 | 5 | **51** | **84.4** |
| 4 | 4 |  | 8 |  | 6 |  |  |  | 5 |  | 5 |  | 5 |  |  | 5 |  | TSW | TSW | 5 | 5 | **52** | **85.4** |
| 4 | 4 |  | 8 |  | 7 |  |  |  | 5 |  | 5 |  | 5 |  |  | 5 |  | TSW | TSW | 5 | 5 | **53** | **86.4** |
| 4 | 4 |  | 9 |  | 7 |  |  |  | 5 |  | 5 |  | 5 |  |  | 5 |  | TSW | TSW | 5 | 5 | **54** | **87.3** |
| 4 | 4 |  | 9 |  | 8 |  |  |  | 5 |  | 5 |  | 5 |  |  | 5 |  | TSW | TSW | 5 | 5 | **55** | **88.3** |
| 4 | 4 |  | 10 |  | 8 |  |  |  | 5 |  | 5 |  | 5 |  |  | 5 |  | TSW | TSW | 5 | 5 | **56** | **89.2** |
| 4 | 4 |  | 10 |  | 8 |  |  | 4 | 5 |  | 5 |  | 5 |  |  | 5 |  | TSW | TSW | 5 | 5 | **60** | **94.2** |
| 4 | 4 |  | 10 |  | 8 |  |  | 5 | 5 |  | 5 |  | 5 |  |  | 5 |  | TSW | TSW | 5 | 5 | **61** | **95.2** |
| 4 | 4 |  | 10 |  | 9 |  |  | 5 | 5 |  | 5 |  | 5 |  |  | 5 |  | TSW | TSW | 5 | 5 | **62** | **96.1** |
| 4 | 4 |  | 10 |  | 10 |  |  | 5 | 5 |  | 5 |  | 5 |  |  | 5 |  | TSW | TSW | 5 | 5 | **63** | **97.0** |
| 4 | 4 |  | 10 |  | 7 | 4 |  | 5 | 5 |  | 5 |  | 5 |  |  | 5 |  | TSW | TSW | 5 | 5 | **64** | **99.2** |
| 4 | 4 |  | 10 |  | 9 | 5 |  | 5 | 5 |  | 5 |  | 5 |  |  | 5 |  | TSW | TSW | 5 | 5 | **67** | **102.1** |
| 4 | 4 |  | 10 |  | 9 | 6 |  | 5 | 5 |  | 5 |  | 5 |  |  | 5 |  | TSW | TSW | 5 | 5 | **68** | **103.1** |
| 4 | 4 |  | 10 |  | 10 | 6 |  | 5 | 5 |  | 5 |  | 5 |  |  | 5 |  | TSW | TSW | 5 | 5 | **69** | **104.0** |
| 4 | 4 |  | 10 |  | 10 | 7 |  | 5 | 5 |  | 5 |  | 5 |  |  | 5 |  | TSW | TSW | 5 | 5 | **70** | **105.0** |
| 4 | 4 |  | 10 |  | 10 | 9 |  | 5 | 5 |  | 5 |  | 5 |  |  | 5 |  | TSW | TSW | 5 | 5 | **72** | **106.9** |
| 4 | 4 |  | 10 |  | 10 | 7 |  | 5 | 5 |  | 5 |  | 5 |  | 4 | 5 |  | TSW | TSW | 5 | 5 | **74** | **110.0** |
| 4 | 4 |  | 10 |  | 10 | 7 |  | 5 | 5 |  | 5 |  | 5 |  | 5 | 5 |  | TSW | TSW | 5 | 5 | **75** | **111.0** |
| 4 | 4 |  | 10 |  | 10 | 7 |  | 5 | 5 |  | 5 |  | 5 |  | 5 | 6 |  | TSW | TSW | 5 | 5 | **76** | **112.0** |
| 4 | 4 |  | 10 |  | 10 | 7 |  | 5 | 5 |  | 5 |  | 5 |  | 6 | 6 |  | TSW | TSW | 5 | 5 | **77** | **113.0** |
| 4 | 4 |  | 10 |  | 10 | 8 |  | 5 | 5 |  | 5 |  | 5 |  | 6 | 6 |  | TSW | TSW | 5 | 5 | **78** | **114.0** |
| 4 | 4 |  | 10 |  | 10 | 7 |  | 5 | 5 |  | 5 | 4 | 5 |  | 6 | 6 |  | TSW | TSW | 5 | 5 | **81** | **118.0** |
| 4 | 4 |  | 10 |  | 10 | 7 |  | 5 | 5 |  | 5 | 5 | 5 |  | 6 | 6 |  | TSW | TSW | 5 | 5 | **82** | **119.0** |
| 4 | 4 |  | 10 |  | 10 | 7 |  | 6 | 5 |  | 5 | 5 | 5 |  | 6 | 6 |  | TSW | TSW | 5 | 5 | **83** | **120.0** |
| 4 | 4 |  | 10 |  | 10 | 7 |  | 6 | 6 |  | 5 | 5 | 5 |  | 6 | 6 |  | TSW | TSW | 5 | 5 | **84** | **121.0** |
| 4 | 4 |  | 10 |  | 10 | 7 |  | 5 | 5 | 4 | 5 | 5 | 5 |  | 6 | 6 |  | TSW | TSW | 5 | 5 | **86** | **124.0** |
| 4 | 4 |  | 10 |  | 10 | 7 |  | 5 | 5 | 5 | 5 | 5 | 5 |  | 6 | 6 |  | TSW | TSW | 5 | 5 | **87** | **125.0** |
| 4 | 4 |  | 10 |  | 10 | 7 |  | 6 | 5 | 5 | 5 | 5 | 5 |  | 6 | 6 |  | TSW | TSW | 5 | 5 | **88** | **126.0** |
| 4 | 4 |  | 10 |  | 10 | 7 |  | 6 | 6 | 5 | 5 | 5 | 5 |  | 6 | 6 |  | TSW | TSW | 5 | 5 | **89** | **127.0** |
| 4 | 4 |  | 10 |  | 10 | 8 |  | 6 | 6 | 5 | 5 | 5 | 5 |  | 6 | 6 |  | TSW | TSW | 5 | 5 | **90** | **128.0** |
| 4 | 4 |  | 10 |  | 10 | 8 |  | 6 | 6 | 5 | 5 | 5 | 6 |  | 6 | 6 |  | TSW | TSW | 5 | 5 | **91** | **129.0** |
| 4 | 4 |  | 10 |  | 10 | 8 |  | 6 | 6 | 5 | 5 | 6 | 6 |  | 6 | 6 |  | TSW | TSW | 5 | 5 | **92** | **130.0** |
| 4 | 4 |  | 10 |  | 10 | 8 |  | 6 | 6 | 5 | 6 | 6 | 6 |  | 6 | 6 |  | TSW | TSW | 5 | 5 | **93** | **131.0** |
| 4 | 4 |  | 10 |  | 10 | 8 |  | 6 | 6 | 6 | 6 | 6 | 6 |  | 6 | 6 |  | TSW | TSW | 5 | 5 | **94** | **132.0** |
| 4 | 4 |  | 10 |  | 10 | 8 |  | 6 | 6 | 6 | 6 | 6 | 6 |  | 6 | 6 |  | TSW | TSW | 6 | 5 | **95** | **133.0** |
| 4 | 4 |  | 10 |  | 10 | 8 |  | 6 | 6 | 6 | 6 | 6 | 6 |  | 6 | 6 |  | TSW | TSW | 6 | 6 | **96** | **134.0** |
| 4 | 4 |  | 10 |  | 10 | 9 |  | 6 | 6 | 6 | 6 | 6 | 6 |  | 6 | 6 |  | TSW | TSW | 6 | 6 | **97** | **134.9** |
| 4 | 4 |  | 10 |  | 10 | 9 |  | 6 | 6 | 6 | 6 | 6 | 6 |  | 6 | 7 |  | TSW | TSW | 6 | 6 | **98** | **135.9** |
| 4 | 4 |  | 10 |  | 10 | 9 |  | 6 | 6 | 6 | 6 | 6 | 6 |  | 7 | 7 |  | TSW | TSW | 6 | 6 | **99** | **136.9** |
| 4 | 4 |  | 11 |  | 10 | 9 |  | 7 | 6 | 6 | 6 | 6 | 6 |  | 7 | 7 |  | TSW | TSW | 6 | 6 | **101** | **138.8** |
| 4 | 4 |  | 11 |  | 10 | 9 |  | 7 | 7 | 6 | 6 | 6 | 6 |  | 7 | 7 |  | TSW | TSW | 6 | 6 | **102** | **139.8** |
| 4 | 4 |  | 11 |  | 10 | 9 |  | 7 | 7 | 6 | 6 | 6 | 7 |  | 7 | 7 |  | TSW | TSW | 6 | 6 | **103** | **140.8** |
| 4 | 4 |  | 11 |  | 10 | 9 |  | 7 | 7 | 6 | 6 | 7 | 7 |  | 7 | 7 |  | TSW | TSW | 6 | 6 | **104** | **141.8** |
| 4 | 4 |  | 11 |  | 10 | 9 |  | 7 | 7 | 7 | 6 | 7 | 7 |  | 7 | 7 |  | TSW | TSW | 6 | 6 | **105** | **142.8** |
| 4 | 4 |  | 11 |  | 10 | 9 |  | 7 | 7 | 7 | 7 | 7 | 7 |  | 7 | 7 |  | TSW | TSW | 6 | 6 | **106** | **143.8** |
| 4 | 4 |  | 11 |  | 10 | 9 |  | 7 | 7 | 7 | 7 | 7 | 7 |  | 7 | 7 |  | TSW | TSW | 7 | 6 | **107** | **144.8** |
| 4 | 4 |  | 11 |  | 10 | 9 |  | 7 | 7 | 7 | 7 | 7 | 7 |  | 7 | 7 |  | TSW | TSW | 7 | 7 | **108** | **145.8** |
| 4 | 4 |  | 11 |  | 10 | 10 |  | 7 | 7 | 7 | 7 | 7 | 7 |  | 7 | 7 |  | TSW | TSW | 7 | 7 | **109** | **146.7** |
| 4 | 4 |  | 11 |  | 11 | 10 |  | 7 | 7 | 7 | 7 | 7 | 7 |  | 7 | 7 |  | TSW | TSW | 7 | 7 | **110** | **147.6** |
| 4 | 4 |  | 11 |  | 11 | 10 |  | 7 | 7 | 7 | 7 | 7 | 7 |  | 7 | 8 |  | TSW | TSW | 7 | 7 | **111** | **148.6** |
| 4 | 4 |  | 11 |  | 11 | 10 |  | 7 | 7 | 7 | 7 | 7 | 7 |  | 8 | 8 |  | TSW | TSW | 7 | 7 | **112** | **149.6** |
| 4 | 4 |  | 11 |  | 11 | 10 |  | 8 | 7 | 7 | 7 | 7 | 7 |  | 8 | 8 |  | TSW | TSW | 7 | 7 | **113** | **150.6** |
| 4 | 4 |  | 11 |  | 11 | 10 |  | 8 | 8 | 7 | 7 | 7 | 7 |  | 8 | 8 |  | TSW | TSW | 7 | 7 | **114** | **151.6** |
| 4 | 4 |  | 11 |  | 11 | 10 |  | 8 | 8 | 7 | 7 | 7 | 8 |  | 8 | 8 |  | TSW | TSW | 7 | 7 | **115** | **152.6** |
| 4 | 4 |  | 11 |  | 11 | 10 |  | 8 | 8 | 7 | 7 | 8 | 8 |  | 8 | 8 |  | TSW | TSW | 7 | 7 | **116** | **153.6** |
| 4 | 4 |  | 11 |  | 11 | 10 |  | 8 | 8 | 8 | 7 | 8 | 8 |  | 8 | 8 |  | TSW | TSW | 7 | 7 | **117** | **154.6** |
| 4 | 4 |  | 11 |  | 11 | 10 |  | 8 | 8 | 8 | 8 | 8 | 8 |  | 8 | 8 |  | TSW | TSW | 7 | 7 | **118** | **155.6** |
| 4 | 4 |  | 11 |  | 11 | 10 |  | 8 | 8 | 8 | 8 | 8 | 8 |  | 8 | 8 |  | TSW | TSW | 8 | 7 | **119** | **156.6** |
| 4 | 4 |  | 11 |  | 11 | 10 |  | 8 | 8 | 8 | 8 | 8 | 8 |  | 8 | 8 |  | TSW | TSW | 8 | 8 | **120** | **157.6** |
| 4 | 4 |  | 12 |  | 11 | 10 |  | 8 | 8 | 8 | 8 | 8 | 8 |  | 8 | 8 |  | TSW | TSW | 8 | 8 | **121** | **158.5** |
| 4 | 4 |  | 12 |  | 12 | 10 |  | 8 | 8 | 8 | 8 | 8 | 8 |  | 8 | 8 |  | TSW | TSW | 8 | 8 | **122** | **159.4** |
| 4 | 4 |  | 12 |  | 12 | 11 |  | 8 | 8 | 8 | 8 | 8 | 8 |  | 8 | 8 |  | TSW | TSW | 8 | 8 | **123** | **160.3** |
| 4 | 4 |  | 12 |  | 12 | 11 |  | 8 | 8 | 8 | 8 | 8 | 8 |  | 8 | 9 |  | TSW | TSW | 8 | 8 | **124** | **161.2** |
| 4 | 4 |  | 12 |  | 12 | 11 |  | 8 | 8 | 8 | 8 | 8 | 8 |  | 9 | 9 |  | TSW | TSW | 8 | 8 | **125** | **162.1** |
| 4 | 4 |  | 12 |  | 12 | 11 |  | 9 | 8 | 8 | 8 | 8 | 8 |  | 9 | 9 |  | TSW | TSW | 8 | 8 | **126** | **163.0** |
| 4 | 4 |  | 12 |  | 12 | 11 |  | 9 | 9 | 8 | 8 | 8 | 9 |  | 9 | 9 |  | TSW | TSW | 8 | 8 | **128** | **164.8** |
| 4 | 4 |  | 12 |  | 12 | 11 |  | 9 | 9 | 8 | 8 | 8 | 9 |  | 9 | 9 |  | TSW | TSW | 8 | 8 | **128** | **164.8** |
| 4 | 4 |  | 12 |  | 12 | 11 |  | 9 | 9 | 8 | 8 | 9 | 9 |  | 9 | 9 |  | TSW | TSW | 8 | 8 | **129** | **165.7** |
| 4 | 4 |  | 12 |  | 12 | 11 |  | 9 | 9 | 9 | 8 | 9 | 9 |  | 9 | 9 |  | TSW | TSW | 8 | 8 | **130** | **166.6** |
| 4 | 4 |  | 12 |  | 12 | 11 |  | 9 | 9 | 9 | 9 | 9 | 9 |  | 9 | 9 |  | TSW | TSW | 8 | 8 | **131** | **167.5** |
| 4 | 4 |  | 12 |  | 12 | 11 |  | 9 | 9 | 9 | 9 | 9 | 9 |  | 9 | 9 |  | TSW | TSW | 9 | 8 | **132** | **168.4** |
| 4 | 4 |  | 12 |  | 12 | 11 |  | 9 | 9 | 9 | 9 | 9 | 9 |  | 9 | 9 |  | TSW | TSW | 9 | 9 | **133** | **169.3** |
| 4 | 4 |  | 13 |  | 12 | 11 |  | 9 | 9 | 9 | 9 | 9 | 9 |  | 9 | 9 |  | TSW | TSW | 9 | 9 | **134** | **170.0** |
| 4 | 4 |  | 13 |  | 13 | 11 |  | 9 | 9 | 9 | 9 | 9 | 9 |  | 9 | 9 |  | TSW | TSW | 9 | 9 | **135** | **170.7** |
| 4 | 4 |  | 13 |  | 13 | 12 |  | 9 | 9 | 9 | 9 | 9 | 9 |  | 9 | 9 |  | TSW | TSW | 9 | 9 | **136** | **171.6** |
| 4 | 4 |  | 13 |  | 13 | 12 |  | 9 | 9 | 9 | 9 | 9 | 9 |  | 9 | 10 |  | TSW | TSW | 9 | 9 | **137** | **172.5** |
| 4 | 4 |  | 13 |  | 13 | 12 |  | 9 | 9 | 9 | 9 | 9 | 9 |  | 10 | 10 |  | TSW | TSW | 9 | 9 | **138** | **173.4** |
| 4 | 4 |  | 13 |  | 13 | 12 |  | 10 | 9 | 9 | 9 | 9 | 10 |  | 10 | 10 |  | TSW | TSW | 9 | 9 | **140** | **175.2** |
| 4 | 4 |  | 13 |  | 13 | 12 |  | 10 | 10 | 9 | 9 | 9 | 9 |  | 10 | 10 |  | TSW | TSW | 9 | 9 | **140** | **175.2** |
| 4 | 4 |  | 13 |  | 13 | 12 |  | 10 | 10 | 9 | 9 | 9 | 10 |  | 10 | 10 |  | TSW | TSW | 9 | 9 | **141** | **176.1** |
| 4 | 4 |  | 13 |  | 13 | 12 |  | 10 | 10 | 10 | 9 | 10 | 10 |  | 10 | 10 |  | TSW | TSW | 9 | 9 | **143** | **177.9** |
| 4 | 4 |  | 13 |  | 13 | 12 |  | 10 | 10 | 10 | 10 | 10 | 10 |  | 10 | 10 |  | TSW | TSW | 10 | 9 | **145** | **179.7** |
| 4 | 4 |  | 13 |  | 13 | 12 |  | 10 | 10 | 10 | 10 | 10 | 10 |  | 10 | 10 |  | TSW | TSW | 10 | 10 | **146** | **180.6** |
| 4 | 4 |  | 14 |  | 13 | 12 |  | 10 | 10 | 10 | 10 | 10 | 10 |  | 10 | 10 |  | TSW | TSW | 10 | 10 | **147** | **181.4** |
| 4 | 4 |  | 14 |  | 13 | 12 |  | 10 | 10 | 10 | 10 | 10 | 10 |  | 10 | 10 |  | TSW | TSW | 10 | 10 | **147** | **181.4** |
| 4 | 4 |  | 14 |  | 14 | 12 |  | 10 | 10 | 10 | 10 | 10 | 10 |  | 10 | 10 |  | TSW | TSW | 10 | 10 | **148** | **182.2** |
| 4 | 4 |  | 14 |  | 14 | 13 |  | 10 | 10 | 10 | 10 | 10 | 10 |  | 10 | 10 |  | TSW | TSW | 10 | 10 | **149** | **182.9** |
| 4 | 4 |  | 14 |  | 14 | 13 |  | 11 | 10 | 10 | 10 | 10 | 10 |  | 10 | 11 |  | TSW | TSW | 10 | 10 | **151** | **184.7** |
| 4 | 4 |  | 14 |  | 14 | 13 |  | 11 | 10 | 10 | 10 | 10 | 10 |  | 11 | 11 |  | TSW | TSW | 10 | 10 | **152** | **185.6** |
| 4 | 4 |  | 14 |  | 14 | 13 |  | 11 | 11 | 10 | 10 | 10 | 11 |  | 11 | 11 |  | TSW | TSW | 10 | 10 | **154** | **187.4** |
| 4 | 4 |  | 14 |  | 14 | 13 |  | 11 | 11 | 10 | 10 | 10 | 11 |  | 11 | 11 |  | TSW | TSW | 10 | 10 | **154** | **187.4** |
| 4 | 4 |  | 14 |  | 14 | 13 |  | 11 | 11 | 10 | 10 | 10 | 11 |  | 11 | 11 |  | TSW | TSW | 10 | 10 | **154** | **187.4** |
| 4 | 4 |  | 14 |  | 14 | 13 |  | 11 | 11 | 11 | 10 | 11 | 11 |  | 11 | 11 |  | TSW | TSW | 10 | 10 | **156** | **189.2** |
| 4 | 4 |  | 14 |  | 14 | 13 |  | 11 | 11 | 11 | 11 | 11 | 11 |  | 11 | 11 |  | TSW | TSW | 10 | 10 | **157** | **190.1** |
| 4 | 4 |  | 14 |  | 14 | 13 |  | 11 | 11 | 11 | 11 | 11 | 11 |  | 11 | 11 |  | TSW | TSW | 11 | 10 | **158** | **191.0** |
| 4 | 4 |  | 14 |  | 14 | 13 |  | 11 | 11 | 11 | 11 | 11 | 11 |  | 11 | 11 |  | TSW | TSW | 11 | 11 | **159** | **191.9** |
| 4 | 4 |  | 15 |  | 14 | 13 |  | 11 | 11 | 11 | 11 | 11 | 11 |  | 11 | 11 |  | TSW | TSW | 11 | 11 | **160** | **192.7** |
| 4 | 4 |  | 15 |  | 15 | 13 |  | 11 | 11 | 11 | 11 | 11 | 11 |  | 11 | 11 |  | TSW | TSW | 11 | 11 | **161** | **193.5** |
| 4 | 4 |  | 15 |  | 15 | 14 |  | 11 | 11 | 11 | 11 | 11 | 12 |  | 11 | 11 |  | TSW | TSW | 11 | 11 | **163** | **195.2** |
| 4 | 4 |  | 15 |  | 15 | 14 |  | 11 | 11 | 11 | 11 | 11 | 11 |  | 11 | 12 |  | TSW | TSW | 11 | 11 | **163** | **195.2** |
| 4 | 4 |  | 15 |  | 15 | 14 |  | 11 | 11 | 11 | 11 | 11 | 11 |  | 12 | 12 |  | TSW | TSW | 11 | 11 | **164** | **196.1** |
| 4 | 4 |  | 15 |  | 15 | 14 |  | 12 | 11 | 11 | 11 | 11 | 11 |  | 12 | 12 |  | TSW | TSW | 11 | 11 | **165** | **197.0** |
| 4 | 4 |  | 15 |  | 15 | 14 |  | 12 | 12 | 11 | 11 | 11 | 12 |  | 12 | 12 |  | TSW | TSW | 11 | 11 | **167** | **198.8** |
| 4 | 4 |  | 15 |  | 15 | 14 |  | 12 | 12 | 11 | 11 | 12 | 12 |  | 12 | 12 |  | TSW | TSW | 11 | 11 | **168** | **199.7** |
| 4 | 4 |  | 15 |  | 15 | 14 |  | 12 | 12 | 12 | 11 | 12 | 12 |  | 12 | 12 |  | TSW | TSW | 11 | 11 | **169** | **200.6** |
| 4 | 4 |  | 15 |  | 15 | 14 |  | 12 | 12 | 12 | 12 | 12 | 12 |  | 12 | 12 |  | TSW | TSW | 11 | 11 | **170** | **201.5** |
| 4 | 4 |  | 15 |  | 15 | 14 |  | 12 | 12 | 12 | 12 | 12 | 12 |  | 12 | 12 |  | TSW | TSW | 12 | 11 | **171** | **202.4** |
| 4 | 4 |  | 15 |  | 15 | 14 |  | 12 | 12 | 12 | 12 | 12 | 13 |  | 12 | 12 |  | TSW | TSW | 12 | 12 | **173** | **204.0** |
| 4 | 4 |  | 16 |  | 15 | 14 |  | 12 | 12 | 12 | 12 | 12 | 12 |  | 12 | 12 |  | TSW | TSW | 12 | 12 | **173** | **204.3** |
| 4 | 4 |  | 16 |  | 16 | 14 |  | 12 | 12 | 12 | 12 | 12 | 12 |  | 12 | 12 |  | TSW | TSW | 12 | 12 | **174** | **205.3** |
| 4 | 4 |  | 16 |  | 16 | 15 |  | 12 | 12 | 12 | 12 | 12 | 12 |  | 12 | 12 |  | TSW | TSW | 12 | 12 | **175** | **206.1** |
| 4 | 4 |  | 16 |  | 16 | 15 |  | 12 | 12 | 12 | 12 | 12 | 12 |  | 12 | 13 |  | TSW | TSW | 12 | 12 | **176** | **206.8** |
| 4 | 4 |  | 16 |  | 16 | 15 |  | 12 | 12 | 12 | 12 | 12 | 12 |  | 13 | 13 |  | TSW | TSW | 12 | 12 | **177** | **207.5** |
| 4 | 4 |  | 16 |  | 16 | 15 |  | 13 | 12 | 12 | 12 | 12 | 12 |  | 13 | 13 |  | TSW | TSW | 12 | 12 | **178** | **208.2** |
| 4 | 4 |  | 16 |  | 16 | 15 |  | 13 | 13 | 12 | 12 | 12 | 13 |  | 13 | 13 |  | TSW | TSW | 12 | 12 | **180** | **209.6** |
| 4 | 4 |  | 16 |  | 16 | 15 |  | 13 | 13 | 12 | 12 | 13 | 13 |  | 13 | 13 |  | TSW | TSW | 12 | 12 | **181** | **210.3** |
| 4 | 4 |  | 16 |  | 16 | 15 |  | 13 | 13 | 13 | 12 | 13 | 13 |  | 13 | 13 |  | TSW | TSW | 12 | 12 | **182** | **211.0** |
| 4 | 4 |  | 16 |  | 16 | 15 |  | 13 | 13 | 13 | 13 | 13 | 13 |  | 13 | 13 |  | TSW | TSW | 12 | 12 | **183** | **211.7** |
| 4 | 4 |  | 16 |  | 16 | 15 |  | 13 | 13 | 13 | 13 | 13 | 13 |  | 13 | 13 |  | TSW | TSW | 13 | 12 | **184** | **212.4** |
| 4 | 4 |  | 16 |  | 16 | 15 |  | 13 | 13 | 13 | 13 | 13 | 13 |  | 13 | 13 |  | TSW | TSW | 13 | 13 | **185** | **213.1** |
| 4 | 4 |  | 17 |  | 16 | 15 |  | 13 | 13 | 13 | 13 | 13 | 13 |  | 13 | 13 |  | TSW | TSW | 13 | 13 | **186** | **214.0** |
| 4 | 4 |  | 17 |  | 17 | 15 |  | 13 | 13 | 13 | 13 | 13 | 13 |  | 13 | 13 |  | TSW | TSW | 13 | 13 | **187** | **214.9** |
| 4 | 4 |  | 17 |  | 17 | 16 |  | 13 | 13 | 13 | 13 | 13 | 13 |  | 13 | 13 |  | TSW | TSW | 13 | 13 | **188** | **215.9** |
| 4 | 4 |  | 17 |  | 17 | 16 |  | 13 | 13 | 13 | 13 | 13 | 13 |  | 13 | 14 |  | TSW | TSW | 13 | 13 | **189** | **216.7** |
| 4 | 4 |  | 17 |  | 17 | 16 |  | 13 | 13 | 13 | 13 | 13 | 13 |  | 14 | 14 |  | TSW | TSW | 13 | 13 | **190** | **217.5** |
| 4 | 4 |  | 17 |  | 17 | 16 |  | 14 | 13 | 13 | 13 | 13 | 13 |  | 14 | 14 |  | TSW | TSW | 13 | 13 | **191** | **218.3** |
| 4 | 4 |  | 17 |  | 17 | 16 |  | 14 | 14 | 13 | 13 | 13 | 14 |  | 14 | 14 |  | TSW | TSW | 13 | 13 | **193** | **219.9** |
| 4 | 4 |  | 17 |  | 17 | 16 |  | 14 | 14 | 14 | 13 | 14 | 14 |  | 14 | 14 |  | TSW | TSW | 13 | 13 | **195** | **221.5** |
| 4 | 4 |  | 17 |  | 17 | 16 |  | 14 | 14 | 14 | 14 | 14 | 14 |  | 14 | 14 |  | TSW | TSW | 13 | 13 | **196** | **222.3** |
| 4 | 4 |  | 17 |  | 17 | 16 |  | 14 | 14 | 14 | 14 | 14 | 14 |  | 14 | 14 |  | TSW | TSW | 14 | 13 | **197** | **223.1** |
| 4 | 4 |  | 17 |  | 17 | 16 |  | 14 | 14 | 14 | 14 | 14 | 14 |  | 14 | 14 |  | TSW | TSW | 14 | 14 | **198** | **223.9** |
| 4 | 4 |  | 18 |  | 17 | 16 |  | 14 | 14 | 14 | 14 | 14 | 14 |  | 14 | 14 |  | TSW | TSW | 14 | 14 | **199** | **224.8** |
| 4 | 4 |  | 18 |  | 18 | 16 |  | 14 | 14 | 14 | 14 | 14 | 14 |  | 14 | 14 |  | TSW | TSW | 14 | 14 | **200** | **225.7** |
| 4 | 4 |  | 18 |  | 18 | 17 |  | 14 | 14 | 14 | 14 | 14 | 14 |  | 14 | 14 |  | TSW | TSW | 14 | 14 | **201** | **226.6** |
| 4 | 4 |  | 18 |  | 18 | 17 |  | 14 | 14 | 14 | 14 | 14 | 14 |  | 14 | 15 |  | TSW | TSW | 14 | 14 | **202** | **227.4** |
| 4 | 4 |  | 18 |  | 18 | 17 |  | 14 | 14 | 14 | 14 | 14 | 14 |  | 15 | 15 |  | TSW | TSW | 14 | 14 | **203** | **228.2** |
| 4 | 4 |  | 18 |  | 18 | 17 |  | 15 | 14 | 14 | 14 | 14 | 14 |  | 15 | 15 |  | TSW | TSW | 14 | 14 | **204** | **229.0** |
| 4 | 4 |  | 18 |  | 18 | 17 |  | 15 | 15 | 14 | 14 | 14 | 15 |  | 15 | 15 |  | TSW | TSW | 14 | 14 | **206** | **230.6** |
| 4 | 4 |  | 18 |  | 18 | 17 |  | 15 | 15 | 15 | 14 | 15 | 15 |  | 15 | 15 |  | TSW | TSW | 14 | 14 | **208** | **232.2** |
| 4 | 4 |  | 18 |  | 18 | 17 |  | 15 | 15 | 15 | 15 | 15 | 15 |  | 15 | 15 |  | TSW | TSW | 15 | 14 | **210** | **233.8** |
| 4 | 4 |  | 18 |  | 18 | 17 |  | 15 | 15 | 15 | 15 | 15 | 15 |  | 15 | 15 |  | TSW | TSW | 15 | 15 | **211** | **234.6** |
| 4 | 4 |  | 19 |  | 18 | 17 |  | 15 | 15 | 15 | 15 | 15 | 15 |  | 15 | 15 |  | TSW | TSW | 15 | 15 | **212** | **235.5** |
| 4 | 4 |  | 19 |  | 19 | 17 |  | 15 | 15 | 15 | 15 | 15 | 15 |  | 15 | 15 |  | TSW | TSW | 15 | 15 | **213** | **236.4** |
| 4 | 4 |  | 19 |  | 19 | 18 |  | 15 | 15 | 15 | 15 | 15 | 15 |  | 15 | 15 |  | TSW | TSW | 15 | 15 | **214** | **237.3** |
| 4 | 4 |  | 19 |  | 19 | 18 |  | 15 | 15 | 15 | 15 | 15 | 15 |  | 15 | 16 |  | TSW | TSW | 15 | 15 | **215** | **238.3** |
| 4 | 4 |  | 19 |  | 19 | 18 |  | 15 | 15 | 15 | 15 | 15 | 15 |  | 16 | 16 |  | TSW | TSW | 15 | 15 | **216** | **239.3** |
| 4 | 4 |  | 19 |  | 19 | 18 |  | 16 | 15 | 15 | 15 | 15 | 15 |  | 16 | 16 |  | TSW | TSW | 15 | 15 | **217** | **240.3** |
| 4 | 4 |  | 19 |  | 19 | 18 |  | 16 | 16 | 15 | 15 | 15 | 16 |  | 16 | 16 |  | TSW | TSW | 15 | 15 | **219** | **242.3** |
| 4 | 4 |  | 19 |  | 19 | 18 |  | 16 | 16 | 16 | 15 | 16 | 16 |  | 16 | 16 |  | TSW | TSW | 15 | 15 | **221** | **244.3** |
| 4 | 4 |  | 19 |  | 19 | 18 |  | 16 | 16 | 16 | 16 | 16 | 16 |  | 16 | 16 |  | TSW | TSW | 15 | 15 | **222** | **245.3** |
| 4 | 4 |  | 19 |  | 19 | 18 |  | 16 | 16 | 16 | 16 | 16 | 16 |  | 16 | 16 |  | TSW | TSW | 16 | 15 | **223** | **246.3** |
| 4 | 4 |  | 19 |  | 19 | 18 |  | 16 | 16 | 16 | 16 | 16 | 16 |  | 16 | 16 |  | TSW | TSW | 16 | 16 | **224** | **247.3** |
| 4 | 4 |  | 19 |  | 19 | 19 |  | 16 | 16 | 16 | 16 | 16 | 16 |  | 16 | 16 |  | TSW | TSW | 16 | 16 | **225** | **248.2** |
| **4** | 4 |  | 19 |  | 19 | 19 |  | 16 | 16 | 16 | 16 | 16 | 16 |  | 16 | 17 |  | TSW | TSW | 16 | 16 | **226** | **249.1** |
| **4** | 4 |  | 19 |  | 19 | 19 |  | 16 | 16 | 16 | 16 | 16 | 16 |  | 17 | 17 |  | TSW | TSW | 16 | 16 | **227** | **250.0** |
| 4 | 4 |  | 19 |  | 19 | 19 |  | 17 | 16 | 16 | 16 | 16 | 16 |  | 17 | 17 |  | TSW | TSW | 16 | 16 | **228** | **250.9** |
| 4 | 4 |  | 19 |  | 19 | 19 |  | 17 | 17 | 16 | 16 | 16 | 17 |  | 17 | 17 |  | TSW | TSW | 16 | 16 | **230** | **252.7** |
| 4 | 4 |  | 19 |  | 19 | 19 |  | 17 | 17 | 17 | 16 | 17 | 17 |  | 17 | 17 |  | TSW | TSW | 16 | 16 | **232** | **254.5** |
| 4 | 4 |  | 19 |  | 19 | 19 |  | 17 | 17 | 17 | 17 | 17 | 17 |  | 17 | 17 |  | TSW | TSW | 16 | 16 | **233** | **255.4** |
| 4 | 4 |  | 19 |  | 19 | 19 |  | 17 | 17 | 17 | 17 | 17 | 17 |  | 17 | 17 |  | TSW | TSW | 16 | 17 | **234** | **256.3** |
| 4 | 4 |  | 19 |  | 19 | 19 |  | 17 | 17 | 17 | 17 | 17 | 17 |  | 17 | 17 |  | TSW | TSW | 17 | 17 | **235** | **257.2** |
| 4 | 4 |  | 19 |  | 19 | 19 |  | 17 | 17 | 17 | 17 | 17 | 17 |  | 17 | 18 |  | TSW | TSW | 17 | 17 | **236** | **258.1** |
| 4 | 4 |  | 19 |  | 19 | 19 |  | 17 | 17 | 17 | 17 | 17 | 17 |  | 18 | 18 |  | TSW | TSW | 17 | 17 | **237** | **259.0** |
| 4 | 4 |  | 19 |  | 19 | 19 |  | 18 | 17 | 17 | 17 | 17 | 17 |  | 18 | 18 |  | TSW | TSW | 17 | 17 | **238** | **259.9** |
| 4 | 4 |  | 19 |  | 19 | 19 |  | 18 | 18 | 17 | 17 | 17 | 18 |  | 18 | 18 |  | TSW | TSW | 17 | 17 | **240** | **261.7** |
| 4 | 4 |  | 19 |  | 19 | 19 |  | 18 | 18 | 18 | 17 | 18 | 18 |  | 18 | 18 |  | TSW | TSW | 17 | 17 | **242** | **263.5** |
| 4 | 4 |  | 19 |  | 19 | 19 |  | 18 | 18 | 18 | 18 | 18 | 18 |  | 18 | 18 |  | TSW | TSW | 17 | 17 | **243** | **264.4** |
| 4 | 4 |  | 19 |  | 19 | 19 |  | 18 | 18 | 18 | 18 | 18 | 18 |  | 18 | 18 |  | TSW | TSW | 17 | 18 | **244** | **265.3** |
| 4 | 4 |  | 19 |  | 19 | 19 |  | 18 | 18 | 18 | 18 | 18 | 18 |  | 18 | 18 |  | TSW | TSW | 18 | 18 | **245** | **266.2** |
| 4 | 4 |  | 19 |  | 19 | 19 |  | 18 | 18 | 18 | 18 | 18 | 18 |  | 18 | 19 |  | TSW | TSW | 18 | 18 | **246** | **267.1** |
| 4 | 4 |  | 19 |  | 19 | 19 |  | 18 | 18 | 18 | 18 | 18 | 18 |  | 19 | 19 |  | TSW | TSW | 18 | 18 | **247** | **268.0** |
| 4 | 4 |  | 19 |  | 19 | 19 |  | 19 | 18 | 18 | 18 | 18 | 18 |  | 19 | 19 |  | TSW | TSW | 18 | 18 | **248** | **268.9** |
| 4 | 4 |  | 19 |  | 19 | 19 |  | 19 | 19 | 18 | 18 | 18 | 19 |  | 19 | 19 |  | TSW | TSW | 18 | 18 | **250** | **270.7** |
| 4 | 4 |  | 19 |  | 19 | 19 |  | 19 | 19 | 19 | 18 | 19 | 19 |  | 19 | 19 |  | TSW | TSW | 18 | 18 | **252** | **272.5** |
| 4 | 4 |  | 19 |  | 19 | 19 |  | 19 | 19 | 19 | 19 | 19 | 19 |  | 19 | 19 |  | TSW | TSW | 18 | 18 | **253** | **273.4** |
| 4 | 4 |  | 19 |  | 19 | 19 |  | 19 | 19 | 19 | 19 | 19 | 19 |  | 19 | 19 |  | TSW | TSW | 18 | 19 | **254** | **274.3** |
| 4 | 4 |  | 19 |  | 19 | 19 |  | 19 | 19 | 19 | 19 | 19 | 19 |  | 19 | 19 |  | TSW | TSW | 19 | 19 | **255** | **275.2** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 15 | 15 | 15 | 15 | 15 | 15 |  | 15 | 15 |  | TSW | TSW | 19 | 19 | **243** | **277.7** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 15 | 15 | 15 | 15 | 15 | 15 |  | 15 | 16 |  | TSW | TSW | 19 | 19 | **244** | **278.7** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 15 | 15 | 15 | 15 | 15 | 15 |  | 16 | 16 |  | TSW | TSW | 19 | 19 | **245** | **279.7** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 16 | 15 | 15 | 15 | 15 | 15 |  | 16 | 16 |  | TSW | TSW | 19 | 19 | **246** | **280.7** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 16 | 16 | 15 | 15 | 15 | 16 |  | 16 | 16 |  | TSW | TSW | 19 | 19 | **248** | **282.7** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 16 | 16 | 16 | 15 | 16 | 16 |  | 16 | 16 |  | TSW | TSW | 19 | 19 | **250** | **284.7** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 16 | 16 | 16 | 16 | 16 | 16 |  | 16 | 16 |  | TSW | TSW | 19 | 19 | **251** | **285.7** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 16 | 16 | 16 | 16 | 16 | 16 |  | 16 | 17 |  | TSW | TSW | 19 | 19 | **252** | **286.6** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 16 | 16 | 16 | 16 | 16 | 16 |  | 17 | 17 |  | TSW | TSW | 19 | 19 | **253** | **287.5** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 17 | 16 | 16 | 16 | 16 | 16 |  | 17 | 17 |  | TSW | TSW | 19 | 19 | **254** | **288.4** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 17 | 17 | 16 | 16 | 16 | 17 |  | 17 | 17 |  | TSW | TSW | 19 | 19 | **256** | **290.2** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 17 | 17 | 17 | 16 | 17 | 17 |  | 17 | 17 |  | TSW | TSW | 19 | 19 | **258** | **292.0** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 17 | 17 | 17 | 17 | 17 | 17 |  | 17 | 17 |  | TSW | TSW | 19 | 19 | **259** | **292.9** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 17 | 17 | 17 | 17 | 17 | 17 |  | 18 | 18 |  | TSW | TSW | 19 | 19 | **261** | **294.7** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 18 | 17 | 17 | 17 | 17 | 17 |  | 18 | 18 |  | TSW | TSW | 19 | 19 | **262** | **295.6** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 18 | 18 | 16 | 17 | 17 | 18 |  | 18 | 18 |  | TSW | TSW | 19 | 19 | **263** | **296.5** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 18 | 18 | 18 | 17 | 18 | 18 |  | 18 | 18 |  | TSW | TSW | 19 | 19 | **266** | **299.2** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 18 | 18 | 18 | 18 | 18 | 18 |  | 18 | 18 |  | TSW | TSW | 19 | 19 | **267** | **300.1** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 18 | 18 | 18 | 18 | 18 | 18 |  | 18 | 19 |  | TSW | TSW | 19 | 19 | **268** | **301.0** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 18 | 18 | 18 | 18 | 18 | 18 |  | 19 | 19 |  | TSW | TSW | 19 | 19 | **269** | **301.9** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 19 | 18 | 18 | 18 | 18 | 19 |  | 19 | 19 |  | TSW | TSW | 19 | 19 | **271** | **303.7** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 19 | 19 | 18 | 18 | 19 | 19 |  | 19 | 19 |  | TSW | TSW | 19 | 19 | **273** | **305.5** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 19 | 19 | 19 | 19 | 19 | 19 |  | 19 | 19 |  | TSW | TSW | 19 | 19 | **275** | **307.3** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 15 | 15 | 15 | 15 | 15 | 15 |  | 15 | 15 | 20 | TSW | TSW | 19 | 19 | **263** | **309.8** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 15 | 15 | 15 | 15 | 15 | 15 |  | 16 | 16 | 20 | TSW | TSW | 19 | 19 | **265** | **311.8** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 16 | 15 | 15 | 15 | 15 | 16 |  | 16 | 16 | 20 | TSW | TSW | 19 | 19 | **267** | **313.8** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 16 | 16 | 15 | 15 | 16 | 16 |  | 16 | 16 | 20 | TSW | TSW | 19 | 19 | **269** | **315.8** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 16 | 16 | 16 | 16 | 16 | 16 |  | 16 | 16 | 20 | TSW | TSW | 19 | 19 | **271** | **317.8** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 16 | 16 | 16 | 16 | 16 | 16 |  | 17 | 17 | 20 | TSW | TSW | 19 | 19 | **273** | **319.6** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 17 | 16 | 16 | 16 | 16 | 17 |  | 17 | 17 | 20 | TSW | TSW | 19 | 19 | **275** | **321.4** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 17 | 17 | 16 | 16 | 17 | 17 |  | 17 | 17 | 20 | TSW | TSW | 19 | 19 | **277** | **323.2** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 17 | 17 | 17 | 17 | 17 | 17 |  | 17 | 17 | 20 | TSW | TSW | 19 | 19 | **279** | **325.0** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 17 | 17 | 17 | 17 | 17 | 17 |  | 18 | 18 | 20 | TSW | TSW | 19 | 19 | **281** | **326.8** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 18 | 17 | 17 | 17 | 17 | 18 |  | 18 | 18 | 20 | TSW | TSW | 19 | 19 | **283** | **328.6** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 18 | 18 | 16 | 17 | 18 | 18 |  | 18 | 18 | 20 | TSW | TSW | 19 | 19 | **284** | **329.5** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 18 | 18 | 18 | 18 | 18 | 18 |  | 18 | 18 | 20 | TSW | TSW | 19 | 19 | **287** | **332.2** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 18 | 18 | 18 | 18 | 18 | 18 |  | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **289** | **334.0** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 19 | 18 | 18 | 18 | 18 | 19 |  | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **291** | **335.8** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 19 | 19 | 18 | 18 | 19 | 19 |  | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **293** | **337.6** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 19 | 19 | 19 | 19 | 19 | 19 |  | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **295** | **339.4** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 15 | 15 | 15 | 15 | 15 | 15 | 20 | 15 | 15 | 20 | TSW | TSW | 19 | 19 | **283** | **341.9** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 15 | 15 | 15 | 15 | 15 | 15 | 20 | 16 | 16 | 20 | TSW | TSW | 19 | 19 | **285** | **343.9** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 16 | 15 | 15 | 15 | 15 | 16 | 20 | 16 | 16 | 20 | TSW | TSW | 19 | 19 | **287** | **345.9** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 16 | 16 | 15 | 15 | 16 | 16 | 20 | 16 | 16 | 20 | TSW | TSW | 19 | 19 | **289** | **347.9** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 16 | 16 | 16 | 16 | 16 | 16 | 20 | 16 | 16 | 20 | TSW | TSW | 19 | 19 | **291** | **349.9** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 16 | 16 | 16 | 16 | 16 | 16 | 20 | 17 | 17 | 20 | TSW | TSW | 19 | 19 | **293** | **351.7** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 17 | 16 | 16 | 16 | 16 | 17 | 20 | 17 | 17 | 20 | TSW | TSW | 19 | 19 | **295** | **353.5** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 17 | 17 | 16 | 16 | 17 | 17 | 20 | 17 | 17 | 20 | TSW | TSW | 19 | 19 | **297** | **355.3** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 17 | 17 | 17 | 17 | 17 | 17 | 20 | 17 | 17 | 20 | TSW | TSW | 19 | 19 | **299** | **357.1** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 17 | 17 | 17 | 17 | 17 | 17 | 20 | 18 | 18 | 20 | TSW | TSW | 19 | 19 | **301** | **358.9** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 18 | 17 | 17 | 17 | 17 | 18 | 20 | 18 | 18 | 20 | TSW | TSW | 19 | 19 | **303** | **360.7** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 18 | 18 | 17 | 17 | 18 | 18 | 20 | 18 | 18 | 20 | TSW | TSW | 19 | 19 | **305** | **362.5** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 18 | 18 | 18 | 18 | 18 | 18 | 20 | 18 | 18 | 20 | TSW | TSW | 19 | 19 | **307** | **364.3** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 18 | 18 | 18 | 18 | 18 | 18 | 20 | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **309** | **366.1** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 19 | 18 | 18 | 18 | 18 | 19 | 20 | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **311** | **367.9** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 19 | 19 | 18 | 18 | 19 | 19 | 20 | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **313** | **369.7** |
| 4 | 4 |  | 19 | 20 | 19 | 19 |  | 19 | 19 | 19 | 19 | 19 | 19 | 20 | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **315** | **371.5** |
| 4 | 4 | 20 | 19 | 20 | 19 | 19 |  | 15 | 15 | 15 | 15 | 15 | 15 | 20 | 15 | 15 | 20 | TSW | TSW | 19 | 19 | **303** | **374.0** |
| 4 | 4 | 20 | 19 | 20 | 19 | 19 |  | 15 | 15 | 15 | 15 | 15 | 15 | 20 | 16 | 16 | 20 | TSW | TSW | 19 | 19 | **305** | **376.0** |
| 4 | 4 | 20 | 19 | 20 | 19 | 19 |  | 16 | 15 | 15 | 15 | 15 | 16 | 20 | 16 | 16 | 20 | TSW | TSW | 19 | 19 | **307** | **378.0** |
| 4 | 4 | 20 | 19 | 20 | 19 | 19 |  | 16 | 16 | 15 | 15 | 16 | 16 | 20 | 16 | 16 | 20 | TSW | TSW | 19 | 19 | **309** | **380.0** |
| 4 | 4 | 20 | 19 | 20 | 19 | 19 |  | 16 | 16 | 16 | 16 | 16 | 16 | 20 | 16 | 16 | 20 | TSW | TSW | 19 | 19 | **311** | **382.0** |
| 4 | 4 | 20 | 19 | 20 | 19 | 19 |  | 16 | 16 | 16 | 16 | 16 | 16 | 20 | 17 | 17 | 20 | TSW | TSW | 19 | 19 | **313** | **383.8** |
| 4 | 4 | 20 | 19 | 20 | 19 | 19 |  | 17 | 16 | 16 | 16 | 16 | 17 | 20 | 17 | 17 | 20 | TSW | TSW | 19 | 19 | **315** | **385.6** |
| 4 | 4 | 20 | 19 | 20 | 19 | 19 |  | 17 | 17 | 16 | 16 | 17 | 17 | 20 | 17 | 17 | 20 | TSW | TSW | 19 | 19 | **317** | **387.4** |
| 4 | 4 | 20 | 19 | 20 | 19 | 19 |  | 17 | 17 | 17 | 17 | 17 | 17 | 20 | 17 | 17 | 20 | TSW | TSW | 19 | 19 | **319** | **389.2** |
| 4 | 4 | 20 | 19 | 20 | 19 | 19 |  | 17 | 17 | 17 | 17 | 17 | 17 | 20 | 18 | 18 | 20 | TSW | TSW | 19 | 19 | **321** | **391.0** |
| 4 | 4 | 20 | 19 | 20 | 19 | 19 |  | 18 | 17 | 17 | 17 | 17 | 18 | 20 | 18 | 18 | 20 | TSW | TSW | 19 | 19 | **323** | **392.8** |
| 4 | 4 | 20 | 19 | 20 | 19 | 19 |  | 18 | 18 | 17 | 17 | 18 | 18 | 20 | 18 | 18 | 20 | TSW | TSW | 19 | 19 | **325** | **394.6** |
| 4 | 4 | 20 | 19 | 20 | 19 | 19 |  | 18 | 18 | 18 | 18 | 18 | 18 | 20 | 18 | 18 | 20 | TSW | TSW | 19 | 19 | **327** | **396.4** |
| 4 | 4 | 20 | 19 | 20 | 19 | 19 |  | 18 | 18 | 18 | 18 | 18 | 18 | 20 | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **329** | **398.2** |
| 4 | 4 | 20 | 19 | 20 | 19 | 19 |  | 19 | 18 | 18 | 18 | 18 | 19 | 20 | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **331** | **400.0** |
| 4 | 4 | 20 | 19 | 20 | 19 | 19 |  | 19 | 19 | 18 | 18 | 19 | 19 | 20 | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **333** | **401.8** |
| 4 | 4 | 20 | 19 | 20 | 19 | 19 |  | 19 | 19 | 19 | 19 | 19 | 19 | 20 | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **335** | **403.6** |
| 4 | 4 | 20 | 19 | 20 | 19 | 19 | 20 | 15 | 15 | 15 | 15 | 15 | 15 | 20 | 15 | 15 | 20 | TSW | TSW | 19 | 19 | **323** | **406.1** |
| 4 | 4 | 20 | 19 | 20 | 19 | 19 | 20 | 15 | 15 | 15 | 15 | 15 | 15 | 20 | 16 | 16 | 20 | TSW | TSW | 19 | 19 | **325** | **408.1** |
| 4 | 4 | 20 | 19 | 20 | 19 | 19 | 20 | 16 | 15 | 15 | 15 | 15 | 16 | 20 | 16 | 16 | 20 | TSW | TSW | 19 | 19 | **327** | **410.1** |
| 4 | 4 | 20 | 19 | 20 | 19 | 19 | 20 | 16 | 16 | 15 | 15 | 16 | 16 | 20 | 16 | 16 | 20 | TSW | TSW | 19 | 19 | **329** | **412.1** |
| 4 | 4 | 20 | 19 | 20 | 19 | 19 | 20 | 16 | 16 | 16 | 16 | 16 | 16 | 20 | 16 | 16 | 20 | TSW | TSW | 19 | 19 | **331** | **414.1** |
| 4 | 4 | 20 | 19 | 20 | 19 | 19 | 20 | 16 | 16 | 16 | 16 | 16 | 16 | 20 | 17 | 17 | 20 | TSW | TSW | 19 | 19 | **333** | **415.9** |
| 4 | 4 | 20 | 19 | 20 | 19 | 19 | 20 | 17 | 16 | 16 | 16 | 16 | 17 | 20 | 17 | 17 | 20 | TSW | TSW | 19 | 19 | **335** | **417.7** |
| 4 | 4 | 20 | 19 | 20 | 19 | 19 | 20 | 17 | 17 | 16 | 16 | 17 | 17 | 20 | 17 | 17 | 20 | TSW | TSW | 19 | 19 | **337** | **419.5** |
| 4 | 4 | 20 | 19 | 20 | 19 | 19 | 20 | 17 | 17 | 17 | 17 | 17 | 17 | 20 | 17 | 17 | 20 | TSW | TSW | 19 | 19 | **339** | **421.3** |
| 4 | 4 | 20 | 19 | 20 | 19 | 19 | 20 | 17 | 17 | 17 | 17 | 17 | 17 | 20 | 18 | 18 | 20 | TSW | TSW | 19 | 19 | **341** | **423.1** |
| 4 | 4 | 20 | 19 | 20 | 19 | 19 | 20 | 18 | 17 | 17 | 17 | 17 | 18 | 20 | 18 | 18 | 20 | TSW | TSW | 19 | 19 | **343** | **424.9** |
| 4 | 4 | 20 | 19 | 20 | 19 | 19 | 20 | 18 | 18 | 17 | 17 | 18 | 18 | 20 | 18 | 18 | 20 | TSW | TSW | 19 | 19 | **345** | **426.7** |
| 4 | 4 | 20 | 19 | 20 | 19 | 19 | 20 | 18 | 18 | 18 | 18 | 18 | 18 | 20 | 18 | 18 | 20 | TSW | TSW | 19 | 19 | **347** | **428.5** |
| 4 | 4 | 20 | 19 | 20 | 19 | 19 | 20 | 18 | 18 | 18 | 18 | 18 | 18 | 20 | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **349** | **430.3** |
| 4 | 4 | 20 | 19 | 20 | 19 | 19 | 20 | 19 | 18 | 18 | 18 | 18 | 19 | 20 | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **351** | **432.1** |
| 4 | 4 | 20 | 19 | 20 | 19 | 19 | 20 | 19 | 19 | 18 | 18 | 19 | 19 | 20 | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **353** | **433.9** |
| 4 | 4 | 20 | 19 | 20 | 19 | 19 | 20 | 19 | 19 | 19 | 19 | 19 | 19 | 20 | 19 | 19 | 20 | TSW | TSW | 19 | 19 | **355** | **435.7** |
| 4 | 4 | 20 | 19 | 20 | 19 | 19 | 20 | 19 | 19 | 19 | 19 | 19 | 19 | 20 | 19 | 19 | 20 | 21 | TSW | 19 | 19 | **376** | **446.0** |
| 4 | 4 | 20 | 19 | 20 | 19 | 19 | 20 | 19 | 19 | 19 | 19 | 19 | 19 | 20 | 19 | 19 | 20 | 21 | 21 | 19 | 19 | **397** | **456.3** |
| 4 | 4 | 20 | 19 | 20 | 19 | 19 | 20 | 19 | 19 | 19 | 19 | 19 | 19 | 20 | 19 | 19 | Free | 21 | 21 | 19 | 19 | **377** | **486.4** |
| 4 | 4 | 20 | 19 | Free | 19 | 19 | 20 | 19 | 19 | 19 | 19 | 19 | 19 | 20 | 19 | 19 | Free | 21 | 21 | 19 | 19 | **357** | **516.5** |
| 4 | 4 | 20 | 19 | Free | 19 | 19 | 20 | 19 | 19 | 19 | 19 | 19 | 19 | Free | 19 | 19 | Free | 21 | 21 | 19 | 19 | **337** | **546.6** |
| 4 | 4 | 20 | 19 | Free | 19 | 19 | Free | 19 | 19 | 19 | 19 | 19 | 19 | Free | 19 | 19 | Free | 21 | 21 | 19 | 19 | **317** | **576.7** |
| 4 | 4 | Free | 19 | Free | 19 | 19 | Free | 19 | 19 | 19 | 19 | 19 | 19 | Free | 19 | 19 | Free | 21 | 21 | 19 | 19 | **297** | **606.8** |

1. These alternate patterns in **Table MCN-8-ALT** will be used if low flows are forecasted and meet all hydrologic criteria defined in **section 2.2.5**. Spill gates 1 and 2 will be opened once to 4 stops (~7 kcfs per bay) then remain open at 4 stops through early summer spill on July 31, or when flows drop below 70 kcfs. Opening and closing gates 1&2 will use both overloaded movements allowed each year.
2. A total of 13 spill gates and hoists will be operated in the upstream slot in split-leaf and adjusted hourly as needed to adjust spill. The remaining 5 spillbays (3, 5, 8, 15, and 18) will remain closed in the downstream slot in double-leaf and only opened if needed to pass high flows using the first of two overloaded movements allowed each year. After the high flow event, open double-leaf gates will be closed using the second of two allowed overloaded movements.
3. Bays 19-20 with TSWs spill approx 19.2 kcfs (9.6 kcfs/bay) at forebay 339'. The upper TSW gates will be raised 3-5 ft above the water surface to ensure free flow over the TSW crests.