

(6) 水質（常時観測）

- 1) 観測目的

ダム撤去により環境が変化すると予測されるダム上・下流において、水質の常時観測を行い、出水時の水の濁り等の発生状況を把握することを目的とする。
- 2) 観測項目

次の4つの項目を観測する。①水温、②pH、③D0、④濁度
- 3) 観測時期・頻度

平成26年4月1日～平成27年3月31日の期間において、1時間毎とする。

4) 観測方法

各観測項目の観測方式及び測定範囲を下表に示す。

観測項目	観測方式	測定範囲
水温	半導体センサ	-5～50℃
pH	固定電解液ガラス電極方式	0～14
D0	ガルバニ電極方式	0～20mg/L
濁度	積分球方式及び透過光方式	0～2000FTU

- 5) 観測地点
- 次の3地点で観測した。①瀬戸石ダム下流、②道の駅坂本、③横石

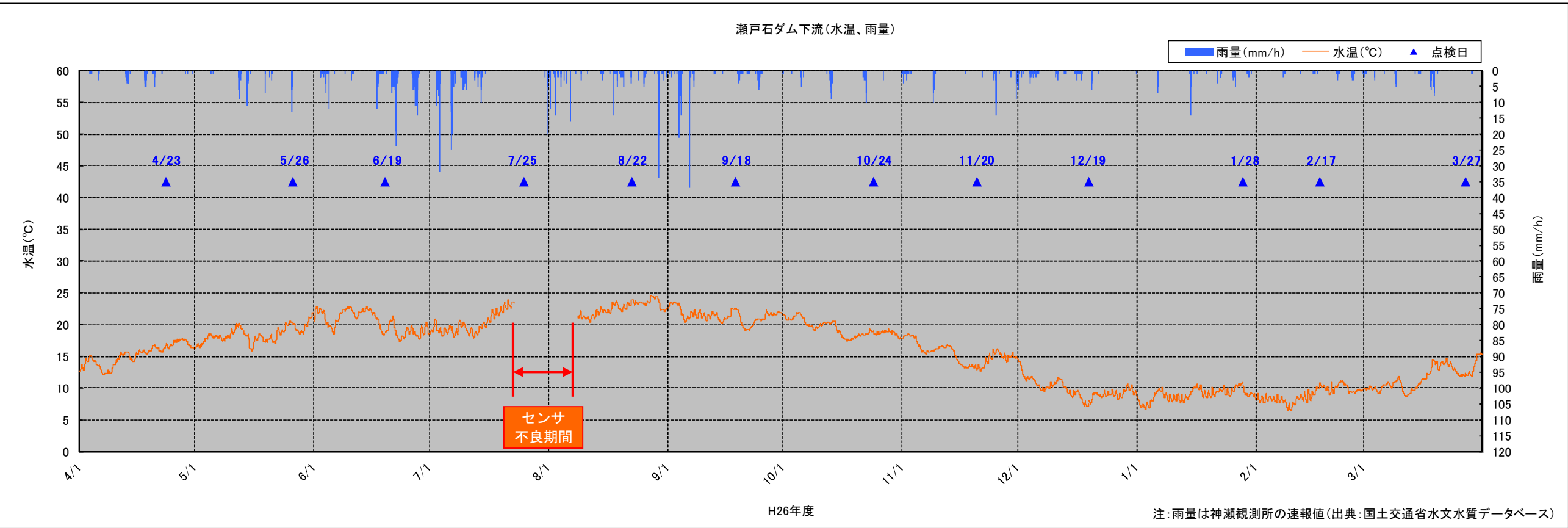


※この地図は、国土地理院発行の2万5千分の1地形図(坂本、中津道)を背景図として使用したものである。

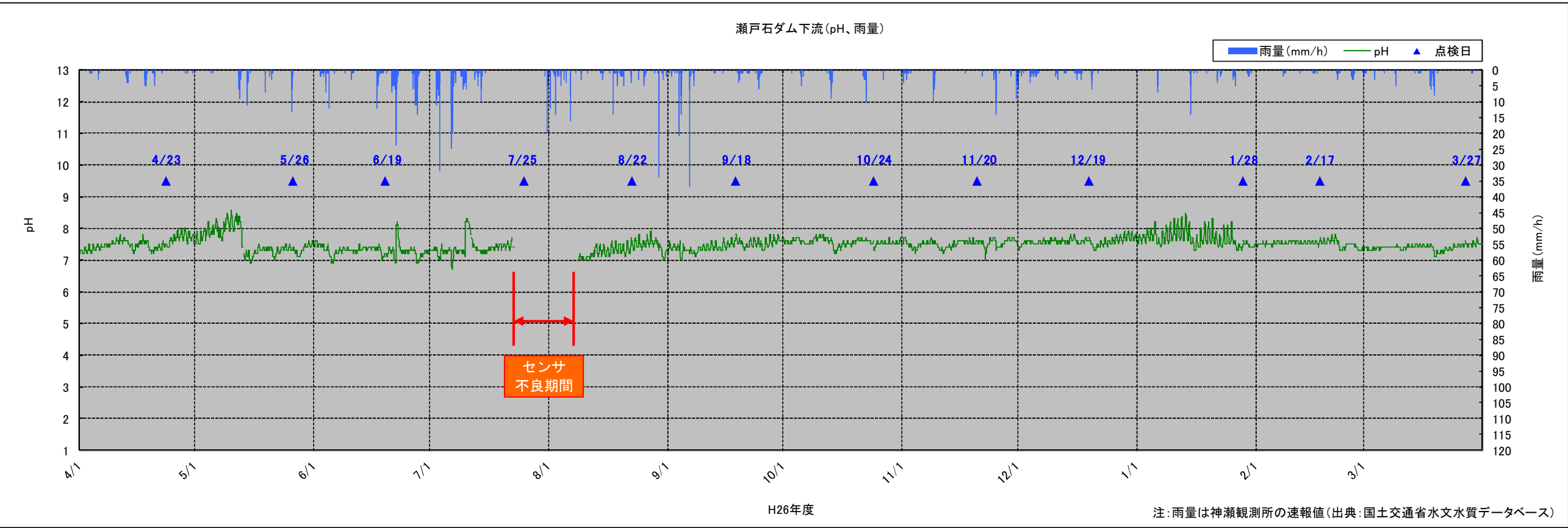
6) 観測結果

①瀬戸石ダム下流

水温

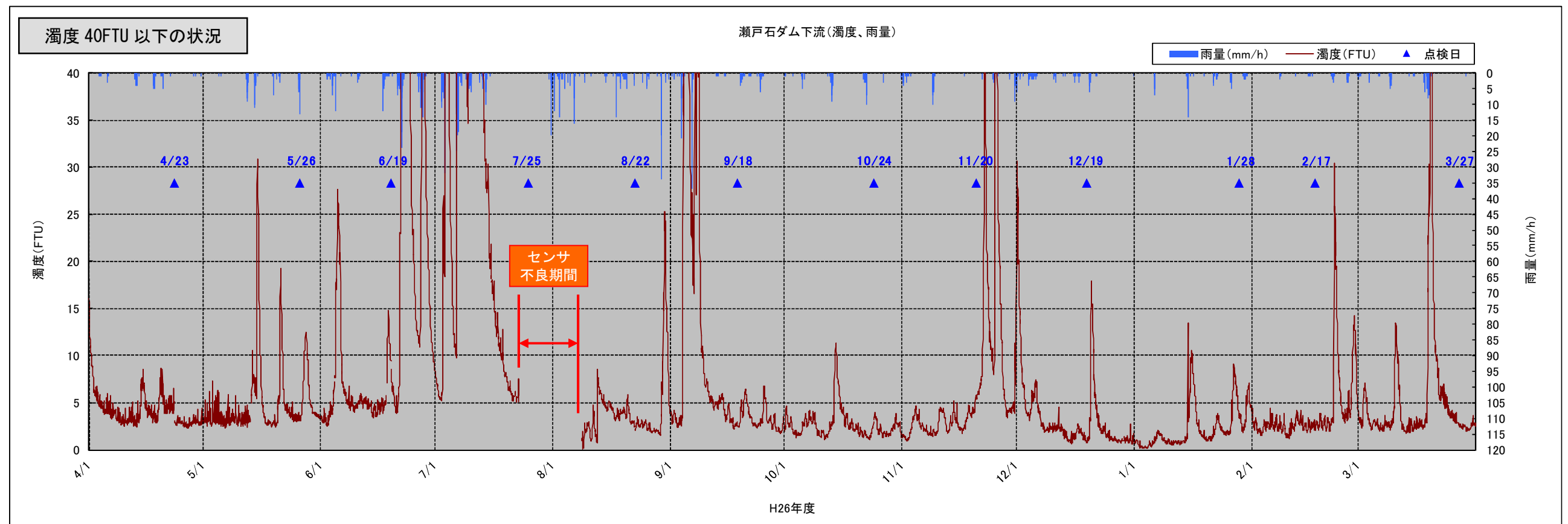
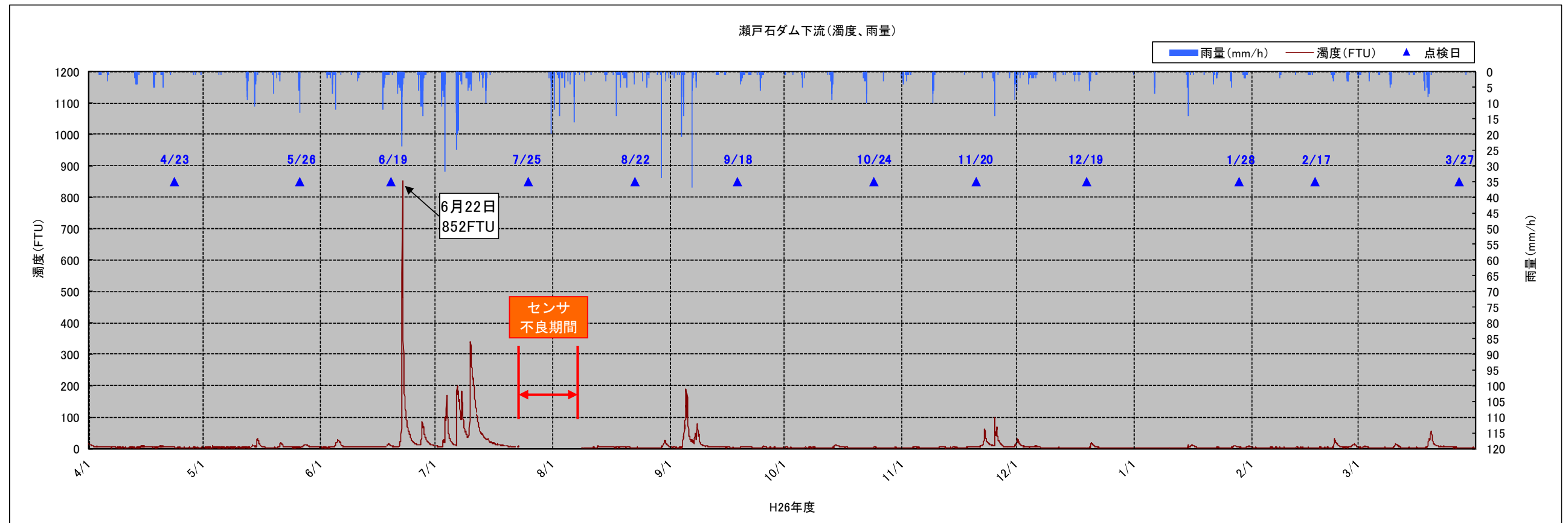


pH



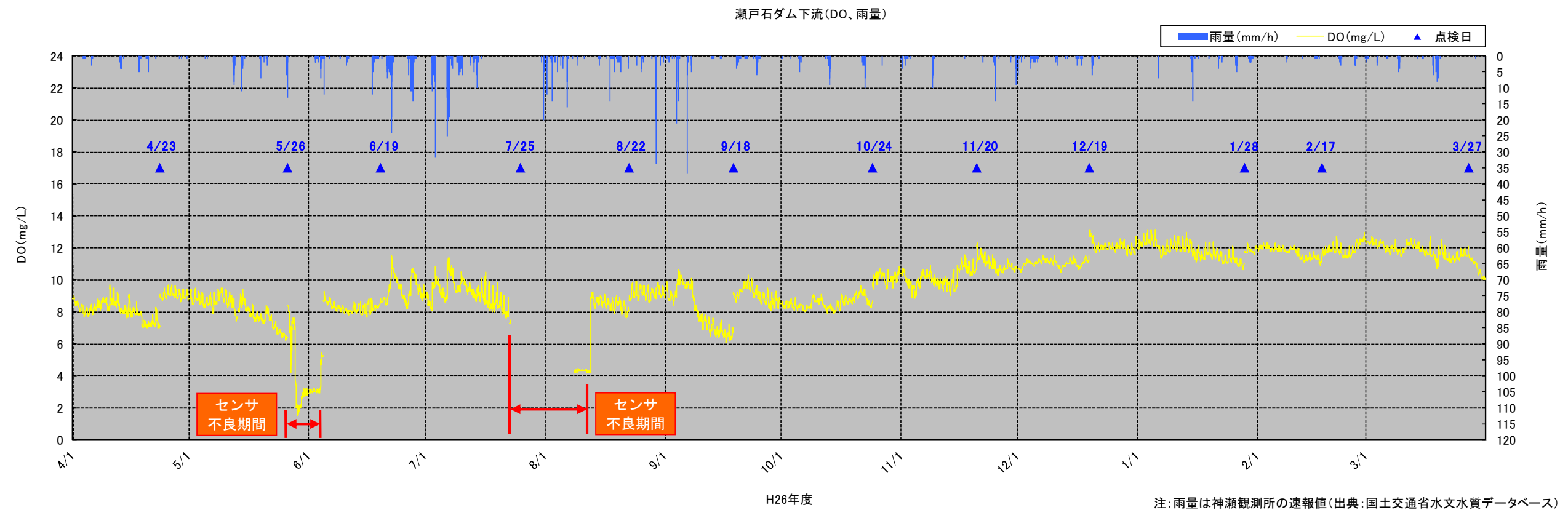
①瀬戸石ダム下流

濁度



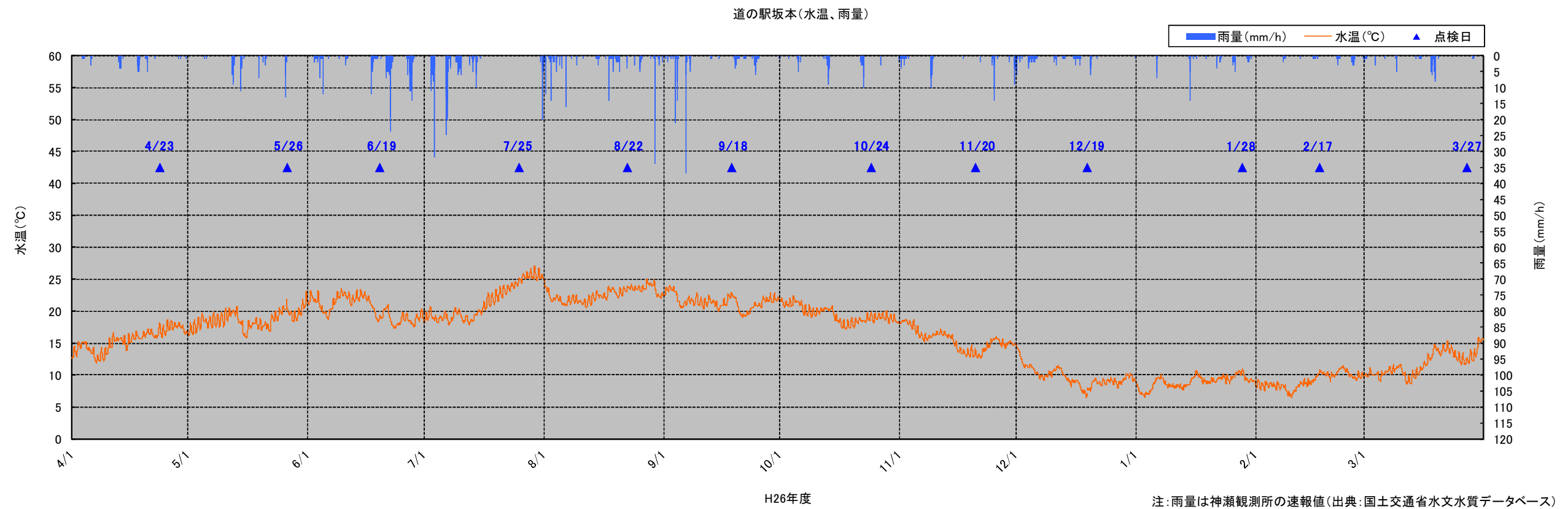
①瀬戸石ダム下流

DO

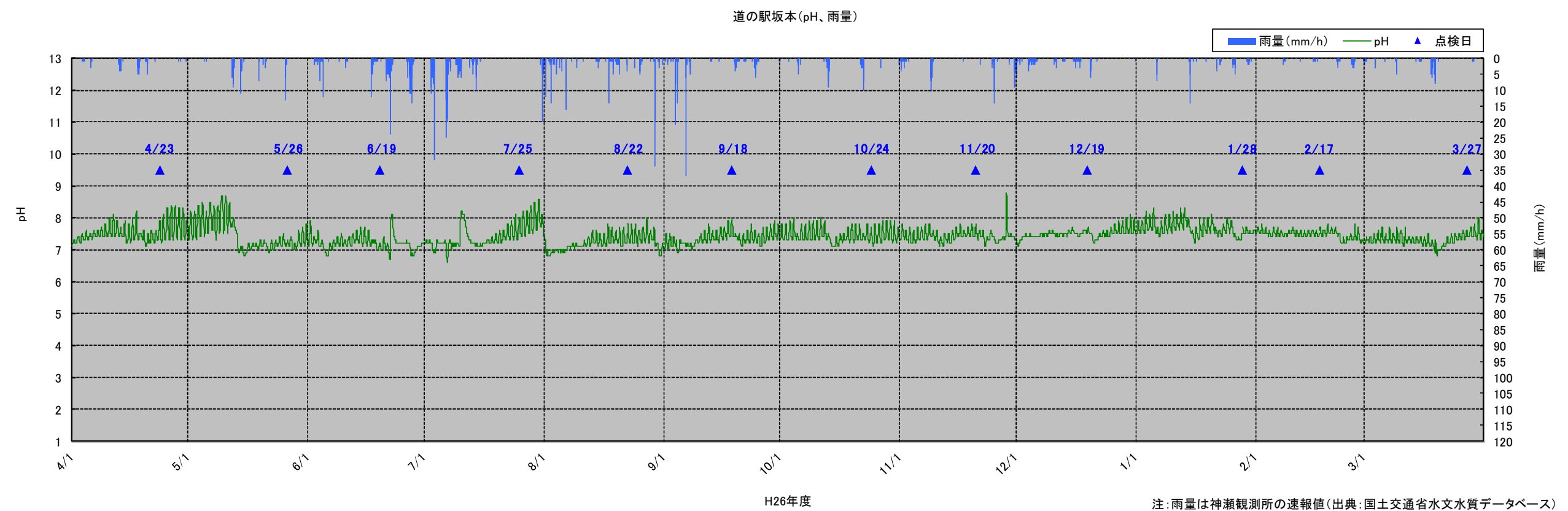


②道の駅坂本

水温

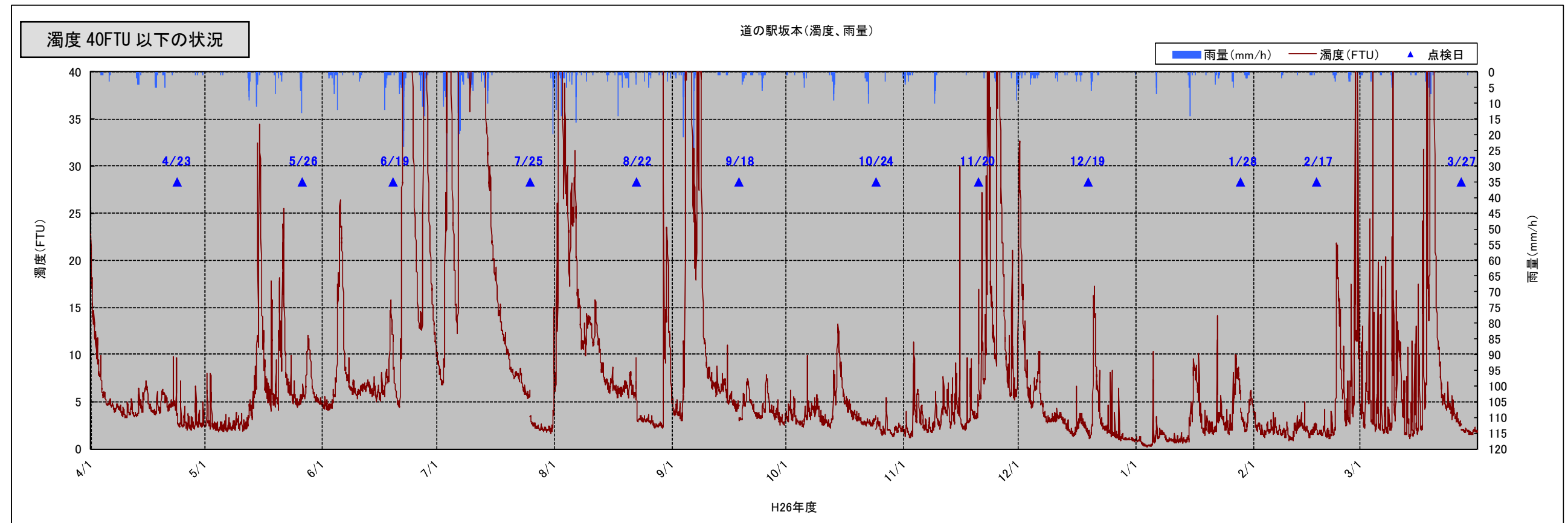
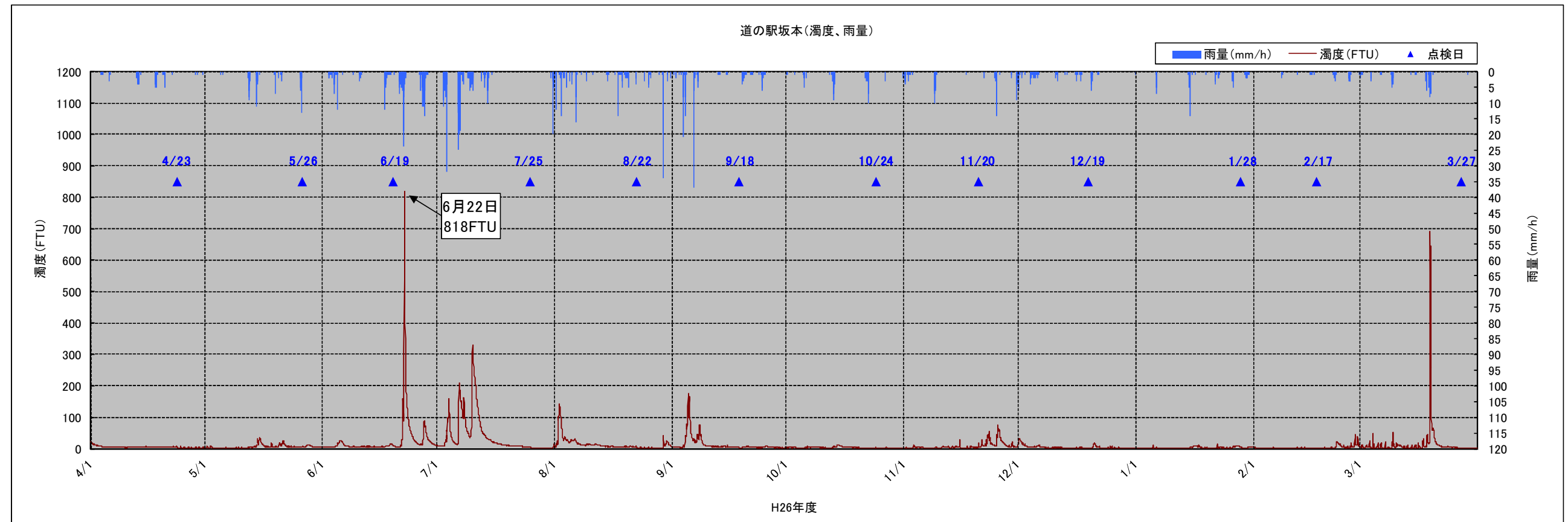


pH



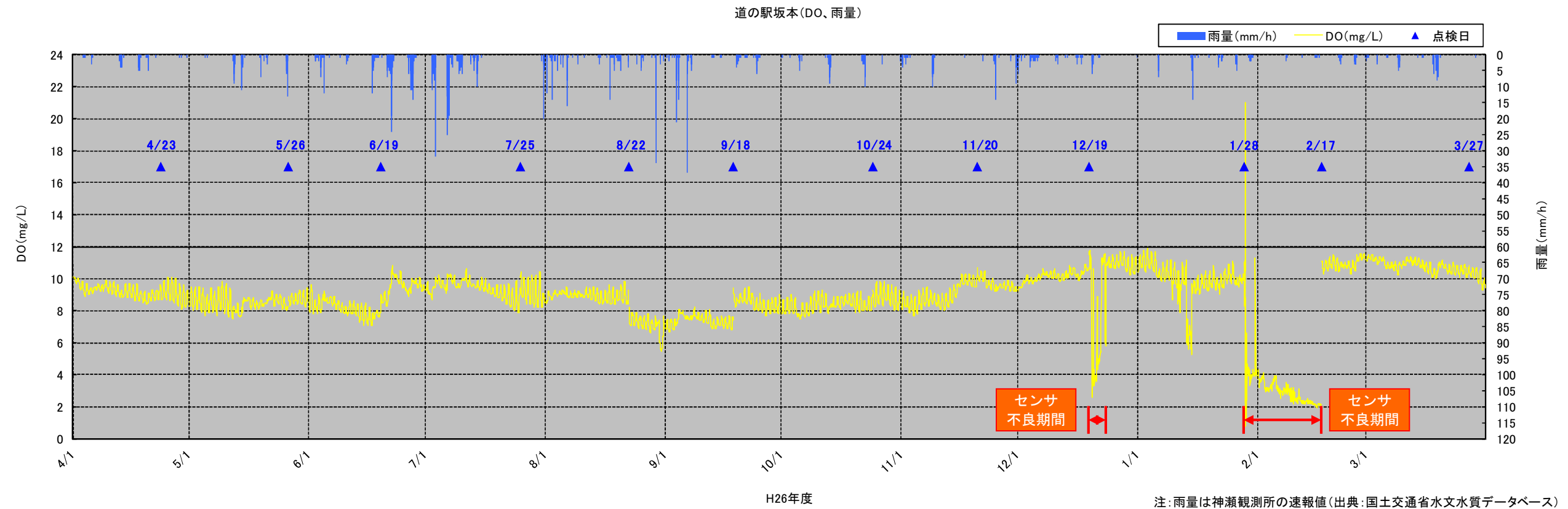
②道の駅坂本

濁度



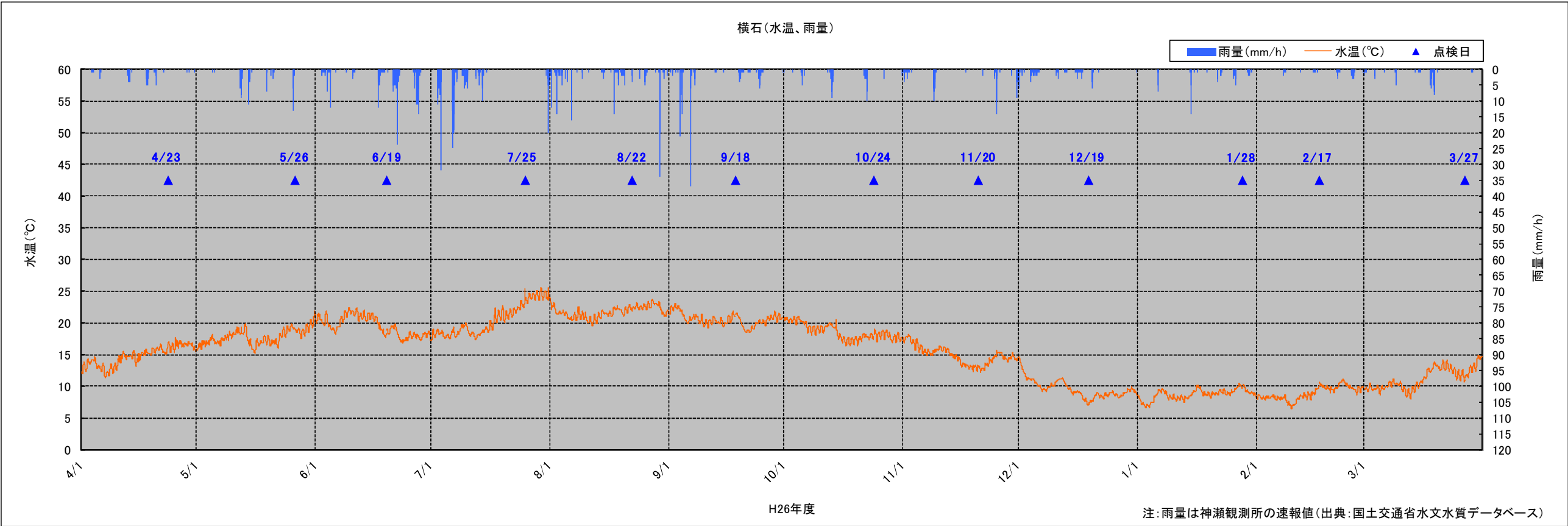
②道の駅坂本

DO

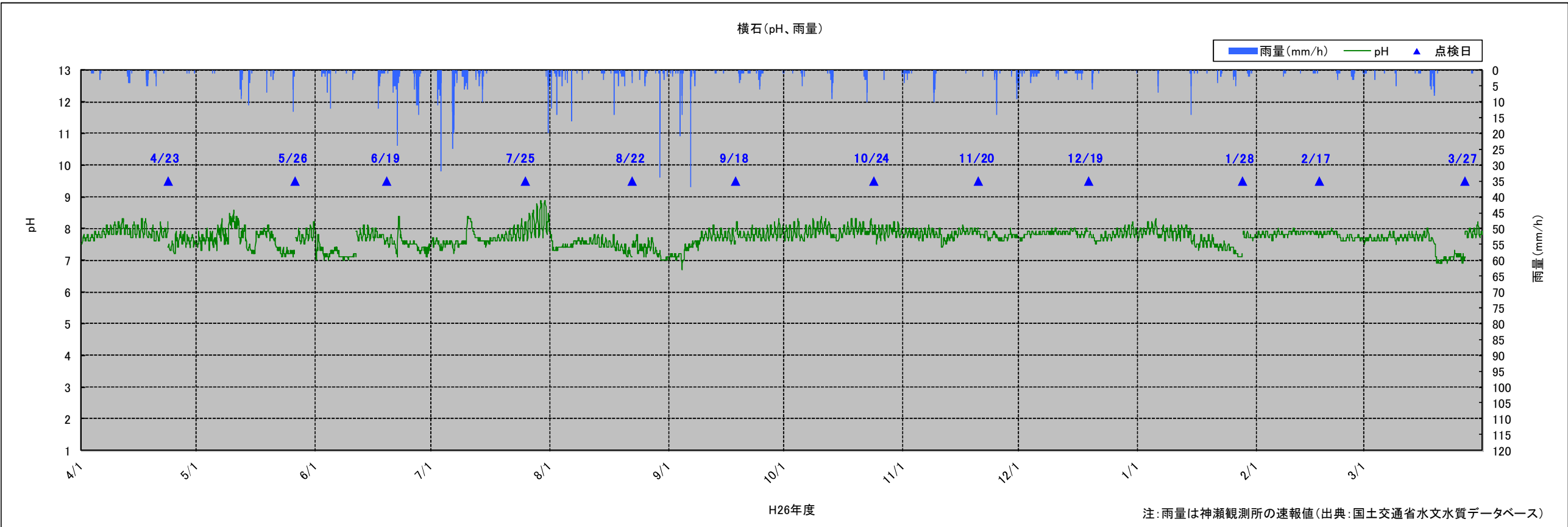


③横石

水温

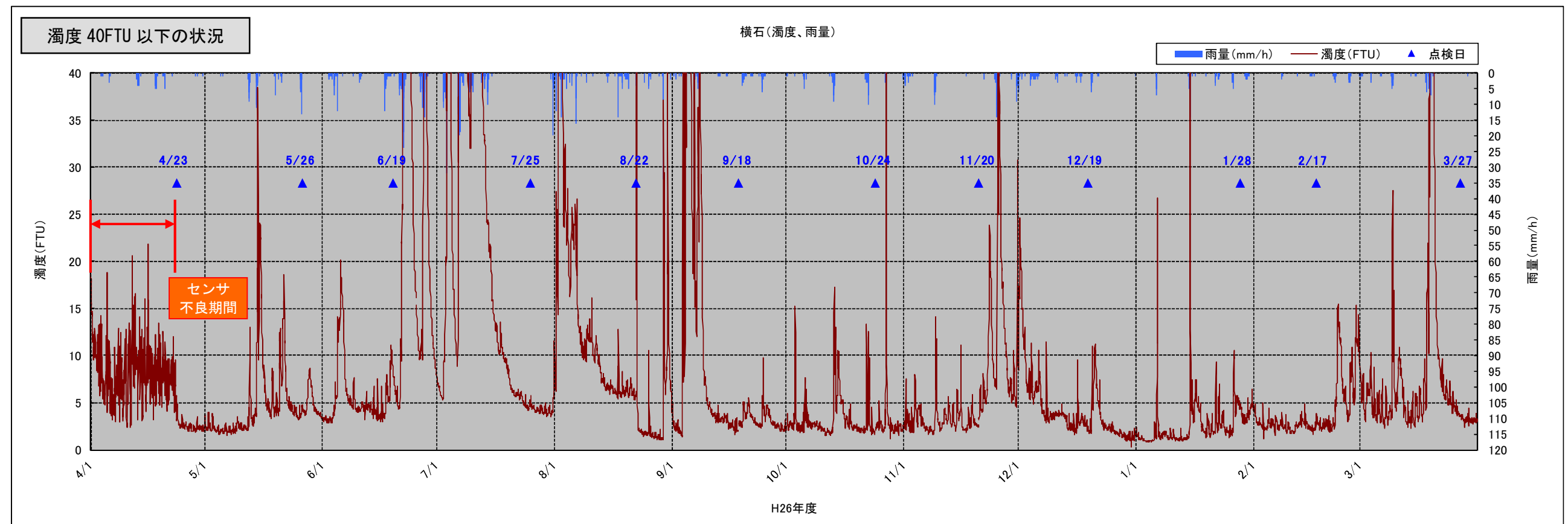
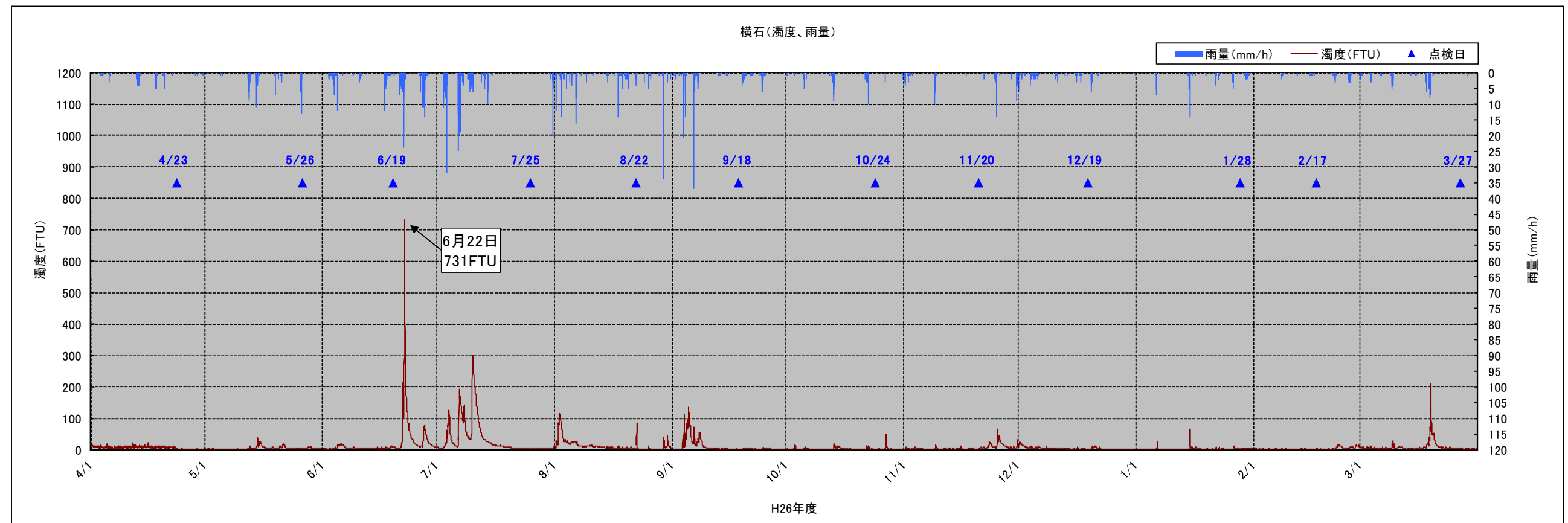


pH



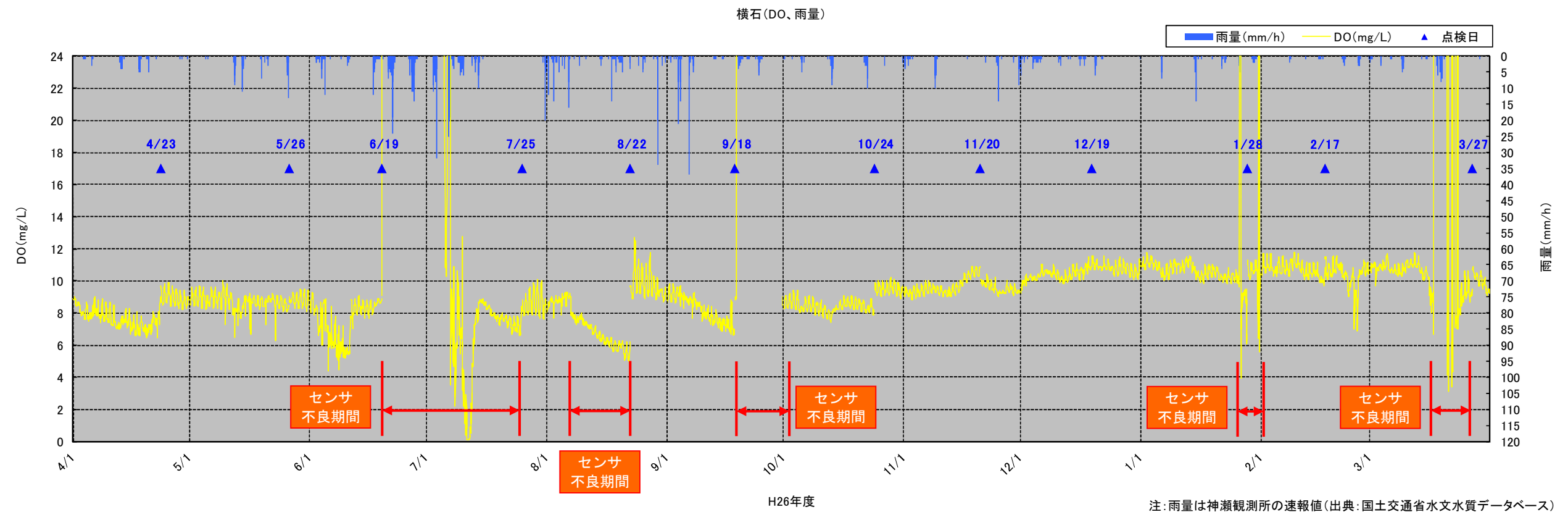
③横石

濁度



③横石

DO



7) 出水時の流量と濁度（FTU）の時間的な変化について（H21～26 年）

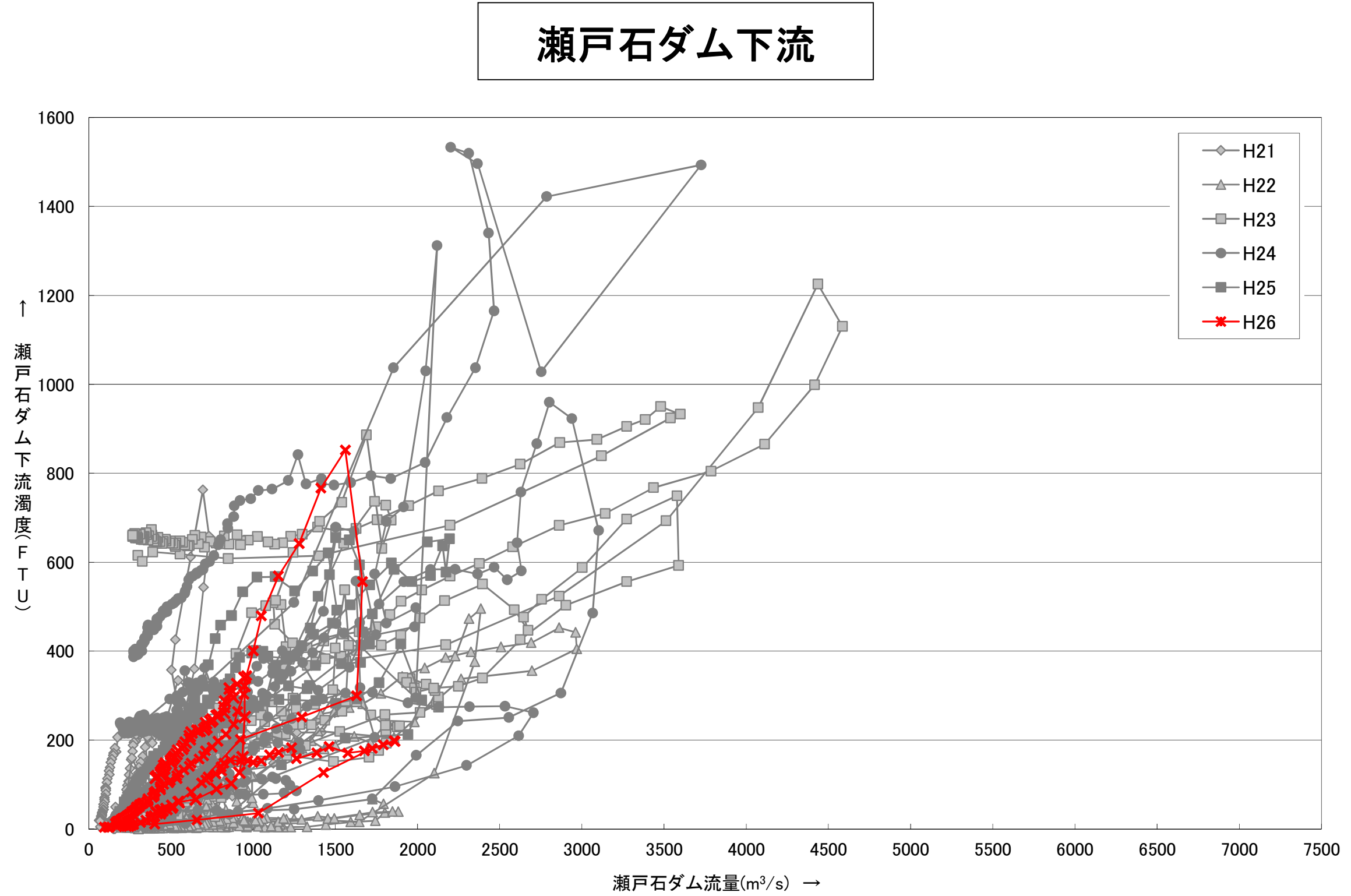
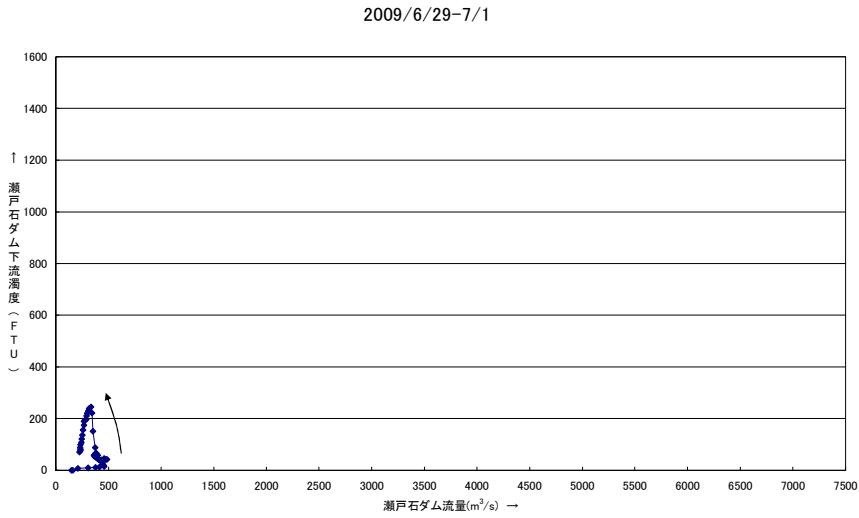


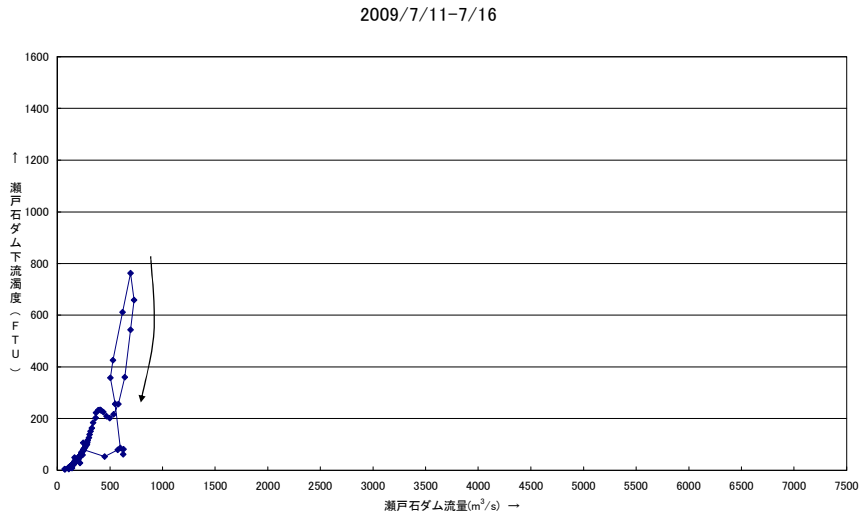
図 出水時の流量と濁度（FTU）の時間的な変化（瀬戸石ダム下流）

瀬戸石ダム下流

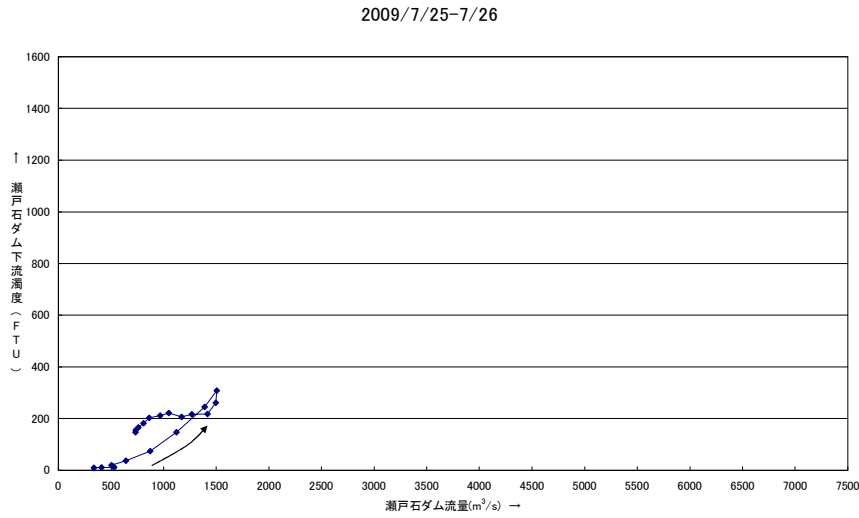
H21①



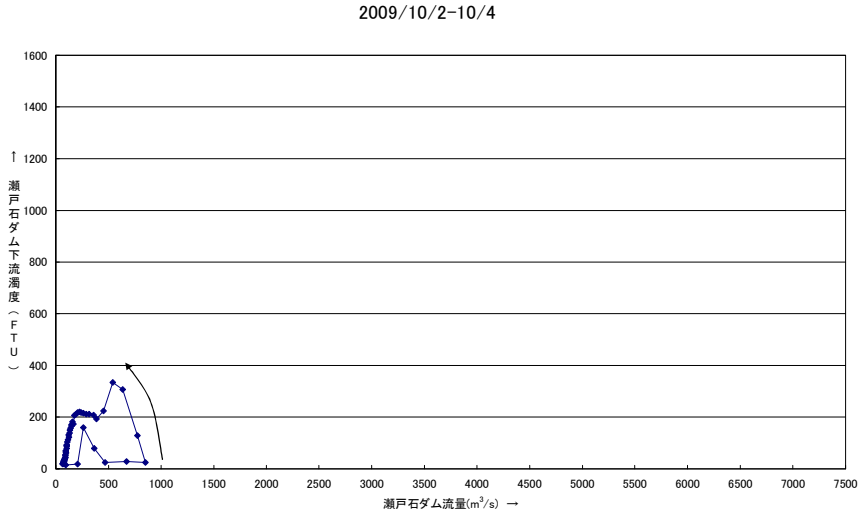
H21②



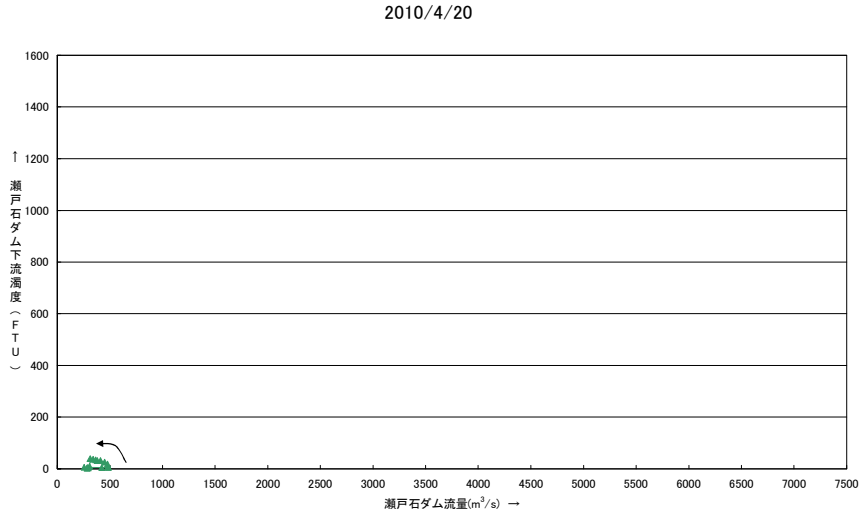
H21③



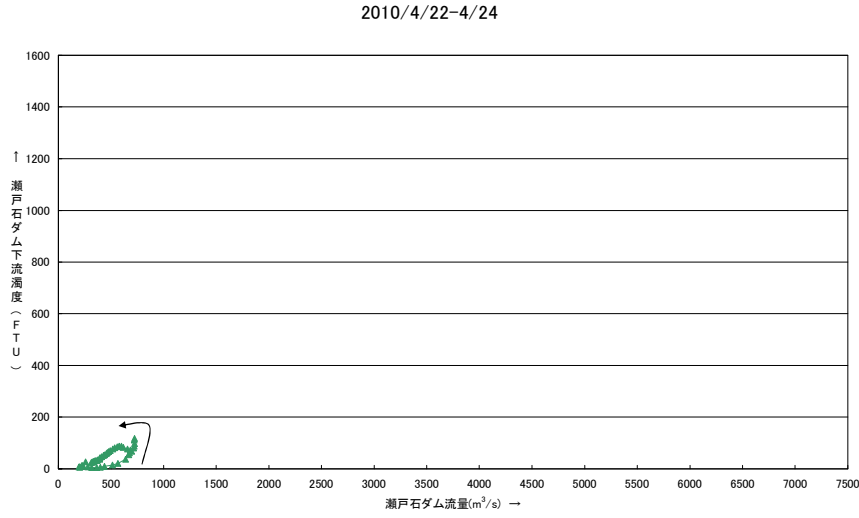
H21④



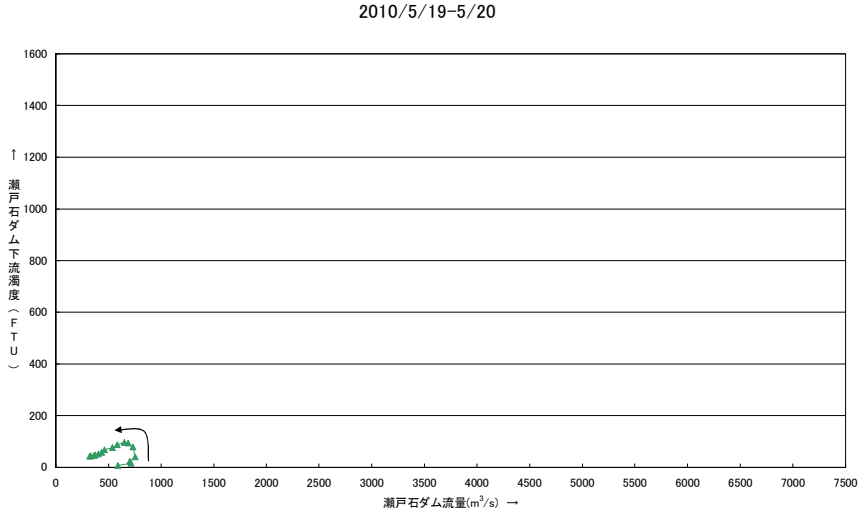
H22①



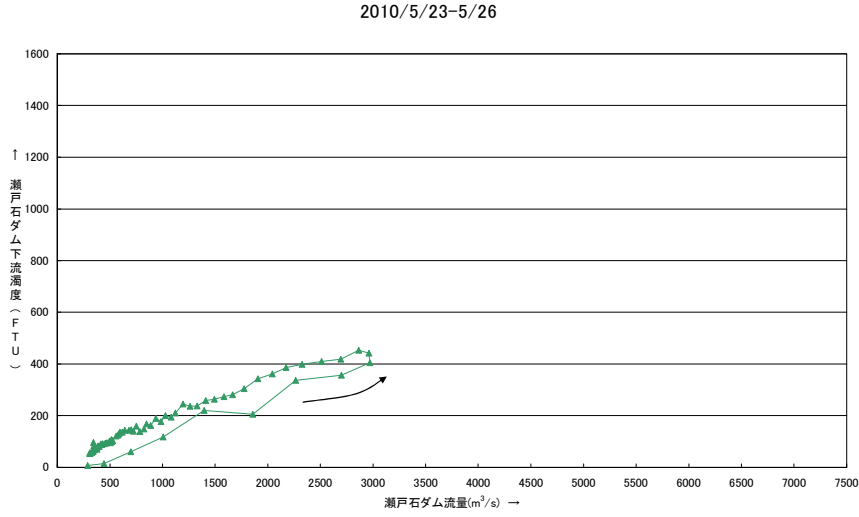
H22②



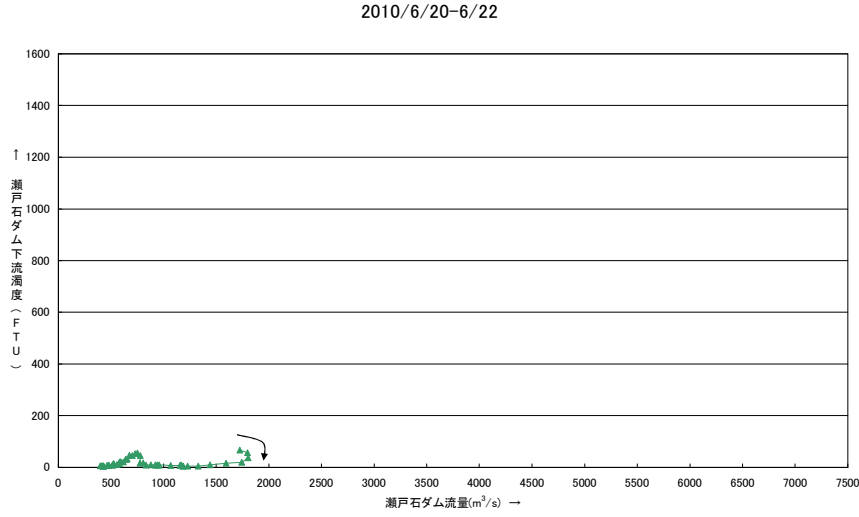
H22③

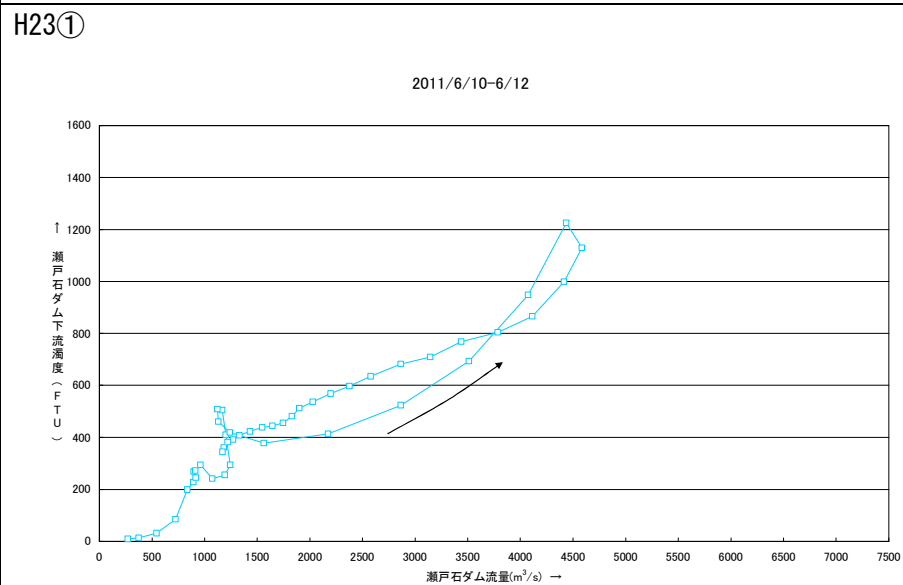
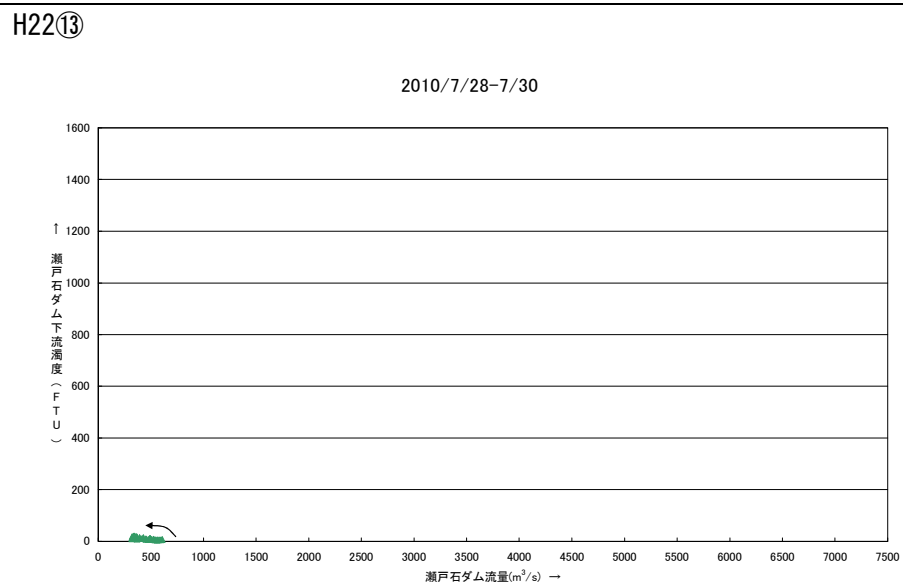
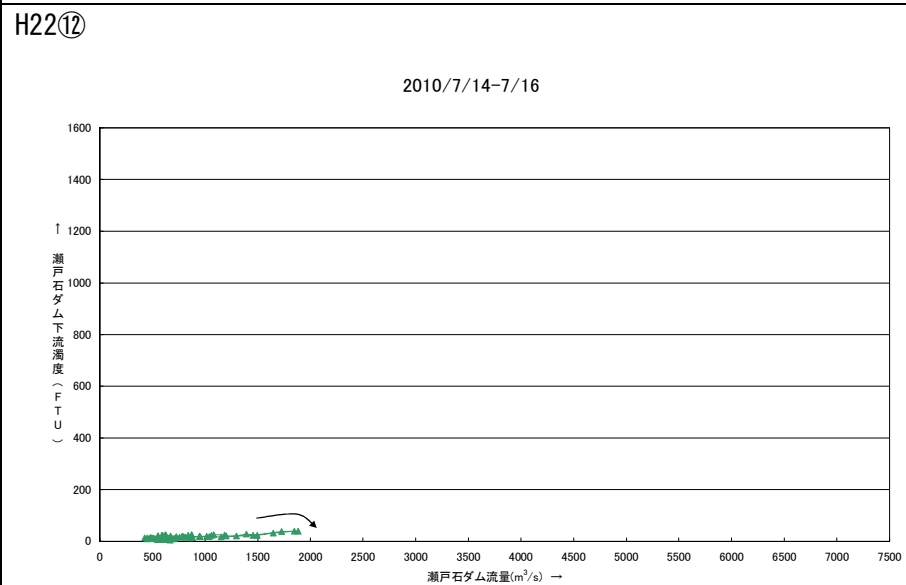
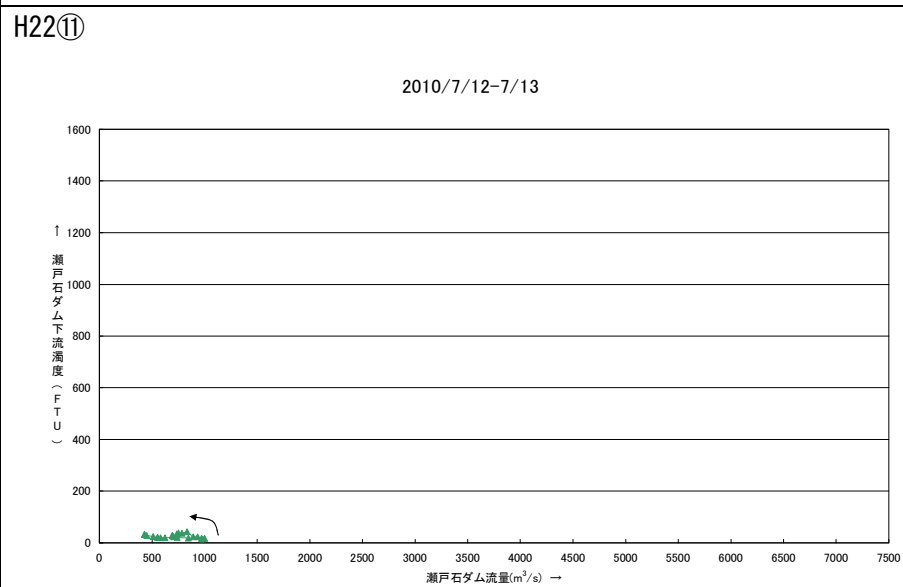
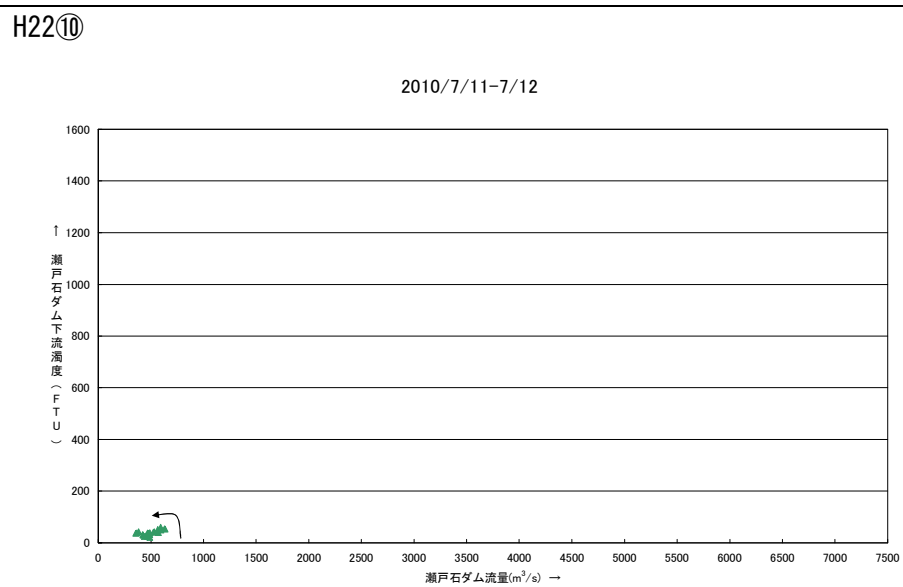
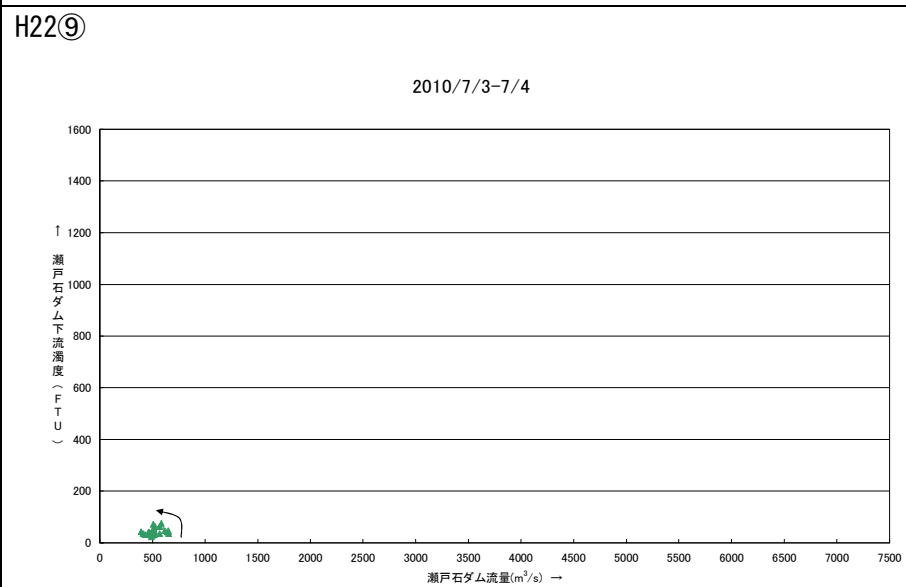
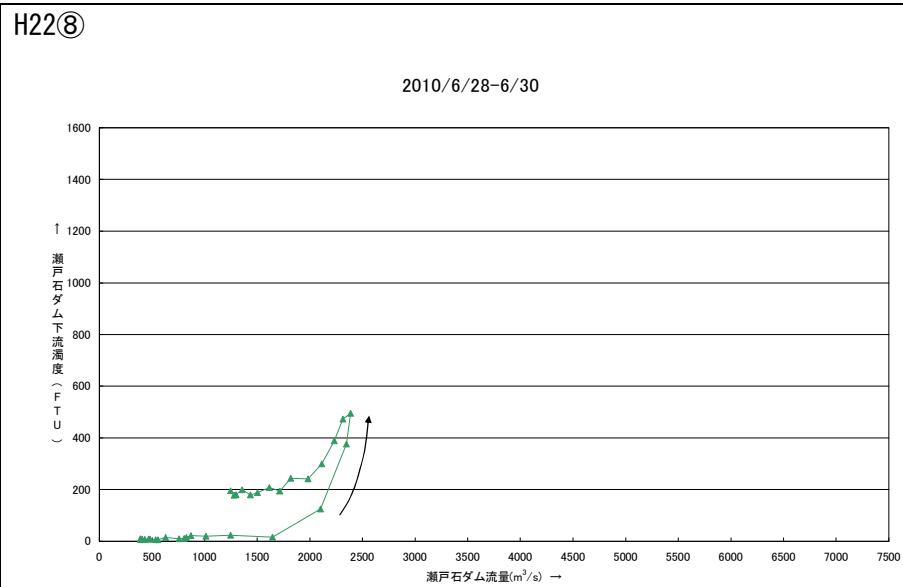
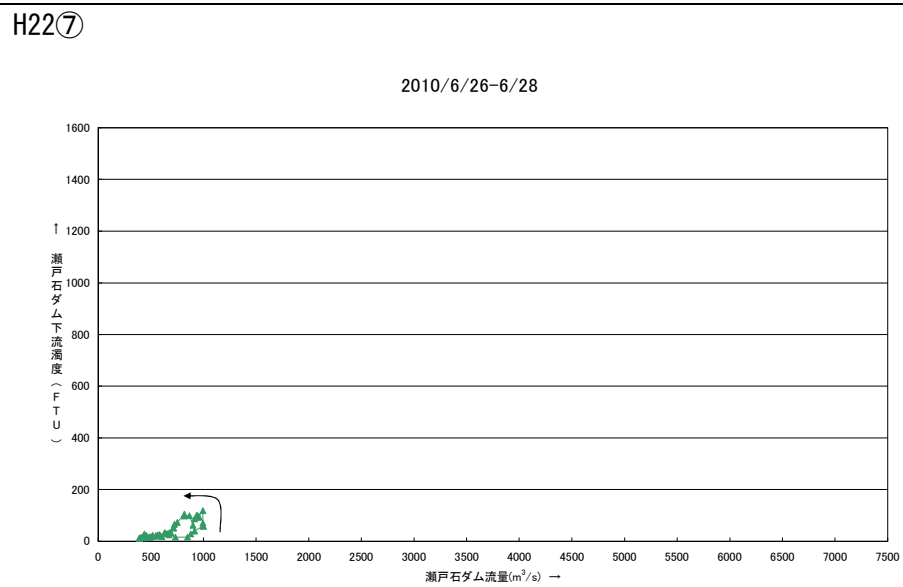
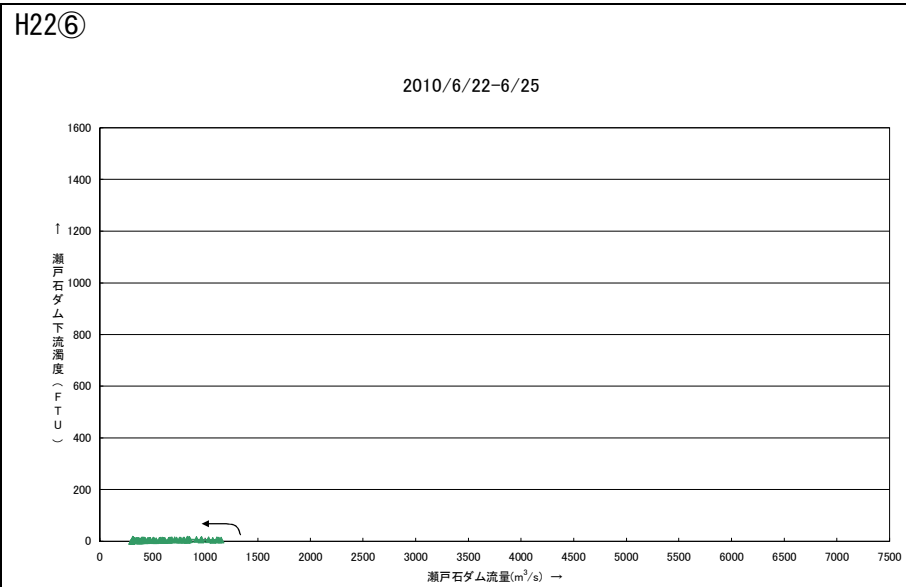


H22④



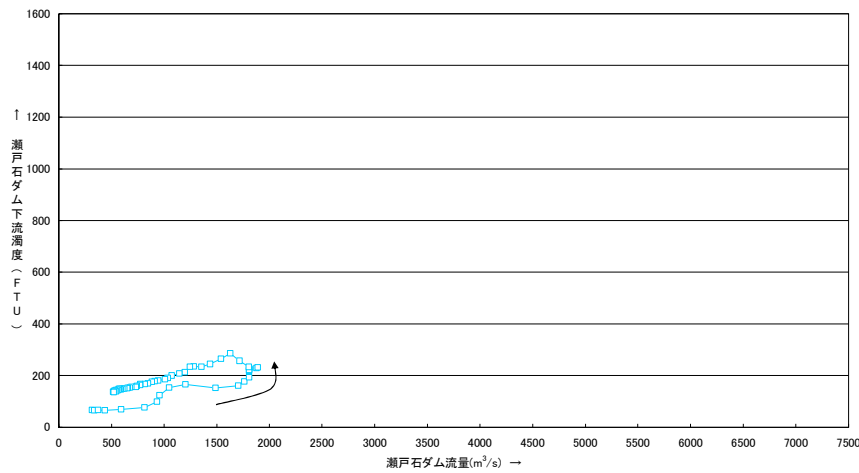
H22⑤





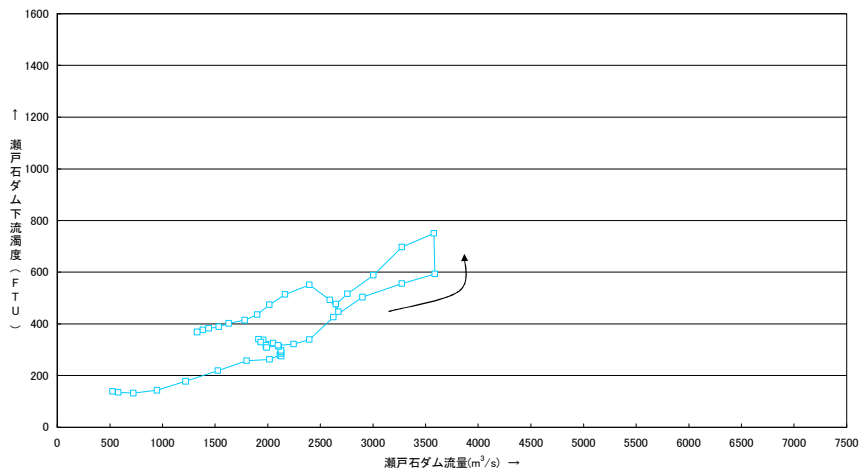
H23②

2011/6/15-6/18



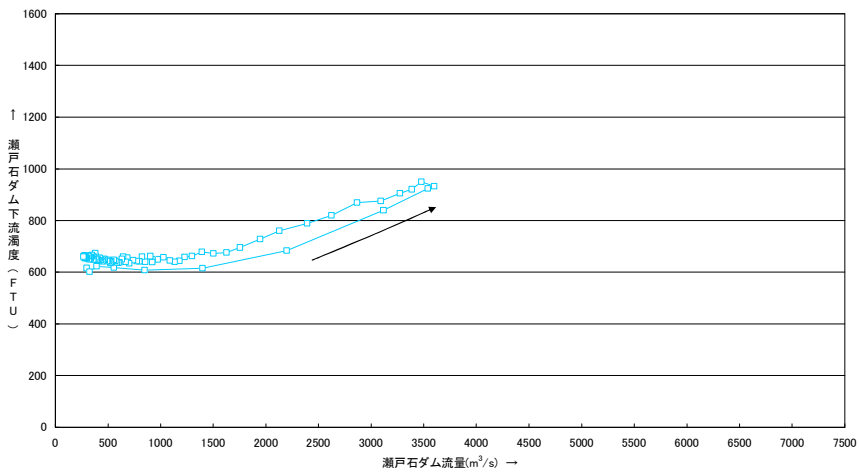
H23③

2011/6/18-6/20



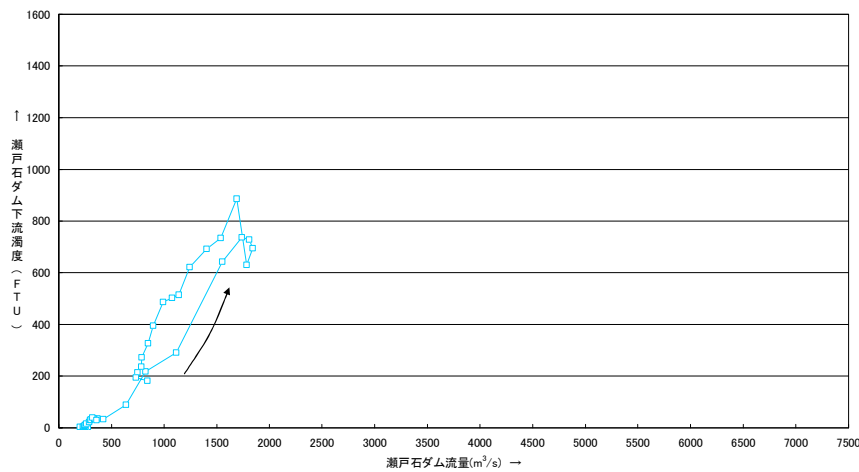
H23④

2011/7/6-7/10



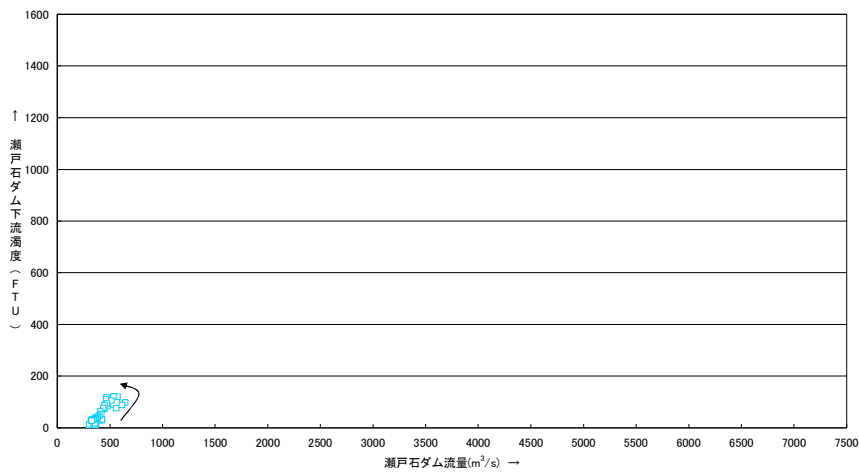
H23⑤

2011/8/14-8/16



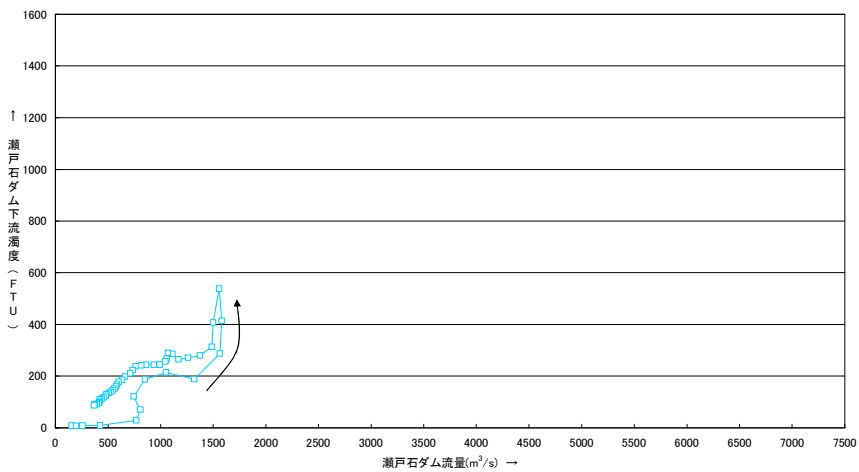
H23⑥

2011/8/21-8/23



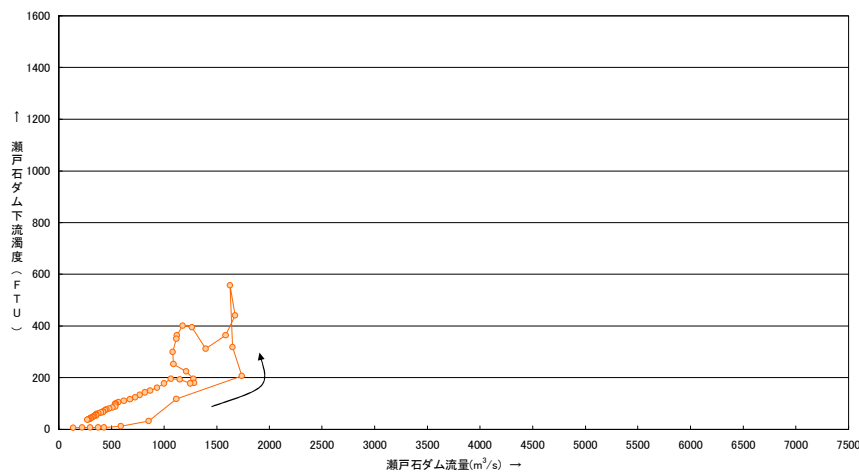
H23⑦

2011/9/20-9/22



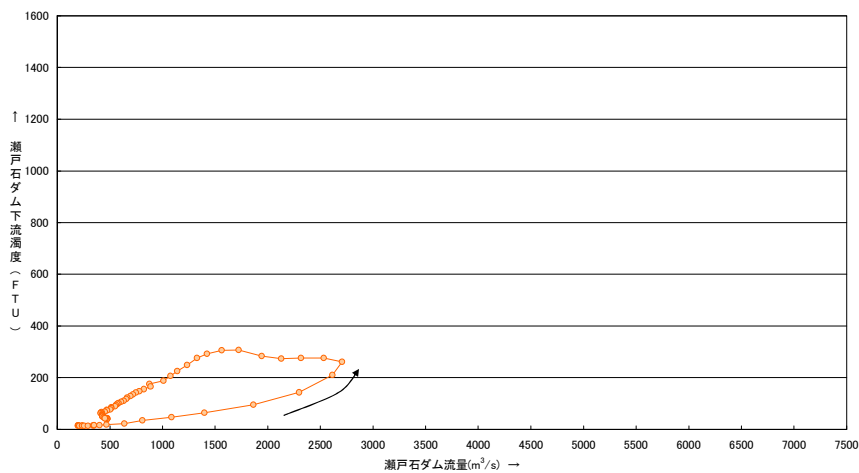
H24①

2012/6/15-6/18



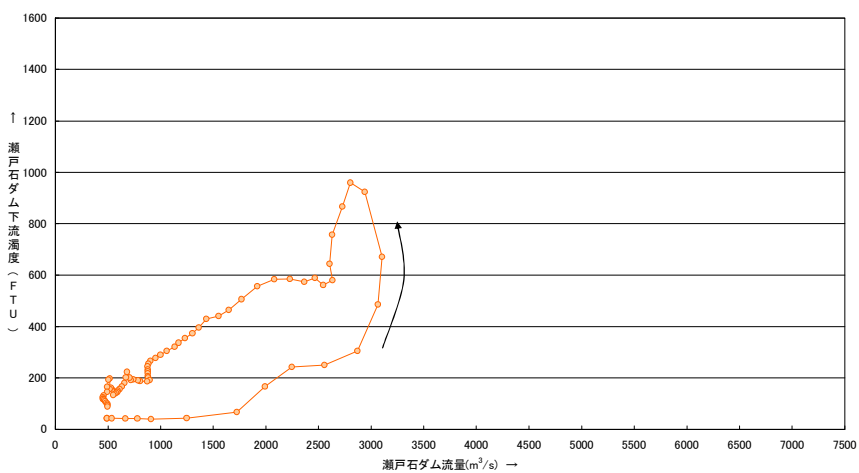
H24②

2012/6/21-6/23



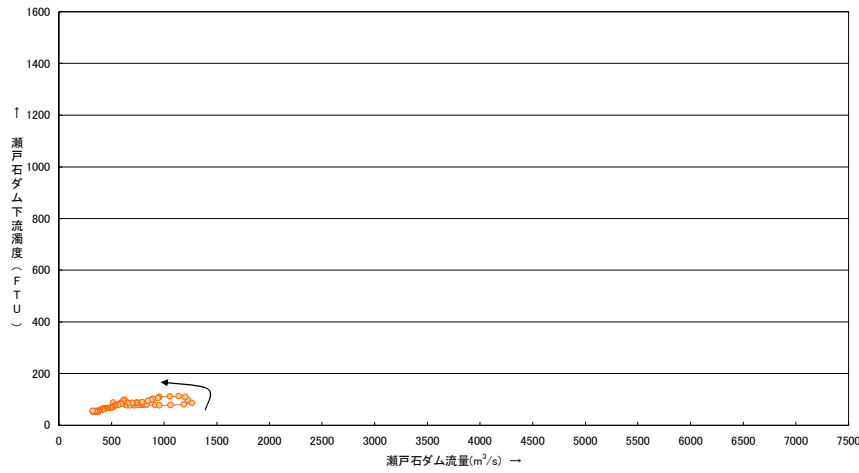
H24③

2012/6/24-6/27



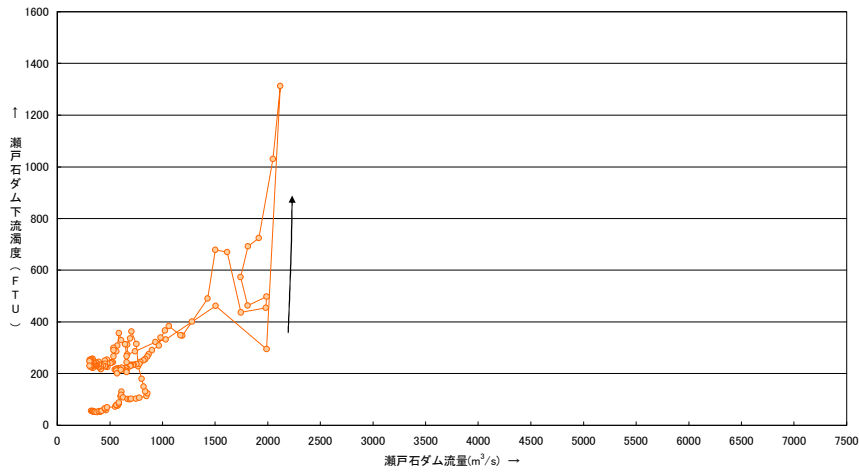
H24④

2012/6/27-6/30



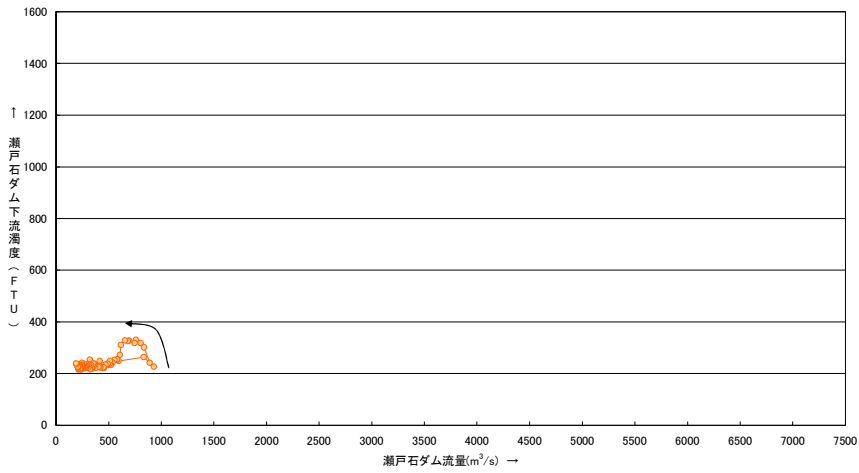
H24⑤

2012/6/30-7/7



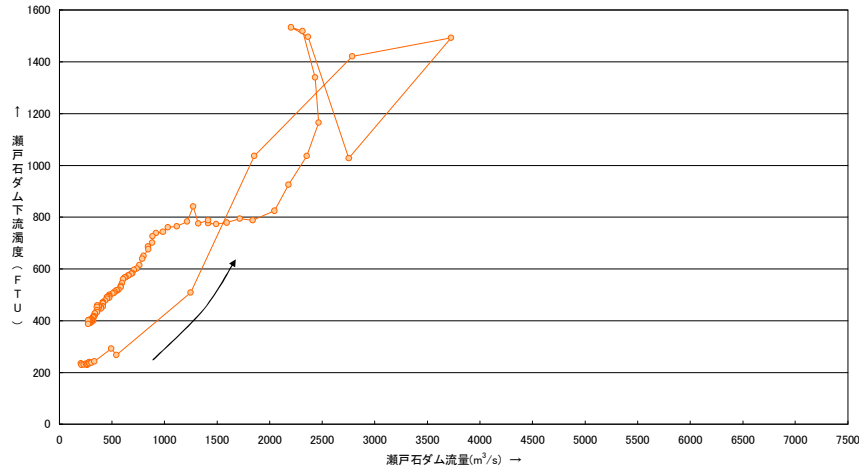
H24⑥

2012/7/7-7/11



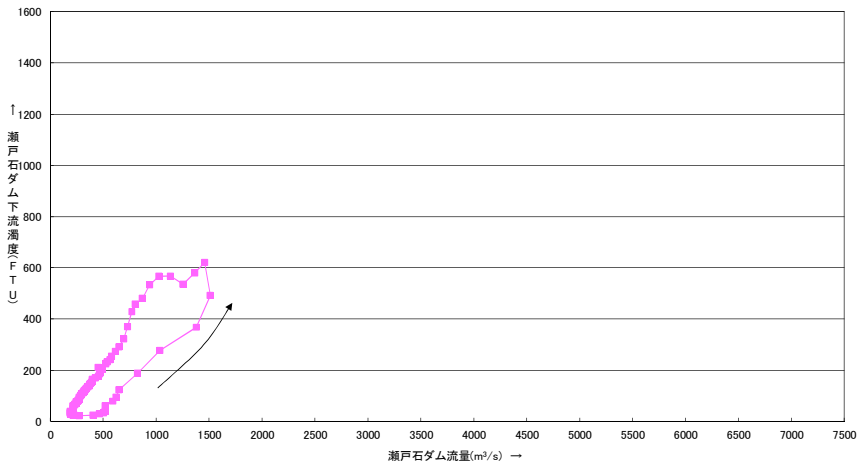
H24⑦

2012/7/11-7/16



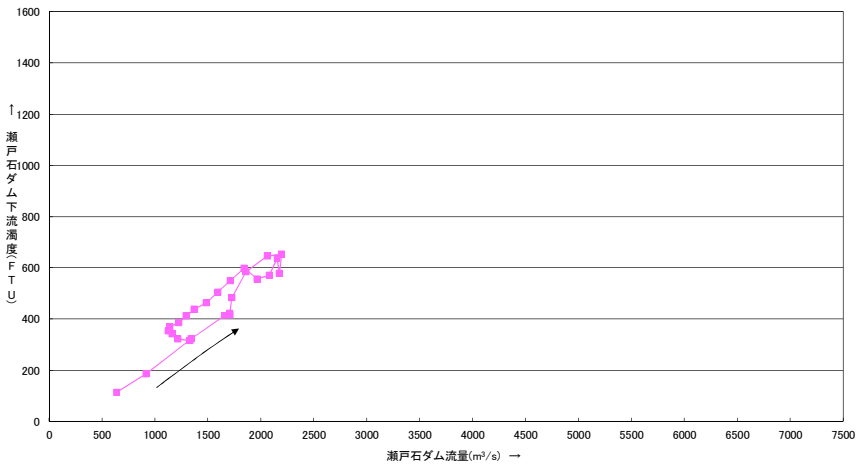
H25①

2013/6/25-6/29



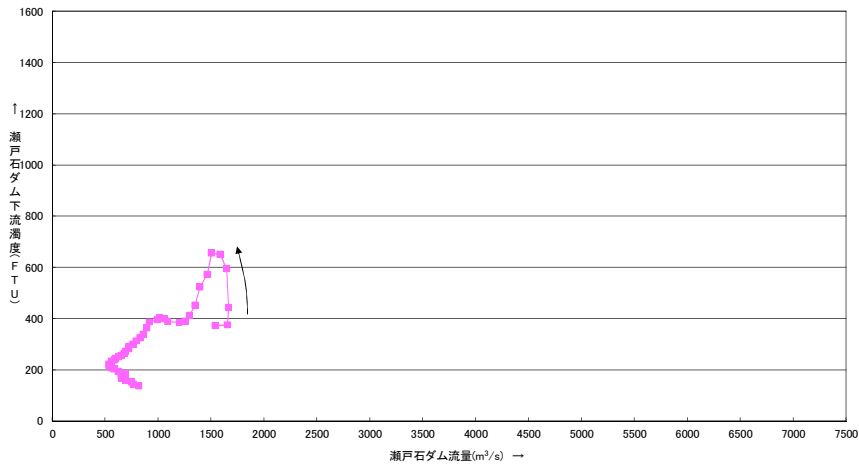
H25②

2013/9/1-9/2



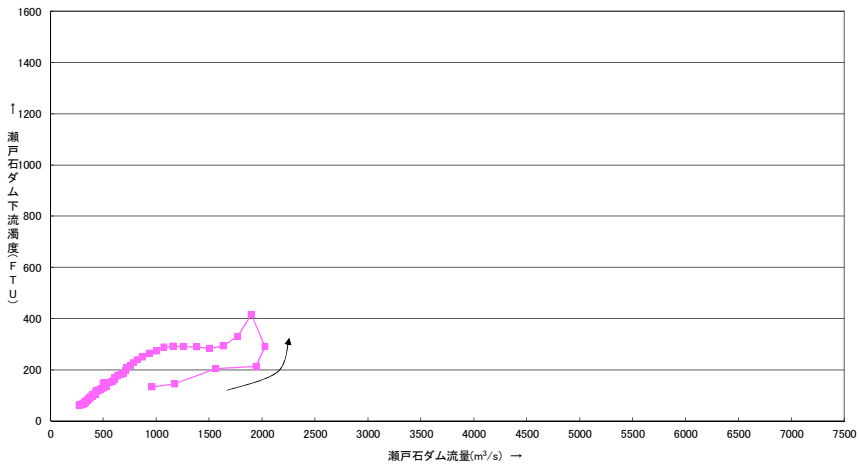
H25③

2013/9/2-9/4



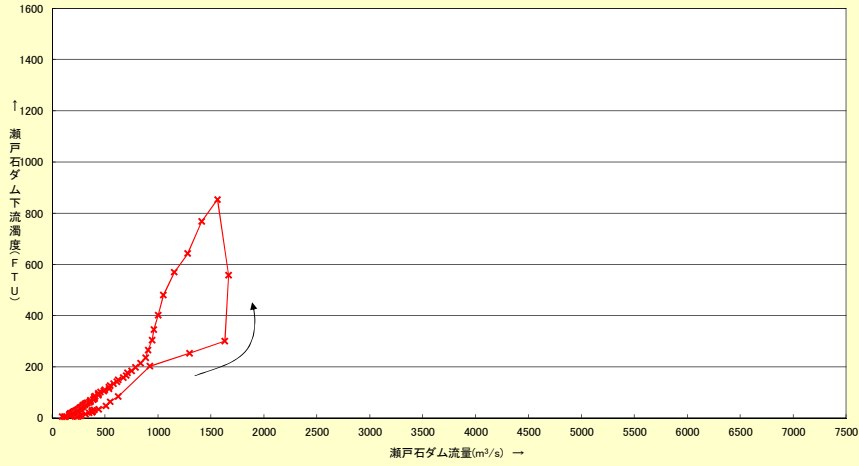
H25④

2013/9/4-9/6



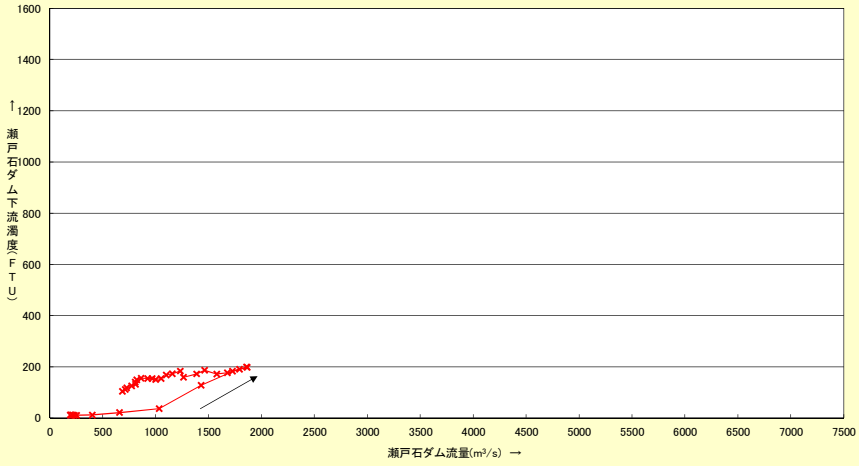
H26①

2014/6/21-6/26



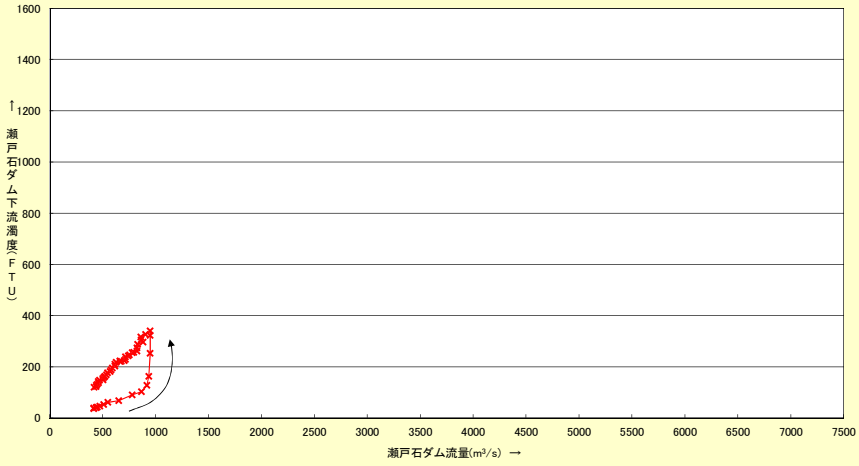
H26②

2014/7/6-7/7



H26③

2014/7/9-7/11



道の駅坂本

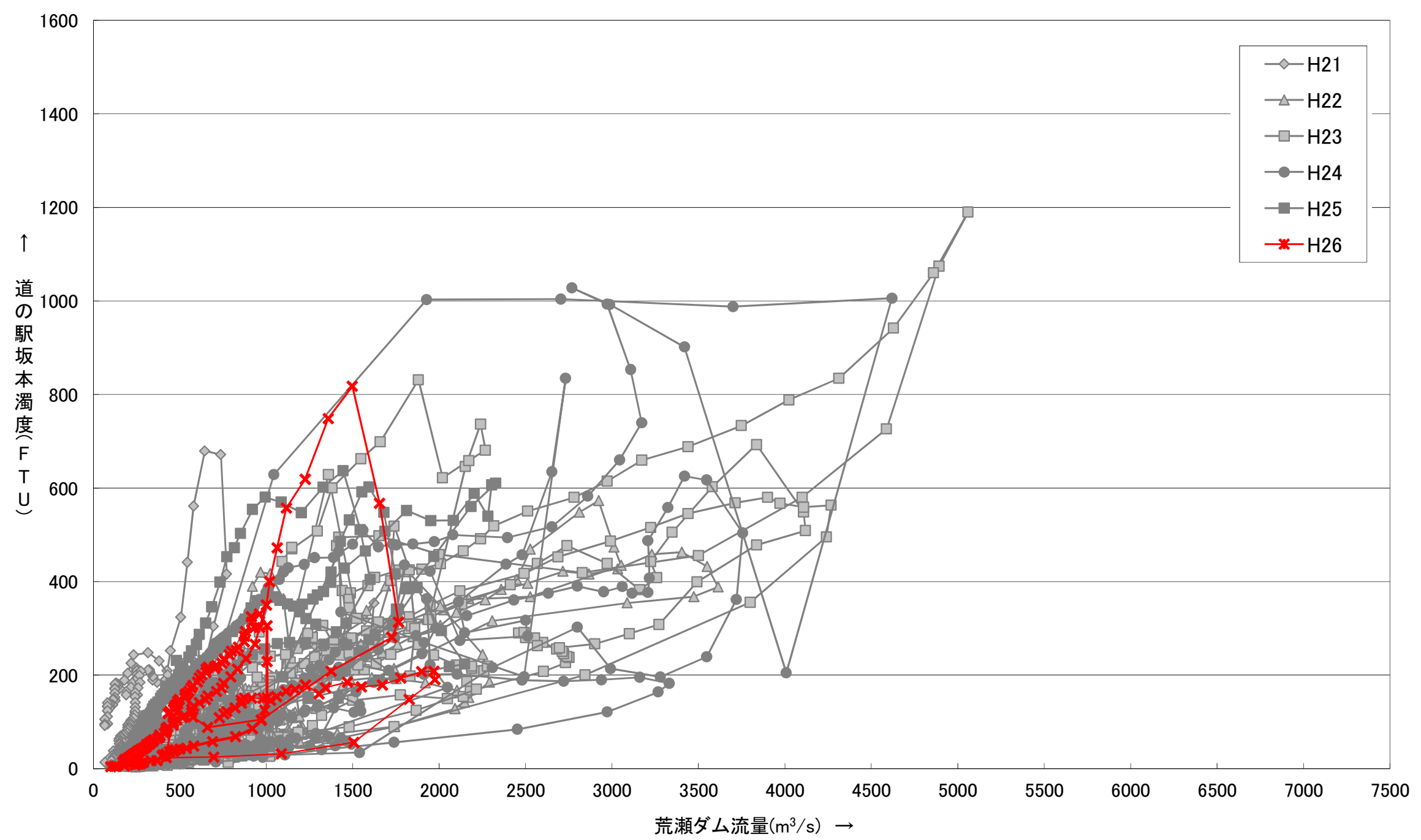
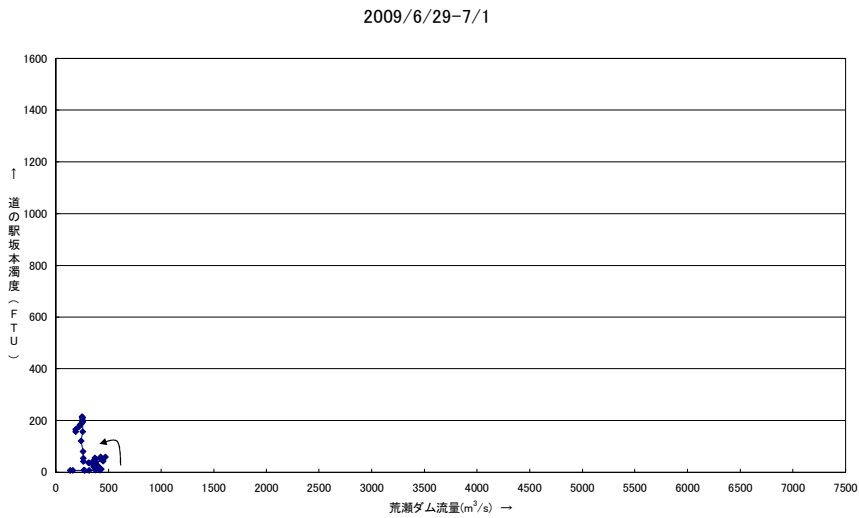


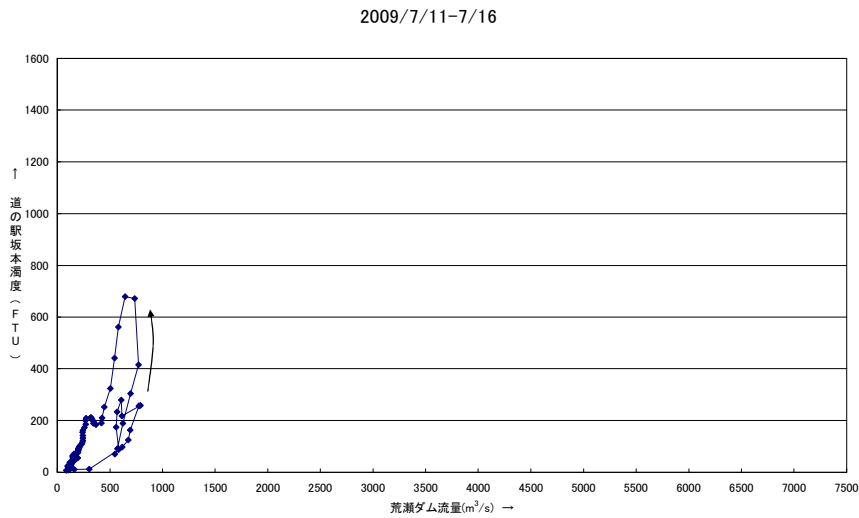
図 出水時の流量と濁度（FTU）の時間的な変化（道の駅坂本）

道の駅坂本

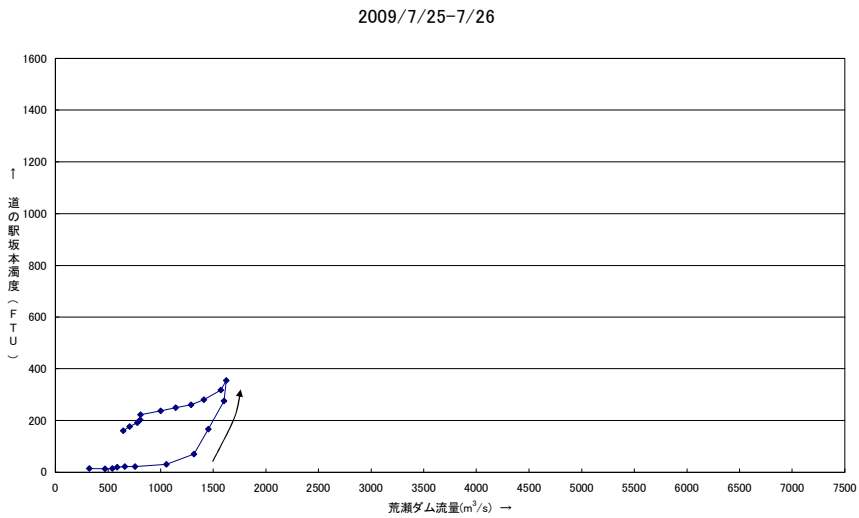
H21①



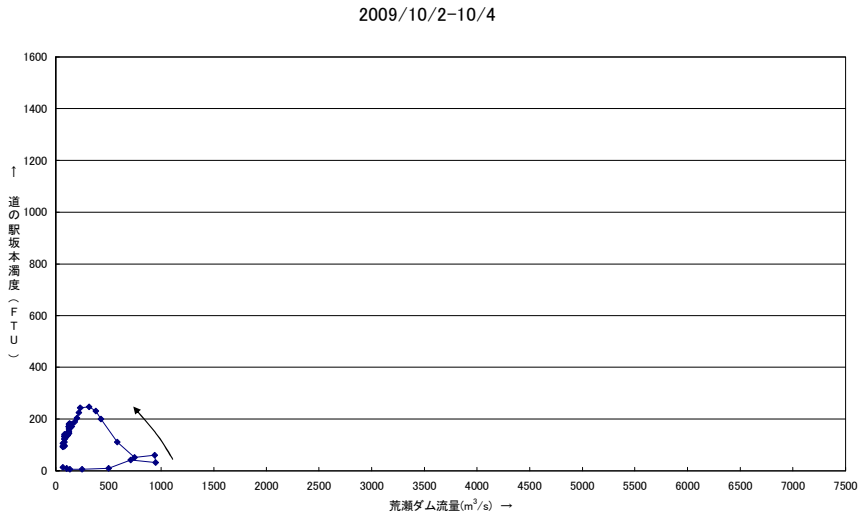
H21②



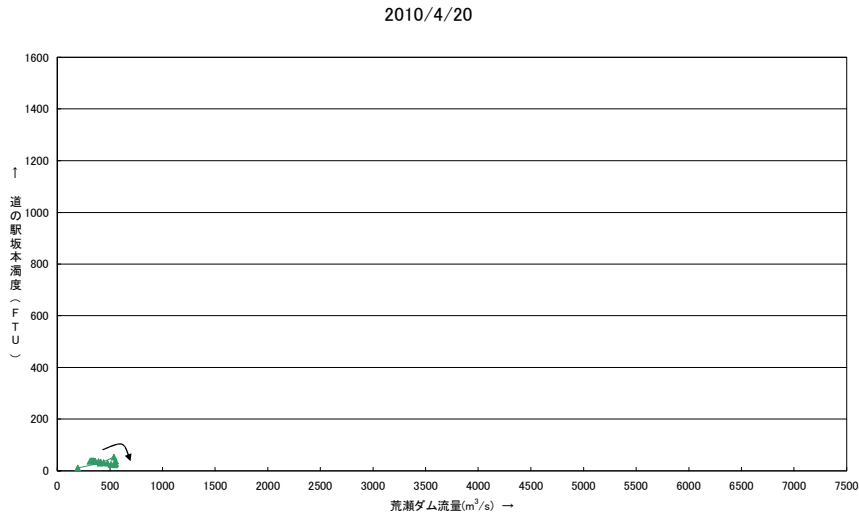
H21③



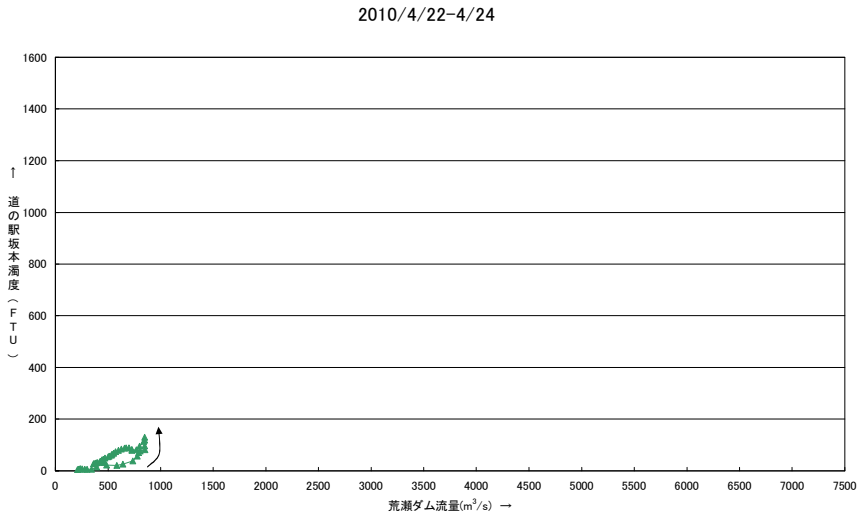
H21④



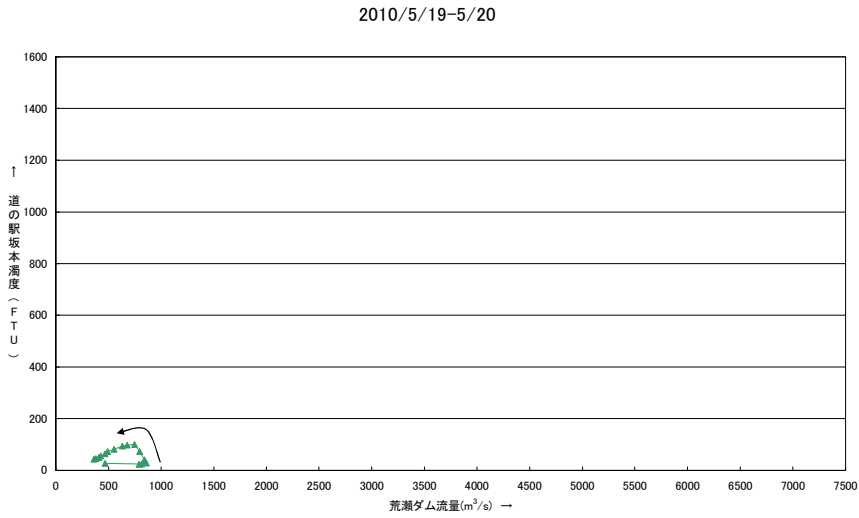
H22①



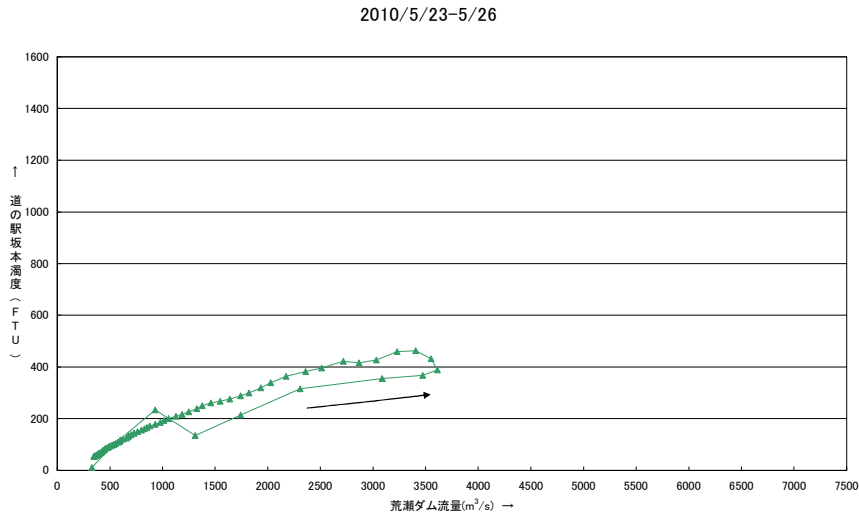
H22②



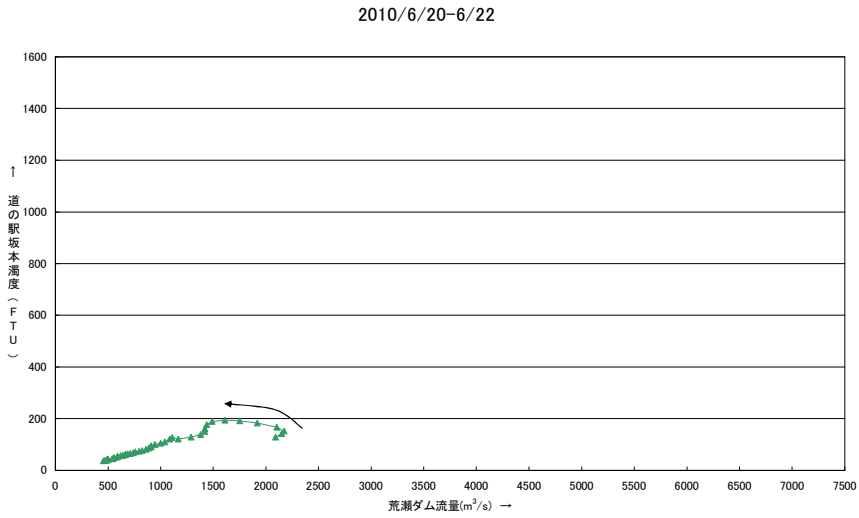
H22③

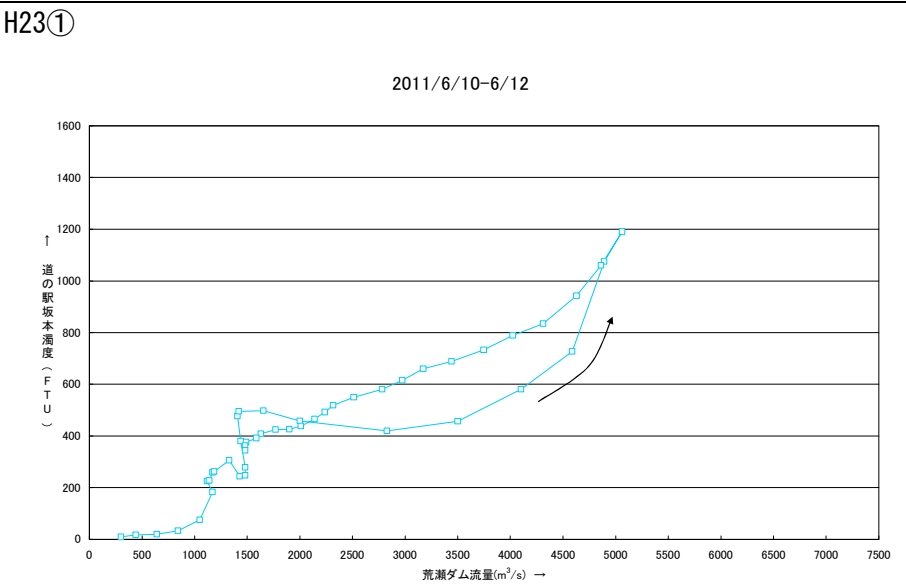
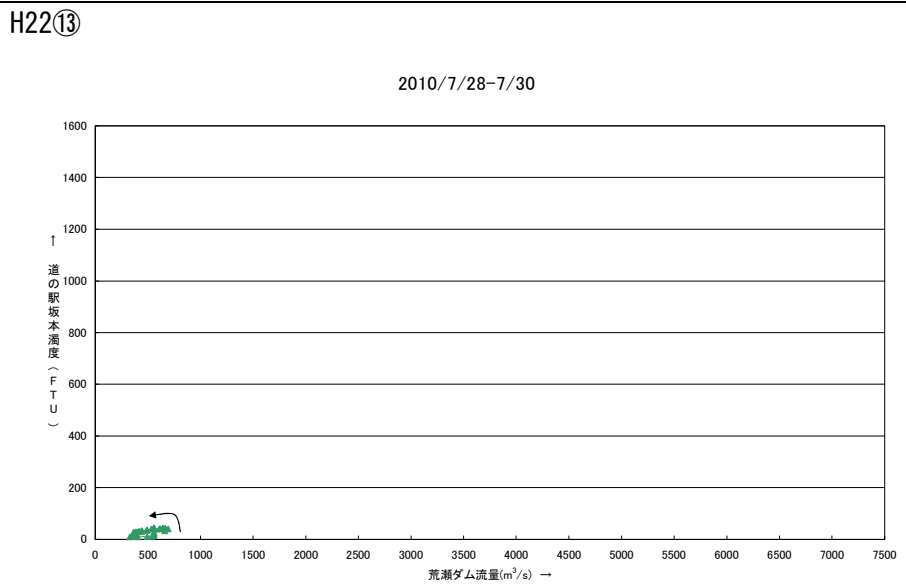
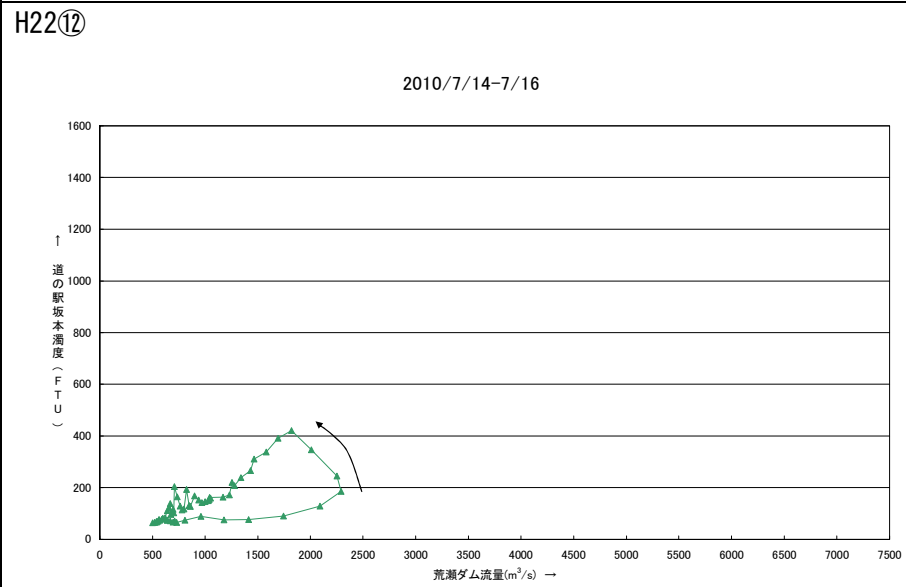
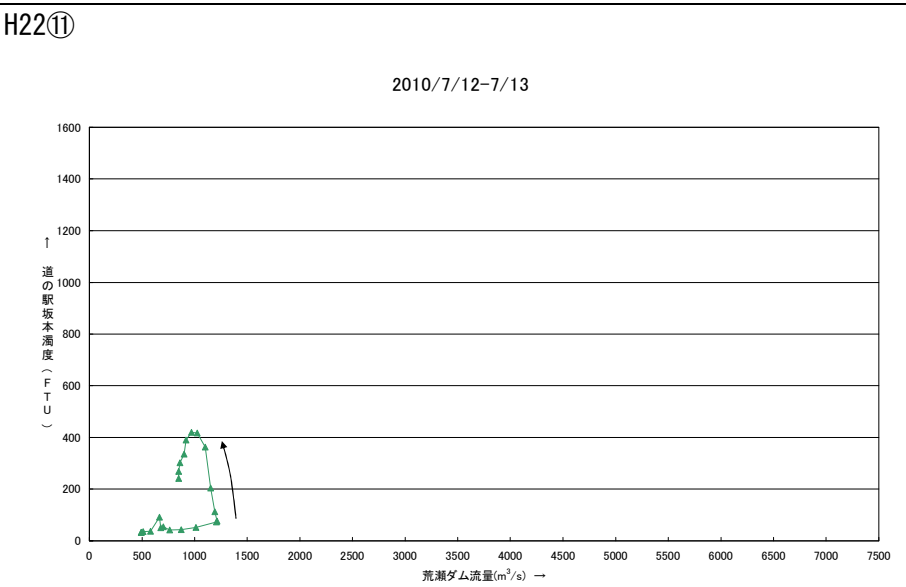
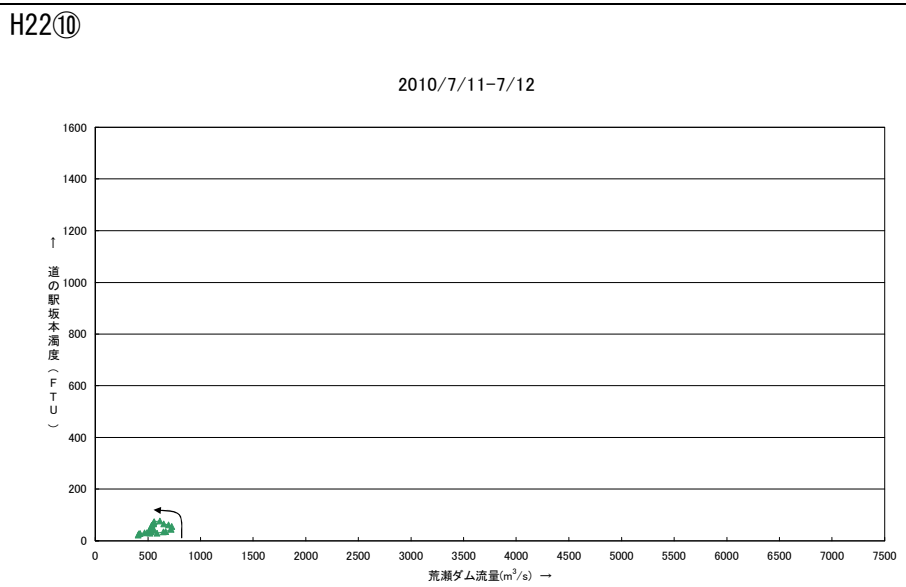
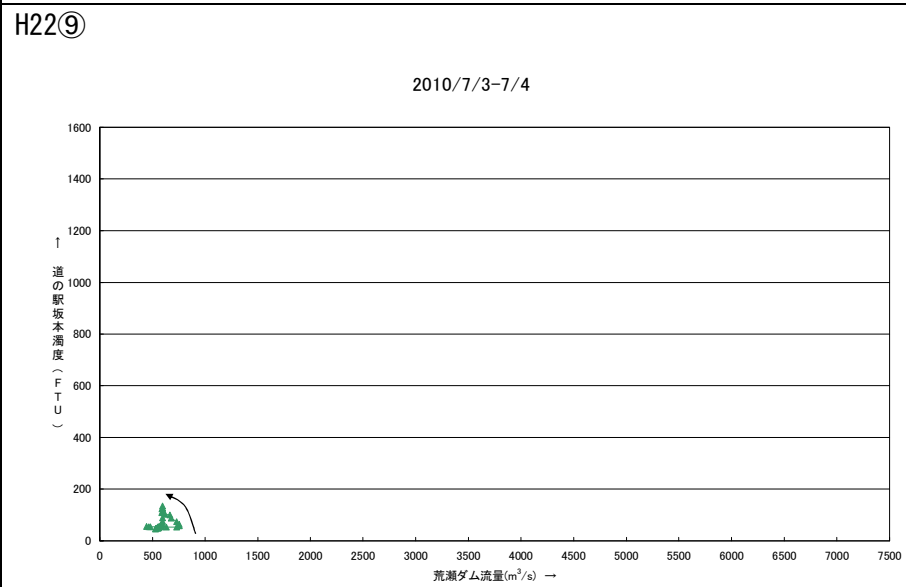
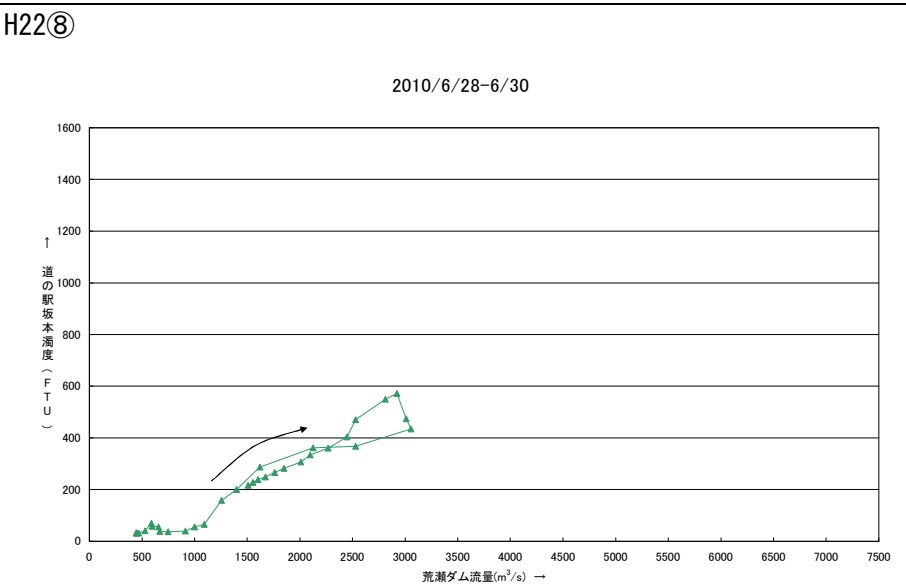
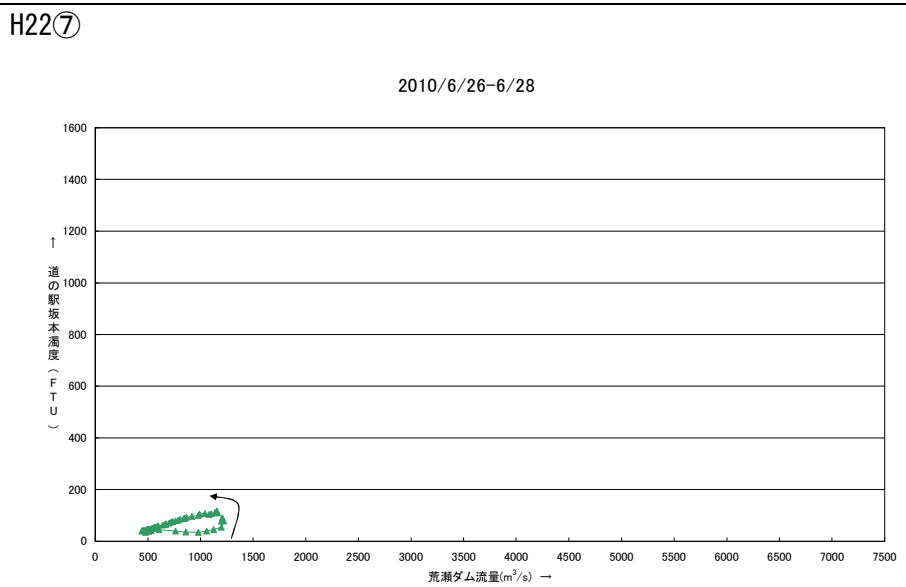
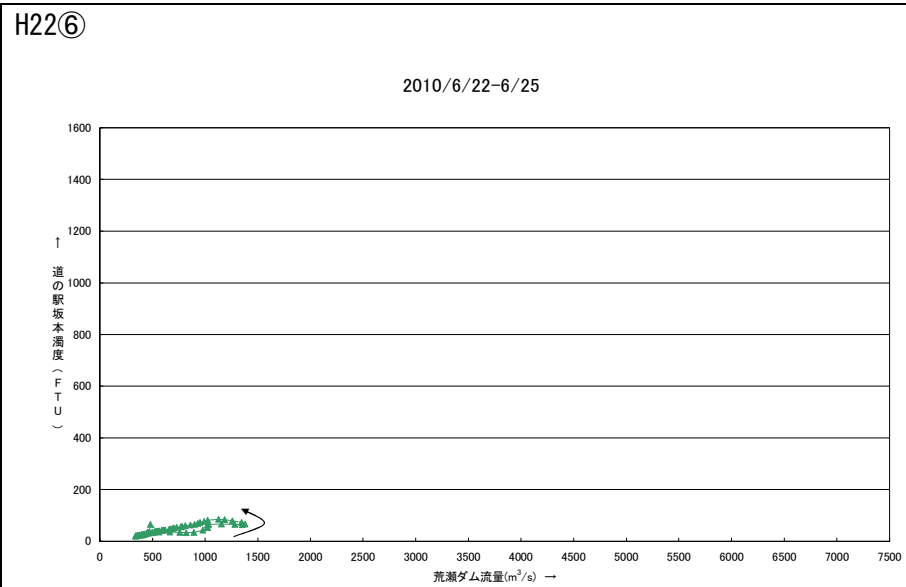


H22④

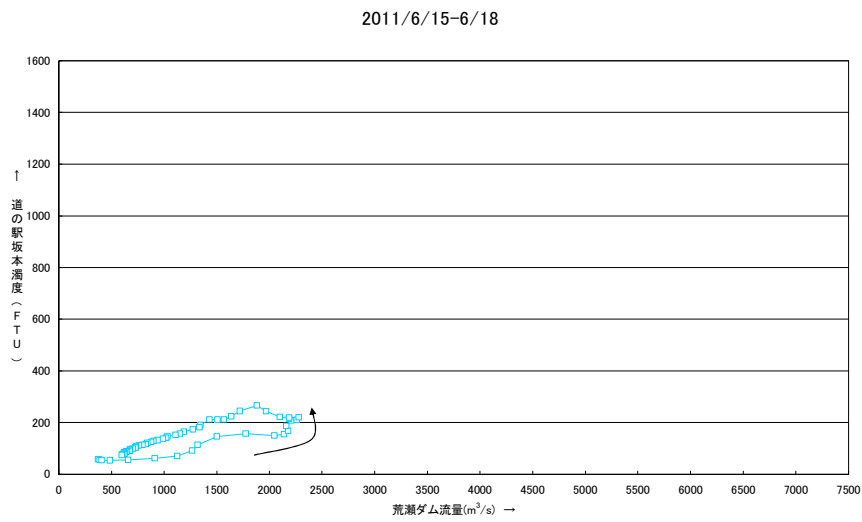


H22⑤

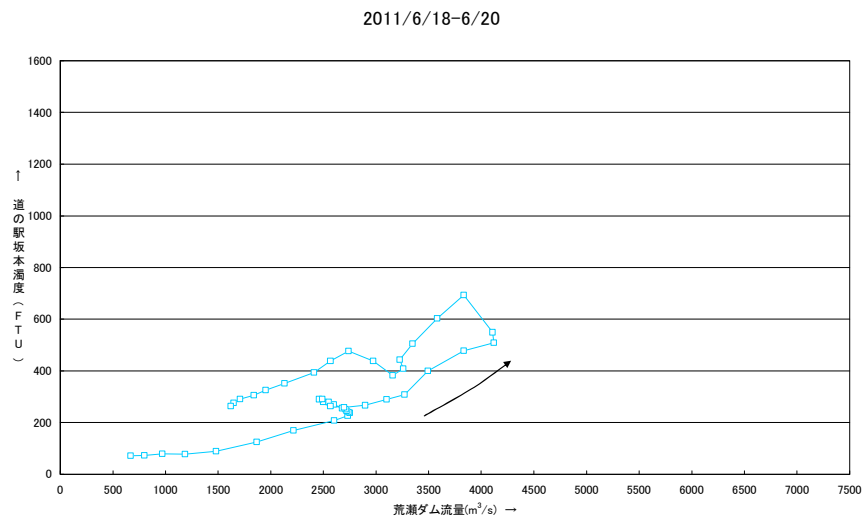




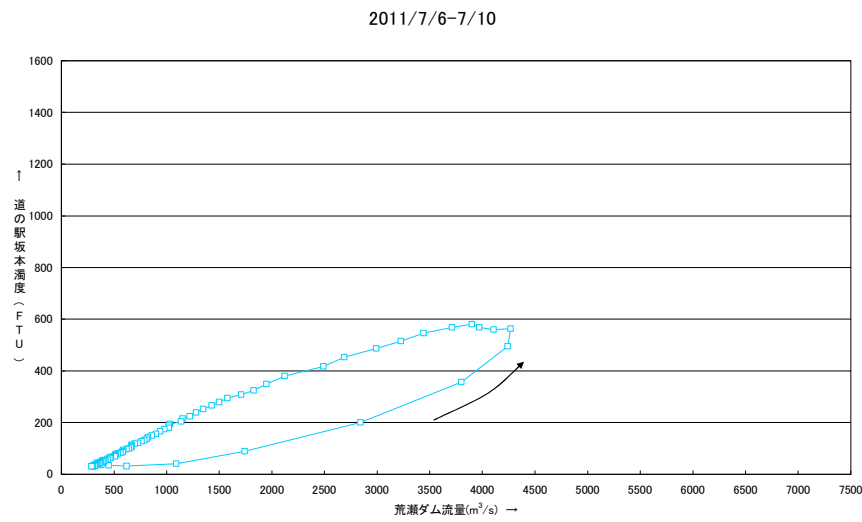
H23②



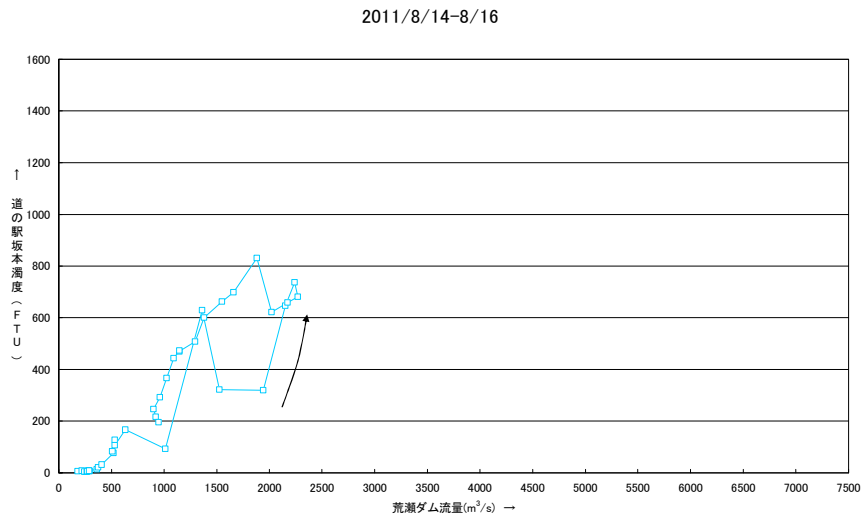
H23③



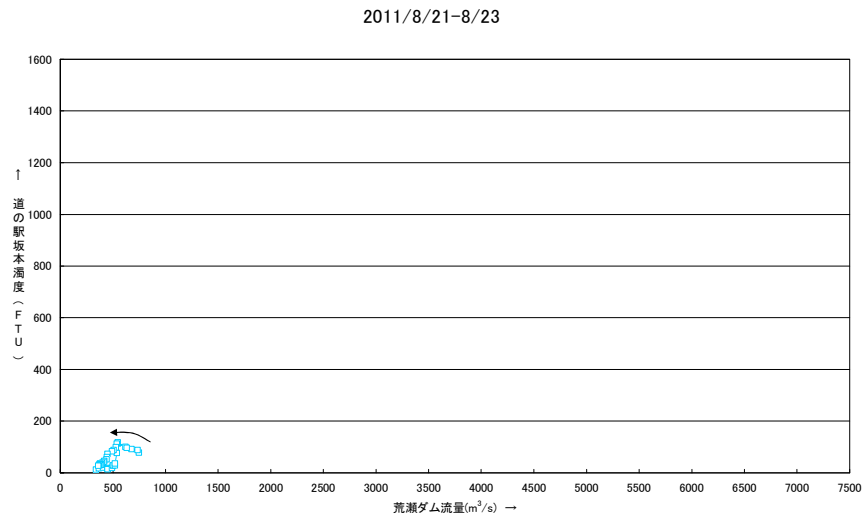
H23④



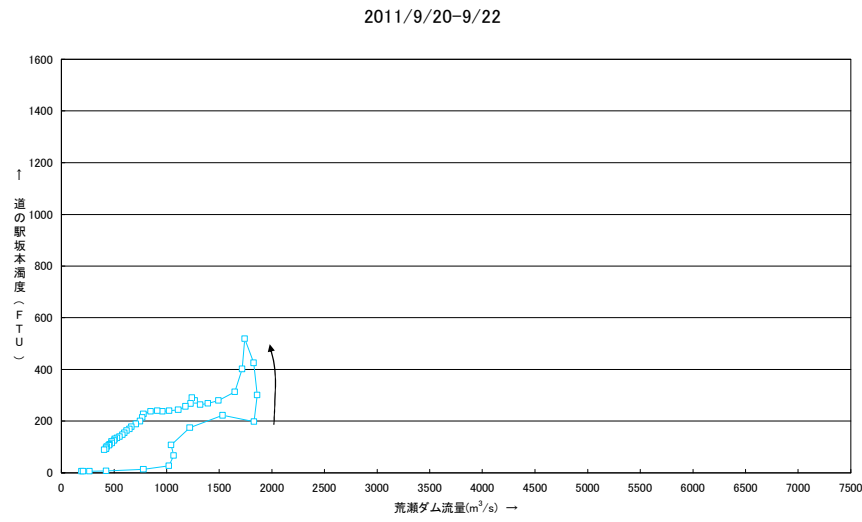
H23⑤



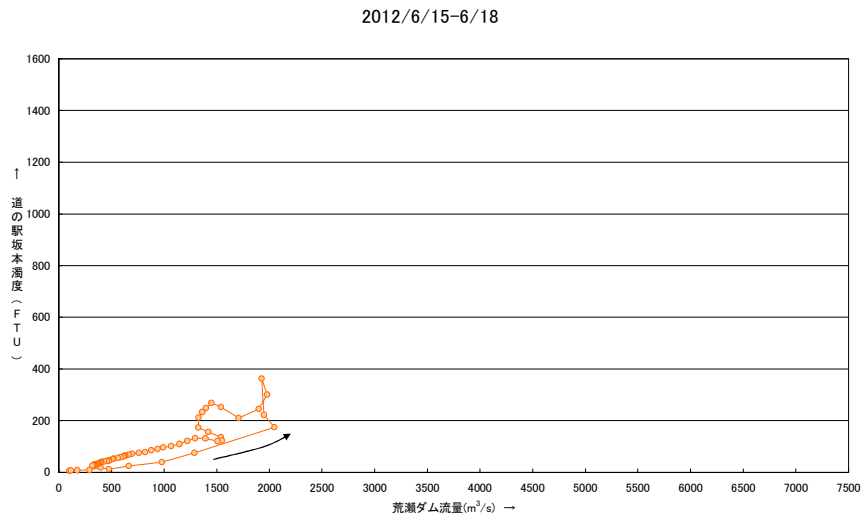
H23⑥



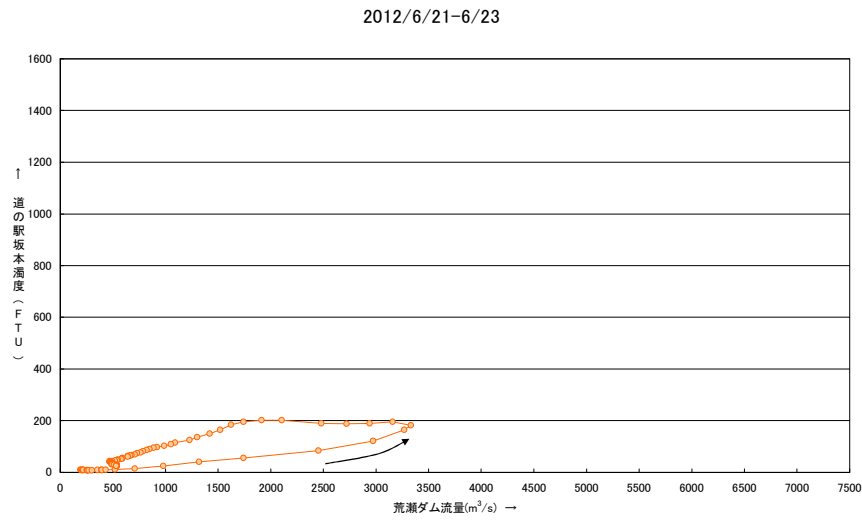
H23⑦



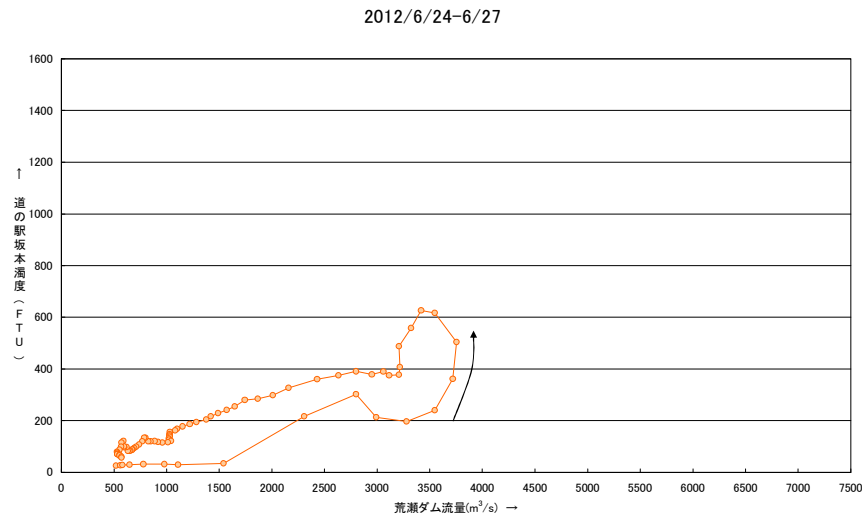
H24①



H24②

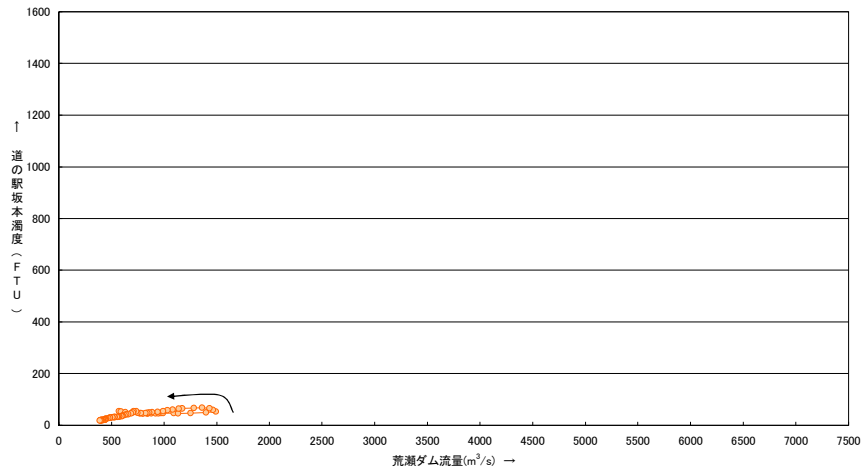


H24③



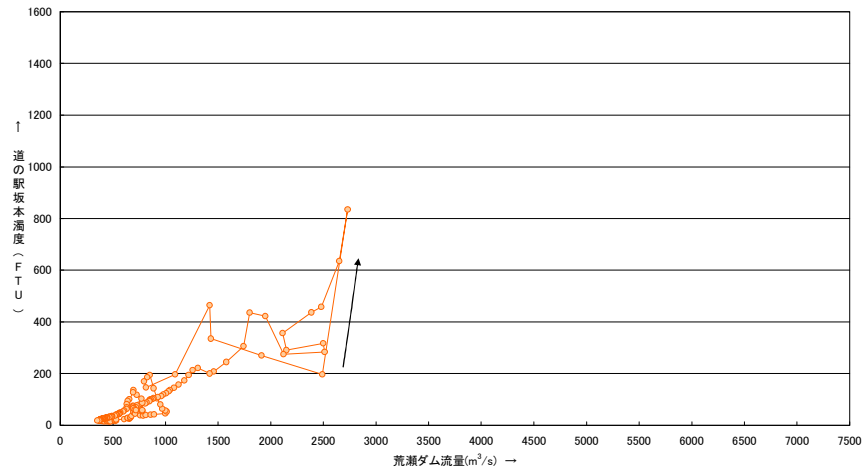
H24④

2012/6/27-6/30



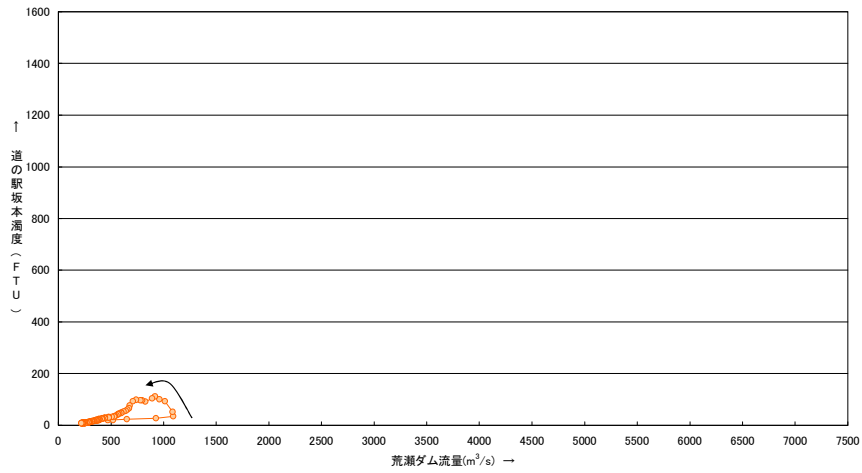
H24⑤

2012/6/30-7/7



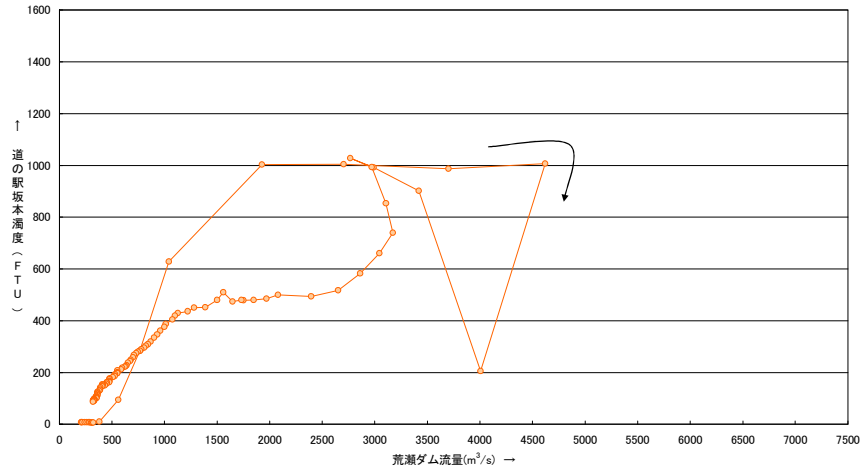
H24⑥

2012/7/7-7/11



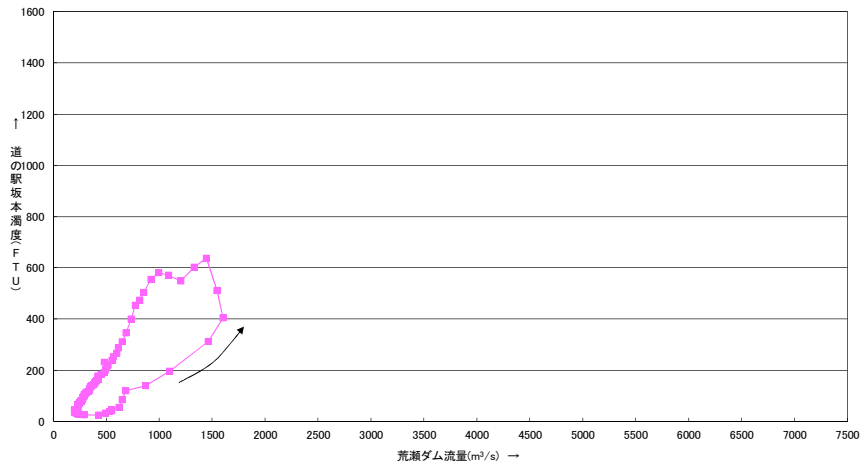
H24⑦

2012/7/11-7/16



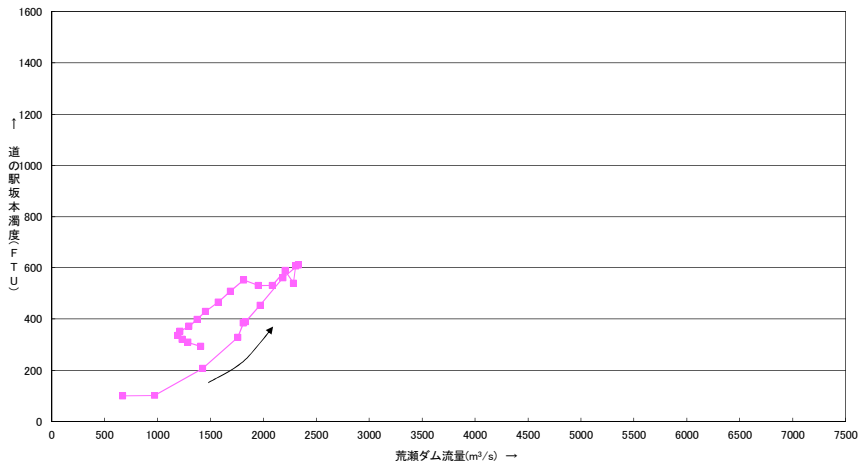
H25①

2013/6/25-6/29



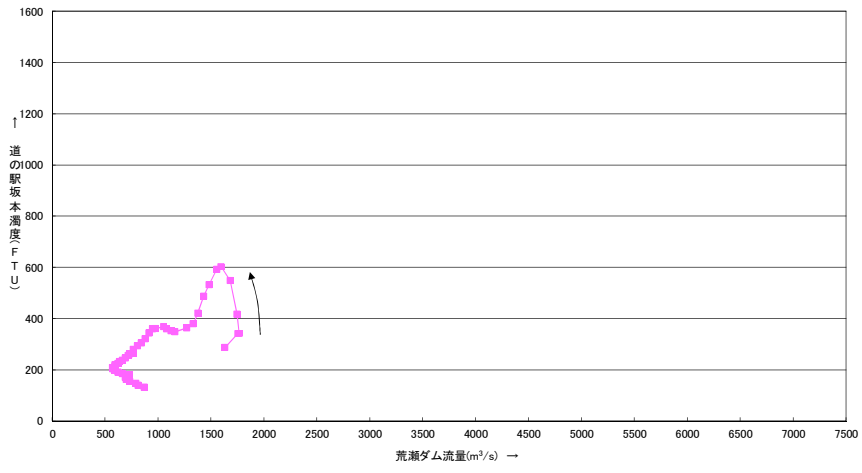
H25②

2013/9/1-9/2



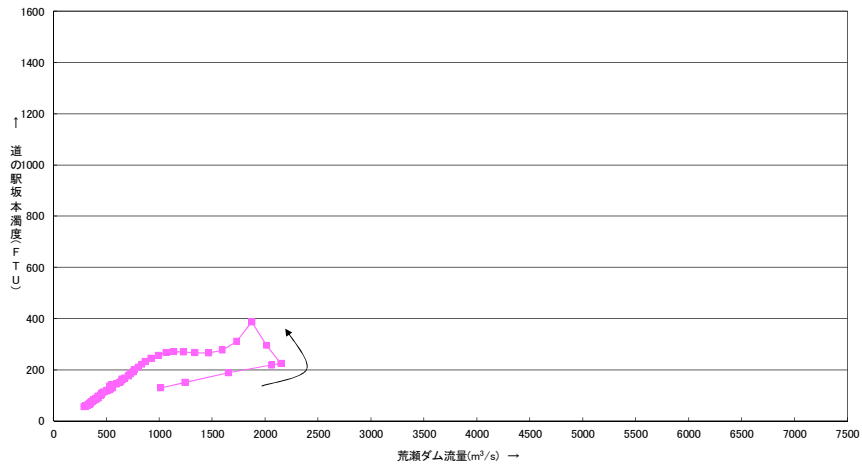
H25③

2013/9/2-9/4



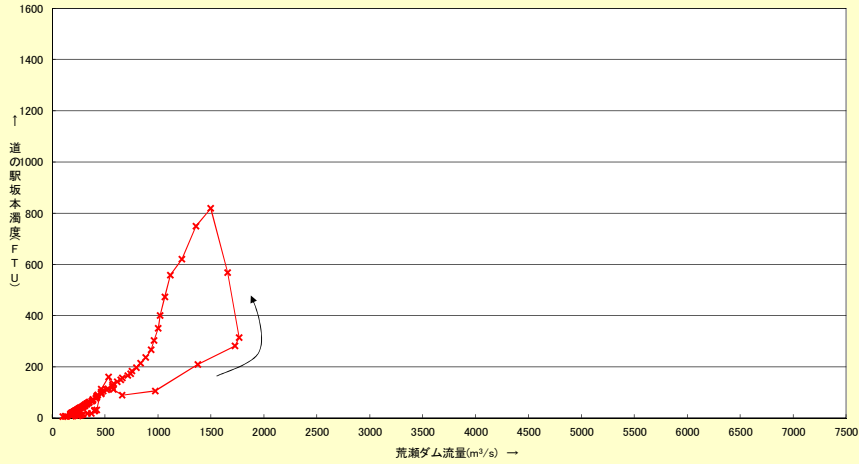
H25④

2013/9/4-9/6



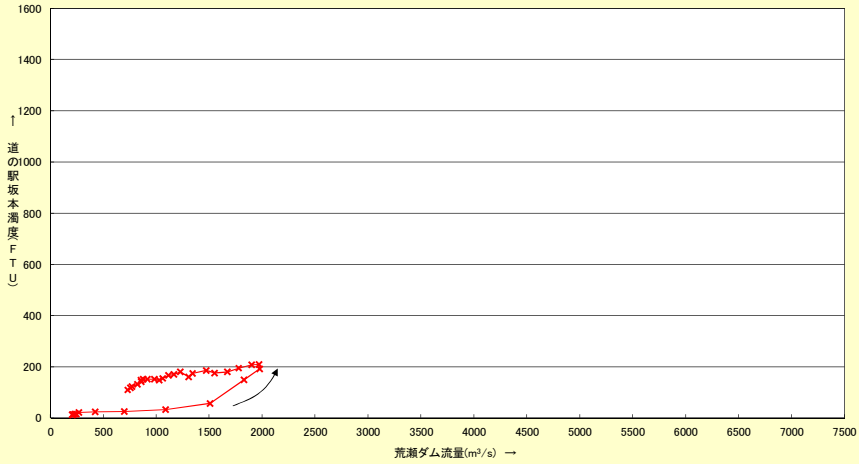
H26①

2014/6/21-6/26



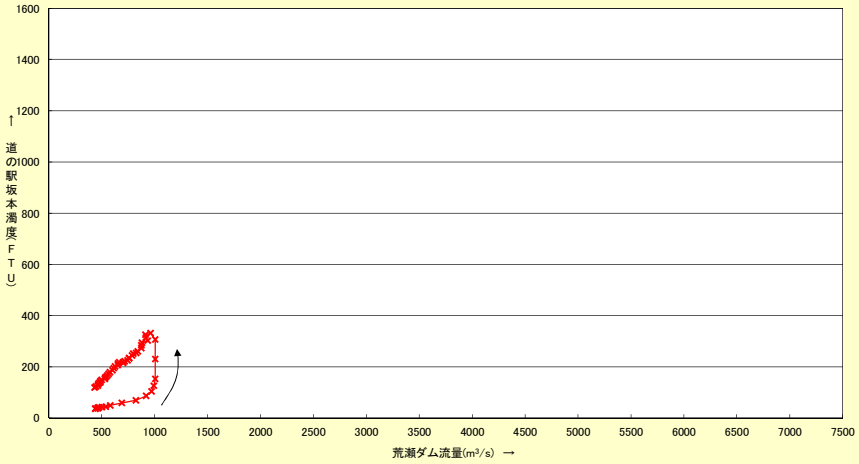
H26②

2014/7/6-7/7



H26③

2014/7/9-7/11



横 石

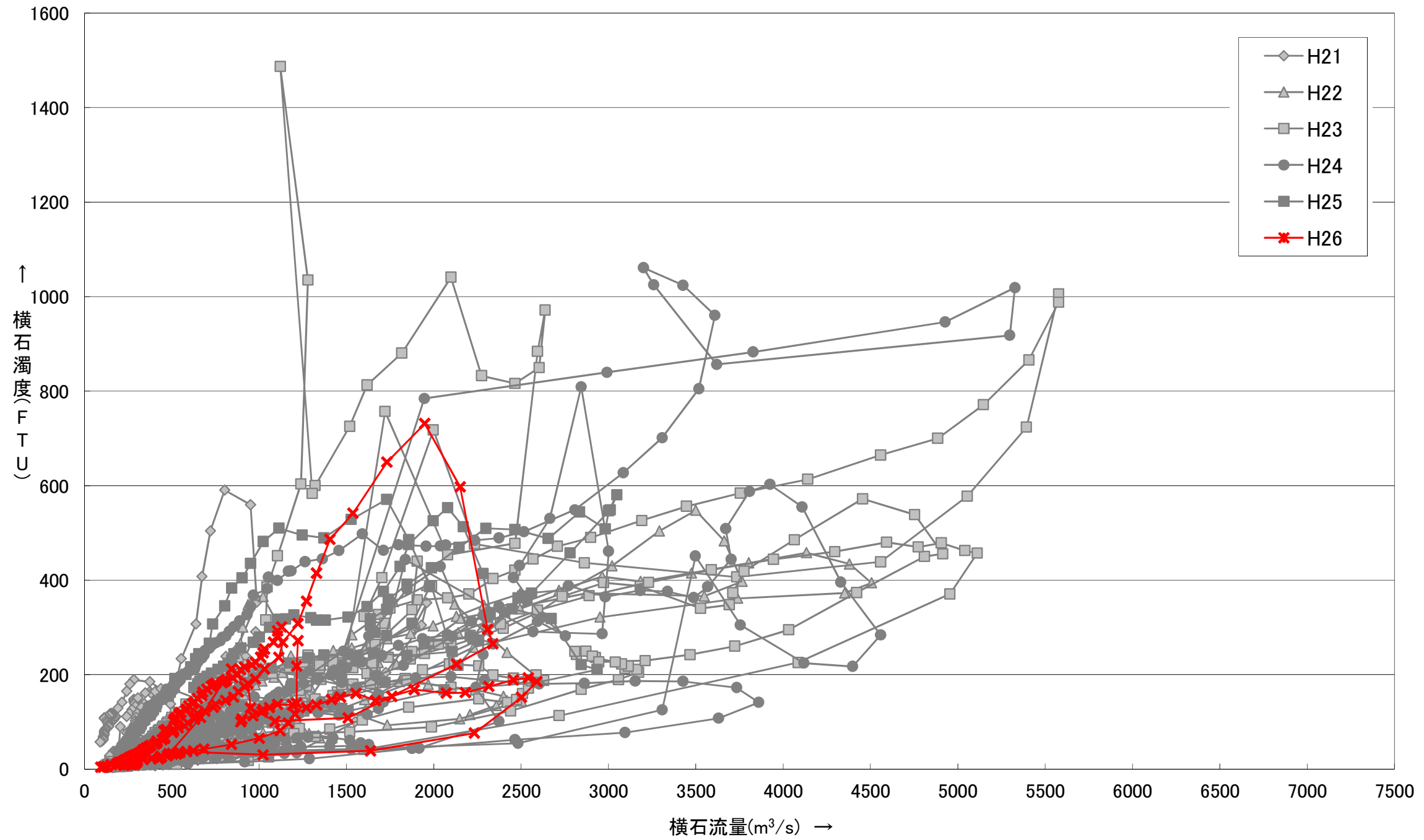
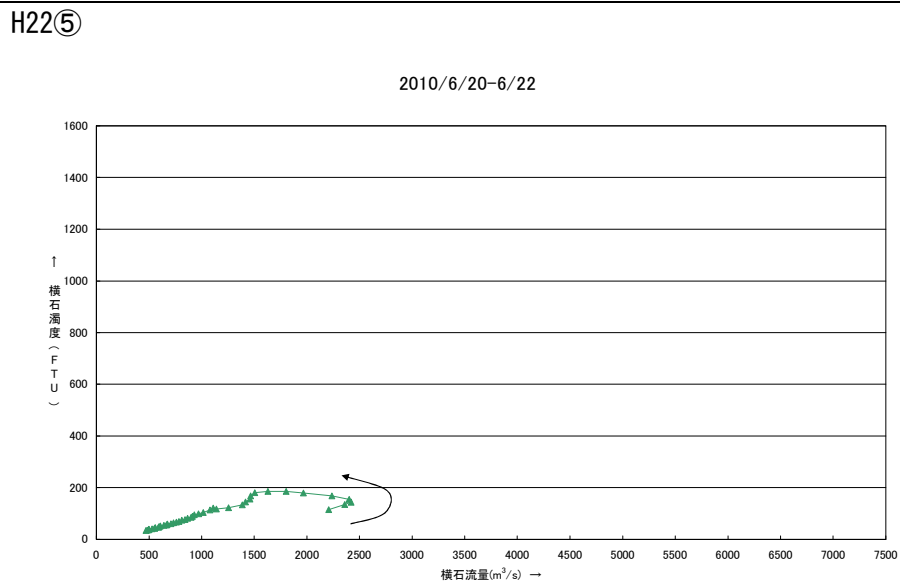
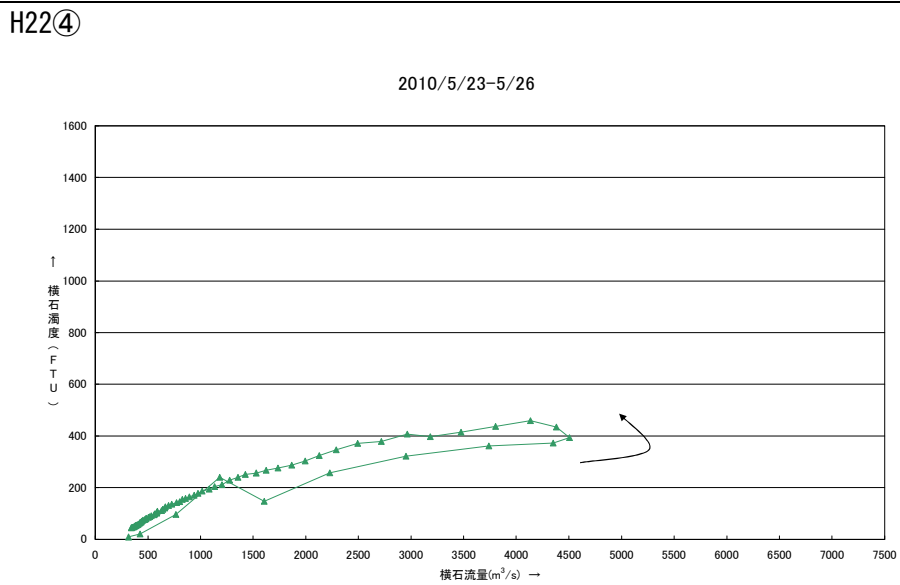
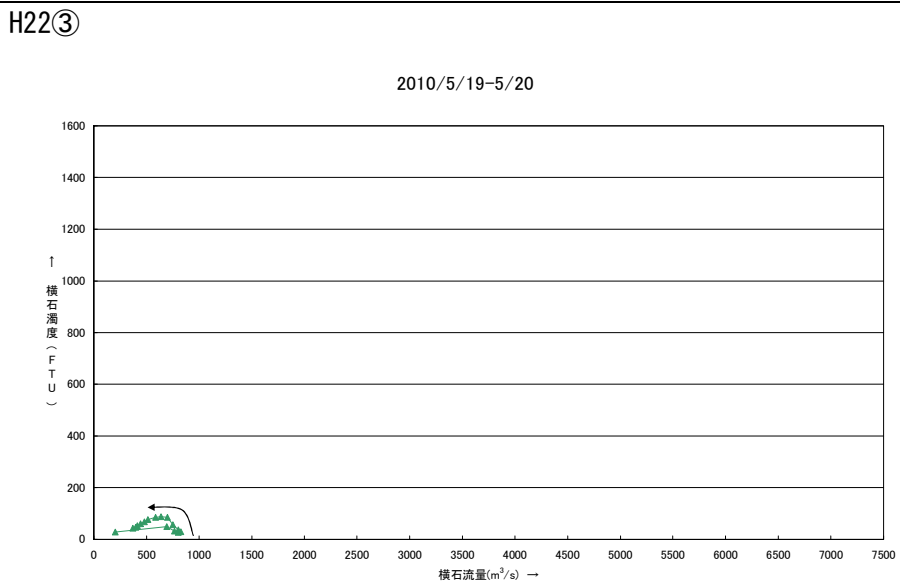
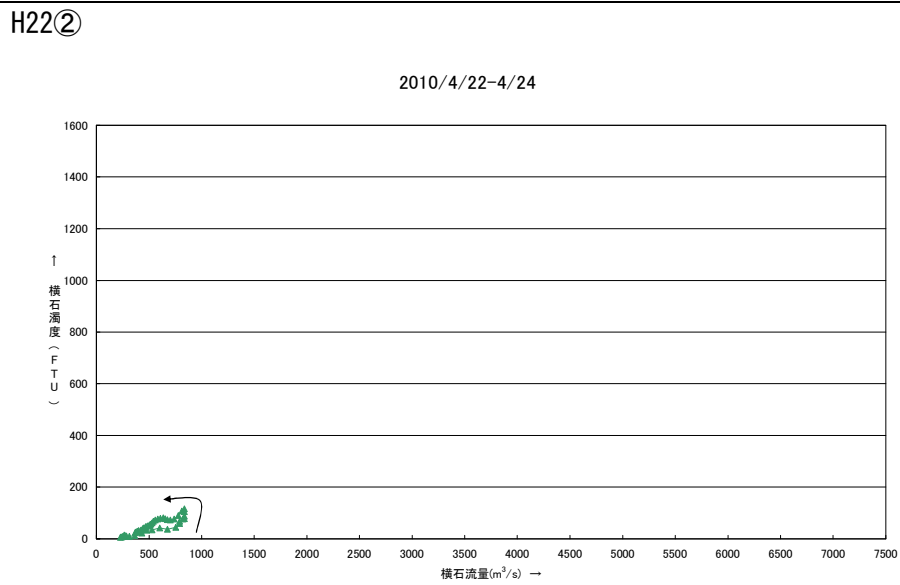
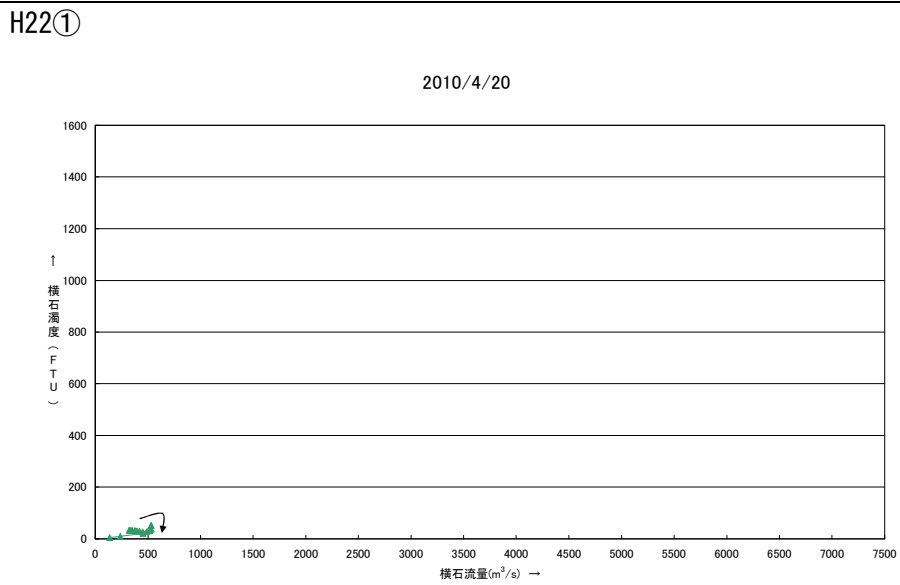
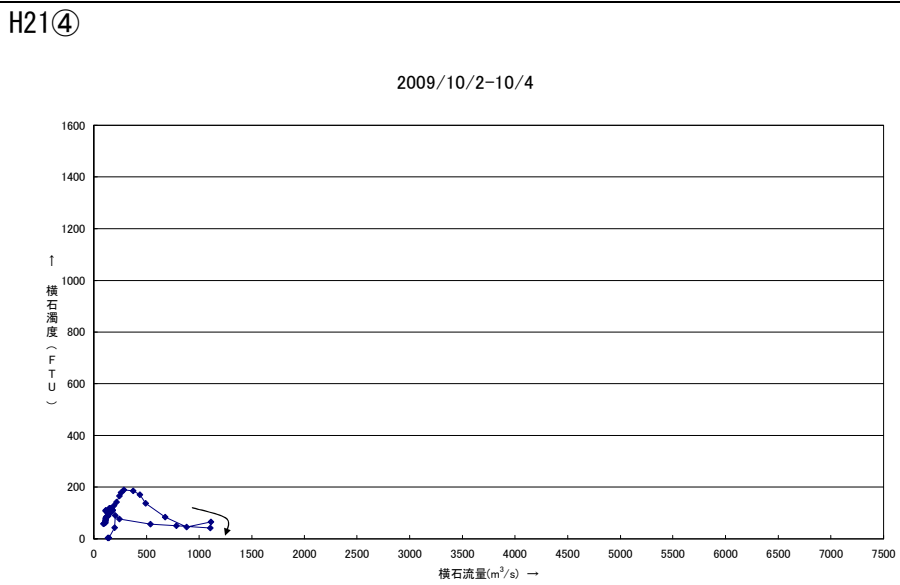
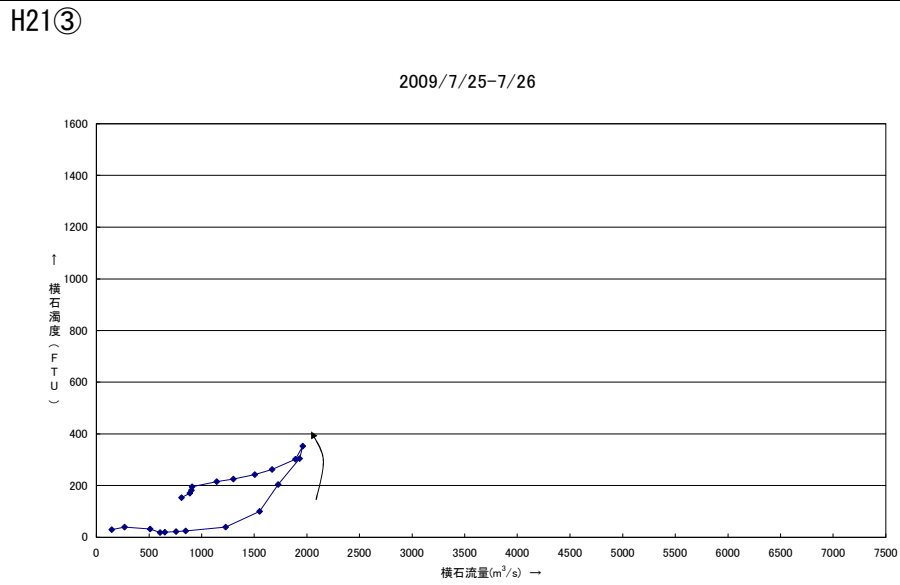
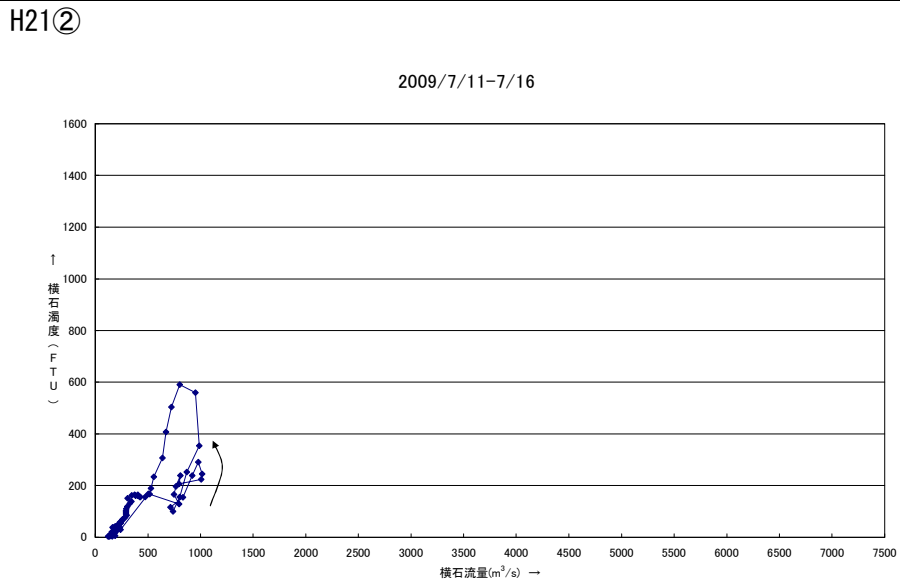
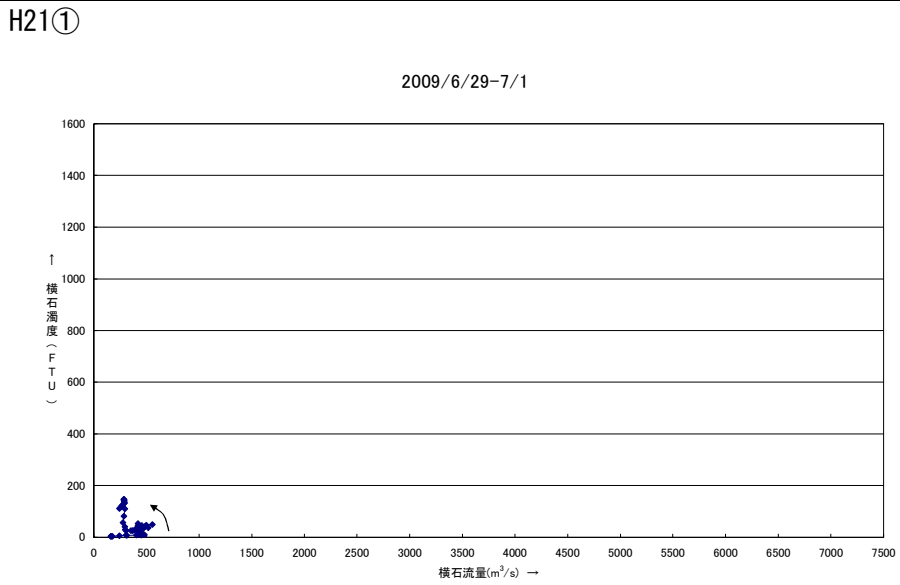
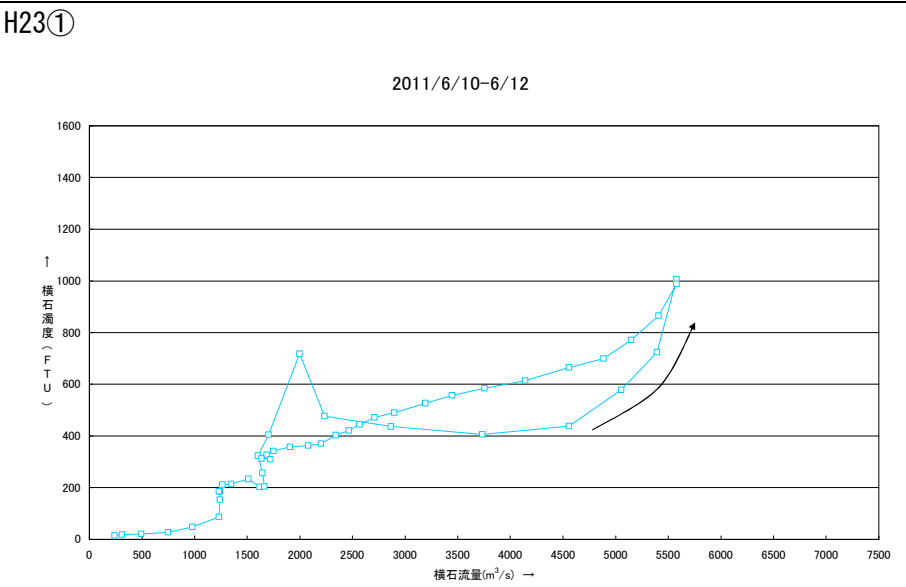
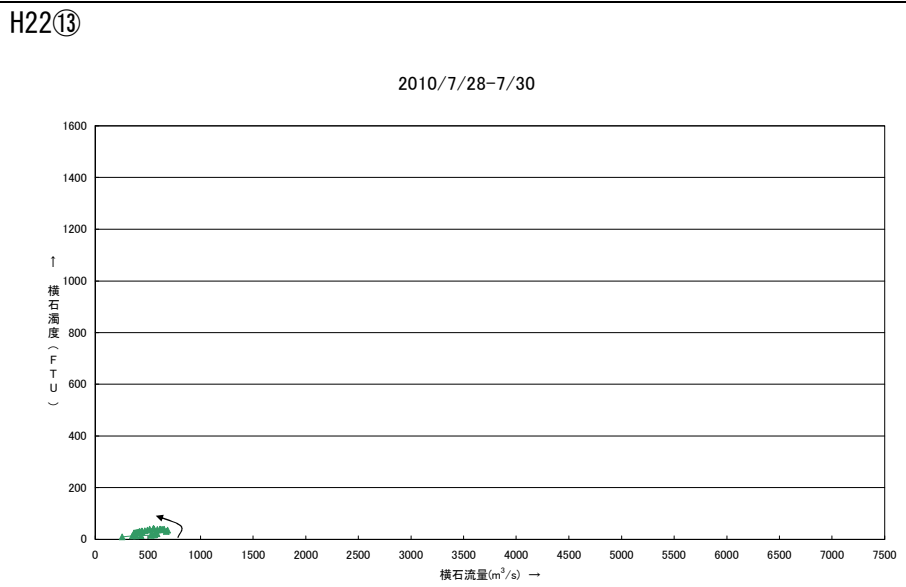
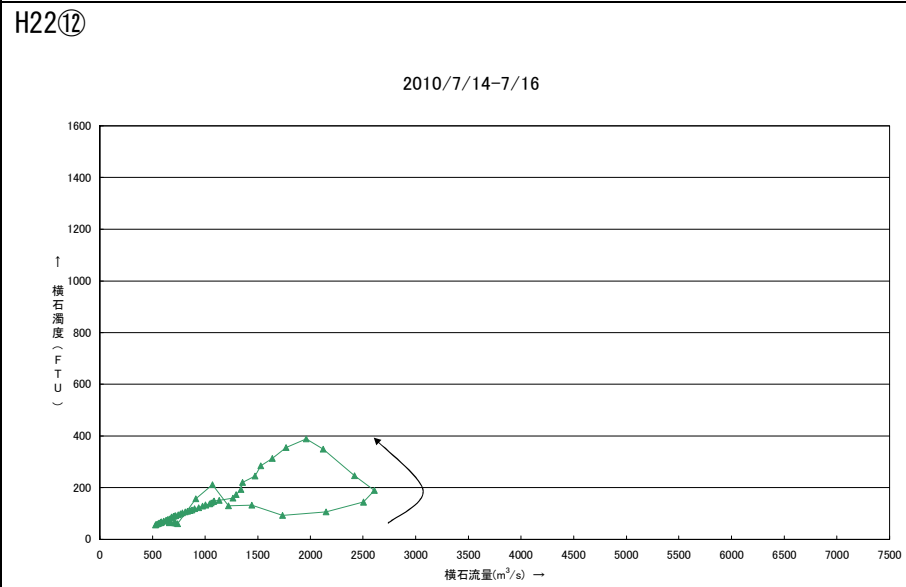
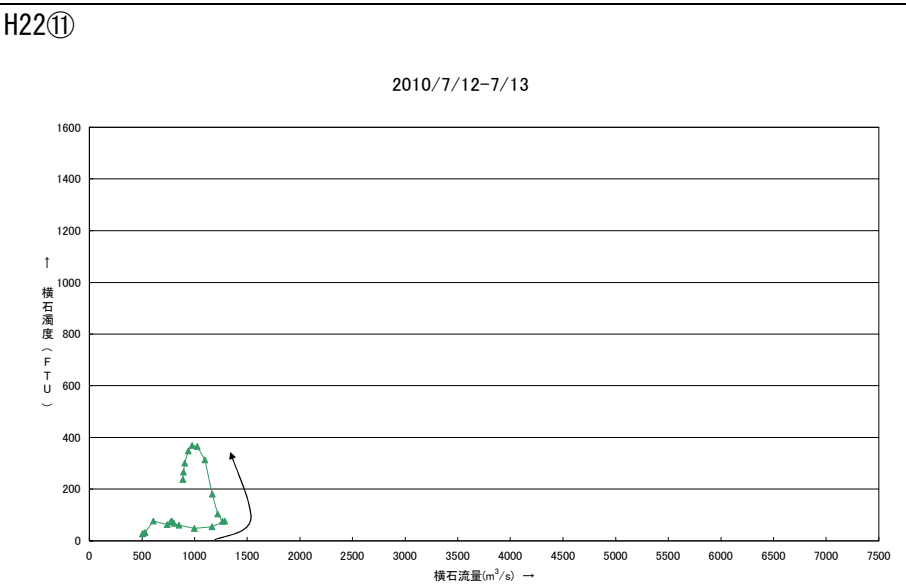
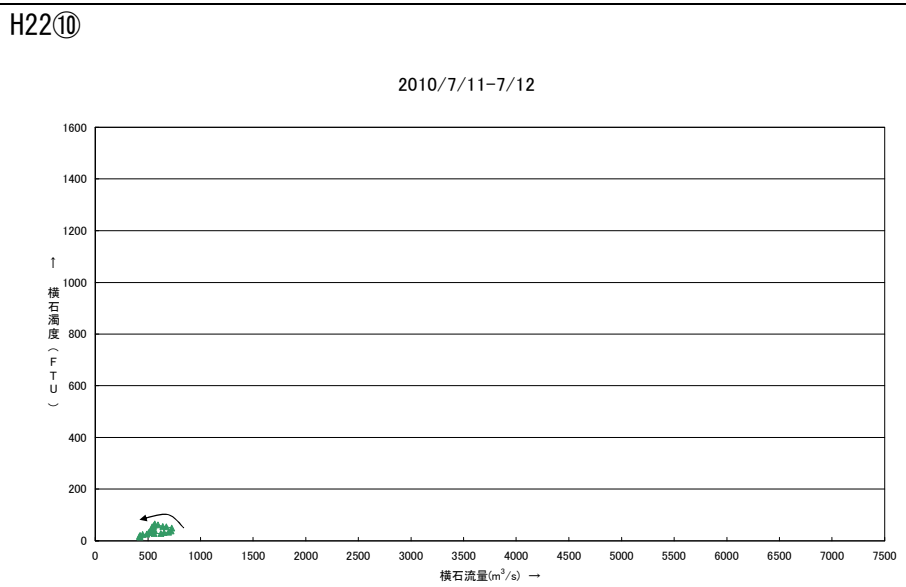
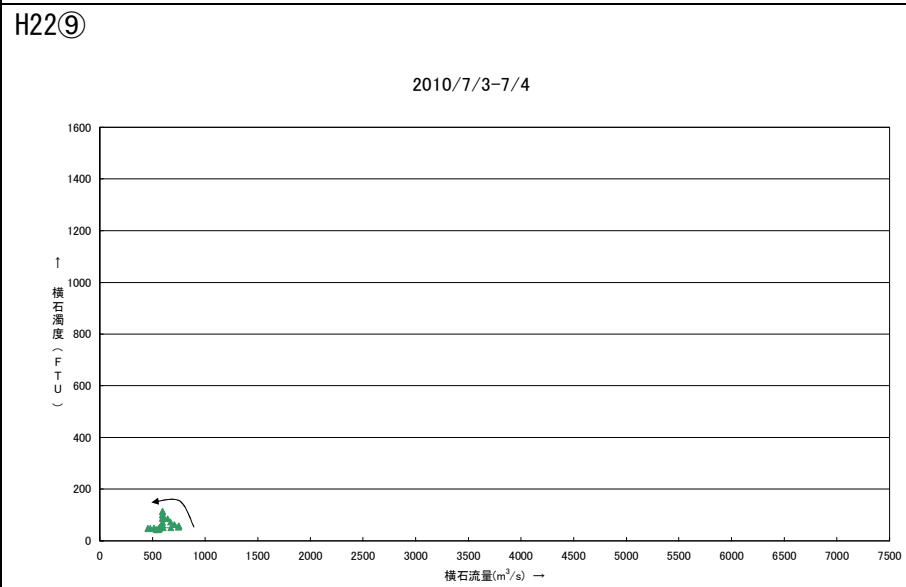
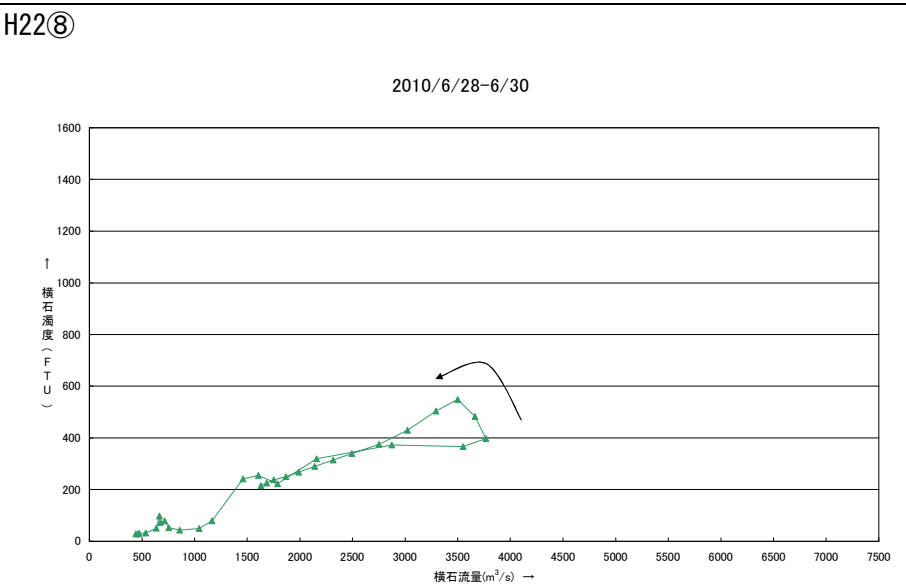
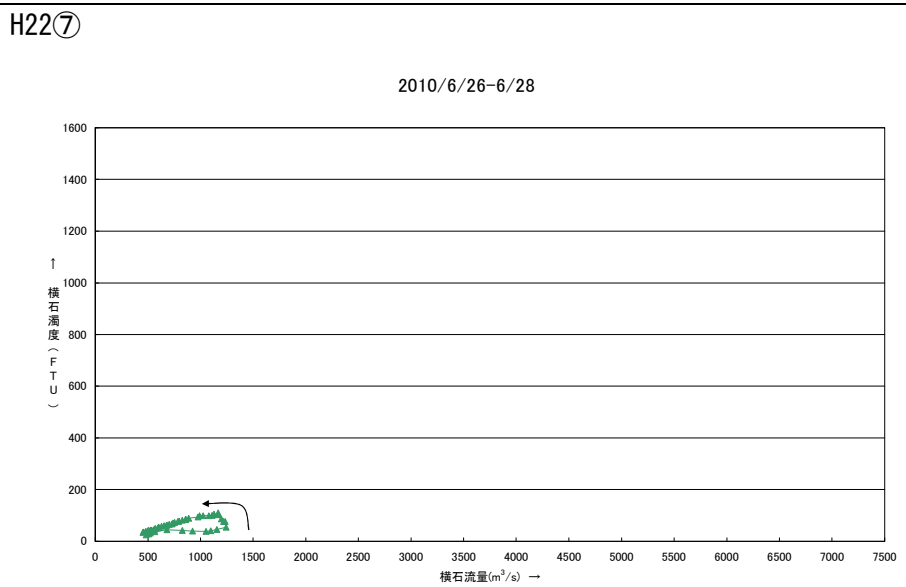
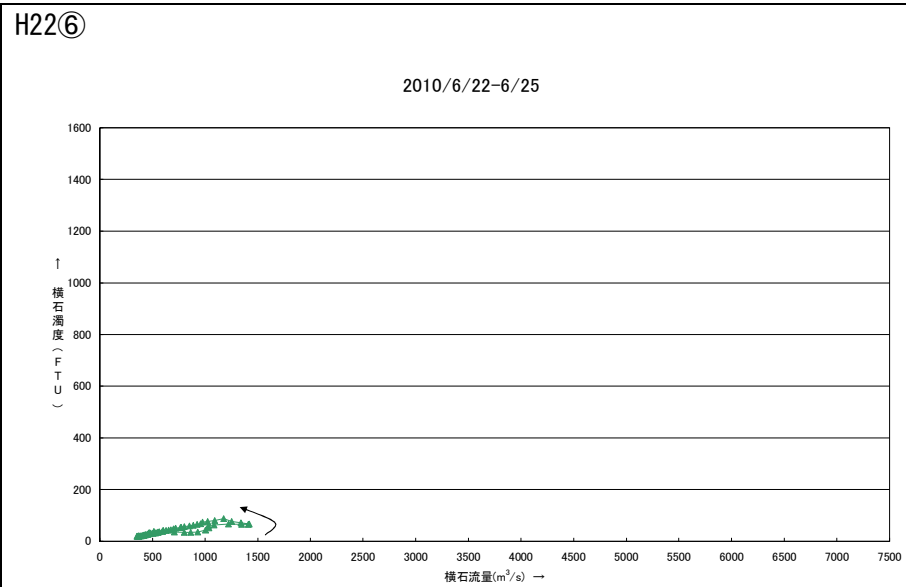


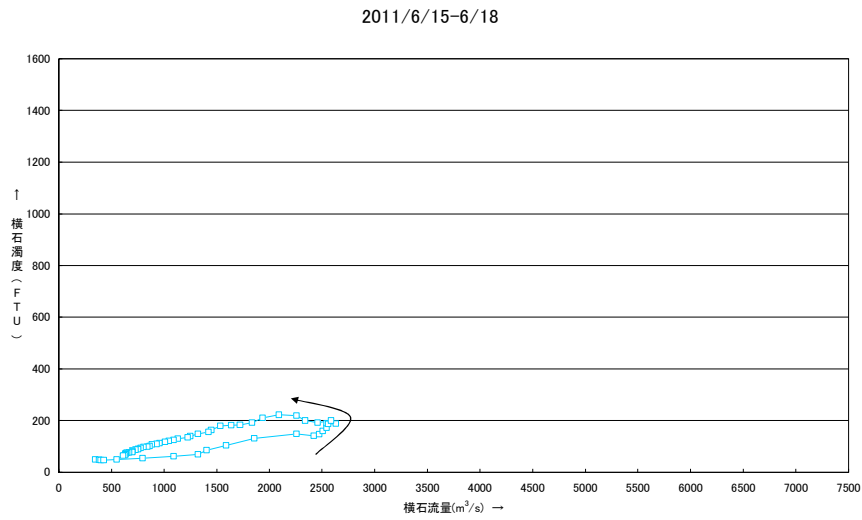
図 出水時の流量と濁度 (FTU) の時間的な変化 (横石)

横石

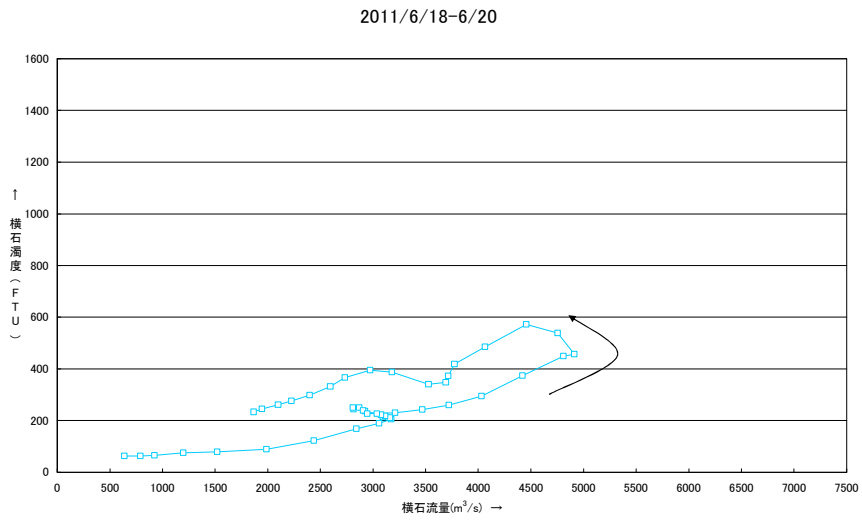




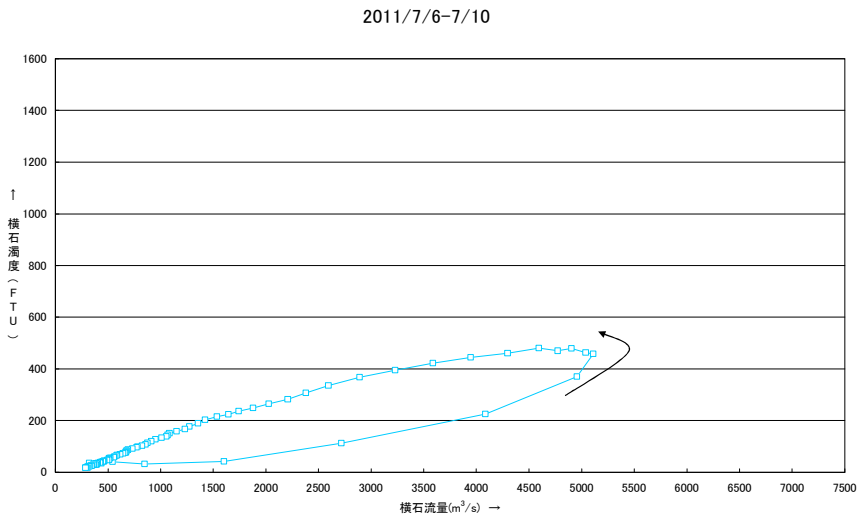
H23②



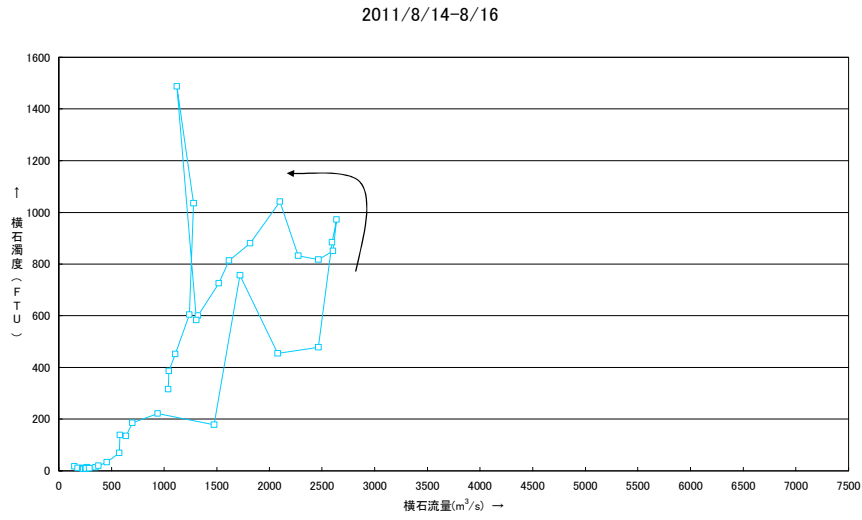
H23③



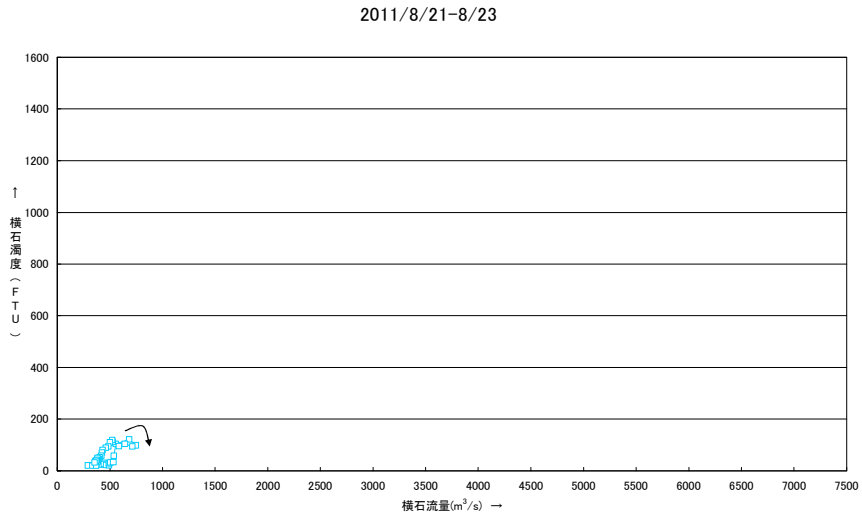
H23④



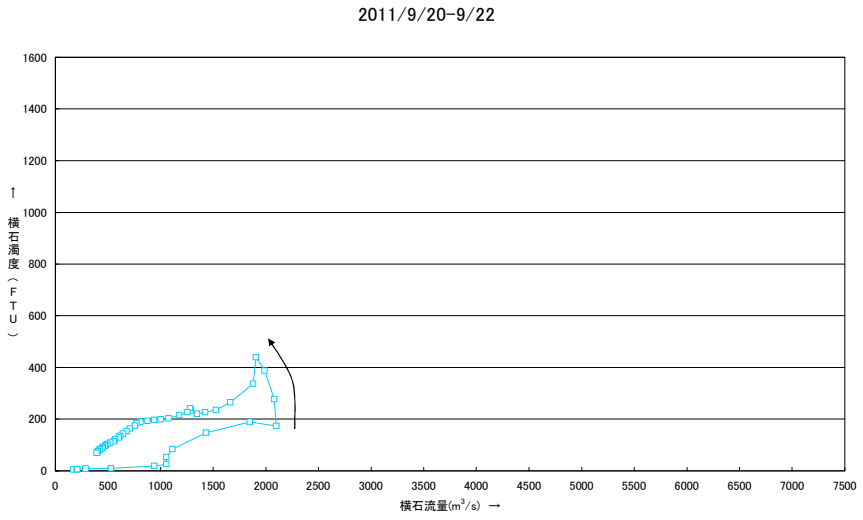
H23⑤



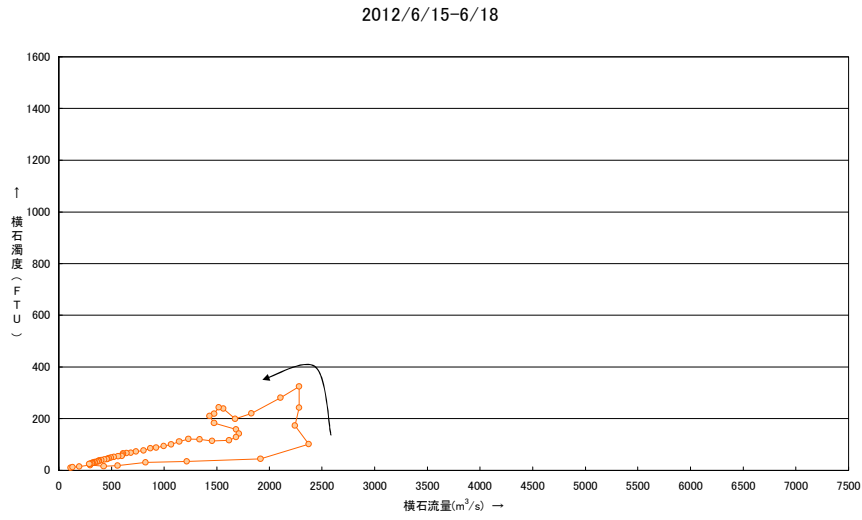
H23⑥



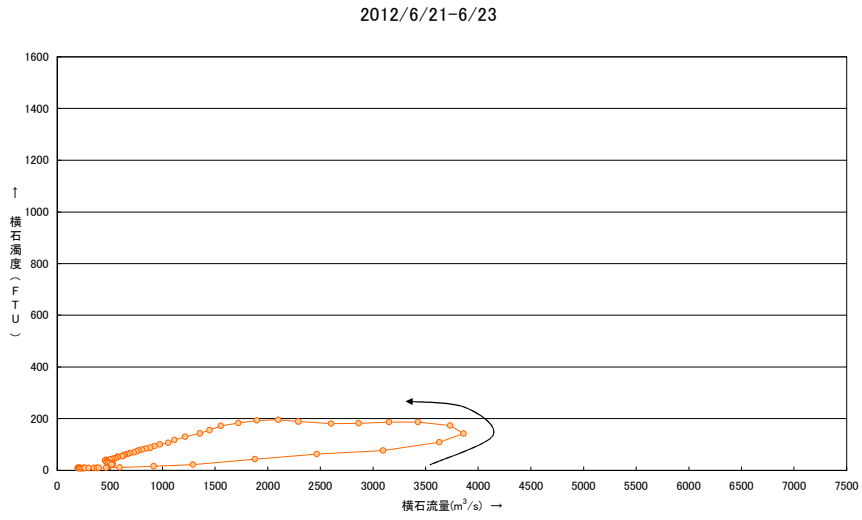
H23⑦



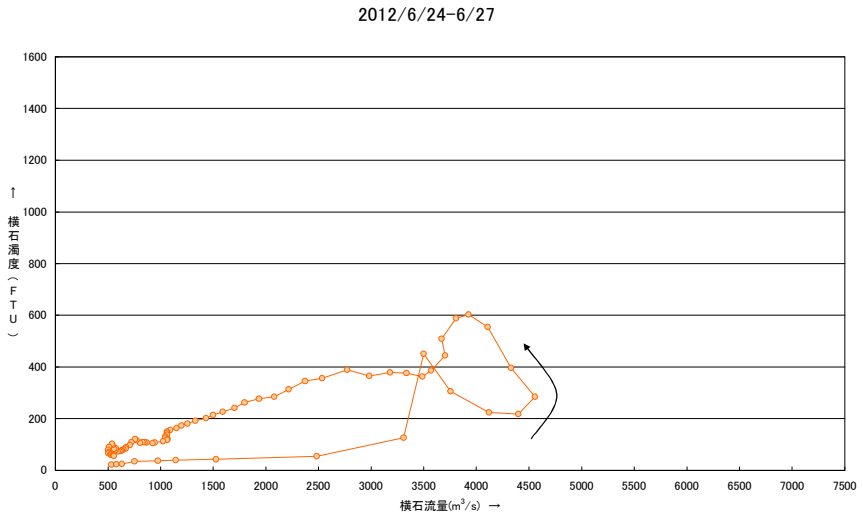
H24①



H24②

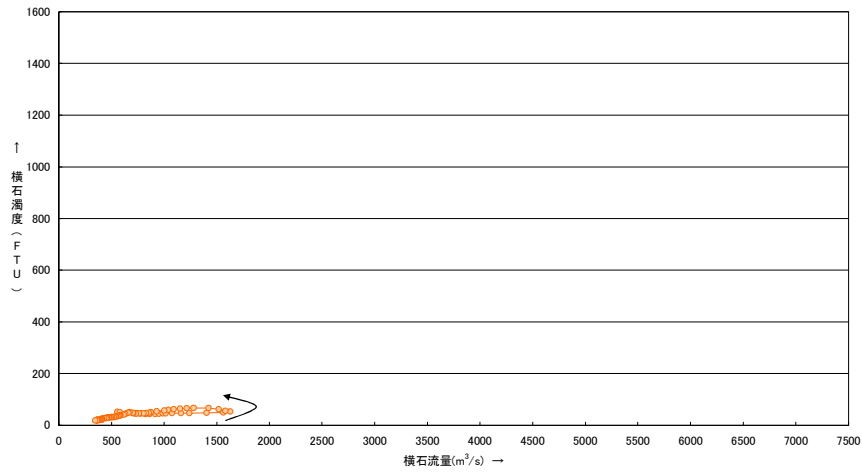


H24③



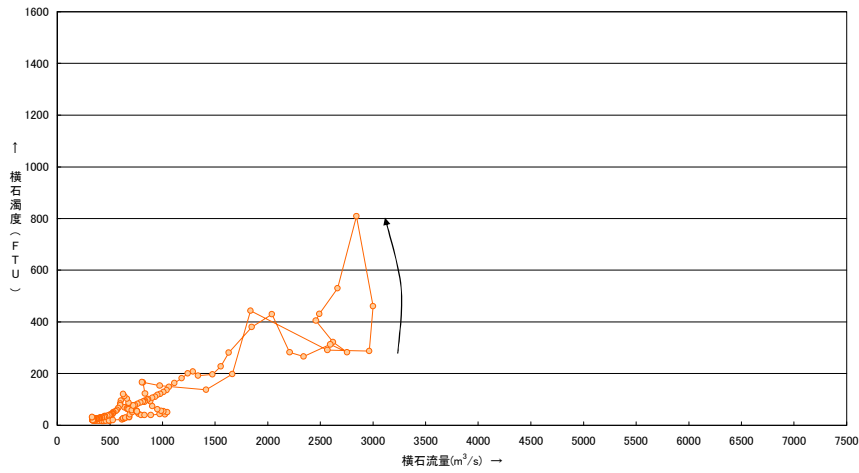
H24④

2012/6/27-6/30



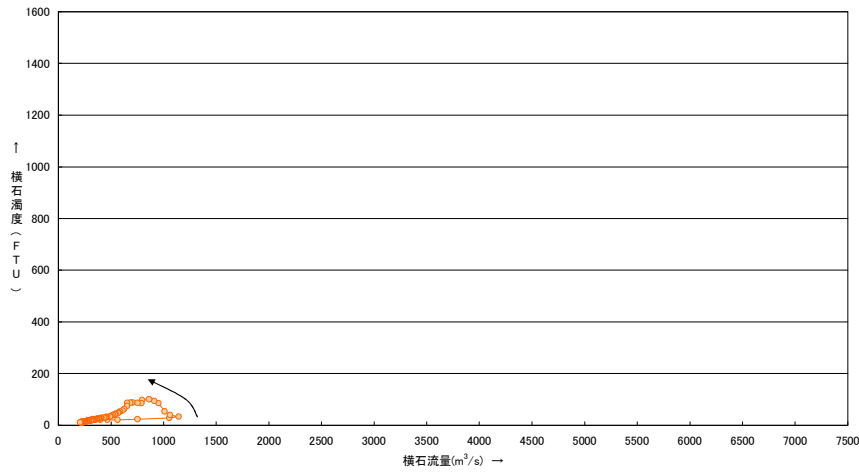
H24⑤

2012/6/30-7/7



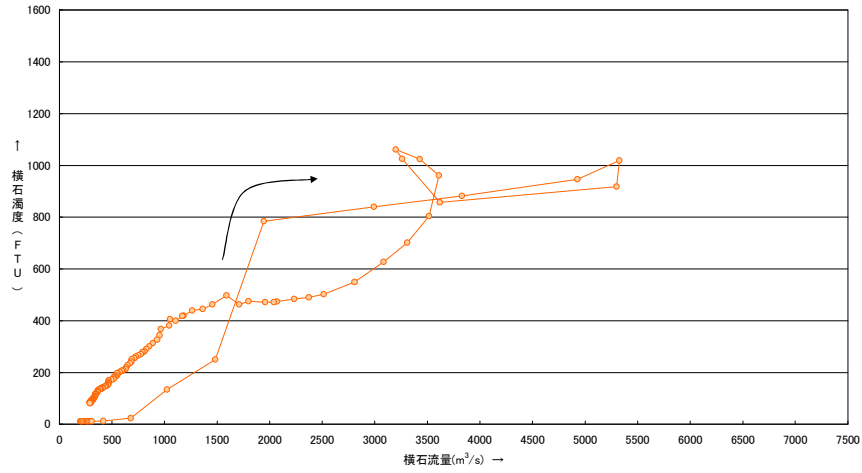
H24⑥

2012/7/7-7/11



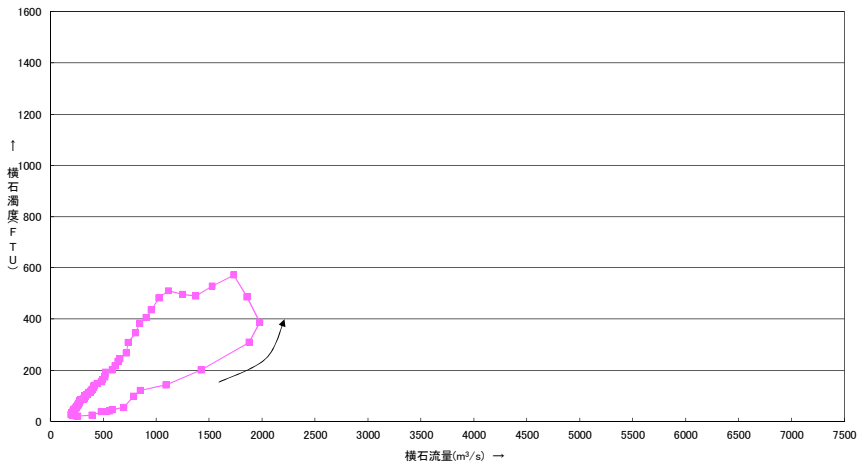
H24⑦

2012/7/11-7/16



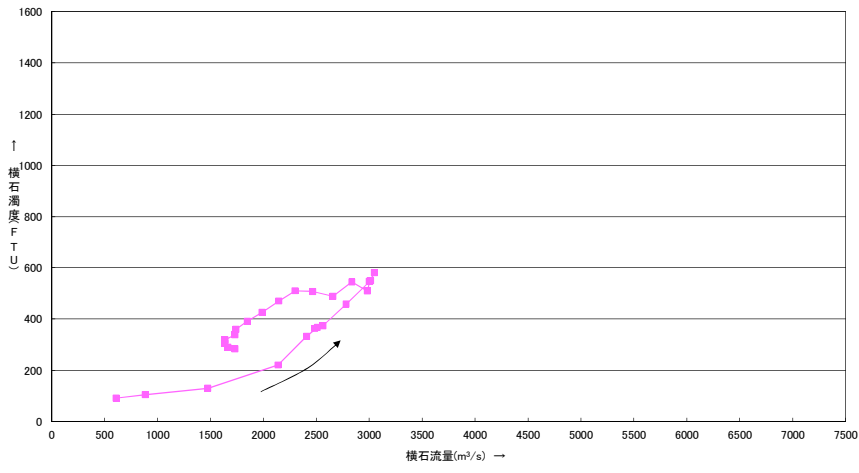
H25①

2013/6/25-6/29



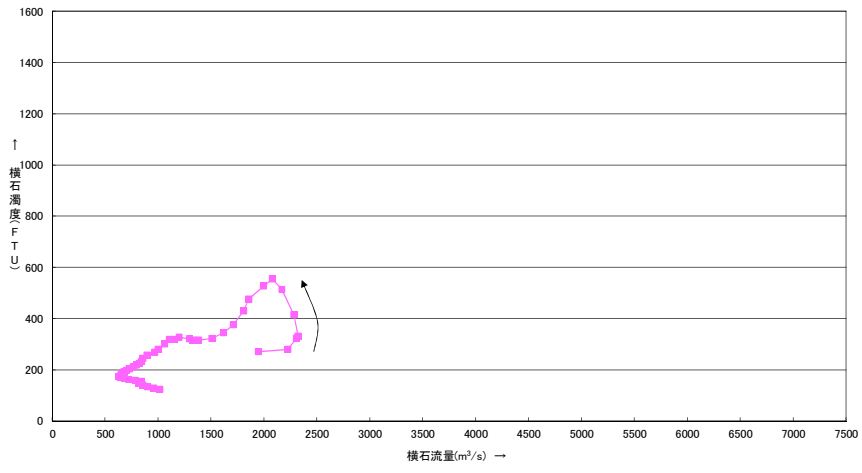
H25②

2013/9/1-9/2



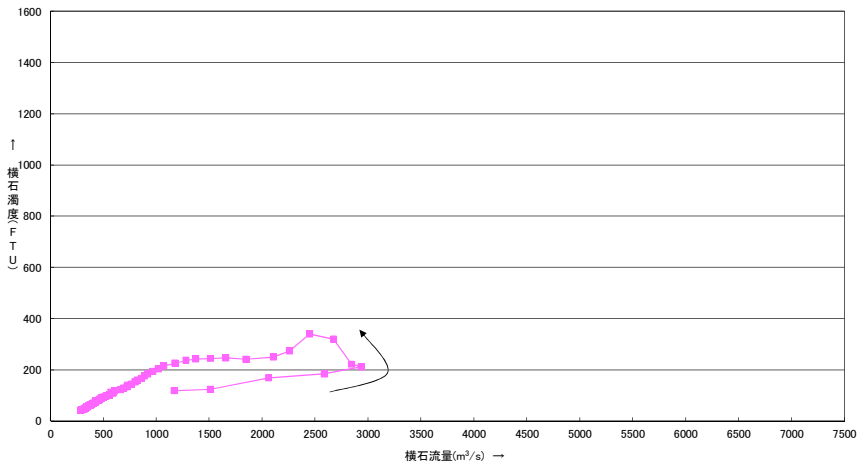
H25③

2013/9/2-9/4



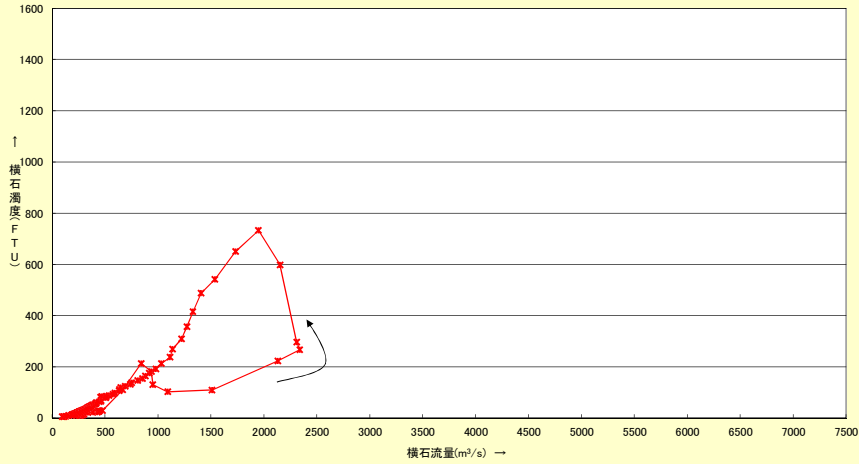
H25④

2013/9/4-9/6



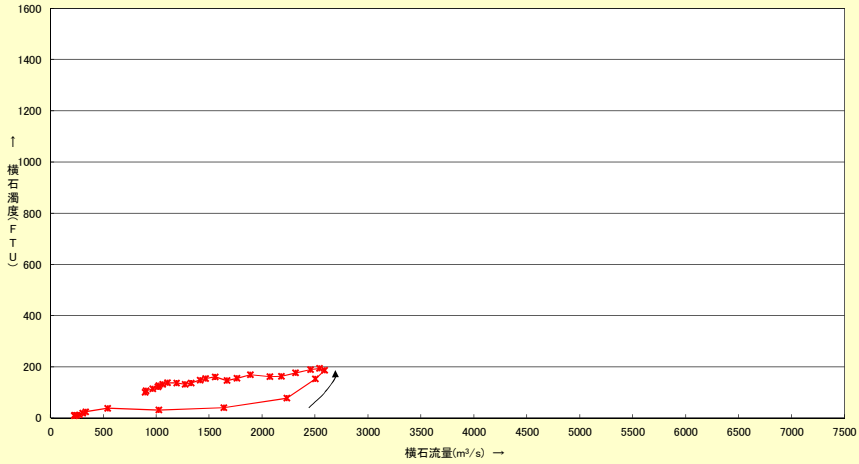
H26①

2014/6/21-6/26



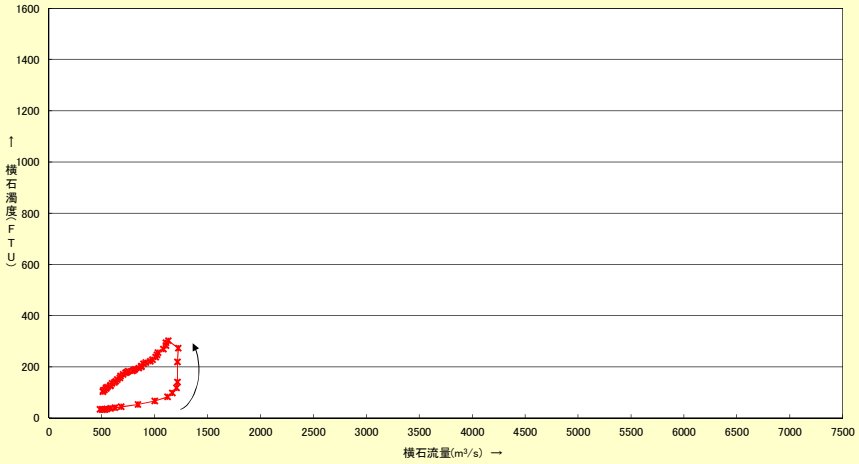
H26②

2014/7/6-7/7



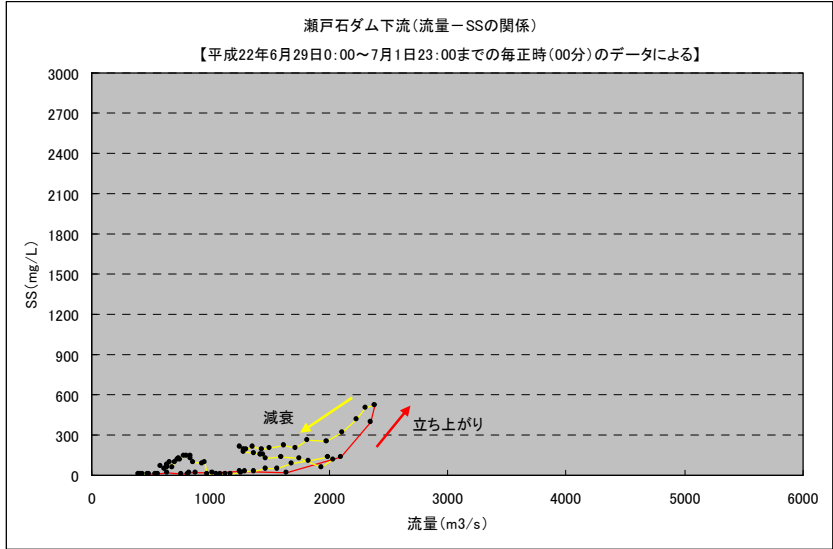
H26③

2014/7/9-7/11

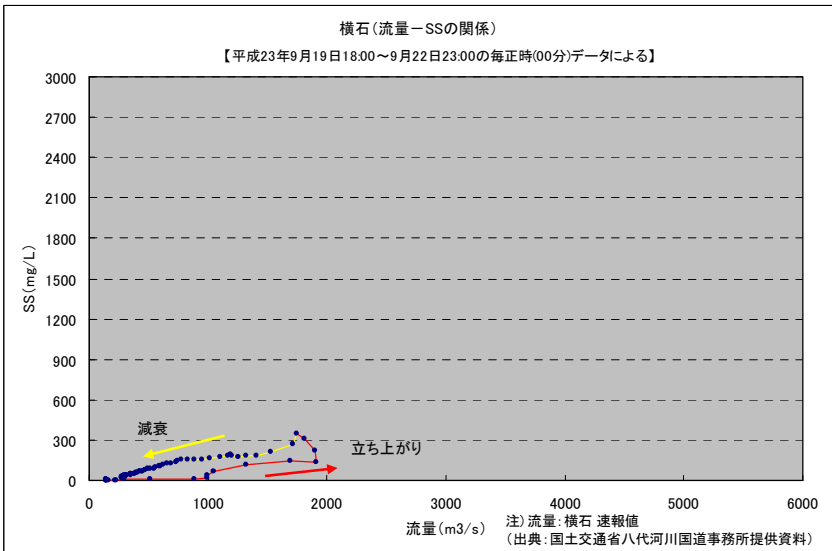
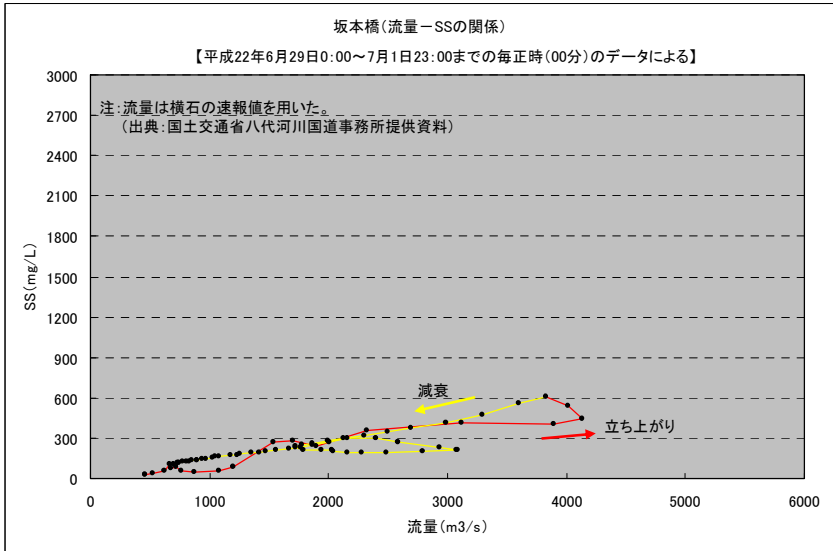
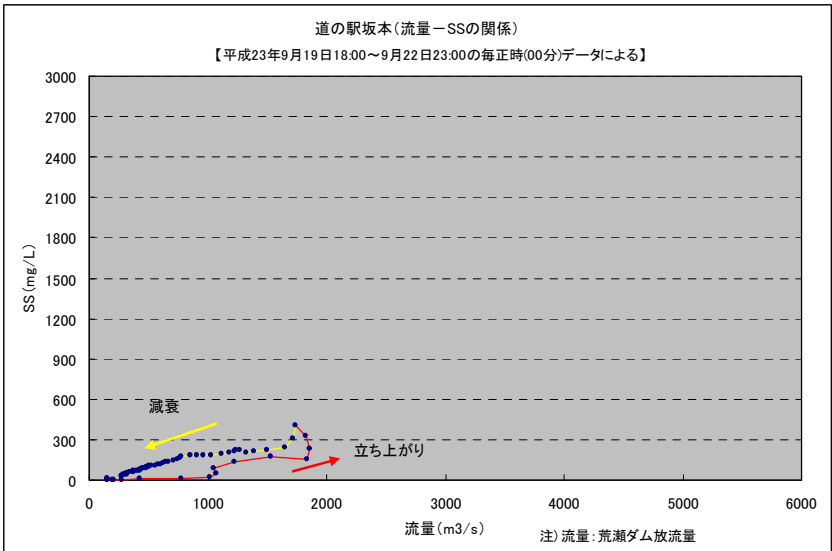
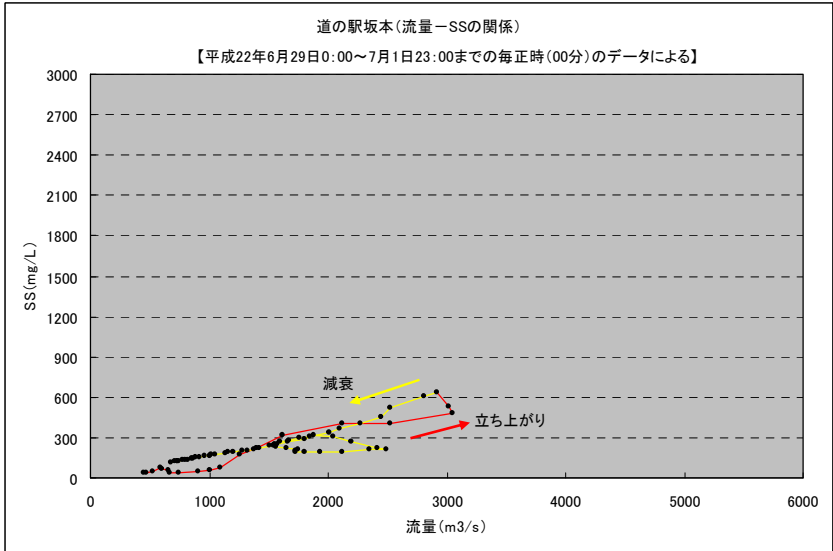
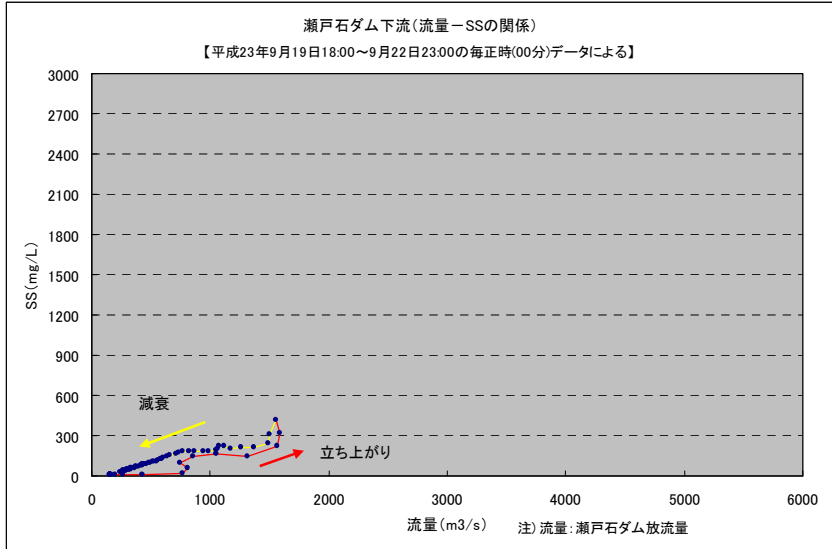


出水時調査時の流量と SS の時間的変化について、平成 22 年度、平成 23 年度及び平成 25 年度のデータを整理した図を以下に示す。全て反時計回りである。

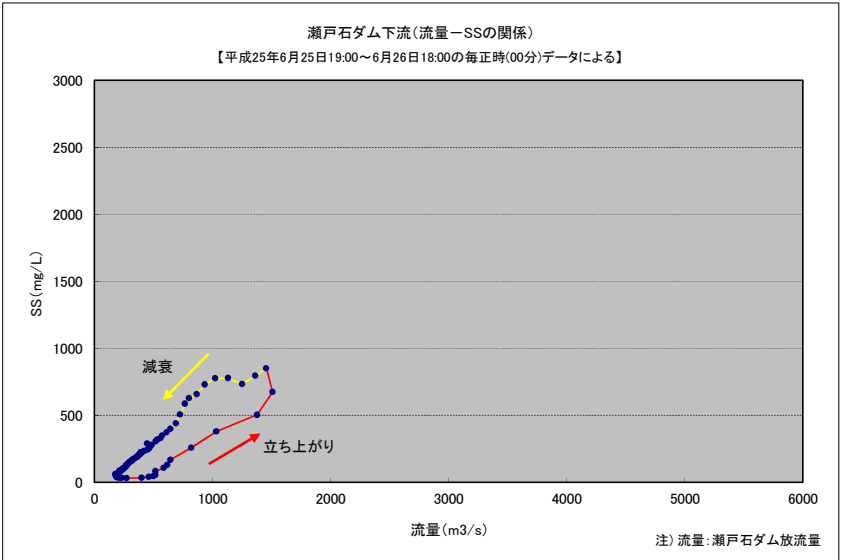
[出水時 1] 平成 22 年度 出水時調査結果（平成 22 年 6 月 29 日～7 月 1 日）



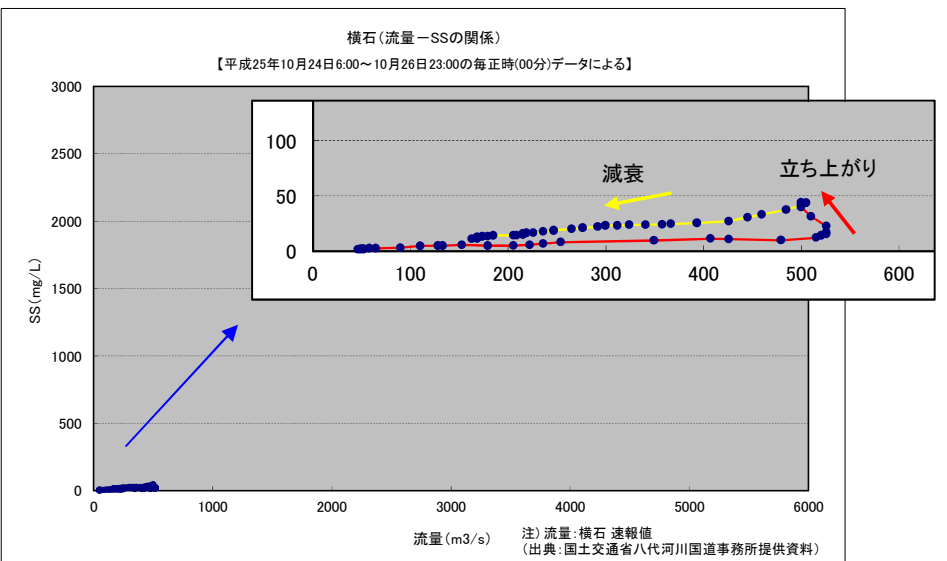
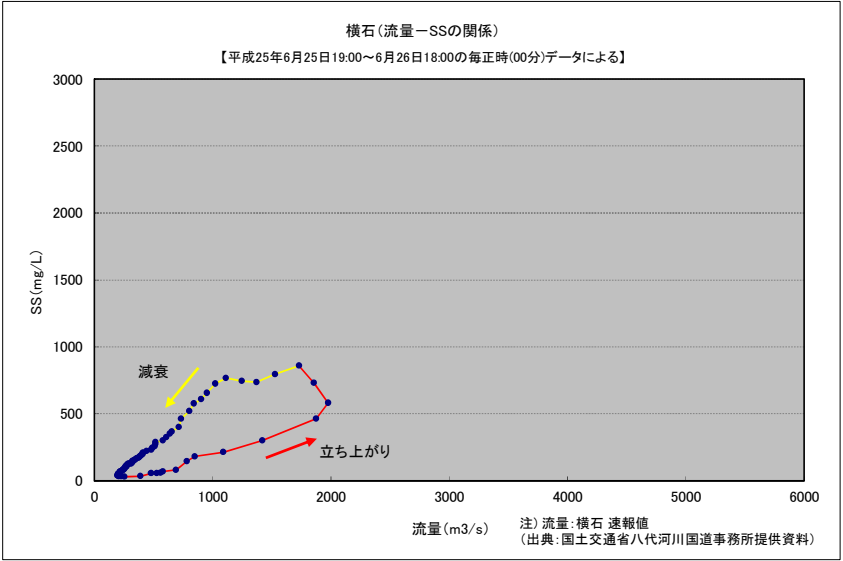
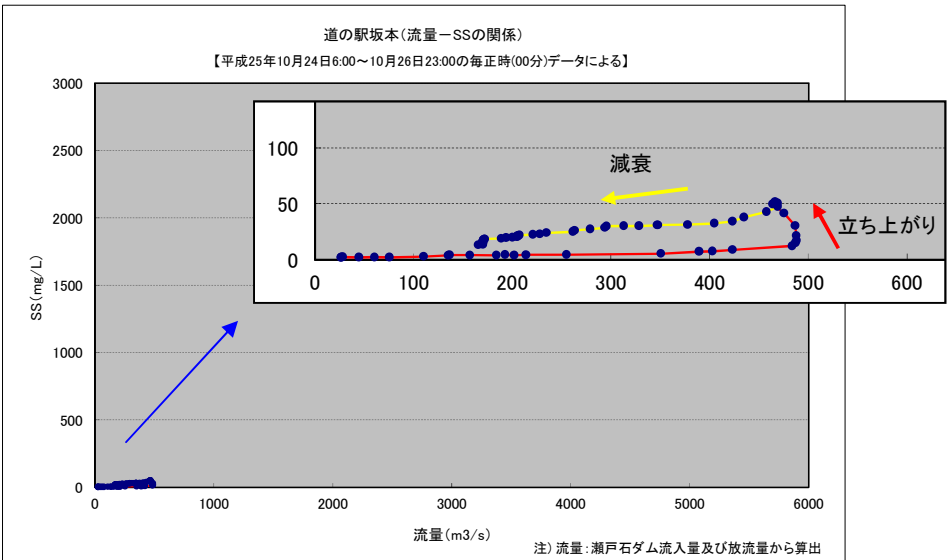
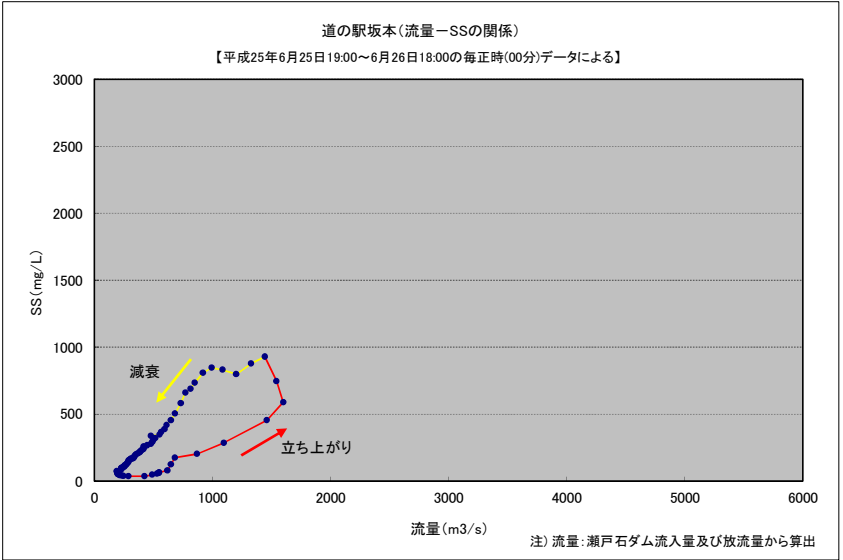
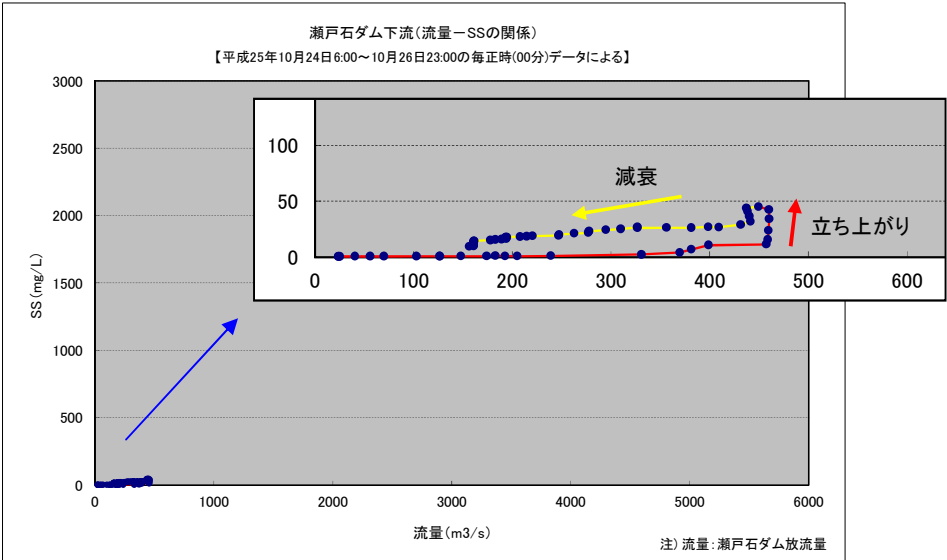
[出水時 2] 平成 23 年度 出水時調査結果（平成 23 年 9 月 19 日～9 月 22 日）



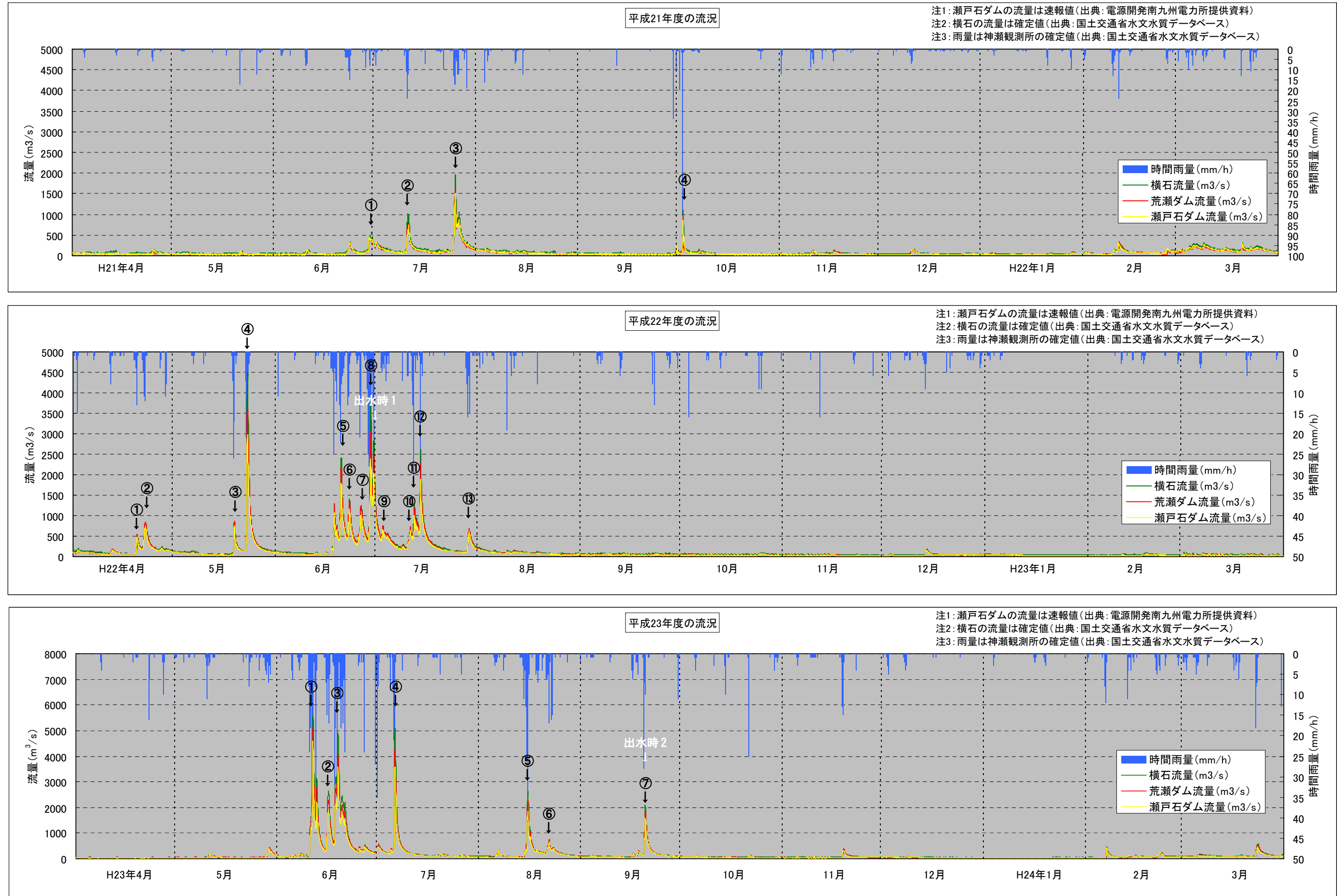
[出水時 3]平成 25 年度 出水時調査結果（平成 25 年 6 月 25 日～26 日）

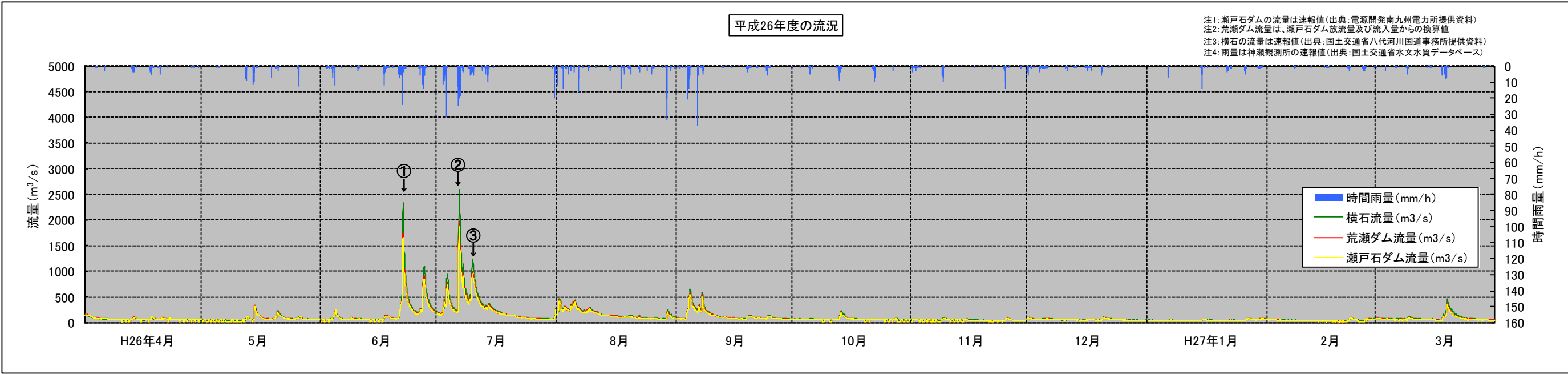
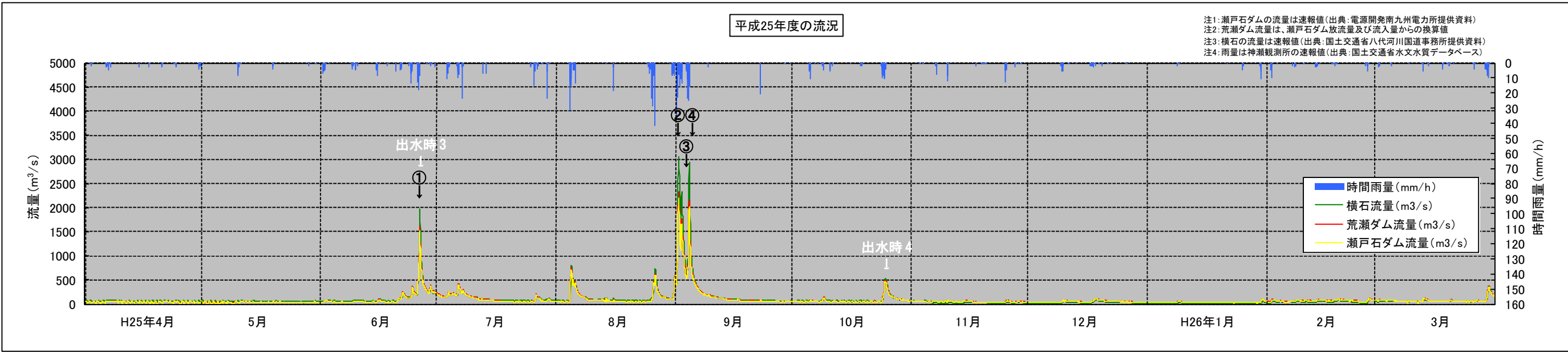
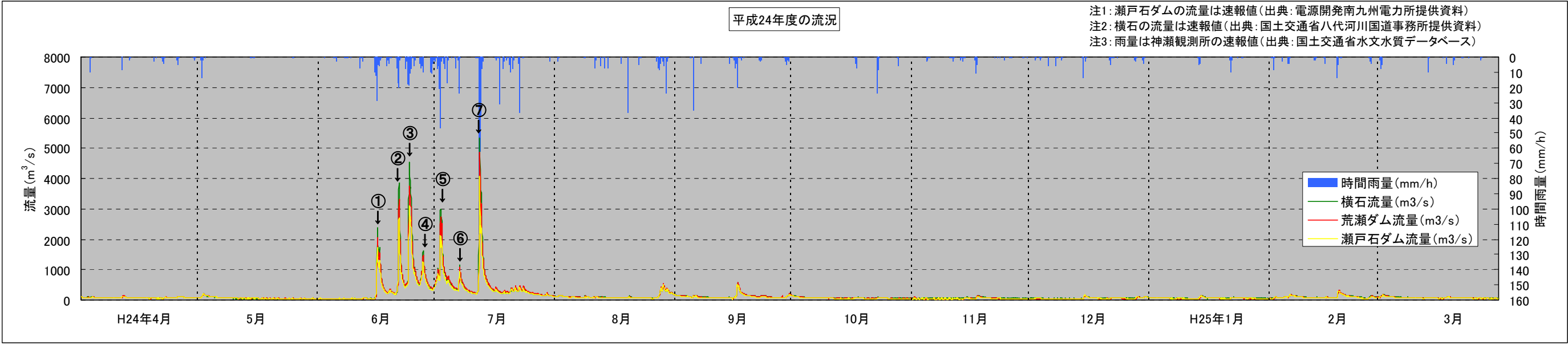


[出水時 4]平成 25 年度 出水時調査結果（平成 25 年 10 月 24 日～26 日）



■「7) 出水時の流量と濁度（FTU）の時間的な変化について（H21～26 年）」に掲載したグラフにおいて、各年度で抽出した出水を以下の図に示した。抽出した出水は丸数字で表しており、7)のグラフの丸数字と対応している。

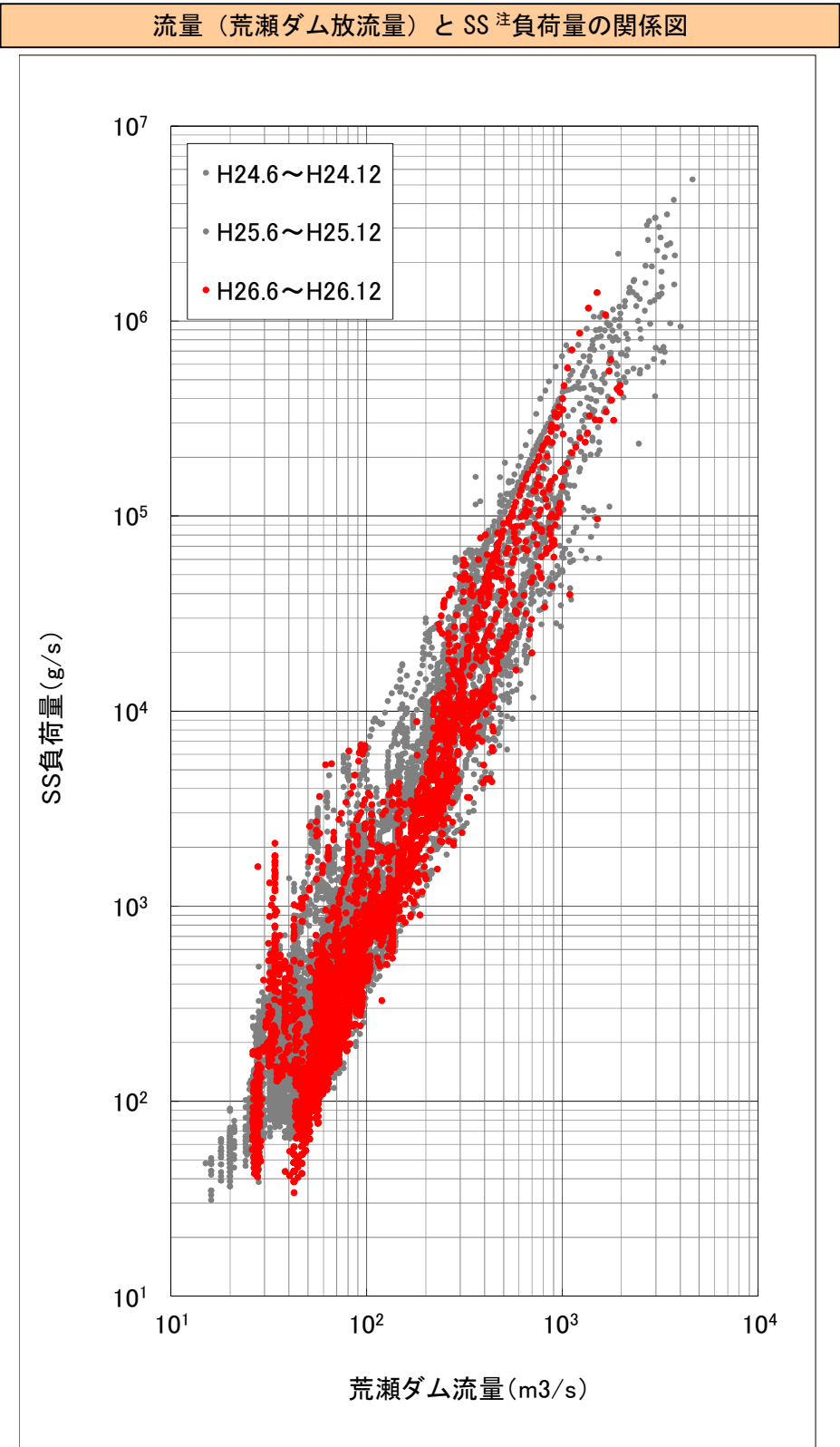
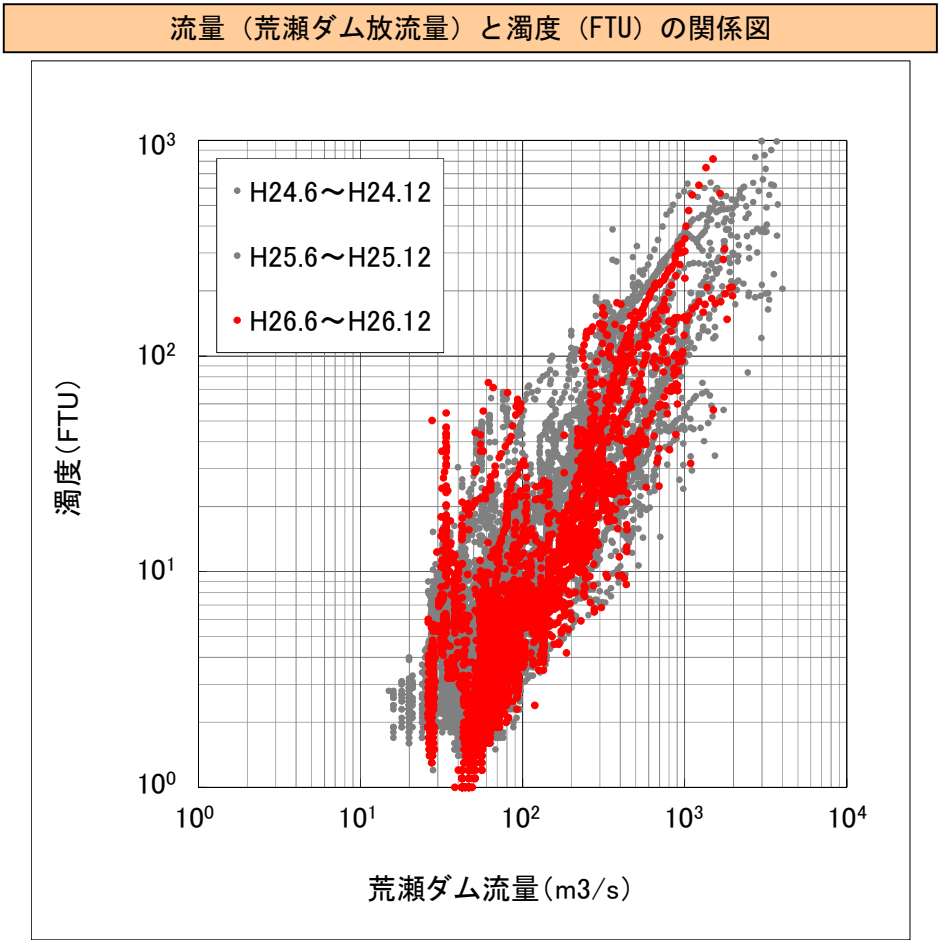




8) 出水時の道の駅坂本の流量（荒瀬ダム流量）と水質（濁度、SS）の関係について（H26 年度観測）

流量と濁度や SS の関係の平均的な挙動を把握するために、平成 24 年 6～12 月、平成 25 年 6～12 月及び平成 26 年 6～12 月の出水時における「流量と濁度 (FTU)」及び「流量と SS 負荷量」のデータをプロットしたものを下図に示す。

注：濁度から SS への換算は、平成 25 年度までのデータから作成した「 $SS=1.1435 \times \text{濁度}$ 」（第 7 回委員会資料と同じもの）を用いている。



注：SS は、回帰式による濁度 (FTU) の換算値