# Fish Passage Plan (FPP) Change Request Form

**Change Form # & Title**: 22MCN002 – TSWs

**Date Submitted**: 17-December-2021

**Project**: McNary

**Requester Name, Agency**: Bobby Johnson, USACE MCN

**Final Action: APPROVED 27-January-2022**

**FPP Section**:

MCN section 2.3.2.6. (TSWs) and Table MCN-10 (Spill Patterns during TSW Removal).

**Justification for Change**:

See MFR [21 MCN 06](http://pweb.crohms.org/tmt/documents/FPOM/2010/NWW%20Memos%20of%20Coordination%20and%20Notification/MCN%20MOC%20and%20MFR/21%20MCN%2006%20MFR%20modified%20spill%20pattern%20for%20TSW%20removal.pdf). Per Table MCN-10, removal of TSWs in bays 19-20 requires adjacent bays closed for worker safety (bays 18–21 closed). Due to new safety requirements related to load limitations for the spillway cranes, bays being worked in and adjacent bays are to be closed, which includes the bays where the standard spill gate sections are stored. Therefore, the spill pattern during removal of the TSWs and installation of standard spill gates will close bays 14–21 during workdays. Spill will be maintained at the FOP level and averaged over bays 1-13 and 22. Daily after work is complete, bays 14-18 and 21 will re-open.

**Proposed Change**: See following pages with edits in track changes.

**2.3.2.6. Temporary Spillway Weirs (TSW).**

McNary Dam has two temporary (or top) spillway weirs (TSWs) in spillbays 19 and 20 that provide surface routes for fish passage.

The spill rate through each TSW is approximately 9.6 kcfs (19.2 kcfs total).

The TSWs can be opened and closed from the control room (unless they are attached to a crane, then a crane operator would be required). Removing the TSWs from the spillbays requires a crew and must be done during daylight hours as weather allows and may take up to 5 workdays. After the TSWs are removed and standard spill gate sections are installed, spillbays 19 and 20 may be operated as conventional (deep) spillbays.

Spring spill for juvenile fish passage will begin with the TSWs open in bays 19–20 and spill distributed in the patterns in **Table MCN-7**.

Both TSWs will be in service April 10 through June 7, then removed starting on June 8 or the next workday (unless coordinated differently via FPOM).The process to remove the TSWs and install standard spill gate sections may take up to 5 workdays, depending on weather conditions and crane status. During this time, spill will be maintained at the FOP target level and distributed in patterns in **Table MCN-10** to ensure worker safety. In addition, at about 0630 hours daily, bays 14-18 and 21, which are adjacent to or where gate sections are stored, will be closed so gate sections can be retrieved and installed safely in bays 19 and 20. During the closure of bays 14-21, the spill volume will be averaged across bays 1-13 and 22. The day’s activity will conclude at 1700 hours with bays 14-18 and 21 reopened.

Upon completion of TSW removal and installation of the standard gate sections, spill will be distributed in patterns in **Table MCN-9** for the remainder of juvenile fish passage spill season.

Table MCN-10. [*pg 1 of 5*]. McNary Dam Spill Patterns during TSW Removal in Bays 19-20.

***NOTE: The TSW removal process may take up to 5 workdays, depending on weather conditions and crane status. During this time, bays 19-20 will be closed all hours until the TSWs are removed and standard spill gate sections are installed so that the bays can be operated as conventional (deep) spillbays. For worker safety, all bays being worked in and adjacent bays must be closed, which includes bays where the gate sections are stored. Therefore, during the workday (approx. 0630-1700), bays 14-21 will be closed and FOP spill will be distributed across the remaining bays 1-13 and 22. See section 2.3.2.6 for more information.***

| **MCN Spill Patterns During TSW Removal (# Gate Stops per Spillbay)** | | | | | | | | | | | | | | | | | | | | | | **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** |

**Comments**:

1/27/22 FPOM FPP Meeting:

Morrill - should we change date for TSW removal? Need more discussion on this. “I have some questions/concerns with a hard ending date of June 7th. We know from the GRS that subs continue to use it during the summer, would it not merit another look at possible benefits for subs at McN ? I did call Tom and asked him about this. The TSW’s at McN can be helpful in clearing forebay debris so having some flexibility in the end date seems reasonable.”

Peery agrees. Worth a deeper dive. For now, let’s add language to allow in-season coordination adjustment. As the date gets closer, he will coordinate with FPOM to adjust the date if warranted.

**Record of Final Action**: Approved as revised at the FPOM FPP meeting 1/27/22.