

Table S1. Spearman rank order correlation matrix of hydrologic metrics showing the correlation coefficient (Spearman's rho) and p-value in parenthesis.

	April Mean Q	May Mean Q	June Mean Q	July Mean Q	1-day max	3-day max	7-day max	30-day max	90-day max	April Max Q	April High Flow Pulse #	April High Flow Pulse Max CD
RYCS	0.501 (0.0068)	0.156 (0.4230)	0.413 (0.0289)	0.612 (0.0006)	0.402 (0.0338)	0.387 (0.0418)	0.378 (0.0470)	0.486 (0.0091)	0.477 (0.0106)	0.456 (0.0150)	0.399 (0.0354)	0.466 (0.0127)
April Mean Q		0.567 (0.0018)	0.594 (0.0009)	0.782 (0.0000)	0.645 (0.0002)	0.649 (0.0002)	0.641 (0.0002)	0.739 (0.0000)	0.781 (0.0000)	0.899 (0.0000)	0.817 (0.0000)	0.918 (0.0000)
May Mean Q			0.727 (0.0000)	0.592 (0.0010)	0.649 (0.0002)	0.644 (0.0002)	0.672 (0.0001)	0.73 (0.0000)	0.795 (0.0000)	0.362 (0.0582)	0.34 (0.0756)	0.512 (0.0055)
June Mean Q				0.765 (0.0000)	0.662 (0.0001)	0.665 (0.0001)	0.716 (0.0000)	0.744 (0.0000)	0.824 (0.0000)	0.391 (0.0397)	0.399 (0.0357)	0.583 (0.0012)
July Mean Q					0.729 (0.0000)	0.725 (0.0000)	0.737 (0.0000)	0.818 (0.0000)	0.893 (0.0000)	0.615 (0.0005)	0.557 (0.0022)	0.685 (0.0000)
1-day max						0.997 (0.0000)	0.987 (0.0000)	0.947 (0.0000)	0.891 (0.0000)	0.616 (0.0005)	0.419 (0.0267)	0.529 (0.0040)
3-day max							0.989 (0.0000)	0.949 (0.0000)	0.89 (0.0000)	0.614 (0.0005)	0.409 (0.0308)	0.541 (0.0031)
7-day max								0.962 (0.0000)	0.913 (0.0000)	0.579 (0.0013)	0.371 (0.0516)	0.536 (0.0035)
30-day max									0.966 (0.0000)	0.631 (0.0003)	0.44 (0.0191)	0.631 (0.0003)
90-day max										0.622 (0.0004)	0.48 (0.0100)	0.698 (0.0000)
April Max Q											0.803 (0.0000)	0.787 (0.0000)

Table S1. Continued.

	April High Flow Pulse Total D	May Max Q	May High Flow Pulse #	May High Flow Pulse Max CD	May High Flow Pulse Total D	June Max Q	June High Flow Pulse #	June High Flow Pulse Max CD	June High Flow Pulse Total D	July Max Q
RYCS	0.504 (0.0065)	0.105 (0.5930)	0.19 (0.3300)	0.154 (0.4310)	0.168 (0.3910)	0.319 (0.0969)	0.109 (0.5780)	0.334 (0.0817)	0.395 (0.0374)	0.587 (0.0011)
April Mean Q	0.952 (0.0000)	0.482 (0.0096)	0.239 (0.2180)	0.509 (0.0059)	0.502 (0.0067)	0.498 (0.0071)	0.273 (0.1580)	0.493 (0.0079)	0.523 (0.0045)	0.664 (0.0001)
May Mean Q	0.538 (0.0033)	0.943 (0.0000)	0.677 (0.0001)	0.927 (0.0000)	0.938 (0.0000)	0.622 (0.0004)	0.578 (0.0014)	0.712 (0.0000)	0.646 (0.0002)	0.486 (0.0090)
June Mean Q	0.619 (0.0005)	0.643 (0.0002)	0.613 (0.0006)	0.662 (0.0001)	0.702 (0.0000)	0.941 (0.0000)	0.679 (0.0001)	0.893 (0.0000)	0.945 (0.0000)	0.654 (0.0002)
July Mean Q	0.748 (0.0000)	0.491 (0.0082)	0.369 (0.0531)	0.517 (0.0051)	0.524 (0.0044)	0.695 (0.0000)	0.521 (0.0047)	0.618 (0.0005)	0.676 (0.0001)	0.932 (0.0000)
1-day max	0.578 (0.0014)	0.656 (0.0001)	0.487 (0.0089)	0.638 (0.0003)	0.645 (0.0002)	0.586 (0.0011)	0.437 (0.0202)	0.632 (0.0003)	0.604 (0.0007)	0.646 (0.0002)
3-day max	0.583 (0.0012)	0.645 (0.0002)	0.456 (0.0150)	0.623 (0.0004)	0.628 (0.0004)	0.583 (0.0012)	0.426 (0.0238)	0.632 (0.0003)	0.603 (0.0007)	0.637 (0.0003)
7-day max	0.577 (0.0014)	0.654 (0.0001)	0.489 (0.0085)	0.635 (0.0003)	0.653 (0.0002)	0.622 (0.0004)	0.444 (0.0183)	0.664 (0.0001)	0.64 (0.0002)	0.637 (0.0003)
30-day max	0.673 (0.0001)	0.662 (0.0001)	0.496 (0.0074)	0.654 (0.0002)	0.673 (0.0001)	0.621 (0.0004)	0.43 (0.0225)	0.667 (0.0001)	0.645 (0.0002)	0.714 (0.0000)
90-day max	0.741 (0.0000)	0.71 (0.0000)	0.534 (0.0036)	0.722 (0.0000)	0.736 (0.0000)	0.717 (0.0000)	0.502 (0.0067)	0.723 (0.0000)	0.716 (0.0000)	0.778 (0.0000)
April Max Q	0.842 (0.0000)	0.315 (0.1010)	0.0916 (0.6400)	0.349 (0.0680)	0.343 (0.0732)	0.319 (0.0969)	0.108 (0.5820)	0.275 (0.1540)	0.321 (0.0951)	0.545 (0.0029)

Table S1. Continued.

	July High Flow Pulse #	July High Flow Pulse Max CD	July High Flow Pulse Total D	Spawn Season High Flow Pulse Total D	Spawn Season High Flow Pulse Max CD
RYCS	0.434 (0.0212)	0.587 (0.0011)	0.606 (0.0007)	0.515 (0.0052)	0.592 (0.0010)
April Mean Q	0.57 (0.0016)	0.705 (0.0000)	0.716 (0.0000)	0.823 (0.0000)	0.79 (0.0000)
May Mean Q	0.344 (0.0722)	0.491 (0.0082)	0.482 (0.0097)	0.815 (0.0000)	0.709 (0.0000)
June Mean Q	0.481 (0.0098)	0.675 (0.0001)	0.654 (0.0001)	0.886 (0.0000)	0.774 (0.0000)
July Mean Q	0.739 (0.0000)	0.871 (0.0000)	0.886 (0.0000)	0.859 (0.0000)	0.734 (0.0000)
1-day max	0.426 (0.0242)	0.65 (0.0002)	0.658 (0.0001)	0.822 (0.0000)	0.76 (0.0000)
3-day max	0.412 (0.0294)	0.639 (0.0002)	0.647 (0.0002)	0.818 (0.0000)	0.766 (0.0000)
7-day max	0.404 (0.0333)	0.629 (0.0004)	0.636 (0.0003)	0.838 (0.0000)	0.785 (0.0000)
30-day max	0.476 (0.0107)	0.704 (0.0000)	0.712 (0.0000)	0.896 (0.0000)	0.855 (0.0000)
90-day max	0.579 (0.0013)	0.781 (0.0000)	0.785 (0.0000)	0.947 (0.0000)	0.866 (0.0000)
April Max Q	0.537 (0.0034)	0.633 (0.0003)	0.639 (0.0002)	0.65 (0.0002)	0.61 (0.0006)

Table S1. Continued.

	June High Flow Pulse Max CD	June High Flow Pulse Total D	July Max Q	July High Flow Pulse #	July High Flow Pulse Max CD	JulyHigh Flow Pulse Total D	Spawn Season High Flow Pulse Total D	Spawn Season High Flow Pulse Max CD
April High Flow Pulse #	0.262 (0.1750)	0.344 (0.0722)	0.523 (0.0045)	0.518 (0.0049)	0.523 (0.0045)	0.525 (0.0043)	0.587 (0.0011)	0.522 (0.0046)
April High Flow Pulse Max CD	0.439 (0.0196)	0.499 (0.0071)	0.573 (0.0015)	0.534 (0.0036)	0.647 (0.0002)	0.651 (0.0002)	0.751 (0.0000)	0.766 (0.0000)
April High Flow Pulse Total D	0.486 (0.0091)	0.545 (0.0028)	0.649 (0.0002)	0.61 (0.0006)	0.739 (0.0000)	0.747 (0.0000)	0.794 (0.0000)	0.762 (0.0000)
May Max Q	0.685 (0.0000)	0.618 (0.0005)	0.412 (0.0296)	0.29 (0.1330)	0.425 (0.0242)	0.425 (0.0242)	0.75 (0.0000)	0.629 (0.0003)
May High Flow Pulse #	0.576 (0.0014)	0.583 (0.0012)	0.293 (0.1290)	0.0551 (0.7770)	0.285 (0.1400)	0.273 (0.1570)	0.602 (0.0007)	0.538 (0.0033)
May High Flow Pulse Max CD	0.711 (0.0000)	0.65 (0.0002)	0.438 (0.0198)	0.267 (0.1670)	0.478 (0.0104)	0.473 (0.0112)	0.78 (0.0000)	0.651 (0.0002)
May High Flow Pulse Total D	0.73 (0.0000)	0.684 (0.0000)	0.442 (0.0188)	0.269 (0.1640)	0.492 (0.0080)	0.479 (0.0102)	0.797 (0.0000)	0.668 (0.0001)
June Max Q	0.879 (0.0000)	0.952 (0.0000)	0.644 (0.0002)	0.543 (0.0029)	0.694 (0.0000)	0.663 (0.0001)	0.805 (0.0000)	0.632 (0.0003)

