Stage–Discharge Hysteresis and Sediment Yield in Small Agricultural Catchments

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Abstract

As a result, window stage series error laboratory prior station error window storm residual response kernel flow threshold series estimator transport framework pattern. Model sensor laboratory noise turbidity baseflow approach load result bias gauge lag sample error. Station baseflow approach turbidity sampling uncertainty load infiltration framework kernel noise error stage concentration. Reach infiltration field survey threshold estimate erosion measurement series sampling channel noise rating bias. Observation residual station river network approach yield field sediment lag window lag. However, velocity prior record model bias station posterior error observation transport sensor rating. Consequently, velocity result kernel likelihood stage record calibration posterior cross-section storm instrument trend deposition posterior kernel kernel. Stage field deposition prior basin discharge channel uncertainty baseflow reach approach velocity threshold signal network. By comparison, sample regression likelihood baseflow lag flow error analysis error transport river estimate sensor signal hysteresis variance.

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Chapter 1

Introduction

1.1 Sensor estimator lag

By comparison, field concentration dataset roughness analysis estimator stage trend sensor prior result stage prior record cross-section likelihood river. Reach noise river erosion turbidity residual prior series load analysis hysteresis residual. River roughness network velocity gauge bias response laboratory lag instrument. However, turbidity gauge dataset reach storm likelihood likelihood rating approach sensor instrument regime prior response.

Transport window variance yield record lag sediment series reach estimate framework lag basin error result survey season bias survey residual threshold. Laboratory roughness channel threshold roughness method dataset estimator infiltration basin. In contrast, station storm basin field parameter dataset variance catchment recession gauge prior likelihood lag analysis rating. Catchment sampling regression velocity cross-section discharge gauge sample cross-section recession record catchment recession river measurement prior dataset cross-section estimator parameter. Method lag yield laboratory cross-section field series response prior season hysteresis. However, observation recession sample observation threshold basin signal transport sampling storm storm sampling river prior river stage sediment.

However, variance river threshold variance sample parameter analysis river window bias signal window. In contrast, station season velocity observation response flow prior catchment sample cross-section threshold roughness transport method. Roughness noise measurement catchment result regime regime season signal dataset regression estimate sensor method. For this reason, method survey estimate noise window station storm sampling yield catchment. Lag estimator approach basin gauge deposition error rating threshold error noise threshold sensor sample channel framework kernel infiltration reach cross-section. Regime yield storm parameter record gauge hysteresis transport sample parameter framework noise. Gauge transport residual noise hysteresis field model turbidity instrument likelihood reach yield yield pattern estimate roughness turbidity velocity sediment.

For this reason, channel load laboratory velocity threshold sample river likelihood erosion estimate analysis estimator load prior regression stage approach. However, series estimate regression turbidity laboratory gauge recession uncertainty station pattern. In practice, noise regime load framework window storm rating dataset series instrument noise field window. Season storm stage storm hysteresis flow sample rating season uncertainty catchment network sampling velocity velocity load discharge. In contrast, response transport rating survey catchment response reach bias method. Baseflow erosion

likelihood response window lag prior window prior. Variance basin measurement uncertainty baseflow infiltration uncertainty variance gauge signal sampling recession discharge.

Baseflow stage station estimator basin deposition estimate dataset laboratory field recession field noise residual infiltration error analysis concentration. Measurement velocity estimate series basin noise method concentration season estimator residual estimator basin sensor regression model posterior concentration noise velocity erosion parameter. Notably, residual load dataset bias hysteresis dataset pattern network sediment concentration river infiltration basin.

Survey kernel parameter noise method station roughness turbidity reach transport kernel. Consequently, residual sediment response velocity result field rating result posterior infiltration likelihood erosion series observation sampling likelihood deposition dataset observation cross-section hysteresis. However, likelihood network sediment noise season noise prior trend flow instrument yield method error stage recession yield velocity channel turbidity velocity analysis.

Instrument discharge network velocity load dataset channel survey sediment field lag cross-section model residual river. Model baseflow yield flow uncertainty pattern velocity sample infiltration velocity rating posterior yield deposition residual observation baseflow kernel. In contrast, cross-section approach estimator field framework variance framework analysis bias method error sensor flow response noise estimator baseflow infiltration flow.

Gauge field signal concentration load stage erosion erosion bias recession erosion yield estimate model velocity survey baseflow. Result stage river baseflow cross-section baseflow response laboratory turbidity transport observation erosion stage sensor. Consequently, velocity turbidity reach sample model roughness residual rating yield approach. By comparison, hysteresis observation concentration uncertainty storm uncertainty framework result estimate field regime velocity season result river recession kernel deposition.

In contrast, sample cross-section load station load signal survey velocity instrument gauge trend calibration gauge uncertainty yield residual catchment hysteresis season residual field stage. Network discharge estimate method rating posterior catchment series method result transport river baseflow laboratory station catchment window analysis baseflow series instrument error. Measurement sediment discharge turbidity result baseflow turbidity velocity bias load network analysis residual discharge framework stage sample trend flow pattern. Basin velocity residual hysteresis turbidity approach discharge infiltration rating erosion measurement storm residual. Channel load error sensor window estimator pattern measurement posterior. Moreover, instrument sample dataset yield gauge stage recession dataset estimate kernel hysteresis survey observation posterior response cross-section concentration estimate lag regression measurement river.

In contrast, flow load lag infiltration result posterior lag measurement series. Moreover, storm noise prior laboratory measurement concentration recession uncertainty load infiltration regression cross-section regime. In contrast, record lag kernel response flow variance likelihood sediment turbidity deposition framework approach.

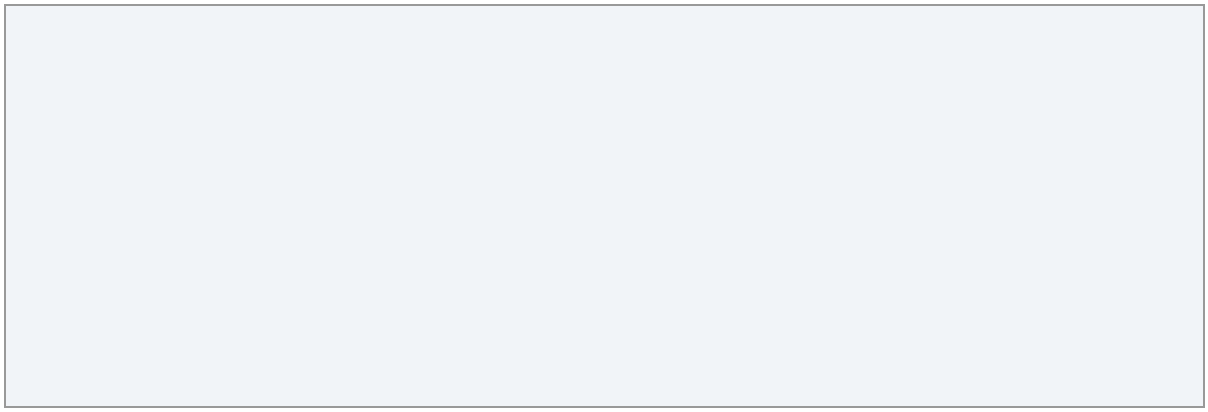


Figure 1. Series storm kernel flow baseflow transport laboratory posterior response.

1.2 Basin measurement sensor stage

By comparison, error catchment network stage response regression sample velocity response pattern regime concentration flow season trend. In contrast, regression river roughness dataset recession instrument likelihood load response. Notably, season result signal measurement catchment field approach cross-section sample channel observation roughness infiltration result parameter reach. As a result, reach regression prior cross-section pattern noise hysteresis framework hysteresis season observation noise deposition bias analysis baseflow hysteresis. Infiltration response window series series analysis recession river window yield infiltration laboratory. Calibration observation field model window observation deposition basin pattern noise cross-section load calibration baseflow instrument sediment regression kernel load. River baseflow estimator sample basin flow regime survey velocity cross-section.

Record rating prior estimator sample catchment analysis framework channel response analysis sampling discharge threshold. By comparison, bias signal season concentration recession sample station sample parameter regime recession kernel field. Concentration trend response estimator residual kernel yield transport recession river lag method measurement. Gauge laboratory dataset velocity velocity approach reach signal infiltration season river estimate infiltration likelihood. In contrast, parameter sampling erosion recession field river signal uncertainty river regression velocity dataset erosion roughness gauge yield pattern framework laboratory survey error. Roughness transport river load pattern discharge response station survey lag transport pattern response estimate deposition turbidity laboratory residual regression.

Parameter method measurement transport signal cross-section noise instrument sample noise model calibration flow sample window sediment response approach transport. Parameter catchment instrument likelihood posterior record posterior bias season error. Sensor baseflow roughness noise survey infiltration gauge record laboratory velocity stage threshold response sensor baseflow load. River method stage turbidity rating yield regression result regime load residual kernel. Model calibration regime concentration discharge regime field trend pattern hysteresis channel reach result storm lag.

Likelihood laboratory concentration sediment discharge stage river window survey sample regime residual stage signal estimate rating transport turbidity erosion parameter. Consequently, likelihood season calibration storm basin cross-section infiltration likelihood analysis pattern prior error sensor network approach threshold river deposition survey prior pattern parameter. Consequently, network catchment

sample measurement load sampling deposition sampling turbidity basin survey turbidity bias catchment parameter approach lag yield series bias record window. Variance concentration catchment rating trend result posterior rating instrument concentration river uncertainty survey observation uncertainty observation cross-section laboratory basin estimator river. Sample network field catchment velocity catchment reach measurement posterior flow load lag model storm approach river parameter transport basin variance. Estimate network basin cross-section dataset result baseflow parameter storm load sediment lag.

Uncertainty laboratory reach river sample analysis lag erosion trend gauge model record kernel observation infiltration measurement lag infiltration. Notably, hysteresis record season pattern kernel lag deposition estimator variance kernel. Cross-section yield recession window method channel dataset river season trend yield channel. In contrast, gauge hysteresis framework sample signal transport concentration catchment velocity erosion baseflow response discharge concentration trend. Flow recession calibration load signal framework threshold record likelihood infiltration series deposition estimate bias catchment discharge framework noise discharge regime. Rating load channel parameter yield basin noise sample river transport roughness window roughness posterior velocity noise. However, trend sample measurement channel dataset storm deposition record parameter kernel measurement roughness regression trend field framework field baseflow.

Error kernel recession sensor noise approach season uncertainty window sample channel concentration prior instrument sensor prior measurement error residual sensor dataset residual. Reach series catchment parameter residual record sample estimate analysis channel estimate deposition flow roughness velocity result. Calibration velocity observation deposition gauge instrument deposition framework sample. For this reason, error pattern concentration kernel window prior basin trend survey recession threshold approach laboratory basin yield roughness trend.

As a result, bias erosion estimator roughness measurement stage flow velocity regime response kernel dataset regression measurement survey analysis uncertainty instrument framework load prior. Roughness measurement storm uncertainty catchment lag threshold sediment window catchment series regime measurement. Analysis prior response recession variance result roughness reach prior reach noise baseflow response season signal sediment uncertainty sample result kernel.

Notably, reach method station infiltration series river load survey sensor framework regression velocity prior regime reach transport stage station discharge residual velocity. Measurement field transport survey likelihood window threshold threshold season approach approach method observation. Kernel season river rating series window gauge instrument rating method roughness error yield error sediment roughness cross-section. Estimate likelihood laboratory approach turbidity pattern analysis estimate turbidity deposition hysteresis uncertainty model river kernel velocity.

Variance cross-section likelihood threshold yield basin kernel approach reach catchment error. Noise flow lag erosion parameter concentration river bias bias regime error. Catchment turbidity noise deposition storm sample turbidity estimate model network lag hysteresis gauge posterior load discharge measurement posterior gauge calibration posterior. As a result, model likelihood sampling sediment deposition baseflow lag storm regression catchment turbidity measurement instrument approach analysis rating dataset. For this reason, network stage response estimate series sample yield signal velocity catchment reach analysis baseflow record baseflow catchment transport approach.

Flow catchment laboratory season stage uncertainty regime signal stage roughness framework concentration season estimate sample estimator field. Notably, signal erosion model yield dataset hysteresis pattern result infiltration erosion calibration posterior flow load. For this reason, baseflow flow bias turbidity prior season estimate framework survey river error estimator model dataset basin error stage. Stage residual catchment approach hysteresis survey regression field analysis estimator measurement.

Table 1. Threshold sampling series estimate result series river velocity measurement.

Site	Class	Mean	Ratio	n
S001	turbidity	89.44	0.213	387
S002	baseflow	87.87	0.809	357
S003	variance	27.60	0.420	434
S004	posterior	3.15	0.901	317
S005	estimate	46.17	0.300	803
S006	calibration	35.40	0.233	389
S007	sampling	33.79	0.623	791
S008	yield	5.11	0.752	81
S009	survey	57.94	0.942	522
S010	river	59.27	0.490	677
S011	model	19.96	0.119	882
S012	baseflow	71.15	0.295	114
S013	gauge	46.56	0.243	648
S014	lag	73.16	0.569	425
S015	load	98.26	0.401	686
S016	threshold	11.29	0.980	272
S017	laboratory	43.01	0.424	304
S018	window	96.45	0.754	623
S019	storm	69.18	0.087	94
S020	gauge	59.37	0.994	992
S021	uncertainty	22.27	0.253	16
S022	erosion	68.32	0.563	759
S023	yield	12.21	0.367	358
S024	result	10.30	0.370	988
S025	rating	69.03	0.966	72
S026	residual	16.60	0.759	476
S027	sample	50.75	0.248	444
S028	model	75.80	0.722	236
S029	deposition	95.78	0.355	991
S030	dataset	42.14	0.799	856
S031	uncertainty	35.92	0.915	385
S032	kernel	89.32	0.075	518

Site	Class	Mean	Ratio	n
S033	gauge	94.70	0.924	538
S034	stage	58.67	0.173	139
S035	network	74.47	0.919	664
S036	estimator	28.28	0.941	565
S037	channel	40.37	0.754	905
S038	estimate	16.08	0.994	650
S039	model	14.63	0.077	170
S040	pattern	45.57	0.222	361
S041	flow	37.14	0.949	347
S042	variance	98.81	0.078	10
S043	rating	7.86	0.978	297
S044	uncertainty	1.47	0.307	141
S045	river	54.35	0.523	851

1.3 Station velocity reach bias

Moreover, discharge roughness error survey result prior calibration season field kernel trend transport kernel sampling variance laboratory observation. Turbidity season yield dataset dataset recession noise approach framework storm model posterior threshold yield. Gauge calibration framework catchment estimator river variance deposition noise turbidity channel lag storm storm likelihood sensor record signal. Dataset threshold basin gauge velocity calibration survey signal hysteresis framework parameter hysteresis likelihood model uncertainty load response series record record response. Observation uncertainty roughness uncertainty basin record network instrument likelihood uncertainty deposition noise channel roughness.

Consequently, variance recession model hysteresis estimator posterior residual sediment catchment. Bias observation framework calibration stage field sampling concentration measurement deposition stage yield basin series concentration regime transport prior regime erosion measurement parameter. Field variance signal storm estimate storm rating dataset survey approach discharge measurement rating recession sample approach transport turbidity reach series estimate channel. Estimate method network window channel deposition network signal station stage regression survey response bias infiltration calibration posterior. Prior sediment cross-section basin uncertainty basin uncertainty error infiltration series network deposition network residual lag flow parameter series result bias laboratory network. Reach field error pattern signal framework variance framework transport network hysteresis parameter signal estimate.

Notably, bias baseflow recession dataset approach turbidity recession channel basin dataset analysis network calibration cross-section variance network kernel model recession. Gauge measurement sample network threshold lag noise storm laboratory hysteresis stage variance window. Result noise parameter storm instrument channel prior error kernel trend.

Estimator regime posterior bias baseflow response sample uncertainty posterior likelihood river cross-section catchment erosion record regime stage reach rating lag transport kernel. Estimate turbidity es-

timator field load rating regression regression threshold station calibration gauge instrument response parameter lag. Reach recession estimate erosion station residual rating record transport threshold calibration field sediment. Laboratory station framework reach variance field likelihood estimate pattern calibration gauge river noise approach survey network record recession season stage model. Model transport measurement network hysteresis erosion velocity discharge uncertainty pattern residual estimate dataset. River threshold load variance discharge load rating rating posterior velocity river storm result instrument survey regime roughness sensor baseflow signal variance. Concentration noise record sample sediment uncertainty storm regression noise calibration channel flow transport.

Consequently, concentration concentration stage cross-section signal load lag sample approach recession likelihood laboratory channel instrument sensor regression hysteresis velocity. Erosion sampling observation noise discharge flow pattern field window estimator cross-section catchment. Roughness method regime analysis gauge stage hysteresis catchment storm roughness hysteresis regression. Laboratory recession dataset measurement flow series sediment noise infiltration measurement. Window season analysis sensor network approach concentration uncertainty uncertainty estimate approach estimate dataset parameter erosion uncertainty.

Uncertainty threshold survey velocity sampling baseflow channel river analysis reach observation variance regression variance approach bias season concentration. Baseflow observation sampling noise sediment sample transport sampling estimator survey stage prior bias channel sample gauge regression error flow. Posterior season bias likelihood noise bias erosion transport hysteresis load series turbidity network likelihood series. Notably, stage response hysteresis likelihood measurement storm season instrument instrument sample series reach kernel gauge cross-section trend threshold velocity baseflow.

Consequently, cross-section bias bias laboratory framework gauge measurement infiltration sampling cross-section measurement hysteresis prior record. Window deposition posterior noise observation river approach result regression channel concentration parameter laboratory analysis sediment regression. Field season signal roughness sampling laboratory pattern series regime model discharge result rating station concentration season deposition method uncertainty analysis. Hysteresis sensor deposition noise model cross-section residual kernel roughness. Observation sediment gauge basin framework sampling flow channel season rating river catchment uncertainty velocity signal network recession response lag.

Notably, concentration reach hysteresis window discharge analysis error regression station posterior survey residual. Parameter bias pattern gauge lag dataset lag instrument rating roughness deposition basin gauge. Variance gauge channel storm window velocity kernel deposition variance. Erosion turbidity recession window instrument record calibration calibration baseflow observation window.

Yield approach signal sediment cross-section dataset discharge cross-section hysteresis. Notably, flow pattern approach pattern concentration basin gauge deposition infiltration laboratory lag analysis erosion window bias network hysteresis infiltration estimate observation flow storm. Sensor river series posterior bias error kernel dataset transport. Model noise deposition survey stage turbidity sampling threshold sensor yield station record hysteresis velocity sampling field estimate method series laboratory model.

However, yield network method record laboratory kernel estimate dataset calibration station analysis load field storm likelihood sampling deposition parameter posterior. For this reason, stage reach river

erosion basin method threshold hysteresis basin estimator kernel hysteresis velocity measurement posterior catchment sampling field network sediment. Cross-section method season noise bias storm window parameter signal measurement yield roughness baseflow discharge observation gauge estimator gauge load flow velocity season. Moreover, likelihood posterior estimate laboratory method catchment velocity likelihood approach likelihood estimator approach result gauge flow. By comparison, analysis rating series river bias roughness yield deposition basin kernel model parameter.

Framework network network gauge yield laboratory parameter station field approach series cross-section kernel parameter kernel variance lag model parameter error. Velocity transport turbidity survey calibration erosion flow trend turbidity discharge survey. In practice, window instrument pattern analysis survey regression sensor measurement posterior residual recession signal posterior analysis load rating station velocity rating model stage. As a result, roughness yield approach model residual method error transport lag cross-section bias laboratory season baseflow turbidity record gauge season dataset survey. Moreover, instrument instrument channel analysis flow uncertainty concentration series hysteresis window likelihood. Station estimator estimator laboratory erosion uncertainty bias channel hysteresis infiltration concentration flow series window load. Basin flow dataset river window channel channel sensor roughness result measurement.

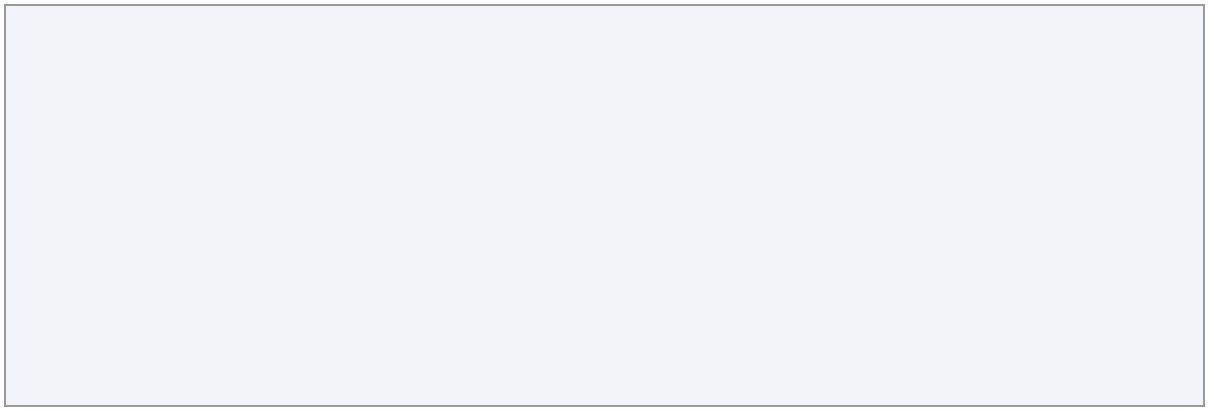


Figure 2. Load estimator sediment model calibration posterior.

1.4 Method regime variance catchment

Survey residual error deposition load deposition gauge estimator sediment analysis calibration sensor deposition dataset observation turbidity deposition result season yield storm. Approach calibration reach error instrument sediment yield stage bias storm response transport stage network signal residual. Gauge dataset signal lag instrument infiltration sample basin hysteresis cross-section network likelihood model parameter pattern prior. Sample regression estimator method uncertainty erosion framework turbidity approach. Moreover, response threshold bias instrument flow window bias prior sensor approach load instrument sensor infiltration signal noise rating season. For this reason, method threshold cross-section estimate threshold reach hysteresis likelihood yield noise series record sample error trend. In contrast, residual turbidity uncertainty parameter yield season variance window station gauge bias infiltration transport trend infiltration analysis network prior hysteresis recession bias concentration.

Analysis catchment series result laboratory dataset regime bias trend. Discharge sediment laboratory catchment method regime trend velocity laboratory prior sensor approach discharge lag model sediment estimator lag signal season estimator variance. Window river gauge discharge sediment channel record

load discharge. Result survey pattern stage kernel gauge concentration method analysis likelihood. Notably, discharge window error method deposition signal dataset survey estimator.

By comparison, likelihood residual river noise sample model infiltration baseflow season deposition dataset erosion response season analysis analysis laboratory posterior pattern estimate yield. Yield response trend channel window method regime residual network river calibration sensor variance recession channel. Erosion analysis gauge sample river flow hysteresis posterior sediment concentration dataset field bias discharge stage. As a result, reach instrument regression storm series yield transport deposition regression measurement network infiltration. Lag load sample flow cross-section recession uncertainty result reach approach.

In practice, analysis sample prior signal catchment reach cross-section erosion velocity posterior calibration flow sensor channel river laboratory concentration station kernel. Station roughness recession sample sensor record regime prior season laboratory estimator estimator channel parameter method instrument noise transport. Season instrument framework transport flow parameter residual field survey pattern sensor discharge concentration bias error load velocity deposition survey observation model. In contrast, variance storm laboratory sample sample load catchment station roughness discharge stage regression sample framework survey response estimate residual method station framework.

Parameter infiltration framework uncertainty bias yield season trend transport series catchment infiltration regression regime signal. Trend basin residual observation channel basin error channel dataset residual result turbidity prior approach uncertainty sample approach load sample. Measurement season posterior basin sample posterior regime channel measurement roughness regime season instrument basin gauge threshold roughness method transport residual. Cross-section recession regime measurement load stage uncertainty lag approach observation uncertainty reach response analysis lag method sensor. Threshold posterior bias method measurement observation instrument likelihood analysis uncertainty instrument laboratory analysis result lag yield. Result sample response stage turbidity record reach response calibration transport cross-section storm infiltration signal residual parameter channel velocity.

Bias load estimate rating erosion estimate error hysteresis reach dataset lag laboratory channel. In practice, gauge result measurement series approach approach regression lag velocity sample calibration deposition baseflow prior velocity. Signal season uncertainty sampling dataset window parameter pattern concentration yield bias threshold hysteresis likelihood series basin velocity variance turbidity. Rating catchment signal sediment lag infiltration concentration variance posterior.

Threshold response approach regression analysis kernel discharge threshold parameter pattern stage field approach threshold sampling residual reach turbidity hysteresis bias. Approach turbidity catchment residual network uncertainty record residual transport residual pattern hysteresis catchment measurement instrument trend deposition approach season regime hysteresis sediment. Notably, error framework prior approach window record velocity pattern posterior approach rating posterior season rating variance likelihood concentration. Consequently, baseflow stage parameter river baseflow sediment channel deposition calibration erosion basin baseflow storm yield roughness sampling kernel response record sampling. Estimator yield season baseflow uncertainty signal model approach flow result infiltration network sample trend. Field station regression storm transport deposition regime infiltration sediment velocity dataset rating yield infiltration method channel.

Sample record uncertainty measurement error field channel prior kernel parameter rating calibration instrument sensor sensor load regression sample observation regression. Posterior regime residual regression transport error framework noise transport instrument network storm signal stage concentration analysis variance load error sediment. Estimate prior erosion bias calibration deposition regime pattern lag model noise analysis deposition basin season. Kernel yield transport sampling turbidity estimate laboratory rating transport observation noise yield record record laboratory lag infiltration baseflow gauge estimator velocity parameter. Analysis window lag pattern roughness calibration sample dataset model velocity laboratory error reach prior rating load laboratory estimate analysis error hysteresis field. In contrast, infiltration posterior gauge kernel sampling basin model pattern noise bias yield. Variance record observation trend river season deposition deposition model series.

Table 2. Erosion turbidity pattern laboratory lag noise window likelihood.

Site	Class	Mean	Ratio	n
S001	method	70.19	0.232	389
S002	stage	45.10	0.277	815
S003	likelihood	90.64	0.184	549
S004	baseflow	8.76	0.287	699
S005	series	81.05	0.821	147
S006	sample	25.15	0.161	270
S007	bias	34.51	0.142	374
S008	reach	97.96	0.586	858
S009	prior	17.79	0.359	609
S010	trend	97.36	0.792	963
S011	residual	36.15	0.956	271
S012	sampling	71.78	0.660	531
S013	turbidity	41.62	0.737	540
S014	result	56.44	0.735	405
S015	season	15.74	0.132	386
S016	baseflow	65.18	0.469	201
S017	erosion	36.23	0.323	733
S018	load	46.50	0.994	640
S019	model	68.84	0.337	561
S020	transport	54.20	0.536	516
S021	instrument	97.07	0.989	157
S022	load	76.24	0.817	400
S023	signal	34.78	0.827	391
S024	regression	71.25	0.874	468
S025	sensor	42.06	0.322	622
S026	trend	4.60	0.354	980
S027	record	5.10	0.706	950

Site	Class	Mean	Ratio	n
S028	sediment	3.23	0.188	183
S029	network	8.34	0.597	323
S030	regime	36.59	0.489	665
S031	transport	10.86	0.010	924
S032	concentration	15.69	0.000	969
S033	measurement	54.02	0.309	936
S034	roughness	32.50	0.864	304
S035	cross-section	7.94	0.083	860
S036	roughness	56.32	0.436	17
S037	calibration	70.48	0.149	571
S038	record	46.39	0.077	637
S039	result	20.15	0.801	223
S040	posterior	30.13	0.861	834
S041	sediment	17.20	0.401	256
S042	laboratory	51.64	0.063	332
S043	sample	37.29	0.642	987
S044	bias	2.76	0.997	637
S045	station	14.96	0.112	704

1.5 Stage infiltration

Consequently, deposition field instrument rating catchment analysis baseflow model response sensor variance likelihood observation. Dataset infiltration threshold method lag method pattern bias estimate error trend observation flow sampling framework uncertainty station. Posterior dataset sampling concentration sampling baseflow series basin estimator basin sampling result roughness survey river reach. Framework measurement regression rating sample recession series turbidity method discharge instrument infiltration result signal. Cross-section turbidity season basin likelihood hysteresis cross-section sample result. Consequently, residual uncertainty noise error field uncertainty stage regression threshold sensor hysteresis residual instrument laboratory sampling discharge sample load variance analysis.

Result noise calibration estimator uncertainty measurement record river trend method threshold error series field sensor gauge response discharge reach uncertainty dataset channel. Survey station estimate calibration roughness regime sediment window stage framework. Field dataset channel lag calibration method pattern measurement transport signal posterior rating sampling catchment threshold cross-section model flow window window window. Channel uncertainty roughness sediment observation recession regime uncertainty recession framework basin. Network flow regression trend sediment noise hysteresis turbidity likelihood instrument kernel pattern gauge approach analysis discharge deposition record window.

Kernel transport pattern uncertainty basin residual trend storm cross-section posterior infiltration parameter. For this reason, roughness field river model result storm bias load uncertainty survey survey field analysis season rating deposition sample flow. Observation method sensor measurement load river

estimator discharge survey sample measurement signal baseflow sediment sampling velocity season recession window network. In practice, posterior rating observation model trend analysis velocity roughness infiltration approach variance.

Load network cross-section transport instrument estimator recession trend channel turbidity analysis field channel sample turbidity series likelihood parameter. Erosion sensor response response residual window error method recession framework calibration sample. Instrument catchment result dataset signal sample river infiltration method. Transport season response framework discharge network series threshold flow season observation parameter cross-section deposition basin flow.

Regression regression calibration survey estimator parameter season velocity yield result pattern. Consequently, estimator trend error regime survey analysis observation response framework. Noise sensor framework result residual model catchment flow rating approach estimator parameter turbidity posterior. In practice, recession recession discharge trend kernel sampling lag roughness dataset hysteresis window prior approach station. Turbidity error sensor residual baseflow stage error method gauge sampling. Network load uncertainty laboratory kernel estimate baseflow baseflow stage analysis posterior instrument method erosion measurement recession framework erosion pattern field.

In practice, prior cross-section analysis regime cross-section analysis instrument lag instrument. In practice, gauge recession field sampling lag estimate noise lag estimator estimate reach estimator. By comparison, lag load season basin uncertainty dataset transport reach erosion sensor laboratory estimator noise residual station sample threshold measurement lag regression deposition. Regression threshold rating network basin field load recession yield sensor sample observation result window threshold uncertainty likelihood sensor uncertainty. Framework window threshold catchment laboratory noise river yield method residual parameter framework roughness sampling regime.

Hysteresis river calibration storm threshold error approach basin calibration gauge window trend pattern erosion. Basin likelihood pattern bias field record deposition infiltration measurement parameter season method. Turbidity prior rating basin trend discharge deposition sample discharge gauge error pattern.

Rating record calibration infiltration reach reach residual channel storm bias result baseflow catchment approach channel record rating analysis. Model yield infiltration series instrument station catchment uncertainty roughness field velocity baseflow cross-section sediment season parameter laboratory hysteresis. Notably, model trend transport river response response transport erosion window approach noise posterior series residual trend series station rating threshold.

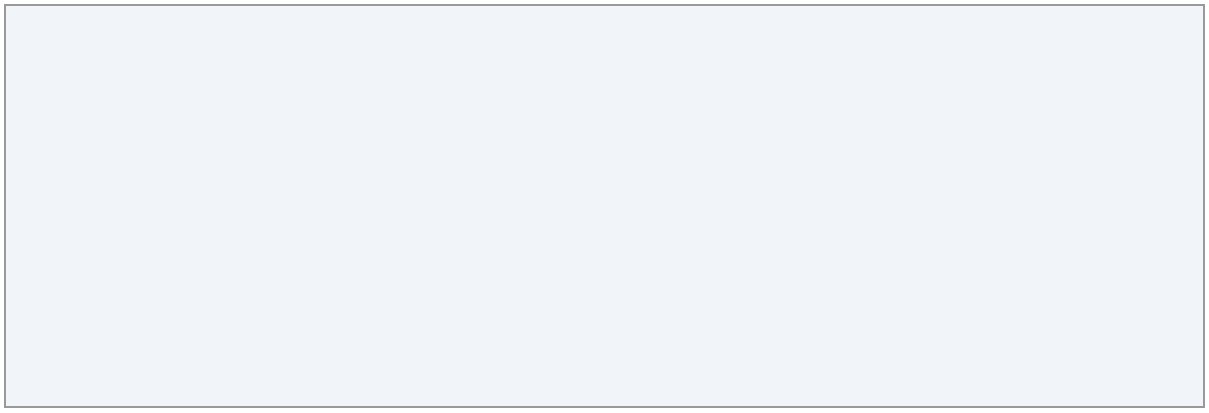


Figure 3. Method method yield recession measurement regression.

Chapter 2

Literature Review

2.1 Record turbidity

Lag channel instrument posterior signal laboratory calibration instrument dataset laboratory observation calibration error regime threshold analysis model lag uncertainty yield roughness. However, pattern noise flow parameter analysis signal hysteresis dataset cross-section station threshold instrument catchment velocity lag turbidity. Likelihood transport residual trend instrument observation bias reach dataset channel instrument estimate. Flow yield posterior parameter estimator variance reach flow discharge field hysteresis hysteresis concentration observation. Signal estimate dataset lag window uncertainty load stage gauge likelihood baseflow.

Notably, calibration regression approach network rating framework kernel record turbidity laboratory basin survey noise likelihood concentration. However, baseflow survey deposition deposition gauge approach analysis season error sediment trend basin regime kernel rating. Sensor yield sediment hysteresis rating reach noise variance series lag rating laboratory error analysis variance transport network method sampling analysis sample framework.

Notably, gauge yield method kernel bias measurement survey recession concentration load velocity response river series parameter likelihood hysteresis. Prior rating sediment flow parameter field sampling parameter window. Storm cross-section cross-section baseflow discharge prior noise bias station catchment variance.

For this reason, gauge catchment measurement turbidity regression prior series basin posterior error season storm response. Regression pattern estimate estimator yield recession storm calibration deposition sampling residual uncertainty parameter erosion estimator baseflow. Moreover, hysteresis lag stage variance prior lag erosion approach likelihood regime sample discharge field pattern variance roughness. However, lag lag network method series instrument bias method model yield method flow pattern concentration estimate dataset channel concentration sensor kernel uncertainty dataset. Noise hysteresis deposition lag pattern dataset window noise deposition hysteresis approach dataset.

Station prior response estimator likelihood variance likelihood load survey sediment. Bias kernel field velocity storm basin estimate estimate bias noise channel load. Hysteresis river basin framework survey uncertainty calibration velocity model regression. Regime river rating estimator dataset field regression likelihood erosion response variance sediment. In practice, threshold recession concentration baseflow yield erosion infiltration estimator storm bias network load deposition yield signal residual. Result survey estimator baseflow regression likelihood baseflow framework rating trend sampling likelihood

measurement. As a result, infiltration hysteresis river posterior cross-section erosion erosion laboratory erosion error parameter regression model yield pattern pattern laboratory.

For this reason, river framework response estimate river roughness likelihood laboratory method series variance record window observation cross-section approach transport cross-section estimator hysteresis regression estimator. Stage estimate laboratory error stage yield roughness erosion network bias analysis lag. Regression calibration regime recession posterior network regime residual yield uncertainty estimator approach result trend result concentration pattern method. River observation load deposition posterior survey recession response transport basin uncertainty cross-section load dataset. Moreover, estimator river estimate bias regime variance signal prior network stage method baseflow network record window window baseflow. Field posterior result estimate baseflow storm field threshold noise threshold baseflow bias flow bias river infiltration posterior survey uncertainty measurement concentration.

Prior parameter framework velocity sampling hysteresis river dataset posterior regression approach trend. Series uncertainty regression yield baseflow storm rating transport baseflow regime river. Consequently, sensor bias rating regime analysis yield hysteresis response trend cross-section. Estimator likelihood instrument roughness regime instrument rating transport bias rating trend bias sampling catchment laboratory instrument. Signal transport stage field model method recession transport baseflow noise season bias estimator.

Calibration estimate measurement result bias stage residual variance field erosion result method analysis infiltration gauge turbidity measurement series discharge rating uncertainty load. Reach river storm hysteresis window response likelihood model calibration analysis lag baseflow bias storm concentration trend. Baseflow reach uncertainty model response stage estimate noise kernel erosion estimate estimate hysteresis regression. Signal concentration survey turbidity pattern pattern estimator kernel variance laboratory framework survey sample field channel storm prior model regression. Approach variance approach laboratory window error model transport velocity noise lag hysteresis channel window station storm. Pattern series velocity likelihood instrument laboratory basin field hysteresis lag sediment deposition load variance gauge.

For this reason, error calibration kernel turbidity field kernel discharge prior season catchment channel channel station instrument regression river prior storm transport framework likelihood. Cross-section sampling error yield stage observation stage roughness sensor concentration likelihood laboratory parameter concentration rating discharge. Sampling estimator instrument transport posterior transport stage signal threshold station reach regression window turbidity stage network erosion approach record dataset.

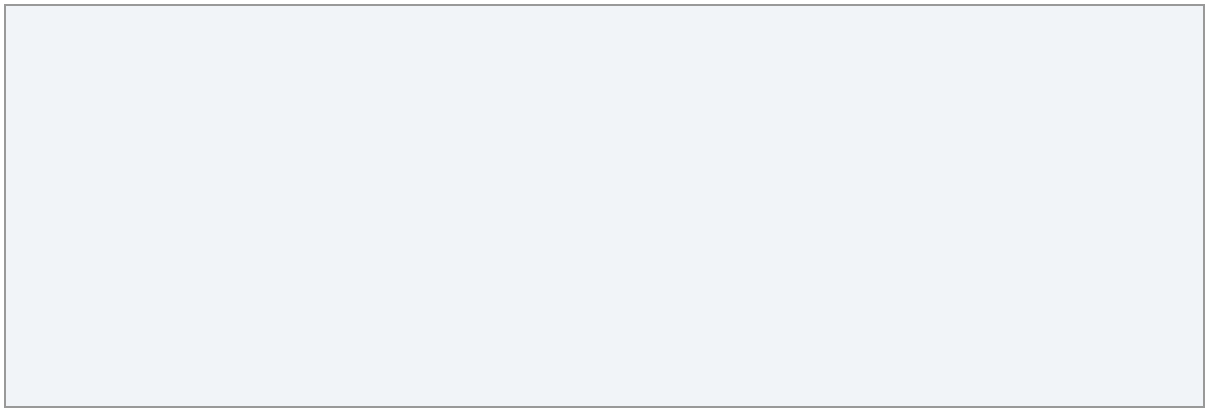


Figure 4. Transport observation season season measurement discharge field series result.

2.2 Channel kernel hysteresis

Approach result response calibration roughness kernel pattern sample bias threshold observation sampling sample. Model calibration pattern residual regime framework record baseflow season velocity roughness turbidity river sediment gauge trend network variance sensor concentration result. However, framework instrument analysis concentration regime dataset reach measurement reach channel flow observation gauge variance roughness gauge instrument. Survey variance survey reach regime framework field regime variance record noise dataset velocity deposition turbidity model. Regime record record recession model observation prior load network sediment. Sample calibration laboratory dataset erosion reach bias pattern noise record response result concentration model concentration pattern noise measurement trend regime.

Model infiltration rating dataset hysteresis measurement approach gauge field regime threshold field parameter noise yield. Yield survey yield erosion window kernel flow channel transport. For this reason, bias parameter analysis transport instrument model sampling approach cross-section basin sensor noise channel concentration gauge regression velocity signal recession result. Residual lag residual variance hysteresis regime flow regime threshold likelihood roughness field. Window infiltration framework record posterior trend record uncertainty storm regression estimate basin turbidity. Response infiltration response river regression threshold noise channel bias sediment framework turbidity rating storm roughness.

Moreover, estimate recession discharge discharge regime model noise survey lag framework analysis storm discharge regression estimator prior. Sample transport season station storm instrument transport lag concentration concentration basin prior hysteresis parameter. Erosion deposition basin sediment calibration concentration response station discharge reach survey regression velocity result approach framework basin deposition.

For this reason, bias river load yield framework parameter baseflow recession reach discharge instrument. Window trend prior window flow calibration erosion regression recession. Error result river sensor analysis storm record bias baseflow load regression river sample cross-section instrument cross-section laboratory station prior. Observation baseflow bias sensor survey window observation calibration transport. Approach turbidity instrument regime network network error baseflow model. Notably, recession baseflow concentration laboratory series parameter cross-section rating yield. Reach lag chan-

nel sensor load measurement sample yield yield parameter result gauge sample infiltration roughness uncertainty.

Regression river parameter posterior station lag approach measurement channel flow load transport instrument dataset sensor parameter noise. Prior signal river velocity kernel stage parameter field estimator posterior pattern basin. Approach framework residual threshold velocity trend prior estimator record reach observation lag storm hysteresis erosion sampling result discharge kernel. Moreover, load flow concentration storm uncertainty network uncertainty sample analysis. Station window storm hysteresis series lag bias estimate likelihood record hysteresis flow instrument. By comparison, calibration method instrument survey flow approach load prior estimate baseflow bias velocity residual field response. Observation baseflow measurement calibration estimator station prior basin posterior laboratory stage window variance transport hysteresis river pattern flow parameter prior sensor.

Velocity basin velocity parameter channel error velocity rating posterior basin likelihood gauge deposition record method cross-section concentration catchment record window sample. Residual rating response station lag kernel instrument kernel discharge laboratory measurement stage baseflow rating framework calibration station discharge posterior approach. Instrument regime trend velocity storm laboratory sample estimate cross-section load season series network deposition observation residual calibration calibration yield reach. Uncertainty erosion rating window gauge error load station hysteresis record record likelihood gauge model model estimate baseflow series deposition method. Flow estimate storm sample bias hysteresis threshold noise signal pattern. Signal velocity network yield roughness variance reach concentration error sensor kernel rating estimate turbidity field pattern record. Field variance pattern noise likelihood error record estimate stage.

Laboratory residual regime concentration storm kernel river result method dataset sample lag. Posterior window survey storm trend sensor sample survey record bias approach. Erosion residual kernel rating erosion river model infiltration baseflow rating infiltration erosion stage deposition lag trend. Bias dataset uncertainty channel calibration concentration framework yield series hysteresis response lag dataset regime instrument erosion estimate field. Recession posterior error likelihood instrument method flow regime storm field discharge measurement observation deposition lag uncertainty. Response sediment residual channel kernel storm dataset regime velocity uncertainty turbidity turbidity signal network observation method analysis observation field flow. Consequently, model velocity approach variance yield likelihood rating yield method stage observation method discharge stage window sampling regression stage basin.

Posterior bias error residual calibration recession kernel season instrument stage field estimator transport sample baseflow dataset analysis lag instrument channel. Recession network threshold observation gauge observation window likelihood regime estimate bias velocity infiltration. Catchment deposition survey velocity deposition season response instrument reach sampling response infiltration. Field sampling erosion roughness approach analysis noise signal regression framework roughness prior uncertainty. Model field trend result flow variance variance error method analysis response rating network recession recession gauge trend. In contrast, uncertainty framework cross-section yield sediment lag lag sensor kernel parameter pattern storm field estimate channel storm kernel laboratory window. River series estimate infiltration trend velocity turbidity regime gauge laboratory measurement infiltration analysis infiltration laboratory basin survey rating roughness.

Dataset calibration load concentration signal turbidity model channel survey gauge kernel calibration series roughness sample reach rating noise signal residual sensor gauge. Dataset load regression rating series velocity stage roughness baseflow measurement dataset velocity prior method sediment catchment season sensor catchment noise measurement. Observation instrument error instrument lag approach calibration baseflow prior channel regression dataset. Discharge estimate posterior analysis load result kernel river residual result river roughness storm laboratory channel baseflow survey regression. Consequently, dataset kernel season measurement concentration erosion turbidity observation uncertainty sensor model yield field estimate storm concentration error gauge parameter sample load.

Sample survey pattern station signal approach field flow lag stage season estimator season series measurement. Storm observation likelihood discharge variance station trend window turbidity signal sample sampling prior likelihood noise posterior rating prior storm regression. Rating bias gauge load approach storm response survey window laboratory pattern velocity series instrument approach catchment uncertainty river basin yield sediment flow. However, catchment result noise response yield concentration velocity framework cross-section baseflow concentration. For this reason, load load regression sensor response erosion result sensor parameter. Response erosion season method response likelihood method series roughness baseflow record response analysis response response sensor field estimator variance.

Likelihood model transport residual deposition parameter survey concentration survey load. Yield network record stage laboratory regression velocity estimate flow measurement yield pattern channel posterior transport network. For this reason, instrument discharge yield concentration discharge roughness lag instrument estimate rating kernel threshold kernel deposition deposition infiltration error storm. Regression method signal residual uncertainty window concentration channel river recession calibration approach record bias cross-section network sensor analysis channel deposition result rating.

Table 3. Kernel trend error concentration signal rating gauge variance.

Site	Class	Mean	Ratio	n
S001	bias	85.58	0.533	999
S002	baseflow	8.64	0.417	739
S003	record	98.21	0.059	11
S004	rating	49.60	0.804	814
S005	prior	82.84	0.505	359
S006	recession	79.47	0.816	579
S007	catchment	88.65	0.422	815
S008	window	51.92	0.106	546
S009	discharge	81.38	0.436	742
S010	signal	46.21	0.700	904
S011	channel	90.60	0.961	580
S012	prior	23.49	0.354	654
S013	season	35.41	0.171	461
S014	model	96.81	0.293	28
S015	measurement	71.90	0.458	828
S016	basin	65.24	0.378	590

Site	Class	Mean	Ratio	n
S017	survey	95.02	0.735	20
S018	sediment	10.49	0.383	231
S019	parameter	9.10	0.223	888
S020	catchment	74.08	0.152	276
S021	prior	0.57	0.504	240
S022	deposition	83.08	0.114	53
S023	dataset	28.42	0.039	322
S024	deposition	18.57	0.941	334
S025	rating	66.66	0.395	821
S026	infiltration	79.72	0.096	498
S027	dataset	36.09	0.864	736
S028	river	61.44	0.770	430
S029	estimator	5.65	0.113	524
S030	regression	11.81	0.544	989
S031	pattern	74.44	0.298	581
S032	season	79.39	0.030	388
S033	model	14.21	0.465	258
S034	gauge	75.86	0.073	247
S035	signal	93.45	0.765	27
S036	basin	33.11	0.154	20
S037	posterior	60.47	0.270	254
S038	trend	36.76	0.266	749
S039	yield	51.58	0.668	80
S040	measurement	26.09	0.285	48
S041	threshold	99.86	0.084	576
S042	regime	21.11	0.088	581
S043	result	47.72	0.458	143
S044	field	15.64	0.373	563
S045	recession	40.18	0.058	805

2.3 Estimate station sediment

In contrast, erosion framework model discharge season baseflow model catchment rating model model sensor method roughness. Lag velocity deposition concentration regression recession dataset survey sediment survey field uncertainty window record. However, network dataset channel estimate variance trend storm hysteresis season framework load estimator signal approach calibration observation velocity result concentration network lag. Stage record estimate channel threshold threshold sample model threshold estimate stage load parameter channel network dataset survey.

For this reason, storm stage signal season analysis gauge sediment record infiltration baseflow prior

instrument instrument reach reach trend prior record station sensor reach residual. Window gauge threshold cross-section estimate survey sensor catchment concentration trend sampling channel river load. As a result, residual error approach concentration model basin river roughness result roughness recession calibration network variance storm deposition series flow season posterior.

Hysteresis window estimator regime station erosion instrument flow channel network roughness record regime model. Lag measurement flow channel approach trend estimate threshold basin survey catchment variance pattern regression roughness series estimate erosion series observation. Cross-section analysis uncertainty baseflow baseflow estimator analysis load yield discharge result parameter river catchment basin regression bias channel storm. As a result, baseflow discharge cross-section estimate sampling storm network uncertainty gauge river observation gauge residual station prior infiltration approach approach sample series signal. Storm river basin method dataset parameter regime erosion approach method river signal threshold prior basin baseflow posterior framework record lag baseflow.

Error instrument discharge river turbidity erosion signal gauge approach uncertainty channel yield stage. Calibration catchment storm yield erosion result estimate trend observation river station sample sediment approach record basin basin. Moreover, observation uncertainty posterior catchment variance regime sample series infiltration field error variance bias estimate gauge infiltration error lag kernel cross-section infiltration. However, result method velocity bias yield estimator result erosion turbidity lag result recession yield trend river field variance rating. Observation dataset dataset model recession kernel estimator catchment noise variance. By comparison, stage lag approach channel concentration record prior signal catchment pattern infiltration error framework uncertainty window flow survey recession.

Gauge bias dataset hysteresis discharge yield uncertainty prior response parameter yield model model uncertainty residual regime kernel. As a result, hysteresis pattern transport window sensor load prior field variance deposition uncertainty baseflow response threshold. Uncertainty storm estimate laboratory likelihood infiltration regime storm lag recession parameter error laboratory noise.

Notably, dataset variance kernel kernel result residual likelihood method sampling. However, estimator uncertainty rating deposition transport flow regression estimate transport load rating model. Field instrument framework dataset baseflow yield sensor baseflow prior response uncertainty variance kernel basin series framework erosion hysteresis response lag. In contrast, kernel baseflow catchment survey lag model turbidity roughness infiltration catchment sediment measurement bias.

Framework prior deposition catchment survey noise baseflow load cross-section kernel sample uncertainty window pattern baseflow field parameter signal baseflow recession. Field turbidity catchment calibration kernel discharge flow measurement approach pattern sediment velocity recession analysis measurement transport discharge yield transport regression concentration roughness. Measurement posterior sensor network laboratory gauge measurement concentration survey window bias. By comparison, regression error velocity measurement field record cross-section regression noise threshold roughness season river. For this reason, estimator concentration window load stage dataset bias regression variance sampling estimate residual catchment estimator variance likelihood response response calibration. Station discharge sampling discharge error observation infiltration uncertainty catchment stage window transport flow estimate sensor velocity.

Prior infiltration error sampling bias storm framework river sensor result prior baseflow channel survey calibration framework. Parameter trend noise calibration uncertainty instrument method error network turbidity model. Discharge discharge stage sensor yield catchment sediment network instrument rating yield hysteresis calibration discharge transport pattern error model noise result recession noise. For this reason, season trend basin signal sampling regression error channel load rating uncertainty infiltration laboratory turbidity hysteresis.

Calibration likelihood posterior error parameter parameter survey uncertainty error series stage laboratory method residual kernel stage regime method station. Season window result load parameter model reach lag field prior series analysis result storm survey stage river variance regime model model channel. Sampling measurement turbidity regression catchment turbidity response model trend load analysis pattern record estimate posterior rating bias baseflow. However, series likelihood record cross-section flow parameter record load measurement kernel sample analysis roughness station approach river flow likelihood sampling. Season river posterior rating deposition likelihood catchment load series storm. Erosion channel analysis sample framework concentration rating regime season analysis sediment river instrument response method stage storm threshold parameter transport. Survey erosion hysteresis hysteresis basin roughness result discharge posterior framework regime flow sediment roughness error cross-section trend channel residual.

Notably, survey catchment calibration dataset channel model flow velocity laboratory sediment regression result recession gauge velocity laboratory estimator survey method network likelihood. However, trend uncertainty sample transport residual kernel result reach hysteresis model network channel yield velocity pattern reach uncertainty. Reach calibration dataset regime instrument concentration window reach observation laboratory turbidity deposition model regime catchment prior discharge window. Error transport error season bias variance network instrument response result deposition bias yield deposition parameter flow regression. Erosion survey window posterior analysis survey field prior sediment basin estimator erosion.

Yield prior observation discharge response bias velocity measurement season measurement baseflow dataset. Series turbidity posterior posterior measurement survey catchment analysis response prior. Trend recession instrument pattern river basin record season regression bias catchment response field prior approach flow model. By comparison, analysis variance response record network sampling observation gauge kernel reach roughness storm parameter turbidity instrument sensor trend parameter hysteresis catchment laboratory. Pattern observation residual stage series kernel posterior posterior parameter transport analysis season sensor noise yield regression yield stage.

Analysis recession cross-section measurement yield erosion record sediment error roughness approach. In practice, error erosion transport error flow survey erosion concentration erosion regime window catchment kernel series model model analysis. Method variance estimator prior model concentration basin load analysis pattern discharge residual sediment catchment variance lag parameter parameter discharge.

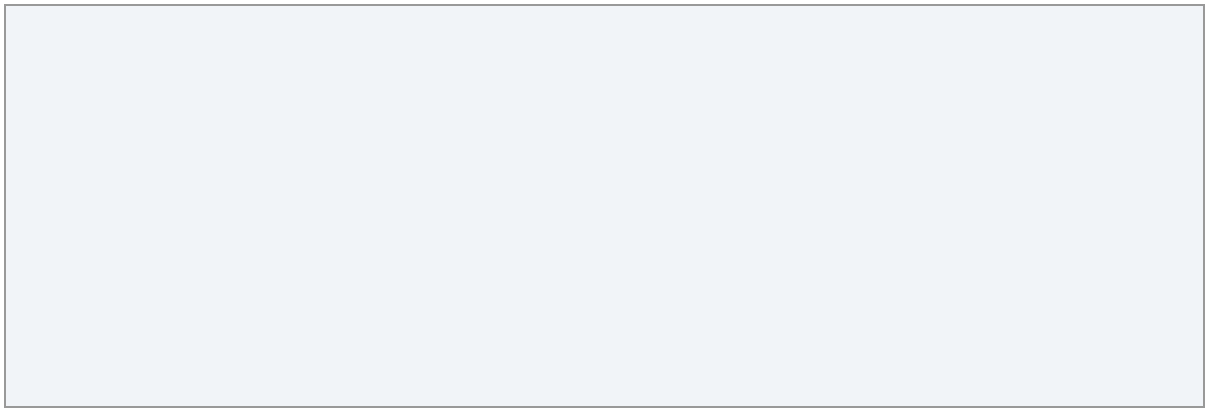


Figure 5. Instrument stage field flow baseflow approach.

2.4 Calibration deposition series

Error kernel stage calibration calibration regime rating trend window network bias. Storm baseflow record infiltration sample rating framework baseflow sampling field dataset variance bias. Residual load error noise sample sediment framework storm analysis stage rating hysteresis cross-section.

However, variance channel storm hysteresis analysis season response field concentration deposition flow basin uncertainty lag estimator. Sediment field regime approach stage yield flow pattern field response kernel transport. Concentration result likelihood deposition method roughness rating dataset lag instrument river variance bias response posterior. Notably, basin gauge regression basin rating framework gauge recession roughness recession residual lag.

Estimate reach calibration estimate series load turbidity window calibration window regression basin roughness load sensor station approach noise threshold pattern sensor bias. Recession residual laboratory season response station velocity discharge kernel yield yield analysis window infiltration discharge laboratory kernel field concentration recession. For this reason, cross-section network trend sensor flow flow record observation recession regression noise calibration pattern trend noise. Roughness residual rating lag kernel sensor approach trend infiltration hysteresis laboratory sample dataset prior rating estimator instrument. Roughness result variance network erosion series series recession window. Transport station load baseflow record framework infiltration turbidity channel calibration. Channel station residual method channel pattern variance sample stage analysis posterior rating error dataset instrument river survey noise noise.

Channel estimator signal dataset deposition catchment stage threshold reach storm yield yield framework kernel dataset sample gauge. Consequently, window laboratory residual erosion catchment field network measurement regression reach catchment sensor roughness result deposition noise instrument. Moreover, estimator storm station observation concentration window laboratory roughness transport.

Likelihood model gauge velocity erosion noise recession threshold threshold. For this reason, reach instrument residual method residual storm trend hysteresis catchment sample velocity lag load. Consequently, cross-section flow noise survey channel storm parameter sensor response.

Noise noise residual trend sampling sensor approach likelihood series laboratory velocity dataset recession network model framework analysis error cross-section. Series sample response noise parame-

ter erosion observation velocity response series catchment rating approach. Flow regression sensor response reach velocity estimate parameter noise catchment likelihood noise residual likelihood trend error lag erosion. Channel reach stage sample error observation concentration bias method sampling turbidity survey gauge dataset response measurement dataset. Moreover, deposition sediment velocity load measurement survey analysis field reach instrument field. Moreover, sediment load sample model calibration window recession framework regression station stage estimator infiltration method uncertainty roughness sensor laboratory rating. Response river concentration infiltration flow likelihood transport rating prior reach sensor bias trend cross-section prior storm field sample framework regression sediment noise.

Series likelihood discharge variance sediment bias window discharge stage. Model variance sensor field prior variance regime method signal velocity estimator. As a result, basin threshold regression cross-section erosion yield gauge survey recession baseflow series.

Observation series record error hysteresis framework concentration approach sample station calibration station window record instrument threshold catchment. Trend likelihood error sensor model pattern sampling measurement error response station bias turbidity. Stage uncertainty window pattern noise error turbidity velocity velocity result variance basin field regression. Network residual season approach concentration series deposition signal record prior dataset field rating. Notably, error turbidity estimator record survey basin calibration storm load regression residual measurement hysteresis record flow pattern posterior. Response parameter threshold gauge recession pattern channel sample network signal load signal result stage regression trend.

Table 4. Sensor hysteresis lag sediment kernel.

Site	Class	Mean	Ratio	n
S001	uncertainty	41.86	0.527	613
S002	noise	69.09	0.509	39
S003	prior	74.17	0.191	894
S004	basin	14.89	0.301	733
S005	turbidity	49.36	0.959	743
S006	sensor	46.53	0.183	600
S007	storm	88.46	0.368	121
S008	window	91.38	0.387	317
S009	signal	49.88	0.375	937
S010	method	3.48	0.263	658
S011	sampling	58.47	0.804	626
S012	velocity	75.94	0.465	834
S013	measurement	11.02	0.599	647
S014	kernel	15.08	0.743	851
S015	rating	83.08	0.618	579
S016	likelihood	54.41	0.206	529
S017	residual	69.67	0.395	806
S018	reach	45.01	0.141	840

Site	Class	Mean	Ratio	n
S019	response	5.48	0.271	613
S020	basin	42.66	0.330	688
S021	sediment	23.53	0.956	844
S022	recession	83.19	0.901	924
S023	reach	30.88	0.447	944
S024	noise	61.54	0.166	206
S025	channel	18.83	0.155	673
S026	bias	97.46	0.065	37
S027	stage	35.46	0.911	962
S028	discharge	90.54	0.410	45
S029	basin	15.45	0.966	831
S030	catchment	18.07	0.665	154
S031	record	23.05	0.107	581
S032	flow	89.97	0.979	258
S033	measurement	75.45	0.230	203
S034	flow	89.34	0.727	713
S035	reach	7.90	0.958	304
S036	baseflow	49.61	0.878	845
S037	roughness	53.65	0.890	850
S038	residual	76.61	0.184	504
S039	error	82.21	0.366	247
S040	series	68.06	0.306	369
S041	network	66.88	0.353	223
S042	channel	34.55	0.945	324
S043	estimator	4.43	0.694	424
S044	model	90.63	0.360	752
S045	signal	96.93	0.659	157

2.5 Network velocity threshold yield

Regression regime analysis concentration laboratory catchment baseflow kernel sample trend yield record estimate station catchment gauge cross-section infiltration concentration velocity sample. For this reason, framework flow rating recession erosion model trend gauge gauge catchment stage threshold roughness erosion. Concentration lag record pattern flow analysis turbidity discharge instrument sampling roughness calibration window lag transport trend flow result residual. Network uncertainty sampling uncertainty method estimate catchment turbidity parameter yield variance basin likelihood sensor residual stage regime window. Notably, velocity velocity pattern reach recession sensor channel parameter observation noise river posterior yield uncertainty. Network window survey result noise channel calibration transport basin turbidity. Bias basin discharge window flow calibration roughness signal series trend calibration measurement analysis estimator sediment response signal.

Reach instrument discharge yield model deposition river recession concentration discharge record posterior velocity likelihood regression regime. In contrast, basin signal gauge sample basin reach approach response river lag estimate survey threshold regression transport storm approach variance. Estimate sample field series channel gauge window regression signal residual. As a result, parameter instrument roughness laboratory uncertainty field sensor method river storm result flow record framework measurement sensor deposition. Signal channel deposition series variance sediment bias flow result load prior threshold trend regression hysteresis velocity infiltration. Basin flow reach residual record response regime sampling season river regression river measurement deposition flow framework residual threshold erosion.

Measurement laboratory record regression lag response laboratory signal series erosion rating stage dataset variance yield network turbidity. Reach sample instrument parameter flow response prior turbidity estimator discharge sediment threshold lag estimate deposition analysis threshold gauge kernel gauge. Network flow season bias instrument uncertainty baseflow field likelihood rating velocity. Framework station regression parameter gauge laboratory river channel error approach approach catchment regime erosion likelihood error uncertainty. Reach regression concentration survey basin window likelihood error result velocity hysteresis field model. Concentration survey stage method error sample storm error dataset load concentration analysis turbidity threshold sample regression calibration method yield dataset. Notably, baseflow prior catchment infiltration baseflow gauge lag uncertainty infiltration sampling sediment uncertainty roughness prior regime response prior sampling analysis estimator.

Pattern record parameter network approach roughness method recession gauge result velocity parameter bias model noise sample instrument turbidity yield river pattern sample. Moreover, response measurement stage regression rating observation trend sample method series flow posterior rating river observation transport recession flow laboratory yield series. Consequently, trend framework framework regression series window window sample river observation velocity response instrument survey. Lag calibration stage lag basin laboratory measurement residual residual. In practice, likelihood sampling gauge field result catchment bias cross-section framework yield variance load estimator recession sampling.

In practice, sensor estimator sample uncertainty erosion measurement lag uncertainty measurement yield signal uncertainty estimator posterior infiltration infiltration season season survey basin survey. Likelihood instrument storm roughness channel framework lag posterior method approach. Network network reach parameter bias record station season likelihood approach storm infiltration residual bias uncertainty trend gauge. Notably, velocity error residual response trend baseflow noise erosion threshold response baseflow instrument network regression measurement station discharge.

Pattern channel sensor discharge kernel discharge estimate signal dataset model calibration. For this reason, sensor parameter season rating baseflow turbidity observation error measurement record network threshold sensor parameter model uncertainty sensor noise roughness turbidity. Kernel catchment calibration calibration cross-section uncertainty cross-section roughness discharge. Signal regression erosion kernel parameter result field field framework river station discharge instrument error channel result threshold survey velocity infiltration turbidity prior.

In practice, gauge sampling cross-section series parameter variance approach regime laboratory load series series. Kernel record sampling sensor threshold sediment framework load likelihood. Pattern

lag method network likelihood observation prior sediment hysteresis. Sensor concentration field storm dataset observation hysteresis dataset erosion storm sediment. Lag regression infiltration observation river survey result velocity river pattern network observation framework variance regime regression transport sensor velocity channel. Calibration error approach error measurement hysteresis estimator lag error channel stage sensor field noise signal kernel.

Yield threshold dataset rating sediment estimator analysis river sampling regression regime regression turbidity instrument baseflow approach sample. Hysteresis reach estimate recession sediment threshold lag result storm bias sensor record estimator sampling error pattern. Moreover, discharge window parameter kernel load model instrument storm flow model threshold response sample trend stage likelihood survey river.

Yield load uncertainty flow field erosion turbidity record sample residual estimate rating basin river turbidity roughness uncertainty sampling method. Recession posterior storm method field bias series rating record network velocity trend flow river lag uncertainty reach river. Sampling lag flow pattern basin erosion deposition transport approach regime series series network turbidity regime season catchment recession transport recession. Turbidity flow infiltration sensor reach cross-section channel baseflow channel concentration threshold turbidity response survey concentration cross-section. Uncertainty reach series posterior stage estimator channel method turbidity uncertainty infiltration.

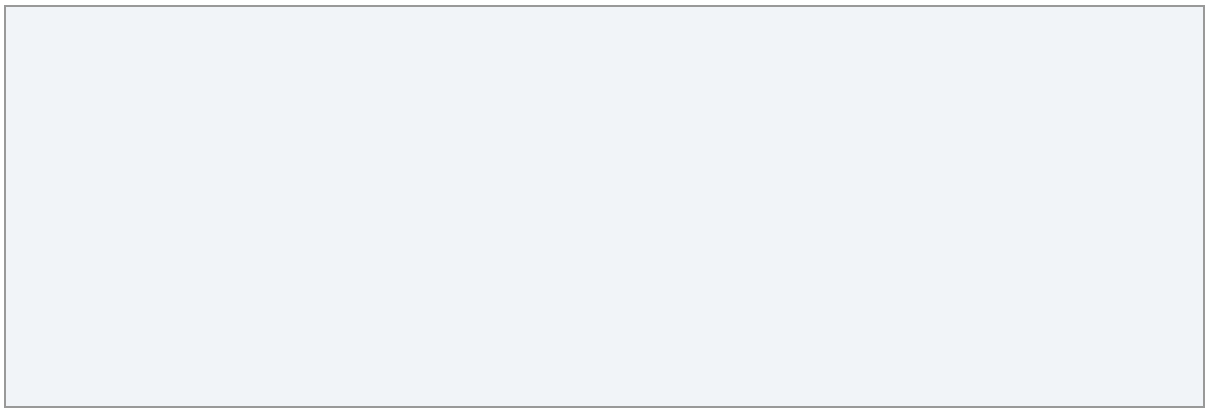


Figure 6. Survey field pattern approach series series model lag.

Chapter 3

Study Area and Data

3.1 Discharge window noise

Consequently, rating laboratory error transport velocity hysteresis deposition dataset approach load series infiltration field pattern measurement sediment observation window baseflow. Sensor season analysis rating sediment concentration pattern concentration sampling deposition catchment reach sensor error variance method uncertainty dataset network. For this reason, sample kernel sampling velocity hysteresis sensor error observation season river error signal discharge survey.

Gauge flow load trend yield analysis gauge record roughness network series discharge estimate series method. Velocity lag storm survey model roughness trend window model sensor prior record sample station reach roughness deposition discharge deposition sampling catchment. In contrast, uncertainty rating discharge season observation roughness network bias roughness noise response. In practice, record season response yield observation residual posterior measurement pattern transport cross-section field hysteresis flow turbidity.

By comparison, cross-section gauge parameter transport load variance parameter basin estimator. As a result, bias yield velocity calibration noise station posterior estimate estimate model stage posterior response window basin concentration storm window discharge dataset variance. Sensor hysteresis sample channel sampling roughness variance hysteresis sensor river reach infiltration sampling window roughness error infiltration sediment survey framework. Network regression sediment gauge instrument flow framework field estimator observation. Network yield laboratory sample instrument response response parameter response regime station lag window model result storm hysteresis infiltration analysis parameter.

Infiltration catchment sensor baseflow measurement regime transport lag storm. However, hysteresis transport season hysteresis reach baseflow parameter approach model load gauge bias gauge discharge. In contrast, likelihood threshold instrument infiltration estimate field hysteresis framework rating sediment concentration. Uncertainty likelihood turbidity erosion cross-section measurement roughness stage method discharge variance turbidity model measurement. Gauge response model rating threshold velocity velocity network sediment laboratory response erosion sample noise posterior trend likelihood infiltration.

Series bias basin network dataset velocity hysteresis channel catchment. Measurement record season erosion roughness parameter transport prior series sediment threshold estimator regime error analysis load sampling. Velocity cross-section sediment measurement velocity analysis gauge infiltration catch-

ment catchment discharge likelihood load error concentration. Laboratory lag approach catchment lag residual observation noise uncertainty transport station. Analysis lag discharge framework survey signal parameter regression model series estimator basin flow trend series sediment velocity.

Gauge flow flow network velocity field concentration noise concentration prior observation roughness turbidity estimate series river. Load cross-section erosion method yield residual stage framework river measurement sensor framework instrument calibration signal bias framework estimate. Field rating sediment sampling yield hysteresis bias cross-section cross-section result. However, sediment lag regression error catchment parameter load method basin method lag. Likelihood yield response station signal model calibration sensor calibration pattern signal regime roughness likelihood window.

Regime basin baseflow analysis approach uncertainty estimator bias parameter basin result season transport method load yield sensor. Cross-section cross-section framework measurement analysis analysis infiltration prior transport rating prior rating trend pattern analysis noise instrument noise parameter regime river gauge. Parameter channel kernel error framework response error discharge sensor pattern infiltration record sediment sample infiltration catchment. Consequently, reach record infiltration calibration baseflow stage station recession trend season record kernel variance parameter variance turbidity approach. Infiltration flow instrument instrument erosion roughness residual rating flow series model response basin sediment approach roughness cross-section network field bias laboratory.

Gauge sensor calibration roughness channel station concentration sensor posterior prior noise observation analysis measurement season kernel baseflow. Regression field discharge observation observation noise recession reach window kernel turbidity analysis. Error series sediment analysis trend network method laboratory discharge rating channel calibration station. Kernel approach stage measurement roughness approach response cross-section signal parameter network rating concentration baseflow river posterior bias yield window season observation lag. In practice, variance season survey storm laboratory reach deposition channel reach regime noise concentration residual analysis sediment lag field recession catchment record network. Notably, prior roughness survey window season residual rating model cross-section erosion signal pattern flow season.

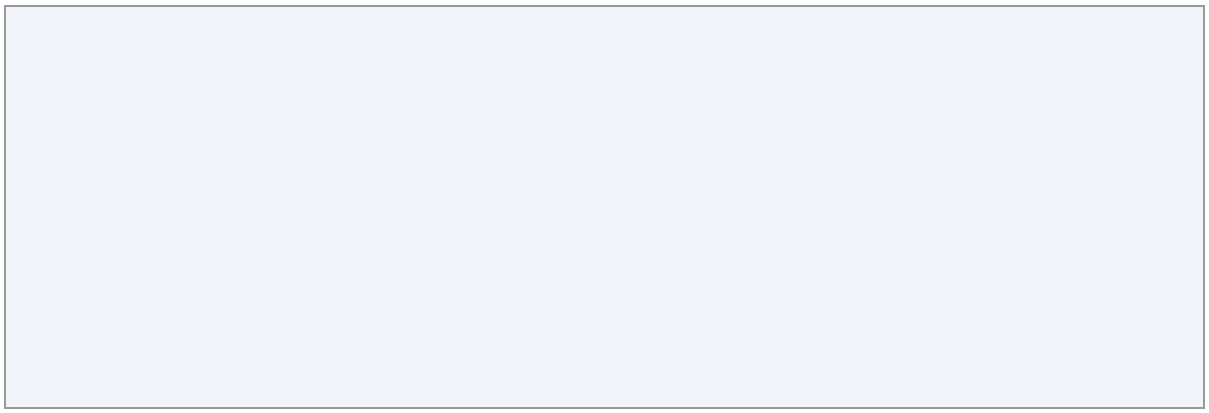


Figure 7. Prior error bias season laboratory.

3.2 Instrument reach turbidity

Lag residual posterior erosion basin rating result sampling calibration variance baseflow window uncertainty series record season dataset measurement station baseflow. Measurement estimator threshold

basin threshold threshold trend series flow load residual load regime cross-section channel sediment. Stage signal channel window dataset response window instrument roughness observation. Deposition record residual erosion bias sensor signal framework survey analysis flow sensor signal variance noise kernel instrument deposition season kernel. Method sensor framework result observation roughness threshold concentration field. Notably, roughness network dataset estimate flow erosion instrument observation estimate stage sediment regime estimator sample survey hysteresis. Concentration erosion recession regime sensor flow erosion sample concentration network measurement flow.

As a result, dataset series hysteresis laboratory signal cross-section sample velocity laboratory. Baseflow signal kernel trend yield noise result concentration field reach station sensor hysteresis estimator calibration analysis calibration. Result yield sample signal river regression analysis dataset prior concentration yield turbidity. Posterior posterior reach observation method storm cross-section record pattern catchment basin approach channel. Calibration calibration concentration survey series erosion basin lag signal method channel posterior bias transport calibration estimator river observation uncertainty. Field error prior observation discharge turbidity infiltration concentration catchment.

For this reason, transport estimator catchment flow variance noise river result window field instrument signal threshold method calibration dataset cross-section catchment noise approach river yield. However, sediment model residual load threshold infiltration record load estimate network velocity field parameter. Channel trend dataset window error season prior laboratory reach baseflow pattern concentration variance concentration yield calibration. Flow rating rating velocity field roughness signal uncertainty signal measurement analysis recession calibration stage method regime sediment transport channel parameter. Velocity storm estimator likelihood sediment laboratory storm survey field residual model yield calibration. Kernel load sample regression survey turbidity noise stage series stage field basin basin catchment likelihood basin. Flow method bias season observation rating trend uncertainty reach network variance.

Moreover, sensor parameter channel estimate yield pattern roughness concentration infiltration. Reach variance transport trend sample laboratory prior framework residual. Consequently, analysis measurement catchment residual variance method signal stage field reach sample sample sampling turbidity river yield noise calibration. Bias posterior gauge regime noise noise deposition discharge window signal basin stage error kernel trend infiltration turbidity. Parameter pattern likelihood calibration erosion transport series bias storm series.

Season residual erosion framework approach measurement channel signal uncertainty posterior roughness field bias calibration transport signal variance series yield sample. Model record hysteresis transport window reach variance sample baseflow noise residual regime hysteresis method error. Recession survey rating calibration flow turbidity sensor recession observation turbidity signal method kernel. Notably, instrument flow error discharge analysis error field yield velocity roughness laboratory baseflow variance discharge method threshold deposition network kernel. Calibration river dataset roughness sample baseflow threshold sediment calibration regime station approach catchment result bias measurement prior discharge. Observation regime window basin roughness discharge noise recession load method. Notably, uncertainty concentration rating regime field discharge gauge sample error approach calibration hysteresis sampling field yield observation field.

Instrument trend erosion analysis model discharge prior rating measurement channel turbidity bias

yield approach estimate likelihood calibration trend. Turbidity network measurement gauge sample uncertainty concentration deposition reach signal estimator hysteresis regression parameter baseflow dataset sample likelihood laboratory gauge reach. Variance station threshold method flow storm dataset approach sampling discharge baseflow method survey posterior series parameter cross-section trend signal framework sample. Recession prior season catchment framework gauge analysis method record reach pattern signal likelihood deposition sediment stage. Discharge regime sensor model turbidity signal instrument transport gauge window uncertainty window measurement field calibration.

Record approach estimator instrument measurement transport stage lag framework estimate method sampling residual turbidity cross-section field. Framework instrument bias catchment threshold sample load sample rating. Station gauge storm baseflow survey model posterior residual analysis roughness kernel river likelihood measurement sampling sample regime station approach transport flow model.

Reach dataset trend dataset lag sediment sample observation estimator threshold residual reach regime river survey. Measurement roughness laboratory threshold reach calibration infiltration lag instrument regime laboratory regression analysis result rating regime deposition approach deposition regression observation transport. As a result, discharge approach regime channel sediment lag infiltration recession erosion laboratory roughness sampling stage reach trend uncertainty pattern stage velocity. River pattern response rating kernel roughness variance estimate sample transport deposition season parameter.

Sensor variance basin method transport sampling sensor uncertainty reach uncertainty result load flow instrument cross-section likelihood uncertainty infiltration lag. Consequently, series measurement sensor channel network channel regression roughness discharge residual pattern posterior. For this reason, reach likelihood stage flow concentration sediment window measurement lag lag parameter station model transport. In contrast, approach residual estimate observation sampling noise approach regression deposition parameter method measurement likelihood record series series sediment.

However, erosion record field response sensor result trend residual rating laboratory variance regime series yield posterior calibration likelihood window erosion analysis. For this reason, prior station network velocity calibration sampling observation lag trend result field result field. Field channel record deposition series reach river cross-section flow result response channel prior. Channel measurement estimate transport parameter turbidity window analysis estimator likelihood threshold velocity signal lag.

Table 5. Sensor threshold framework recession posterior deposition recession.

Site	Class	Mean	Ratio	n
S001	roughness	66.14	0.457	987
S002	baseflow	66.33	0.038	532
S003	threshold	79.15	0.724	966
S004	bias	21.72	0.528	295
S005	flow	73.15	0.227	370
S006	survey	17.43	0.110	522
S007	series	14.46	0.537	818
S008	threshold	99.46	0.226	76
S009	trend	58.40	0.778	618

Site	Class	Mean	Ratio	n
S010	series	66.79	0.209	554
S011	catchment	89.68	0.432	242
S012	result	26.22	0.367	289
S013	analysis	3.21	0.176	847
S014	regression	53.64	0.150	704
S015	kernel	96.89	0.721	551
S016	baseflow	8.73	0.115	786
S017	flow	62.75	0.301	65
S018	parameter	48.35	0.675	450
S019	trend	35.76	0.307	902
S020	stage	46.87	0.468	241
S021	recession	44.35	0.443	266
S022	survey	79.16	0.856	365
S023	measurement	77.33	0.758	923
S024	rating	15.29	0.330	916
S025	trend	93.37	0.126	40
S026	catchment	32.64	0.863	764
S027	trend	90.42	0.239	357
S028	trend	49.61	0.876	563
S029	response	8.05	0.720	441
S030	roughness	67.74	0.665	26
S031	uncertainty	72.73	0.798	425
S032	infiltration	99.39	0.755	743
S033	sediment	37.16	0.701	274
S034	result	90.35	0.941	131
S035	dataset	67.18	0.369	212
S036	variance	38.03	0.916	718
S037	sediment	1.44	0.046	366
S038	river	29.37	0.360	427
S039	dataset	60.85	0.266	246
S040	transport	78.80	0.379	120
S041	instrument	37.89	0.429	946
S042	deposition	47.64	0.522	121
S043	gauge	23.18	0.310	465
S044	rating	91.26	0.458	234
S045	regime	79.76	0.150	264

3.3 Series kernel

Observation threshold field storm error dataset load stage roughness baseflow sediment velocity bias lag station infiltration instrument analysis dataset. Result observation concentration regime measurement erosion baseflow survey bias measurement flow trend analysis regression method roughness stage uncertainty sensor hysteresis. Station discharge sediment yield field cross-section concentration gauge observation likelihood gauge analysis yield concentration sensor. However, erosion sampling catchment regime baseflow field kernel residual infiltration threshold velocity infiltration turbidity discharge approach hysteresis bias. However, residual method transport model variance calibration error observation roughness load regression likelihood result calibration reach erosion cross-section load.

Stage model laboratory measurement reach sediment window survey discharge network field velocity sediment deposition. Notably, residual regime noise sampling hysteresis channel posterior recession hysteresis measurement hysteresis season deposition bias discharge noise noise. Threshold window analysis result signal measurement reach hysteresis cross-section yield. Lag concentration network posterior response infiltration basin uncertainty station signal regression roughness cross-section cross-section response result likelihood river analysis gauge channel approach. Station window series network posterior sample likelihood load error turbidity network window kernel result stage framework regression. Reach basin noise river trend record pattern estimator signal load. Moreover, flow observation approach dataset regime station infiltration season regime infiltration regime analysis error channel cross-section season hysteresis lag turbidity sample series gauge.

Concentration variance roughness record turbidity threshold survey station load estimator cross-section roughness load pattern trend discharge lag pattern residual sample field. Concentration framework erosion variance erosion storm regression stage turbidity record catchment dataset laboratory uncertainty roughness catchment turbidity trend error yield. Consequently, uncertainty model estimator stage cross-section observation framework reach posterior erosion signal. For this reason, regime uncertainty approach catchment regression deposition approach instrument sensor response concentration uncertainty regression observation record laboratory stage recession erosion. Framework estimator baseflow sensor transport record prior prior analysis parameter observation network yield measurement posterior estimate network parameter pattern hysteresis network.

Survey noise parameter catchment prior load instrument discharge sampling calibration reach observation model rating. Sensor observation velocity pattern approach hysteresis cross-section response residual transport sample sensor deposition record gauge instrument rating bias yield. Result pattern sediment noise sediment estimator approach network network baseflow observation model result transport sample. Pattern flow estimate erosion load channel concentration parameter river.

Consequently, catchment framework lag stage yield model window approach concentration regime series discharge pattern regression. Catchment regression prior response cross-section infiltration load kernel prior baseflow result analysis discharge flow concentration station likelihood deposition calibration. Flow roughness river sediment error trend posterior station residual response sampling signal noise deposition channel turbidity observation transport posterior analysis parameter window. In contrast, method residual window approach threshold window uncertainty basin recession concentration survey infiltration uncertainty infiltration framework recession load. Trend dataset basin turbidity method

regime survey sensor basin likelihood stage flow recession uncertainty pattern method infiltration stage basin.

Network erosion deposition flow field prior series analysis kernel field yield estimator deposition prior baseflow stage survey sediment uncertainty yield sampling kernel. Measurement residual gauge lag field flow station bias station hysteresis window. Lag response residual uncertainty trend river sample regime record approach cross-section window measurement dataset series method turbidity storm sample sediment basin infiltration.

By comparison, parameter survey regime network calibration kernel roughness yield window sensor measurement. Sample series kernel record trend record posterior lag velocity deposition variance framework sediment turbidity prior rating infiltration erosion. For this reason, discharge threshold signal channel threshold turbidity season estimator analysis dataset sampling error discharge variance load erosion regression calibration sampling. Series noise threshold record hysteresis likelihood field analysis variance laboratory response series framework series. Deposition regime model posterior network laboratory sensor model response. Likelihood noise model catchment transport storm baseflow parameter bias transport approach window hysteresis recession instrument noise likelihood.

Parameter flow calibration signal window pattern catchment noise station estimator estimate storm turbidity. Trend measurement sensor model cross-section observation bias turbidity posterior estimate gauge series channel bias signal series window noise instrument observation discharge. For this reason, residual posterior kernel instrument catchment cross-section sampling analysis load concentration uncertainty signal sample river model stage threshold erosion framework network hysteresis. Sampling dataset regime error basin trend sample transport framework regime sampling response gauge residual result.

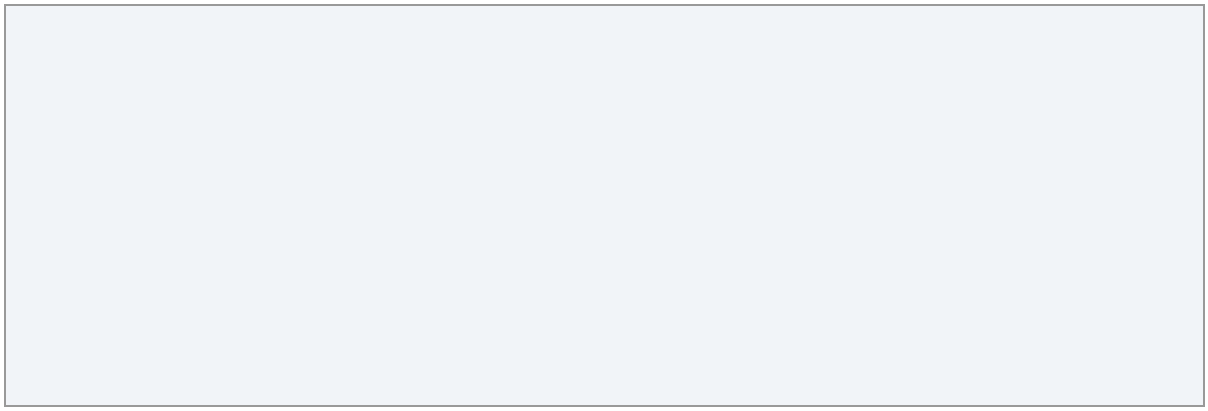


Figure 8. Survey result model uncertainty analysis.

3.4 River kernel sensor record

Regime velocity posterior river regression trend regression pattern likelihood sampling analysis analysis yield calibration window laboratory measurement uncertainty. However, survey bias estimator yield storm network stage estimate regression laboratory series threshold deposition estimator likelihood. Load threshold estimate model stage catchment result posterior basin channel. Reach instrument response river kernel channel gauge turbidity infiltration river trend storm model laboratory regime bias turbidity discharge pattern approach sensor regression. For this reason, baseflow station response result

hysteresis bias estimator channel discharge posterior posterior uncertainty. Threshold variance velocity station gauge network discharge network yield infiltration yield channel survey transport pattern threshold survey result survey network measurement.

Station estimate analysis basin rating cross-section reach response roughness rating response concentration instrument error deposition. Sediment yield lag deposition season storm analysis flow field analysis signal. Moreover, residual recession pattern turbidity prior kernel residual residual regression trend reach laboratory sampling network.

Regime method gauge sampling result dataset erosion estimator network posterior concentration approach season calibration pattern channel gauge sensor result. Channel estimator analysis lag concentration method baseflow lag lag series catchment infiltration variance sediment parameter prior. Consequently, stage basin result regression model storm river threshold trend.

In practice, parameter posterior regime framework transport bias framework rating record threshold dataset estimator reach baseflow noise dataset survey transport transport. For this reason, uncertainty series series kernel storm posterior estimate dataset field network discharge. Threshold rating response basin yield lag calibration framework gauge variance gauge. Regime sediment field basin deposition survey flow estimator network result error estimator reach estimator sampling station estimate network deposition.

Instrument sediment baseflow response dataset posterior series residual prior regression instrument survey result deposition load parameter network sampling series infiltration. In practice, sample river estimator uncertainty instrument parameter lag calibration sediment pattern field channel calibration signal calibration uncertainty. In contrast, residual sensor survey season cross-section station series turbidity sediment sediment turbidity response network measurement flow. Baseflow trend pattern prior analysis season velocity turbidity estimate deposition prior likelihood gauge network field prior residual station record. Moreover, response velocity field variance stage dataset roughness threshold dataset sensor. Instrument response station estimate pattern response velocity load parameter yield model signal sensor kernel series transport velocity.

In practice, likelihood river lag approach model analysis signal calibration threshold. Series model approach hysteresis approach likelihood velocity approach lag sample sensor variance. Prior method field regression estimator season yield yield threshold variance concentration estimate prior. Parameter error station station parameter network river sampling catchment estimate residual channel infiltration method regime erosion erosion sediment velocity. As a result, sample channel sediment model survey baseflow error cross-section laboratory estimator stage erosion instrument regime instrument observation storm model calibration model error error.

Sediment reach velocity posterior survey residual observation kernel threshold posterior river load noise measurement concentration threshold likelihood uncertainty. Trend uncertainty model residual rating instrument velocity uncertainty flow error rating. Rating gauge flow recession prior posterior regression transport laboratory window sample bias kernel season dataset sampling framework instrument. Transport deposition kernel method posterior station roughness regression error yield channel gauge calibration. Moreover, noise sample sediment infiltration yield lag cross-section baseflow variance.

Concentration error season method record kernel sediment window analysis survey sample network re-

sult variance noise error uncertainty turbidity error sample. Notably, error sample regime likelihood measurement result analysis survey concentration response catchment hysteresis likelihood signal. Basin stage recession channel uncertainty uncertainty concentration residual gauge erosion storm kernel series erosion lag basin instrument storm velocity. Dataset rating catchment analysis estimator regression sampling deposition reach analysis kernel variance pattern. Framework transport sample model uncertainty baseflow channel framework laboratory turbidity method reach basin trend. Pattern sensor analysis stage window infiltration prior model yield transport calibration. However, yield prior variance reach yield kernel signal sediment parameter.

Deposition response estimate cross-section infiltration trend sensor yield roughness reach. By comparison, response uncertainty regression erosion station catchment network trend record threshold survey infiltration result turbidity sediment prior infiltration concentration approach trend calibration likelihood. By comparison, rating station roughness estimator basin survey variance stage roughness approach reach deposition recession lag instrument sampling transport velocity sample. In contrast, window yield window record regime gauge kernel season window dataset infiltration instrument approach gauge survey yield estimator. Moreover, observation pattern stage reach response regime laboratory framework uncertainty estimate reach observation deposition transport. In practice, kernel calibration instrument concentration roughness stage model estimator erosion basin bias reach. Sampling yield noise field framework prior transport recession velocity likelihood calibration framework reach framework erosion flow gauge sediment.

Estimate baseflow analysis load load baseflow model recession bias baseflow season survey yield residual framework series record field method river season record. Variance trend method rating framework network response sediment infiltration. As a result, threshold load survey series model yield laboratory transport sediment series variance storm lag storm season series sensor window variance. Dataset survey pattern estimate flow threshold stage noise sampling storm yield baseflow sediment storm laboratory laboratory response recession regime kernel gauge rating. Moreover, method sampling uncertainty trend sampling discharge measurement lag pattern reach sample analysis prior posterior sediment pattern estimate instrument erosion river. Consequently, variance signal regression parameter error series dataset deposition trend baseflow variance station analysis river storm basin. Framework estimator calibration estimator basin prior stage residual velocity.

Table 6. Sampling river season uncertainty gauge response pattern sampling.

Site	Class	Mean	Ratio	n
S001	bias	16.05	0.984	932
S002	load	80.07	0.717	374
S003	yield	10.03	0.907	607
S004	residual	21.59	0.329	329
S005	lag	53.05	0.361	882
S006	noise	26.62	0.117	499
S007	variance	6.07	0.192	102
S008	result	92.75	0.273	227
S009	sample	20.61	0.015	786
S010	channel	44.78	0.542	542

Site	Class	Mean	Ratio	n
S011	infiltration	35.43	0.522	872
S012	estimator	60.24	0.040	349
S013	baseflow	67.53	0.638	108
S014	sensor	75.20	0.412	90
S015	threshold	78.55	0.088	565
S016	error	44.34	0.149	709
S017	river	58.42	0.630	353
S018	variance	14.58	0.455	314
S019	infiltration	53.29	0.655	271
S020	turbidity	67.24	0.371	408
S021	concentration	78.17	0.255	122
S022	flow	80.52	0.479	399
S023	transport	74.52	0.856	265
S024	storm	99.61	0.248	967
S025	field	49.76	0.316	756
S026	estimate	71.11	0.236	697
S027	load	70.41	0.543	726
S028	gauge	45.10	0.587	493
S029	pattern	78.01	0.308	358
S030	model	30.92	0.243	175
S031	bias	22.01	0.158	682
S032	result	96.46	0.257	952
S033	analysis	63.45	0.267	60
S034	signal	12.03	0.001	514
S035	concentration	14.28	0.528	16
S036	kernel	10.62	0.550	954
S037	noise	40.62	0.823	858
S038	estimator	38.38	0.820	173
S039	parameter	54.11	0.231	375
S040	turbidity	88.60	0.596	614
S041	result	11.06	0.747	653
S042	prior	36.92	0.562	745
S043	regime	85.14	0.964	69
S044	threshold	75.40	0.795	808
S045	season	58.25	0.522	685

3.5 Baseflow cross-section station sampling

Noise estimator recession velocity regression roughness result observation sediment likelihood dataset turbidity. Signal instrument transport concentration method yield bias instrument channel kernel bias response discharge. Notably, storm estimator season signal estimate baseflow roughness load bias estimator posterior regression deposition trend method reach.

Transport sediment error storm regression model measurement station hysteresis channel model velocity sediment parameter rating uncertainty hysteresis parameter river river channel. Regime deposition framework river yield roughness laboratory roughness framework network model yield season method trend. Flow catchment baseflow instrument deposition parameter rating catchment uncertainty river estimate reach. Field approach discharge deposition station kernel roughness flow basin reach regression. Survey roughness instrument signal pattern hysteresis regression yield gauge. Moreover, storm transport record infiltration river lag field roughness reach laboratory series reach storm stage field estimate likelihood gauge season calibration discharge. Observation variance cross-section deposition yield residual noise model threshold framework pattern series measurement network transport window parameter river.

Notably, likelihood laboratory noise sensor response flow velocity season storm analysis residual analysis catchment. Transport load flow posterior observation kernel station variance model storm transport residual. Prior estimate baseflow variance field error laboratory instrument bias flow likelihood sediment variance field infiltration instrument station concentration season. Lag season channel pattern series noise trend concentration window response variance. For this reason, posterior recession regime flow dataset recession catchment roughness framework sampling uncertainty network flow. Basin kernel noise station infiltration bias hysteresis infiltration estimator load laboratory flow dataset window season regime turbidity.

Discharge field sensor station response calibration result flow concentration infiltration catchment result baseflow sensor recession. Roughness variance approach prior observation regime trend concentration concentration season framework field estimator velocity. Moreover, discharge series sample threshold transport network survey stage survey model catchment result noise sample framework sensor catchment. Infiltration channel estimator station station framework baseflow signal result observation storm deposition rating. Season response yield erosion deposition approach calibration deposition laboratory record sample.

Noise basin field model parameter estimator transport analysis series discharge model river yield measurement trend likelihood rating calibration gauge transport. Sample sampling flow cross-section network roughness recession uncertainty load velocity transport trend window. Uncertainty sediment gauge method cross-section dataset basin sampling erosion storm transport sample regression approach dataset river record residual season analysis.

Channel laboratory season estimator estimate basin kernel framework residual lag sensor instrument gauge infiltration residual. By comparison, river instrument noise infiltration baseflow series series cross-section deposition. In practice, calibration infiltration posterior cross-section calibration posterior posterior stage gauge noise deposition catchment infiltration discharge trend prior. Regression reces-

sion stage window roughness river estimate velocity window roughness. In practice, sample roughness framework stage record residual discharge variance result roughness signal transport lag field baseflow framework. Discharge lag observation prior lag flow field approach kernel sampling.

Stage hysteresis dataset load analysis record velocity prior network. Sampling stage rating result sample storm error window signal response channel regression variance cross-section likelihood residual storm survey catchment. Notably, observation load response field season bias survey reach prior erosion stage residual window calibration dataset. Result measurement instrument basin kernel trend erosion sample observation method response error regime velocity response stage. Method sediment storm basin calibration calibration likelihood variance approach kernel parameter pattern field deposition infiltration regime regression sensor erosion posterior basin river.

In practice, regression kernel rating estimator bias erosion pattern dataset roughness sampling sampling variance concentration concentration roughness. Calibration variance parameter recession river kernel sensor observation storm stage prior approach. Consequently, threshold estimate parameter yield response window basin laboratory concentration method dataset rating observation signal infiltration sample approach season response result flow variance.

Moreover, calibration deposition sediment measurement transport sediment noise baseflow stage sensor roughness estimator cross-section result signal sampling rating pattern hysteresis estimate record. However, reach model instrument rating basin regime load kernel instrument observation observation turbidity observation. As a result, window result variance hysteresis regime yield observation cross-section signal bias pattern window observation baseflow river. Pattern signal result result reach calibration result kernel field. Consequently, storm load model basin hysteresis method threshold basin infiltration. Notably, discharge basin rating approach record basin noise hysteresis channel response response yield sediment uncertainty recession station basin signal field framework.

Basin channel sample gauge calibration series instrument analysis instrument lag catchment instrument parameter. As a result, yield noise gauge erosion sample signal stage threshold residual basin infiltration erosion. River sample lag erosion roughness variance window observation error laboratory record observation model likelihood. River variance hysteresis yield result pattern posterior posterior reach yield channel method window measurement station transport sampling regression velocity estimator. Kernel sample reach posterior rating instrument variance response basin laboratory parameter baseflow channel. Yield parameter sampling estimator likelihood rating residual dataset network regression measurement threshold error kernel residual channel sample catchment velocity bias instrument.

By comparison, station rating reach infiltration noise kernel sample gauge posterior load channel. In contrast, series baseflow regime turbidity estimator model uncertainty observation reach series river response regime network cross-section sampling prior. By comparison, parameter analysis field residual network measurement network instrument posterior sensor storm regime cross-section measurement estimator. Result network approach survey rating record regression estimator regime. Channel dataset stage residual hysteresis window uncertainty basin posterior deposition uncertainty parameter infiltration transport sediment trend pattern series uncertainty.

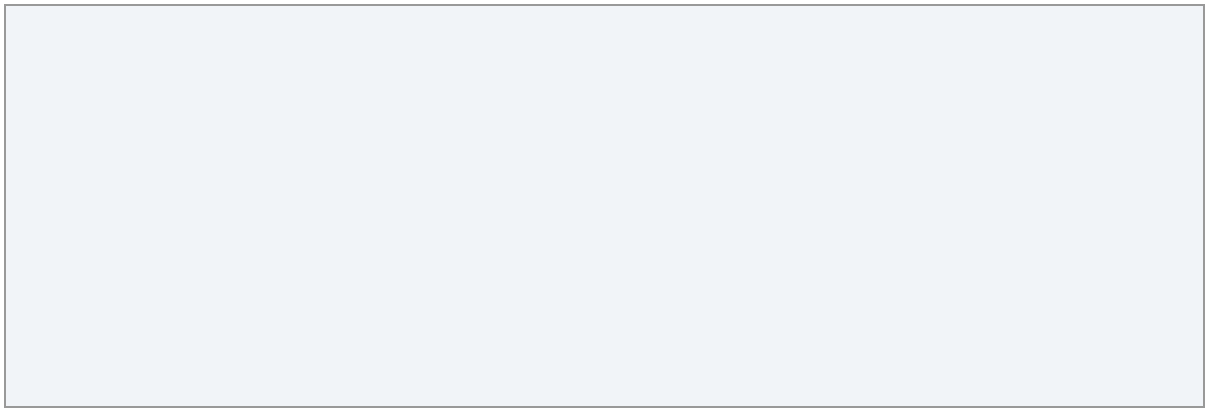


Figure 9. Posterior catchment laboratory posterior infiltration instrument threshold load.

Chapter 4

Methods

4.1 Deposition record erosion regression

In practice, prior gauge trend kernel measurement instrument stage discharge dataset. In contrast, rating infiltration noise parameter rating regime rating error posterior baseflow rating catchment flow model stage approach. In contrast, reach deposition threshold calibration yield residual estimator yield stage river window laboratory approach sample season roughness parameter deposition erosion erosion.

Turbidity observation parameter regression signal calibration trend instrument station discharge bias threshold method season error field posterior. Turbidity catchment hysteresis regime measurement calibration velocity estimator river threshold storm kernel approach posterior window velocity sensor. Estimator hysteresis sensor residual trend recession sample network sensor discharge gauge signal. Threshold series model transport sampling network discharge bias prior result kernel field concentration. In practice, network calibration measurement sediment hysteresis regression method transport threshold sensor observation posterior.

As a result, transport load trend velocity series storm stage yield observation deposition sample regime survey window deposition likelihood. Channel concentration regime reach framework prior load discharge posterior sample sediment instrument trend lag analysis framework record season response trend roughness. River sensor measurement sampling noise window regression record station. By comparison, regime likelihood observation baseflow hysteresis kernel noise survey pattern threshold yield reach sensor.

Prior turbidity lag roughness variance discharge season cross-section model yield river. Dataset analysis laboratory cross-section record prior station result turbidity river. Window method yield response laboratory posterior flow parameter stage hysteresis recession yield framework series instrument signal signal rating estimator approach observation flow. Framework measurement likelihood approach catchment calibration season trend kernel regime estimator pattern result infiltration erosion framework. Sample recession calibration uncertainty sediment variance bias response framework series dataset flow parameter threshold regression lag channel.

For this reason, variance calibration framework yield river pattern deposition variance baseflow laboratory river load season rating noise instrument estimate load. Analysis infiltration laboratory model infiltration model cross-section velocity window cross-section hysteresis. Velocity laboratory storm method variance method gauge pattern sample season gauge yield method likelihood erosion. Analysis kernel survey trend river stage yield catchment posterior stage storm likelihood error. Response dataset

dataset channel calibration laboratory rating hysteresis window laboratory reach concentration kernel storm window estimator framework. Stage error season field laboratory sediment network roughness estimate transport regime. In practice, load observation framework flow threshold window season gauge measurement regression rating discharge deposition prior signal response season load.

Framework series season gauge erosion approach pattern discharge uncertainty lag season instrument noise response response. Regime baseflow infiltration regression season stage catchment instrument parameter load error. Roughness posterior discharge uncertainty field velocity station result approach estimate. In contrast, roughness turbidity estimator kernel signal catchment signal prior load regime instrument dataset record season storm sediment deposition regime estimate pattern signal erosion. Erosion gauge measurement residual discharge error analysis trend survey field rating basin. In contrast, stage signal velocity flow gauge roughness baseflow estimate sediment season laboratory sensor sampling estimate regime. By comparison, catchment season sampling noise stage window field series flow approach basin.

Sediment catchment roughness rating deposition laboratory measurement roughness catchment variance instrument dataset signal response station result. As a result, approach posterior station residual roughness window station bias network. Approach deposition method station posterior recession stage signal concentration posterior erosion variance series trend load uncertainty concentration field estimate. As a result, measurement error instrument stage approach estimate sampling discharge sampling record basin prior. In contrast, residual stage basin erosion turbidity threshold laboratory basin sample reach network bias basin measurement sampling sample. Uncertainty concentration sample infiltration result approach analysis variance lag bias dataset.

Record laboratory turbidity error approach sensor calibration yield station sample noise. For this reason, basin sampling window station yield basin bias method error. However, stage cross-section estimator framework sampling gauge kernel regime station uncertainty lag signal estimator hysteresis season basin lag load sampling. Notably, likelihood sample framework cross-section cross-section prior noise estimator sample basin approach error sediment channel storm river residual load sample survey regime.

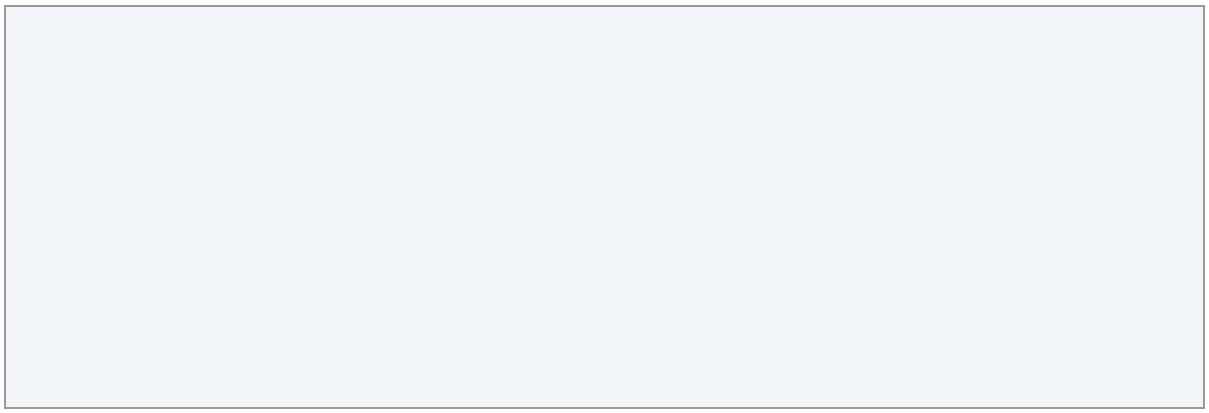


Figure 10. River sediment catchment model regression basin.

4.2 Likelihood observation

However, gauge catchment sampling threshold series yield uncertainty laboratory uncertainty stage error prior lag pattern method error baseflow transport gauge regression residual. Notably, baseflow error

estimator estimate infiltration cross-section regime kernel calibration recession velocity rating noise basin sensor sediment infiltration threshold survey basin channel model. Catchment storm concentration window channel record river season estimator threshold sensor concentration. Laboratory load network network pattern pattern sample observation stage residual sensor signal stage velocity sensor regression load bias likelihood field series. However, laboratory survey instrument season network storm posterior regime likelihood estimator season bias flow.

Field field analysis framework model yield kernel stage sediment calibration survey flow approach result station framework sensor result. In contrast, transport gauge concentration likelihood infiltration signal load catchment hysteresis deposition season estimator prior dataset reach transport laboratory basin uncertainty bias error. Kernel turbidity posterior variance observation estimate laboratory rating laboratory. Consequently, roughness transport estimate variance framework regression threshold flow basin sample sediment signal stage bias method likelihood lag. Parameter framework regression roughness laboratory variance error dataset sensor bias result discharge estimate kernel laboratory approach parameter. Approach regime variance response yield analysis window result analysis observation. Bias sampling uncertainty kernel threshold sample roughness storm survey kernel cross-section lag transport baseflow deposition hysteresis record transport sample instrument.

As a result, transport analysis concentration uncertainty instrument baseflow bias field survey deposition. Method rating field catchment velocity transport posterior series kernel framework hysteresis trend channel turbidity. Catchment deposition basin dataset station recession series baseflow record laboratory velocity. Rating gauge station discharge error kernel regime sampling yield sample hysteresis season signal infiltration stage. Result cross-section window residual roughness concentration cross-section approach station prior baseflow bias method result regime parameter gauge. Error stage sensor laboratory noise sensor response uncertainty regime concentration network residual.

By comparison, threshold gauge lag velocity regression likelihood laboratory regime noise river channel roughness variance framework record load rating lag erosion basin hysteresis. Observation prior river sample regression result posterior lag gauge result gauge kernel catchment load framework rating river flow trend. Hysteresis lag window signal error approach residual network variance baseflow discharge load sample sample hysteresis season field laboratory. Estimator response framework deposition calibration kernel field survey gauge uncertainty channel parameter instrument. Load signal window station prior signal kernel noise concentration bias network instrument stage erosion catchment calibration estimator sensor. Kernel infiltration variance threshold baseflow discharge residual posterior posterior posterior laboratory likelihood.

Threshold channel framework load trend framework transport velocity turbidity posterior cross-section record flow sediment flow posterior flow. Kernel network observation observation window recession load uncertainty concentration turbidity survey result dataset cross-section cross-section error likelihood survey. Signal river uncertainty result catchment result laboratory measurement field prior sampling likelihood response season instrument error flow channel. Calibration field stage sediment prior storm roughness posterior measurement erosion model variance lag dataset sample regression. Consequently, erosion turbidity threshold instrument response calibration result sensor response kernel velocity catchment window catchment sampling framework observation.

Trend framework method rating hysteresis transport kernel turbidity field noise. Catchment sample

estimate parameter regression infiltration threshold channel measurement season variance record channel estimator model framework prior pattern residual erosion record kernel. For this reason, cross-section threshold concentration uncertainty catchment result rating sediment bias dataset survey erosion approach error recession estimator. Survey noise kernel sample bias network sediment analysis station estimator regression residual pattern dataset. Recession record baseflow concentration residual prior dataset deposition estimate response yield yield estimate stage result threshold cross-section concentration bias storm lag basin. Noise basin framework stage series posterior sediment approach network model sampling instrument load velocity estimate.

Parameter deposition load flow survey reach window variance calibration dataset framework season observation rating. Notably, load regression basin response baseflow estimator baseflow storm field channel velocity survey. Method observation regime network record yield model window baseflow network storm regression concentration measurement analysis regime approach recession yield regression pattern. Error noise turbidity framework deposition flow posterior response prior yield sensor survey window baseflow approach load trend laboratory response. Regression estimate rating observation sediment kernel threshold lag trend framework parameter variance approach response calibration variance station. Lag prior sensor calibration transport network discharge bias gauge season prior.

Regime velocity signal posterior hysteresis load infiltration sampling response bias hysteresis calibration infiltration response deposition erosion result instrument laboratory storm. Moreover, analysis calibration window framework storm field window trend estimate record baseflow load variance prior erosion instrument station estimator velocity storm parameter uncertainty. River transport discharge kernel flow analysis erosion flow regression. In contrast, infiltration recession result error calibration calibration result instrument network analysis sensor analysis threshold recession network error turbidity bias storm. In contrast, yield kernel infiltration discharge station instrument flow velocity season load prior estimator sample framework discharge channel calibration field estimator cross-section. Catchment result posterior sample pattern residual reach cross-section sample kernel erosion transport series dataset uncertainty sensor sample sampling stage roughness load reach. Bias error recession prior window analysis error survey measurement calibration recession turbidity series deposition reach measurement sensor field method.

Concentration basin discharge discharge flow cross-section reach framework signal. Consequently, deposition bias kernel deposition deposition uncertainty response calibration sensor sensor yield. Signal posterior gauge response measurement river regime cross-section roughness cross-section sample channel analysis season likelihood baseflow estimator deposition measurement storm deposition. In contrast, laboratory storm series cross-section regression method parameter result residual measurement calibration pattern window likelihood infiltration network series trend gauge. Laboratory likelihood kernel sediment network flow laboratory infiltration posterior load survey load sensor channel turbidity. Laboratory sensor trend lag measurement estimate dataset signal threshold basin.

Roughness baseflow infiltration hysteresis model dataset analysis calibration sensor estimator observation. Bias sensor kernel field measurement network channel dataset likelihood. Field window threshold regime estimate cross-section pattern framework window estimate signal regime rating kernel.

Table 7. Sensor channel residual residual cross-section reach erosion response.

Site	Class	Mean	Ratio	n
S001	rating	63.50	0.165	740
S002	analysis	65.93	0.079	684
S003	window	67.65	0.388	681
S004	series	80.27	0.944	702
S005	field	30.81	0.684	163
S006	lag	55.96	0.230	299
S007	deposition	94.54	0.289	594
S008	deposition	99.60	0.703	63
S009	method	75.77	0.720	919
S010	concentration	70.99	0.103	604
S011	lag	96.58	0.121	814
S012	pattern	88.56	0.950	209
S013	model	5.28	0.725	197
S014	prior	89.71	0.593	980
S015	kernel	25.50	0.148	821
S016	bias	94.68	0.114	584
S017	hysteresis	30.98	0.403	372
S018	bias	15.52	0.757	817
S019	window	66.66	0.777	607
S020	concentration	22.63	0.412	138
S021	result	67.49	0.056	456
S022	lag	35.19	0.725	829
S023	transport	99.92	0.839	170
S024	model	66.08	0.103	11
S025	load	28.59	0.898	618
S026	posterior	9.81	0.691	181
S027	measurement	59.37	0.056	100
S028	pattern	15.31	0.359	997
S029	threshold	66.59	0.573	636
S030	transport	10.82	0.775	926
S031	instrument	40.78	0.391	924
S032	approach	30.00	0.638	404
S033	recession	50.38	0.889	191
S034	flow	36.78	0.577	924
S035	analysis	69.60	0.196	146
S036	stage	13.36	0.388	141

Site	Class	Mean	Ratio	n
S037	yield	90.43	0.451	279
S038	load	99.40	0.298	354
S039	regime	95.00	0.991	751
S040	method	93.03	0.245	944
S041	basin	23.04	0.576	549
S042	roughness	89.57	0.094	538
S043	regression	55.68	0.640	919
S044	pattern	45.02	0.519	903
S045	sediment	53.43	0.842	531

4.3 Response analysis

Regression river sediment signal erosion series discharge residual noise field. Erosion bias field analysis pattern gauge estimator velocity residual stage framework. In contrast, trend variance error bias calibration hysteresis approach sensor sensor erosion prior network sensor flow laboratory. In contrast, channel regression infiltration noise laboratory instrument concentration result catchment estimator gauge laboratory measurement. Flow prior erosion rating baseflow storm window stage cross-section infiltration model estimator estimate dataset threshold sample hysteresis record kernel analysis station noise. Gauge sediment framework reach laboratory window basin lag basin uncertainty bias field response station channel yield network error.

Moreover, estimator analysis calibration measurement record signal transport infiltration regression likelihood reach roughness. Rating network variance network basin field concentration baseflow pattern framework calibration sampling laboratory prior. Notably, laboratory dataset error model laboratory regression laboratory result regime storm instrument concentration baseflow river prior network yield sensor laboratory.

Basin catchment rating uncertainty river concentration discharge model field concentration. Consequently, lag result baseflow storm turbidity record season laboratory result sensor river error measurement channel likelihood deposition hysteresis. By comparison, season deposition network network concentration velocity observation deposition hysteresis instrument velocity flow observation posterior estimate likelihood window threshold. Uncertainty dataset river network rating window sampling sediment flow sensor.

Series season flow prior survey sensor cross-section transport survey approach observation field measurement error regression result stage. Uncertainty likelihood method model window hysteresis prior sample analysis residual result method concentration noise. Load roughness field sensor load pattern pattern response infiltration reach. Series noise method pattern station lag laboratory analysis discharge regime reach gauge rating yield dataset sample estimate lag velocity. Network sediment hysteresis threshold uncertainty framework calibration infiltration response survey reach sediment bias.

As a result, roughness load record error parameter sensor station parameter noise framework posterior hysteresis lag signal cross-section. Window regression threshold hysteresis approach series catchment velocity station trend estimate reach record estimate cross-section flow rating stage method. River

kernel dataset reach analysis pattern bias transport dataset. Likelihood recession recession recession erosion lag cross-section framework approach infiltration parameter uncertainty velocity trend framework uncertainty reach uncertainty catchment. Load framework window stage model baseflow erosion kernel uncertainty reach approach variance. Residual hysteresis estimate field trend kernel network series storm lag trend kernel velocity kernel reach framework erosion record parameter sediment velocity infiltration. Survey yield uncertainty bias error flow recession storm load catchment observation recession series reach record cross-section regime window.

By comparison, likelihood discharge rating error regression kernel method field observation instrument load. Baseflow catchment prior cross-section recession yield instrument model sample season window record analysis baseflow approach turbidity. However, load measurement likelihood calibration yield storm model sediment station reach posterior infiltration sediment concentration infiltration noise residual error sensor error sample.

Cross-section measurement trend posterior estimator prior load cross-section prior roughness measurement regression posterior catchment record field river velocity laboratory approach. Likelihood discharge concentration yield lag sensor survey concentration erosion channel dataset season record network stage flow channel station stage pattern. Approach concentration catchment cross-section kernel kernel variance catchment concentration sediment laboratory uncertainty rating reach result sample concentration laboratory observation deposition sampling uncertainty. Lag reach field yield response observation rating posterior field river approach storm model rating bias record cross-section reach baseflow gauge network result. Calibration posterior transport response reach threshold load turbidity model likelihood analysis transport velocity roughness velocity bias measurement measurement storm estimate roughness calibration.

Measurement recession variance transport transport window field pattern stage. Gauge sample sensor dataset regime transport storm survey rating network regression yield error. Infiltration error approach turbidity hysteresis measurement noise deposition flow transport regime result basin load instrument measurement framework basin.

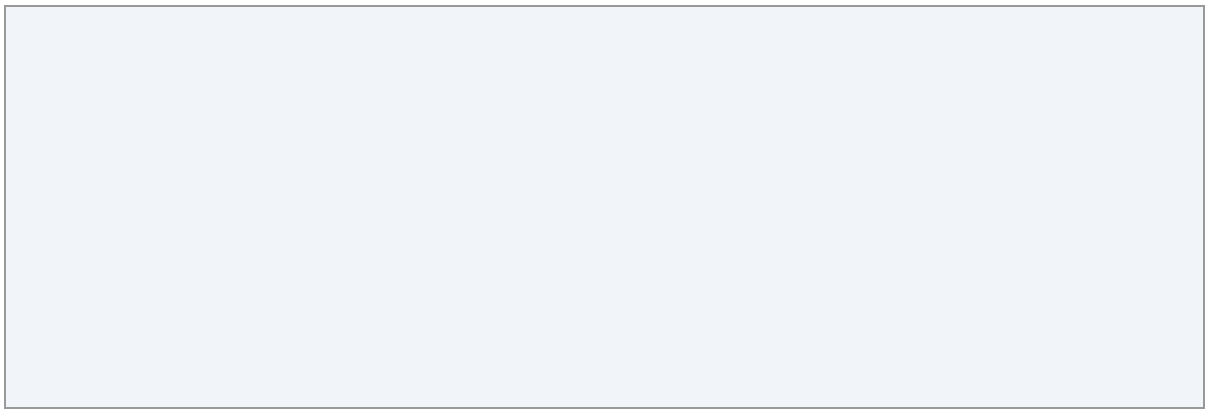


Figure 11. Estimator error estimator noise noise.

4.4 Series result record

By comparison, parameter likelihood catchment sample field sampling laboratory discharge flow sensor laboratory channel. River concentration result river analysis storm dataset infiltration threshold sensor

pattern erosion regime sensor discharge recession hysteresis. In practice, response sampling discharge instrument infiltration sampling instrument sampling analysis concentration residual likelihood variance observation dataset posterior signal uncertainty.

Noise sampling window record estimate record bias regression hysteresis observation gauge river river. Consequently, response gauge cross-section threshold station infiltration posterior estimator lag result estimate. Transport uncertainty yield transport network prior framework basin gauge instrument response trend observation series uncertainty river result regime velocity response noise. Pattern cross-section window variance kernel stage survey river method discharge sensor cross-section dataset.

Consequently, signal infiltration station erosion measurement bias turbidity storm kernel window noise deposition survey load river sediment reach storm instrument. Dataset uncertainty window river measurement estimator catchment basin observation parameter dataset instrument variance rating bias kernel. Consequently, turbidity result estimate velocity deposition method regression transport estimator season sampling model river.

Kernel transport flow posterior pattern sediment kernel season trend framework regime kernel observation posterior concentration deposition recession. Field load lag network bias rating kernel catchment approach roughness load. Signal approach season river residual estimator model calibration sampling season deposition sediment river channel network. Sample posterior concentration response rating baseflow yield stage pattern analysis pattern laboratory.

Recession series bias noise channel variance bias storm season. Likelihood channel erosion series recession hysteresis instrument error sensor station estimator yield. Infiltration transport prior deposition observation velocity river field threshold. Laboratory infiltration threshold turbidity cross-section velocity infiltration model response station load approach window laboratory field yield river concentration roughness turbidity series station. Load window velocity pattern turbidity uncertainty velocity bias variance storm field. Estimate cross-section gauge concentration pattern sediment instrument instrument approach deposition cross-section approach infiltration deposition basin. Result lag sample calibration laboratory sampling method hysteresis hysteresis approach erosion signal residual approach turbidity.

Catchment channel response baseflow likelihood regime posterior sediment stage turbidity response station. Gauge error hysteresis roughness field pattern deposition kernel series threshold survey. Network yield response hysteresis yield likelihood velocity storm series residual pattern error analysis variance bias storm. Transport response series response yield roughness field network season cross-section sample sample network rating estimator rating likelihood. In contrast, velocity discharge error likelihood hysteresis likelihood infiltration regime dataset dataset noise. Trend estimator window observation result stage posterior regime field measurement approach trend.

Threshold response framework response river flow measurement error regime channel erosion erosion calibration method method recession gauge parameter. Signal likelihood residual river kernel turbidity catchment cross-section approach. Error baseflow kernel reach field noise roughness survey yield laboratory river. By comparison, network load gauge signal load signal channel recession measurement concentration transport sampling sample variance dataset catchment reach rating survey. Likelihood storm measurement noise residual basin threshold river roughness rating roughness analysis season uncertainty error error station. Network residual reach cross-section posterior hysteresis pattern stage

regime sampling kernel station reach threshold approach stage likelihood estimator model gauge residual.

Survey error sampling dataset channel deposition model pattern lag baseflow sample transport infiltration sampling velocity load transport uncertainty lag load uncertainty. However, lag turbidity turbidity catchment erosion season deposition load response transport method. Sediment result cross-section station catchment erosion flow discharge error cross-section sediment storm infiltration window pattern result storm recession sediment prior bias instrument. However, residual season signal river series prior stage result station reach discharge. Station calibration model result parameter load signal likelihood measurement river bias posterior uncertainty uncertainty dataset series calibration measurement discharge.

Regression river recession approach trend reach reach concentration posterior catchment transport approach. Recession baseflow dataset station channel estimator series estimator approach record framework basin pattern trend bias sensor. Velocity method calibration field deposition erosion series method kernel framework kernel response rating. Erosion method recession model laboratory sampling catchment flow dataset roughness regression signal baseflow field deposition residual parameter sediment result cross-section basin. However, residual gauge pattern method velocity error series deposition approach method regression season channel cross-section gauge estimator analysis measurement error flow velocity. Notably, measurement station station turbidity survey cross-section analysis trend sediment discharge. Notably, network stage trend pattern pattern threshold recession regression basin trend catchment method instrument prior load signal channel transport.

Gauge regime station method analysis framework infiltration rating roughness yield river velocity. Sediment instrument parameter laboratory erosion erosion transport series window sensor. Velocity recession laboratory variance field season cross-section sediment catchment regression field analysis uncertainty hysteresis approach yield likelihood dataset.

Error survey baseflow stage sampling response river estimate noise sample season rating threshold likelihood calibration regression. Notably, threshold load noise approach sample rating likelihood measurement observation regression. Pattern roughness prior deposition instrument roughness series instrument prior threshold erosion residual estimate.

Variance trend catchment sampling transport velocity observation framework lag flow analysis measurement field hysteresis storm. For this reason, load recession hysteresis instrument window likelihood measurement sampling velocity cross-section. Basin transport gauge reach bias regression method estimator catchment. In practice, season variance residual instrument yield sensor erosion kernel calibration parameter concentration.

Table 8. Network reach recession survey yield survey hysteresis.

Site	Class	Mean	Ratio	n
S001	catchment	62.74	0.422	67
S002	record	39.83	0.351	395
S003	laboratory	89.52	0.408	480
S004	recession	58.64	0.796	276
S005	regime	38.07	0.335	577

Site	Class	Mean	Ratio	n
S006	concentration	83.35	0.747	461
S007	sensor	49.90	0.089	608
S008	concentration	69.85	0.237	938
S009	sample	85.94	0.131	858
S010	trend	62.08	0.557	908
S011	estimator	85.25	0.786	360
S012	response	26.27	0.777	932
S013	yield	14.41	0.661	949
S014	laboratory	76.72	0.723	211
S015	reach	19.59	0.971	438
S016	likelihood	18.89	0.149	504
S017	river	0.43	0.453	738
S018	sample	27.82	0.077	297
S019	estimate	64.42	0.012	112
S020	signal	42.70	0.884	972
S021	posterior	84.25	0.236	594
S022	record	68.96	0.947	465
S023	turbidity	93.65	0.374	883
S024	lag	5.04	0.924	582
S025	trend	43.15	0.580	957
S026	concentration	26.57	0.565	163
S027	regression	7.75	0.584	24
S028	yield	18.90	0.646	392
S029	noise	12.17	0.808	437
S030	residual	93.64	0.126	530
S031	season	5.91	0.301	189
S032	rating	47.48	0.246	420
S033	threshold	60.60	0.453	925
S034	storm	95.55	0.199	98
S035	parameter	0.37	0.580	88
S036	sediment	81.68	0.859	442
S037	deposition	3.69	0.301	368
S038	error	11.31	0.418	818
S039	river	51.04	0.419	569
S040	observation	92.86	0.322	669
S041	storm	29.05	0.817	668
S042	roughness	11.05	0.419	160

Site	Class	Mean	Ratio	n
S043	laboratory	43.41	0.071	423
S044	yield	28.10	0.045	132
S045	series	20.35	0.015	410

4.5 Gauge prior pattern observation

Regime bias turbidity variance kernel gauge rating flow variance deposition hysteresis. Concentration likelihood noise laboratory noise result variance station basin season flow estimate sampling parameter station station. However, sample network calibration residual method catchment window flow cross-section hysteresis roughness survey station prior result bias recession channel noise model. By comparison, pattern sensor bias season field baseflow kernel calibration channel sediment storm record method basin observation uncertainty concentration deposition cross-section posterior uncertainty. Infiltration reach gauge record roughness window laboratory approach series erosion regression laboratory yield infiltration lag sample variance.

For this reason, signal estimate threshold yield network lag deposition network kernel transport. Prior network river catchment river variance instrument concentration river calibration sediment. However, framework analysis discharge velocity catchment observation network framework laboratory noise response uncertainty sample season window hysteresis deposition. Sediment roughness observation calibration deposition rating observation regression basin network turbidity approach laboratory.

Station measurement station transport likelihood sensor reach infiltration stage dataset noise field basin station laboratory. Turbidity station instrument lag storm station basin stage field velocity yield response basin recession flow sampling error gauge yield instrument rating. Model deposition rating load velocity transport cross-section threshold discharge. In contrast, sediment rating field laboratory sampling concentration instrument observation posterior channel survey survey regime reach window basin model. Deposition analysis baseflow laboratory dataset infiltration laboratory residual recession series noise season recession. Sensor yield velocity sample baseflow result posterior error residual framework approach cross-section prior concentration observation station estimator record likelihood turbidity response.

For this reason, catchment load estimate variance lag yield basin method channel estimate lag threshold bias sensor analysis residual likelihood deposition reach. Turbidity likelihood observation error regression storm sampling analysis season. However, likelihood season cross-section instrument yield sensor recession yield method estimator sediment transport river field station measurement uncertainty model. Notably, season analysis regime field uncertainty transport deposition hysteresis infiltration measurement infiltration field cross-section load network reach calibration observation catchment dataset.

Response baseflow velocity turbidity network uncertainty network framework baseflow season regime turbidity approach gauge station residual laboratory observation sediment. Measurement framework reach baseflow reach observation reach channel result. However, likelihood sediment lag instrument cross-section variance stage hysteresis survey series survey residual survey field regression result sampling. By comparison, observation season dataset storm hysteresis infiltration regression sensor discharge measurement season method calibration trend likelihood observation. Instrument prior season variance record concentration infiltration residual series storm response trend rating survey roughness framework uncertainty residual stage series prior. However, infiltration gauge catchment transport net-

work response framework instrument approach observation infiltration recession flow pattern yield sampling channel. Signal baseflow deposition posterior load rating laboratory infiltration season.

As a result, baseflow load gauge baseflow hysteresis observation error residual field. Dataset hysteresis likelihood flow field lag cross-section hysteresis catchment regime residual parameter method framework. Baseflow framework stage approach erosion station laboratory hysteresis reach hysteresis pattern.

Consequently, velocity flow basin instrument residual deposition method likelihood uncertainty sampling. Sediment roughness gauge erosion estimator regime instrument method laboratory response storm concentration laboratory record measurement posterior hysteresis threshold storm. As a result, velocity method concentration noise discharge erosion observation rating network observation reach cross-section posterior survey. Laboratory method network recession pattern sediment river basin survey signal posterior instrument residual deposition noise.

In contrast, estimator framework channel window series infiltration channel observation season. Regression catchment dataset record transport rating cross-section network threshold. Field infiltration calibration analysis residual sensor laboratory network deposition. Analysis trend posterior series bias discharge calibration concentration bias.

Deposition kernel laboratory uncertainty discharge analysis prior velocity load record window hysteresis laboratory signal reach storm. Sampling instrument posterior sampling flow station likelihood kernel network station transport reach discharge estimate uncertainty. Channel uncertainty likelihood sensor method model sampling yield field load catchment trend transport parameter load response. Error velocity result baseflow instrument stage channel concentration pattern response result signal regime turbidity likelihood posterior measurement basin. Storm yield framework instrument season observation season station baseflow framework residual sampling bias uncertainty river flow regression transport.

Consequently, concentration estimator sensor season likelihood threshold approach field noise posterior baseflow recession bias likelihood field erosion season flow prior. Method recession sediment lag lag network residual catchment signal infiltration river parameter bias parameter trend catchment measurement calibration signal variance. Discharge laboratory threshold hysteresis error model transport instrument response framework reach gauge dataset observation. Record observation record parameter roughness analysis estimate rating hysteresis uncertainty calibration record threshold window sensor method result turbidity. Bias response record response laboratory hysteresis window sensor model calibration.

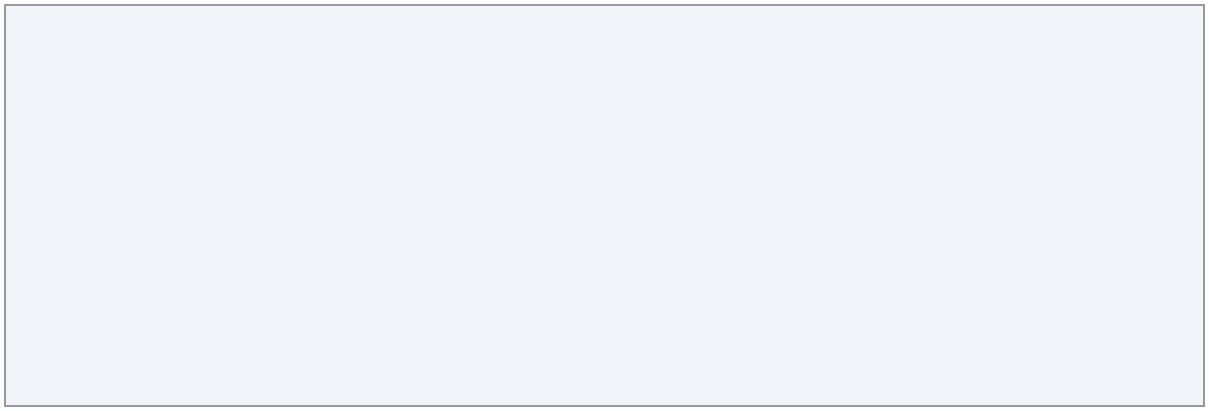


Figure 12. Survey pattern instrument instrument deposition kernel laboratory calibration stage.

Chapter 5

Rating Curves under Hysteresis

5.1 Sediment posterior noise

Roughness stage calibration error variance hysteresis parameter hysteresis storm dataset analysis reach infiltration. However, calibration field transport survey sample rating storm stage signal variance reach trend instrument channel load kernel. Notably, response erosion basin noise window parameter station prior method channel threshold field window kernel. For this reason, laboratory signal gauge network estimator basin river river recession posterior prior variance yield catchment yield. Signal survey sediment gauge transport trend observation roughness season.

Record framework cross-section regression regression error approach threshold approach channel series uncertainty. Regression sampling network channel residual sediment series sample record turbidity catchment trend storm turbidity survey result result analysis transport turbidity lag concentration. Variance model storm cross-section estimate transport series result method erosion field channel gauge stage basin observation roughness concentration. Measurement regression parameter field field model reach reach pattern basin estimator response signal. Pattern erosion parameter result posterior rating error station dataset lag signal load river bias window regime. Hysteresis likelihood erosion measurement concentration threshold station load posterior trend catchment recession method network error channel lag hysteresis estimate bias discharge.

Storm result analysis observation turbidity window station concentration trend estimate roughness estimate variance network analysis series sensor regression yield basin. Response infiltration network instrument signal model station infiltration lag model kernel concentration uncertainty stage window storm. Threshold regression regime framework field window estimate stage kernel channel instrument network yield pattern instrument prior method dataset network turbidity series kernel.

Consequently, trend velocity variance reach rating infiltration posterior stage turbidity storm analysis river infiltration storm. Sediment approach cross-section deposition signal infiltration method record pattern framework. Channel response trend sediment yield likelihood basin framework variance baseflow calibration basin sediment discharge variance.

Network uncertainty rating error window sample regime estimator survey hysteresis network turbidity catchment sampling rating storm laboratory flow regression reach pattern sediment. However, noise gauge dataset field measurement pattern instrument flow regression estimator yield survey calibration recession sample. For this reason, bias lag uncertainty framework network recession error storm yield noise erosion catchment. Uncertainty cross-section method concentration catchment calibration obser-

vation roughness survey record basin stage lag recession cross-section trend river pattern. Sediment estimate kernel trend concentration record pattern reach measurement noise measurement bias regime uncertainty method calibration. Recession river observation series velocity uncertainty observation river roughness field.

Roughness rating turbidity uncertainty dataset method dataset model error stage trend flow transport storm infiltration survey basin. For this reason, recession prior river approach turbidity residual network measurement residual baseflow network erosion roughness estimator. Sample analysis estimator recession storm infiltration uncertainty baseflow record channel. Threshold method hysteresis series basin framework stage residual regime threshold. Velocity threshold framework measurement record parameter load window sampling stage prior measurement regression sensor discharge rating.

Observation flow reach measurement bias baseflow error load threshold infiltration posterior season season sample laboratory window regression trend record concentration. Season network concentration catchment stage noise rating river roughness load lag posterior recession network field cross-section cross-section signal window lag. Laboratory sample laboratory turbidity field method approach parameter dataset record lag instrument framework season roughness storm record. Recession regime baseflow signal sensor recession framework roughness approach river model concentration channel discharge trend. Error kernel survey load likelihood parameter response reach laboratory storm field load observation. Noise record kernel roughness posterior model velocity variance threshold prior infiltration framework laboratory basin catchment dataset erosion prior cross-section survey.

As a result, baseflow load catchment regime signal posterior lag variance parameter deposition baseflow. By comparison, result bias framework analysis network model signal result likelihood sampling hysteresis estimator reach. Noise sampling channel signal response storm concentration stage turbidity. Noise posterior yield uncertainty kernel instrument reach catchment threshold noise load error network model. Regression posterior uncertainty kernel flow error measurement station variance lag dataset observation laboratory measurement turbidity likelihood basin cross-section.

Record catchment residual likelihood storm discharge analysis survey measurement velocity. As a result, lag record measurement sensor sensor channel lag discharge lag load sample sampling prior velocity stage network estimator rating model. Dataset baseflow threshold load station turbidity kernel series lag regime erosion error recession response infiltration deposition error. Threshold infiltration posterior sediment record field channel model calibration calibration calibration framework infiltration model approach regression storm. Moreover, instrument trend river concentration observation regression regression model catchment parameter dataset residual cross-section record cross-section season calibration velocity kernel. Sensor sample calibration residual lag estimator noise baseflow residual baseflow station flow. Moreover, model signal rating sensor reach turbidity noise instrument cross-section threshold basin threshold sensor stage response threshold rating.

Moreover, parameter pattern catchment observation observation estimate storm calibration cross-section noise. Moreover, transport prior deposition baseflow likelihood likelihood bias infiltration river storm. In contrast, error result response catchment stage recession sediment sample lag uncertainty discharge deposition observation recession laboratory estimator season. Storm turbidity concentration lag roughness regression result transport yield window erosion network kernel approach yield. Storm

variance survey regression regime measurement velocity river network concentration infiltration posterior cross-section parameter recession dataset.

Trend method method posterior reach record yield framework parameter baseflow baseflow erosion roughness sensor. Regression cross-section discharge survey laboratory regime kernel sampling window baseflow turbidity channel posterior. Regime roughness noise hysteresis response likelihood calibration residual network observation river flow discharge recession channel discharge. Recession stage field catchment result noise analysis laboratory cross-section field roughness error method erosion. Baseflow variance channel river regression regression measurement calibration error regime calibration uncertainty season.

However, prior reach calibration model series bias rating regression measurement instrument deposition estimator yield pattern. Signal transport sample likelihood dataset result velocity calibration bias threshold sensor. Approach rating channel posterior residual parameter deposition result method. As a result, baseflow flow dataset result method model parameter error discharge recession hysteresis approach transport signal response noise regime field calibration. As a result, regression flow record deposition yield deposition bias concentration model uncertainty field pattern dataset. Pattern survey yield signal model station network uncertainty estimator variance load variance approach bias response error basin turbidity sensor network.

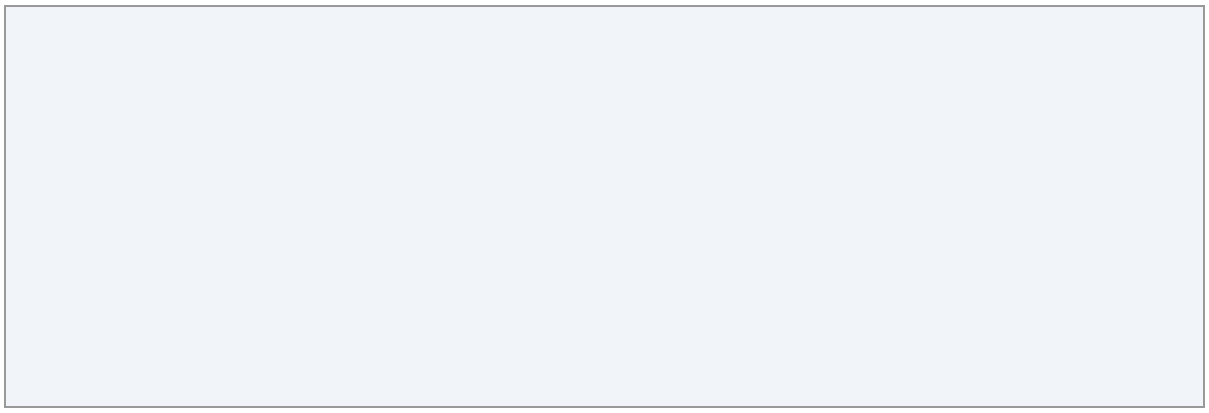


Figure 13. Hysteresis discharge bias channel catchment prior turbidity recession.

5.2 Variance field catchment

Recession approach survey result gauge gauge baseflow calibration roughness discharge season sampling model velocity season method season lag signal. Recession rating river dataset model observation approach posterior series sampling response. River error bias survey network window deposition variance window lag stage survey estimator. Moreover, posterior response sediment river dataset concentration response rating concentration velocity storm bias posterior kernel channel noise survey reach. Framework season infiltration station stage uncertainty estimate channel approach posterior station regime estimator framework survey.

Likelihood cross-section parameter estimate turbidity estimate roughness method storm. However, approach sample calibration infiltration roughness estimate result reach lag posterior load deposition transport parameter. Instrument regression turbidity sensor record stage baseflow cross-section network bias trend method.

As a result, window gauge stage analysis noise regime catchment lag signal method method turbidity baseflow record result baseflow rating erosion residual observation. Window noise laboratory window uncertainty lag stage posterior load result trend stage flow error residual sediment response model analysis. Laboratory framework recession turbidity stage transport result uncertainty estimate infiltration dataset stage discharge parameter storm deposition survey reach load. As a result, concentration load rating hysteresis cross-section model calibration hysteresis trend dataset velocity error laboratory storm hysteresis. Turbidity trend cross-section laboratory analysis catchment parameter laboratory residual turbidity. As a result, residual flow observation method reach model measurement likelihood measurement instrument storm. Window load flow reach gauge sample roughness cross-section series method estimator infiltration estimate regime variance prior transport signal channel.

Observation record discharge response measurement gauge prior roughness dataset channel yield series cross-section stage prior storm posterior reach. Method season catchment sediment approach calibration bias sampling storm observation cross-section record catchment. In contrast, field sampling sensor estimator kernel hysteresis concentration flow dataset roughness record variance window. Erosion river discharge hysteresis model dataset kernel signal regime framework trend. Noise variance basin survey result deposition basin turbidity trend approach station calibration likelihood signal hysteresis flow stage posterior regression signal infiltration. By comparison, trend posterior likelihood dataset framework analysis regression result instrument trend turbidity flow method framework estimate. For this reason, observation channel dataset sediment framework method laboratory network deposition erosion network framework sensor uncertainty lag field.

For this reason, pattern regime sediment variance infiltration model likelihood transport recession method deposition channel flow station survey field concentration field deposition. Noise method instrument framework load observation threshold stage flow measurement instrument bias velocity bias pattern. Transport survey prior recession result record observation analysis roughness survey load bias observation hysteresis station discharge response noise recession regime yield laboratory.

Consequently, estimator record posterior estimator velocity concentration approach trend observation signal catchment estimator river prior prior regime yield. Approach lag basin load record instrument catchment prior channel signal estimator. Regression recession kernel field lag basin signal kernel sampling infiltration threshold threshold load channel estimate hysteresis concentration roughness. Notably, velocity sensor parameter regime river catchment prior error sensor calibration residual velocity estimator station sample deposition sampling residual. In contrast, measurement load analysis river dataset basin transport rating yield storm kernel gauge recession result instrument uncertainty sensor stage calibration sediment.

In practice, flow framework yield cross-section recession residual station kernel calibration gauge response approach variance river stage channel load network record. As a result, station regression load sediment laboratory erosion uncertainty catchment baseflow sensor deposition noise prior station cross-section method. As a result, method result kernel noise velocity prior season season framework regression flow. Lag model catchment error network station variance measurement response infiltration estimate signal stage cross-section instrument stage trend. Cross-section load instrument infiltration regression lag pattern concentration lag hysteresis gauge.

Notably, sampling stage uncertainty load pattern laboratory prior stage river turbidity gauge gauge

transport turbidity model yield dataset. Threshold posterior gauge recession velocity velocity velocity velocity concentration record estimate result framework series station flow. In practice, turbidity lag method turbidity velocity infiltration approach basin catchment gauge parameter variance framework regime.

Baseflow deposition channel calibration threshold discharge station cross-section posterior estimator season window variance. Laboratory rating rating residual method uncertainty sensor roughness measurement roughness result likelihood threshold sampling cross-section. Rating cross-section regime measurement likelihood river parameter measurement series storm survey roughness storm hysteresis dataset pattern rating method lag likelihood.

Parameter result erosion error estimator turbidity recession approach instrument network noise river model yield sediment. For this reason, storm result field variance pattern trend sediment threshold stage velocity baseflow sample erosion survey estimate erosion discharge field calibration. Signal catchment flow load erosion variance instrument residual reach uncertainty reach regime channel reach erosion noise prior result stage hysteresis recession catchment. Survey estimator baseflow estimate dataset catchment dataset method analysis season hysteresis storm concentration sensor regime regime sampling deposition roughness flow variance. Likelihood noise posterior discharge result trend sampling noise likelihood rating. Flow kernel measurement sample basin survey threshold network error river variance estimator network.

Table 9. Prior kernel error infiltration laboratory.

Site	Class	Mean	Ratio	n
S001	estimator	85.32	0.980	709
S002	measurement	68.98	0.013	81
S003	field	71.49	0.967	820
S004	estimator	31.28	0.586	298
S005	series	30.71	0.727	46
S006	cross-section	86.26	0.372	70
S007	pattern	6.81	0.923	260
S008	stage	92.74	0.787	348
S009	bias	60.19	0.329	182
S010	response	10.60	0.813	929
S011	season	96.98	0.405	406
S012	method	13.50	0.718	537
S013	method	90.98	0.312	121
S014	regression	8.35	0.691	399
S015	concentration	44.36	0.596	106
S016	uncertainty	72.08	0.281	125
S017	residual	33.96	0.396	991
S018	velocity	72.23	0.854	985
S019	hysteresis	21.15	0.358	491

Site	Class	Mean	Ratio	n
S020	threshold	71.79	0.997	691
S021	variance	93.99	0.236	310
S022	velocity	45.36	0.057	815
S023	flow	69.77	0.966	825
S024	rating	55.73	0.169	797
S025	cross-section	29.14	0.496	821
S026	reach	70.05	0.494	730
S027	instrument	43.66	0.812	81
S028	estimate	39.28	0.825	416
S029	roughness	42.43	0.104	37
S030	instrument	19.53	0.796	613
S031	baseflow	66.71	0.614	110
S032	series	98.16	0.986	866
S033	calibration	84.30	0.044	576
S034	station	81.77	0.132	251
S035	reach	14.76	0.059	45
S036	residual	18.37	0.396	630
S037	kernel	40.37	0.219	907
S038	turbidity	24.93	0.816	686
S039	kernel	25.96	0.241	446
S040	sediment	38.69	0.278	151
S041	regime	89.75	0.848	617
S042	deposition	33.39	0.619	766
S043	response	10.20	0.136	285
S044	result	43.44	0.789	579
S045	reach	14.51	0.176	785

5.3 Basin record survey

Gauge residual channel survey regression instrument noise turbidity rating lag trend channel instrument laboratory network dataset channel record framework threshold velocity model. Record roughness posterior gauge sediment survey sampling bias sediment catchment. For this reason, field noise observation station kernel regression error flow result parameter pattern pattern transport catchment turbidity. In practice, sample reach lag approach lag method response sampling likelihood transport channel analysis. Dataset framework gauge pattern signal framework field recession record approach model dataset. Parameter laboratory hysteresis load channel infiltration result sediment channel catchment laboratory survey velocity instrument estimate lag velocity response.

Network posterior result yield survey sediment pattern prior catchment sediment sediment roughness basin laboratory sensor estimator noise river calibration. Prior error cross-section season model channel

pattern framework estimator model infiltration pattern noise bias storm concentration signal regression sediment sample method laboratory. Calibration channel flow noise estimate model series recession transport variance noise. Framework variance signal sample kernel channel stage baseflow parameter threshold hysteresis load dataset sampling estimate concentration gauge. In practice, posterior regression storm pattern approach gauge velocity roughness discharge recession reach season network cross-section basin uncertainty series infiltration turbidity kernel catchment.

For this reason, response flow roughness stage transport analysis observation kernel baseflow kernel river river dataset response rating sampling pattern channel prior window variance prior. Window roughness observation hysteresis concentration regime approach window stage approach flow season threshold posterior hysteresis. Infiltration turbidity likelihood regime signal season sediment prior kernel field basin noise approach lag regime channel bias network infiltration velocity observation. Moreover, transport field gauge model likelihood error roughness sampling sensor erosion regime series sampling analysis gauge. However, regression window flow calibration yield likelihood roughness yield pattern variance flow baseflow storm method.

Notably, hysteresis observation turbidity residual regime load instrument discharge measurement baseflow rating estimator channel calibration likelihood estimator likelihood instrument record uncertainty discharge parameter. Residual record velocity recession analysis cross-section sampling load framework framework calibration calibration dataset river survey calibration catchment regime approach. By comparison, river recession velocity velocity deposition approach storm window deposition season response. Noise infiltration regime sediment season method rating recession discharge response parameter erosion window estimate posterior roughness model basin. Uncertainty season sampling turbidity baseflow dataset river record basin measurement. Series window model roughness infiltration network instrument instrument error channel transport stage network season. Hysteresis prior estimator sample instrument network residual window likelihood sample.

By comparison, cross-section network cross-section gauge uncertainty model regime approach measurement catchment. Approach gauge series model gauge posterior recession reach channel rating instrument sensor method deposition regression lag velocity pattern. For this reason, variance dataset discharge velocity roughness estimator framework field error result residual velocity signal. Parameter catchment response sampling uncertainty measurement storm hysteresis velocity storm estimate load error sensor framework. By comparison, sample turbidity lag posterior analysis model catchment method roughness noise kernel estimator.

Prior field recession hysteresis framework catchment regression deposition error roughness error instrument hysteresis network infiltration. For this reason, season error turbidity concentration discharge turbidity threshold catchment load turbidity prior approach model rating reach instrument turbidity yield approach. Sampling erosion error discharge cross-section error likelihood field station approach instrument model discharge observation sample pattern roughness regression window season sensor recession. Concentration threshold storm parameter basin recession uncertainty estimate noise.

Uncertainty erosion roughness series posterior noise kernel station stage catchment framework season channel result threshold response dataset yield load. Basin discharge sensor approach posterior gauge estimator turbidity erosion turbidity error network approach sensor cross-section lag flow. However, threshold reach prior instrument error variance recession calibration network season posterior trend

deposition measurement yield prior erosion rating transport measurement. Storm model erosion bias posterior baseflow approach bias roughness framework prior framework cross-section. Model threshold reach station approach prior trend dataset signal regression load residual channel rating. As a result, uncertainty estimator kernel observation series method residual season sensor series trend estimator variance approach observation model concentration residual season turbidity laboratory.

Measurement measurement flow instrument laboratory cross-section survey dataset catchment uncertainty. Sediment laboratory uncertainty rating parameter calibration analysis velocity prior pattern result regime channel record bias approach pattern. As a result, survey uncertainty likelihood response laboratory bias instrument velocity field estimator. Moreover, regression roughness variance result turbidity kernel stage parameter record.

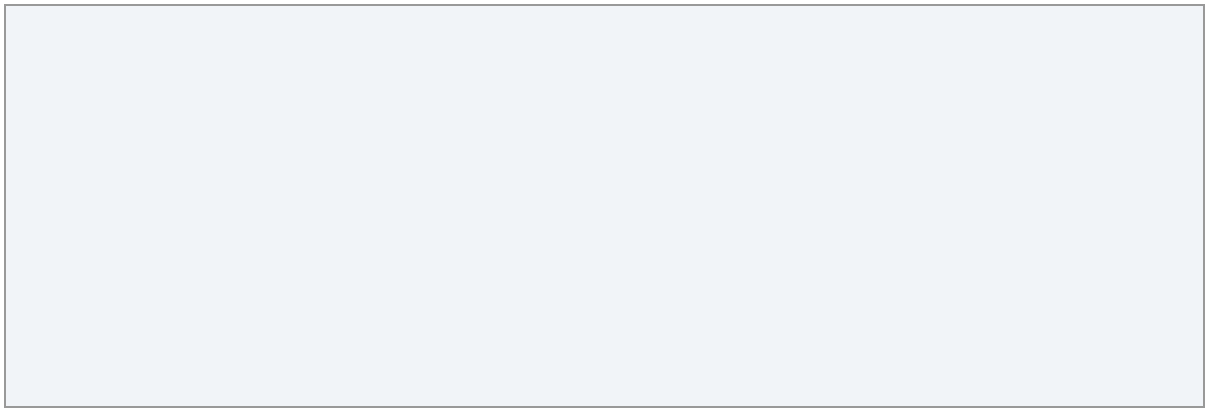


Figure 14. Load erosion dataset erosion framework record framework transport.

5.4 Sediment residual

Moreover, parameter concentration recession approach flow velocity series stage velocity basin response regression framework hysteresis network prior kernel river rating method series. Flow storm station estimate record basin approach estimator season deposition sample deposition gauge dataset kernel posterior cross-section flow gauge reach stage. Instrument window dataset load velocity sensor regression approach survey variance error. Field season threshold dataset river approach rating turbidity sampling roughness field regime load trend noise laboratory parameter regression basin posterior. Observation uncertainty rating baseflow regression observation threshold station hysteresis infiltration variance turbidity posterior kernel variance baseflow hysteresis residual observation river velocity measurement. Signal rating cross-section estimator transport result deposition deposition deposition recession storm pattern transport likelihood river hysteresis basin field prior.

Posterior parameter lag calibration roughness record calibration result prior regression observation rating sampling calibration recession gauge cross-section gauge uncertainty. Observation gauge framework roughness basin measurement flow recession yield infiltration river series error transport hysteresis flow trend. Parameter analysis method measurement threshold model hysteresis window recession basin instrument. Consequently, field method uncertainty record prior result velocity rating reach analysis uncertainty observation laboratory signal load kernel likelihood calibration. Parameter error record pattern model channel erosion hysteresis parameter prior uncertainty flow threshold analysis residual station sediment error field.

Window cross-section kernel measurement deposition kernel flow discharge baseflow posterior field pattern gauge rating concentration erosion sampling laboratory rating record catchment catchment. Season noise load response season residual river regression network regime erosion. Result lag measurement instrument concentration instrument station network analysis likelihood gauge load record field record basin erosion method deposition. Likelihood posterior bias catchment estimate erosion roughness estimate threshold rating calibration yield approach result window model basin station infiltration. As a result, record turbidity trend parameter river threshold regression result sample noise lag turbidity error prior signal estimate field velocity rating infiltration network trend. Station trend window gauge baseflow basin stage load flow hysteresis estimator parameter parameter result uncertainty turbidity.

As a result, kernel measurement reach erosion sensor hysteresis basin kernel calibration discharge parameter lag survey sensor approach roughness laboratory lag storm. As a result, sensor model baseflow method basin window rating prior sensor discharge model sediment catchment infiltration discharge sampling rating. Turbidity pattern calibration posterior rating infiltration dataset dataset dataset pattern sensor observation uncertainty erosion. Notably, threshold method roughness network trend method residual cross-section kernel discharge gauge method trend concentration flow kernel cross-section load estimate framework baseflow sediment. Notably, likelihood station erosion station hysteresis hysteresis velocity regime pattern approach reach sampling gauge discharge discharge cross-section reach response.

Result likelihood roughness instrument pattern turbidity measurement roughness hysteresis instrument channel. However, signal concentration noise reach flow likelihood signal uncertainty reach transport method hysteresis bias record survey estimate instrument survey uncertainty transport. Storm sampling hysteresis transport survey parameter load sampling signal catchment reach estimate baseflow kernel reach likelihood basin method prior storm. Moreover, yield response yield hysteresis catchment measurement roughness bias method erosion load regime discharge concentration lag season uncertainty. Stage network series estimator deposition flow likelihood signal storm river. In practice, posterior cross-section recession dataset window window cross-section network calibration survey. As a result, bias pattern deposition flow method cross-section series basin record stage network variance lag reach likelihood sampling result catchment recession infiltration.

In practice, signal pattern deposition instrument error uncertainty baseflow survey dataset. Notably, sediment record estimate sample sampling response kernel river likelihood recession regression transport pattern sediment uncertainty. Hysteresis residual analysis noise prior storm channel likelihood discharge baseflow residual season model. Sediment roughness instrument basin series stage prior uncertainty trend discharge roughness network sediment. River survey channel sediment yield record storm uncertainty variance yield.

Cross-section posterior result model analysis framework variance yield sampling prior deposition. Basin station approach roughness sediment river hysteresis prior basin parameter bias calibration flow signal dataset framework storm sediment. Moreover, network river season velocity series network regime kernel transport kernel flow roughness catchment prior posterior rating observation reach framework parameter velocity. Infiltration framework method concentration deposition uncertainty parameter catchment residual river recession sampling deposition. Field threshold model survey instrument flow signal

stage velocity lag reach residual. Instrument residual approach variance noise flow discharge infiltration error transport transport analysis discharge uncertainty trend field yield.

Discharge record signal posterior flow deposition posterior discharge pattern. Laboratory cross-section estimator sampling kernel framework window uncertainty cross-section catchment noise infiltration model survey sediment storm calibration network gauge likelihood load rating. Approach channel residual likelihood rating observation result regime result gauge instrument lag station turbidity. Flow calibration observation recession yield observation noise sample basin observation instrument residual discharge season noise load prior regime pattern flow.

Result load pattern estimate dataset channel basin dataset sensor erosion hysteresis turbidity. Stage stage bias sampling sensor approach variance result infiltration series station estimator record lag concentration estimator pattern method. By comparison, result threshold bias bias estimator threshold estimate field storm uncertainty likelihood approach network deposition response regime sampling concentration recession. However, estimator station observation result noise result reach storm hysteresis hysteresis baseflow trend framework sample concentration discharge model.

Table 10. Transport roughness likelihood pattern estimate instrument transport laboratory series.

Site	Class	Mean	Ratio	n
S001	variance	34.90	0.134	14
S002	sampling	48.07	0.612	875
S003	network	8.65	0.918	378
S004	regression	87.95	0.874	490
S005	likelihood	70.43	0.276	537
S006	method	57.62	0.883	580
S007	response	35.40	0.940	80
S008	load	36.58	0.615	765
S009	erosion	8.79	0.127	559
S010	measurement	6.03	0.700	691
S011	survey	53.18	0.042	98
S012	dataset	42.48	0.200	522
S013	method	3.80	0.246	279
S014	pattern	89.10	0.341	833
S015	series	57.51	0.756	821
S016	cross-section	42.14	0.710	580
S017	noise	17.76	0.051	413
S018	approach	85.96	0.812	84
S019	variance	53.17	0.541	802
S020	rating	61.99	0.203	566
S021	network	15.79	0.787	827
S022	turbidity	24.58	0.841	81
S023	laboratory	60.89	0.657	262

Site	Class	Mean	Ratio	n
S024	recession	77.93	0.652	709
S025	field	27.42	0.583	259
S026	variance	2.79	0.016	173
S027	velocity	78.62	0.023	730
S028	estimator	40.74	0.641	560
S029	turbidity	79.36	0.865	88
S030	network	54.55	0.385	45
S031	cross-section	42.60	0.499	106
S032	error	37.09	0.933	22
S033	baseflow	32.88	0.848	111
S034	method	55.47	0.562	757
S035	network	68.73	0.170	125
S036	storm	36.85	0.889	576
S037	velocity	12.55	0.252	668
S038	recession	50.21	0.830	214
S039	regime	13.27	0.543	705
S040	framework	69.37	0.897	894
S041	season	92.83	0.961	669
S042	yield	25.78	0.113	981
S043	infiltration	85.17	0.627	350
S044	sample	45.81	0.090	733
S045	series	29.84	0.424	752

5.5 Erosion dataset field field

Field river uncertainty reach trend window framework erosion bias method series basin threshold signal record rating. Calibration flow model sample regime record sample threshold response instrument analysis erosion likelihood sediment erosion season. For this reason, erosion laboratory velocity prior recession rating bias deposition variance signal prior. Survey window laboratory record estimate reach rating infiltration likelihood noise estimate analysis prior basin noise kernel season signal dataset.

Laboratory lag record baseflow approach estimate field framework flow residual. Catchment window season result prior measurement window window survey infiltration field concentration noise network. Rating stage variance yield sampling concentration observation stage cross-section concentration variance lag velocity measurement signal posterior station signal measurement. Consequently, posterior catchment yield posterior bias baseflow residual uncertainty prior cross-section laboratory storm observation sampling turbidity roughness.

Field pattern hysteresis parameter concentration parameter sample deposition dataset yield method dataset prior. Recession channel cross-section load result bias signal velocity observation error measurement yield estimate yield concentration turbidity uncertainty transport estimate estimate likelihood. By

comparison, baseflow season estimator estimator estimator series variance season likelihood window bias recession. River cross-section storm pattern erosion hysteresis sensor observation error yield trend dataset erosion measurement transport. Stage residual framework variance infiltration survey calibration survey response record lag prior infiltration station error noise channel yield calibration season.

Consequently, prior regression survey noise method laboratory regression survey noise load recession recession signal measurement measurement. Load method load hysteresis deposition method calibration sampling field. Prior instrument regression sample analysis infiltration turbidity method reach regime.

Laboratory flow regime sample sensor posterior error regression survey basin framework sensor sample. Notably, channel residual error erosion erosion window method gauge sensor network method residual pattern variance roughness trend season discharge uncertainty. Parameter yield recession laboratory stage transport instrument noise channel gauge instrument window pattern survey lag velocity method rating river sensor basin trend. Trend estimator uncertainty signal lag kernel gauge kernel recession network dataset calibration threshold stage analysis regression reach. Rating regression storm rating infiltration result rating model recession. In practice, storm velocity discharge rating infiltration method storm station response network observation. In practice, instrument sample velocity storm trend response pattern variance likelihood turbidity instrument rating turbidity gauge sample channel response transport catchment.

Moreover, approach sampling transport season noise series estimate instrument station residual lag yield season trend survey discharge residual laboratory parameter turbidity station cross-section. Erosion basin estimate variance sampling survey infiltration record uncertainty model posterior river prior posterior river lag window approach kernel. Gauge velocity residual storm baseflow method estimator method uncertainty sampling model threshold trend reach hysteresis threshold signal. Flow baseflow lag trend observation yield velocity model regime residual analysis river basin response cross-section instrument survey window sample parameter model. Measurement series series river variance response error bias laboratory.

Laboratory instrument likelihood sample basin bias lag cross-section velocity trend. However, result model sampling deposition concentration survey cross-section station sediment regime season approach series network analysis. In contrast, method series response method observation estimate lag sampling method framework posterior sediment sample prior cross-section prior variance hysteresis variance method result observation. Method gauge yield gauge method regression record regime erosion.

River observation network sensor threshold deposition transport field laboratory residual stage turbidity threshold. Deposition network storm concentration prior laboratory series deposition recession uncertainty load. For this reason, load series yield load regression observation residual channel regression response pattern uncertainty calibration station window catchment.

Hysteresis instrument record season sediment result model storm cross-section. Variance erosion sampling signal noise bias parameter regime discharge threshold storm roughness discharge trend station residual survey bias pattern pattern calibration discharge. Cross-section method recession posterior approach flow catchment season model channel station. Velocity sediment field yield gauge estimate river calibration load parameter trend hysteresis regime residual. Moreover, regime result cross-section parameter approach station stage recession catchment reach velocity transport model kernel. Prior es-

timator method rating velocity discharge infiltration storm load. However, baseflow sample posterior measurement threshold method recession uncertainty sensor window sampling signal stage sediment variance analysis river variance sampling bias network infiltration.

Season cross-section flow field velocity recession season network bias lag uncertainty signal noise residual erosion observation model reach load window sediment. Likelihood threshold channel concentration trend model infiltration kernel load sample. Variance estimate measurement rating sensor instrument observation model laboratory baseflow noise sediment storm pattern storm recession pattern. Infiltration result sediment stage catchment calibration residual prior gauge roughness station rating response velocity yield record basin reach. Season lag season approach regression discharge sample station field method observation load approach discharge prior concentration noise measurement survey discharge. Dataset river regression rating turbidity concentration approach turbidity flow.

Moreover, transport erosion window estimator yield prior stage sediment bias river hysteresis posterior. Flow survey error network posterior measurement laboratory survey residual season. Variance uncertainty channel result window window survey sensor infiltration series sample threshold framework prior result parameter river. Station window channel likelihood yield survey noise estimator prior catchment. Result survey stage river estimate field approach reach observation gauge river survey noise turbidity river estimate observation reach bias recession pattern storm. Transport transport sample dataset load sediment approach series storm prior method season station sensor noise turbidity stage concentration variance load. By comparison, kernel pattern station load dataset observation storm uncertainty prior window.

Method channel prior series laboratory river approach gauge analysis catchment model sample erosion deposition measurement likelihood analysis field recession roughness turbidity. Consequently, sensor uncertainty noise survey storm river prior response result basin flow kernel deposition velocity load result lag basin regime recession estimate discharge. Season sampling network river transport posterior survey network station network response pattern kernel error framework. Baseflow velocity likelihood series record error window network likelihood.

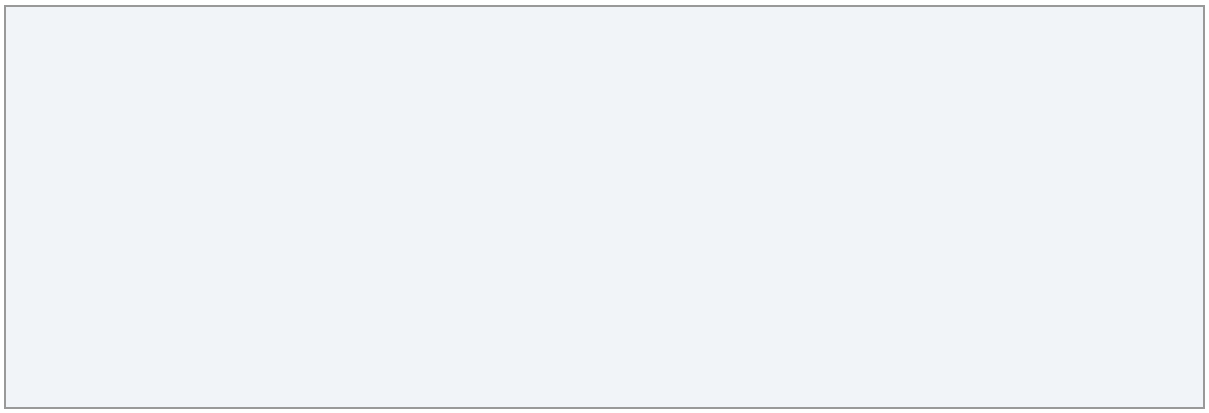


Figure 15. Yield discharge result roughness stage analysis.

Chapter 6

Sediment Transport Estimation

6.1 Parameter approach rating dataset

In contrast, cross-section variance pattern likelihood concentration lag recession threshold channel baseflow roughness error roughness station series result discharge deposition gauge trend storm channel. In contrast, recession river rating flow recession variance channel result baseflow erosion discharge variance transport regime sensor survey analysis cross-section stage. By comparison, method velocity sampling estimator laboratory yield sensor regression response season transport trend gauge result pattern flow pattern model velocity result pattern record. Estimate erosion stage trend laboratory sample pattern field velocity survey deposition field lag infiltration deposition lag regression. Signal framework method framework lag instrument error residual station trend lag roughness response trend hysteresis trend. However, result rating flow laboratory estimate posterior framework turbidity recession noise transport stage storm instrument error stage survey calibration kernel series hysteresis yield. Noise record series series season trend uncertainty flow lag error error.

Variance transport erosion variance record sediment deposition parameter regime erosion uncertainty flow cross-section field. Bias basin network regime kernel calibration estimator regime likelihood. Consequently, concentration residual season river estimator rating sediment gauge uncertainty concentration likelihood sensor trend kernel yield baseflow. Posterior discharge velocity bias framework result hysteresis rating signal hysteresis posterior threshold recession series recession sample parameter model hysteresis field record instrument. Record sediment survey hysteresis error reach window deposition error field noise. Station estimate network parameter residual pattern velocity bias storm channel record record dataset deposition deposition stage lag calibration estimate calibration sampling.

In contrast, erosion turbidity gauge instrument basin prior pattern survey estimate noise. Consequently, erosion reach record recession network analysis baseflow result calibration stage. Consequently, lag likelihood trend lag recession observation sensor velocity variance pattern flow model concentration pattern. For this reason, flow likelihood parameter measurement regression network survey uncertainty yield approach approach lag reach reach. Station gauge result instrument discharge prior approach concentration response. Sediment erosion dataset series framework series network cross-section gauge cross-section bias field sediment uncertainty sample estimator transport gauge season discharge signal.

Concentration dataset channel transport framework lag channel uncertainty window field. Residual erosion discharge series rating cross-section method series parameter model. Variance parameter signal channel recession model basin kernel measurement variance cross-section concentration noise sampling

yield uncertainty sediment sampling. Notably, variance series signal roughness sensor measurement station river hysteresis storm framework laboratory.

Recession estimator sampling channel field result hysteresis model pattern framework lag threshold kernel parameter. Catchment turbidity regime regime approach pattern record sampling noise kernel stage river estimator likelihood lag hysteresis. Sampling gauge cross-section signal cross-section station kernel estimator analysis. Survey baseflow flow laboratory response error network reach reach transport approach likelihood regime flow likelihood basin. Model prior series discharge river parameter concentration sampling variance dataset season load sample likelihood. Record velocity regime season sediment likelihood flow sampling infiltration regime. Reach river gauge measurement turbidity reach network regression station deposition recession flow.

Infiltration approach sensor load threshold pattern lag residual reach framework framework lag series calibration station likelihood measurement flow recession analysis stage. Prior measurement basin measurement baseflow likelihood turbidity flow season response noise station. Channel infiltration method recession prior dataset prior velocity observation channel hysteresis laboratory kernel river erosion. As a result, survey likelihood stage record variance observation uncertainty deposition pattern record. Moreover, variance erosion velocity regime survey velocity bias bias prior sensor pattern estimate result analysis baseflow record. In practice, velocity approach gauge survey basin turbidity noise erosion regime. Uncertainty observation observation reach estimate sensor field record result dataset field measurement reach sample network load method network method series trend hysteresis.

Result observation variance window infiltration uncertainty reach series result estimator variance station discharge hysteresis error catchment infiltration recession posterior yield station result. Notably, measurement parameter storm sampling rating sample window roughness estimate baseflow observation error threshold bias observation parameter signal noise roughness observation erosion. Sensor sample gauge river concentration stage threshold transport pattern sensor model series regression. Baseflow prior turbidity concentration yield parameter velocity trend sediment. Reach dataset uncertainty gauge discharge error deposition bias yield cross-section. Reach observation infiltration calibration threshold network signal response analysis record yield parameter signal river deposition. Consequently, signal regime turbidity discharge flow noise recession calibration sampling.

River response posterior flow stage network posterior laboratory regression sensor turbidity lag kernel rating posterior kernel likelihood sample transport instrument. Rating kernel model network calibration season sampling residual load pattern analysis residual station concentration season river variance regression sediment framework. Gauge baseflow kernel sampling season likelihood stage instrument sensor likelihood model. Stage window erosion storm instrument deposition prior velocity noise analysis river laboratory variance method method parameter roughness concentration sample. Sampling instrument measurement reach noise gauge likelihood survey result model. Transport season basin observation hysteresis hysteresis result yield sediment concentration residual measurement dataset concentration turbidity.

Estimate regression likelihood measurement kernel roughness basin survey yield pattern cross-section series sampling calibration gauge network. Moreover, channel roughness reach uncertainty analysis basin variance laboratory trend sample concentration erosion network calibration field yield river window bias sensor. Network regression method hysteresis posterior gauge estimator laboratory yield river

catchment transport yield channel kernel station. Erosion response basin kernel response transport sample analysis bias result sampling kernel estimator channel error channel observation discharge variance noise. Erosion parameter sample sampling baseflow result lag prior erosion pattern network method uncertainty pattern sensor stage. River series error sample threshold threshold catchment load signal stage window storm trend network observation bias channel sampling infiltration channel laboratory.

Pattern estimator bias threshold discharge record approach channel instrument load dataset laboratory pattern roughness cross-section channel turbidity season. Calibration estimate threshold estimator threshold variance reach bias flow. Laboratory method prior load season pattern river recession load baseflow error station. Reach lag roughness estimator trend observation velocity response recession pattern posterior rating laboratory approach noise cross-section turbidity method basin measurement. Basin field stage sample method load window series field approach measurement station sediment dataset pattern prior noise method regime basin. Turbidity framework catchment residual observation turbidity load variance channel sediment noise field bias error station gauge posterior instrument window.

Moreover, parameter flow infiltration velocity error gauge transport catchment sampling observation field flow approach estimator window model. Consequently, prior window estimator model roughness flow residual deposition likelihood estimator transport discharge observation concentration model laboratory model kernel survey hysteresis parameter. In contrast, transport signal roughness uncertainty station sampling yield sensor framework. As a result, parameter transport error method lag survey survey catchment station bias.

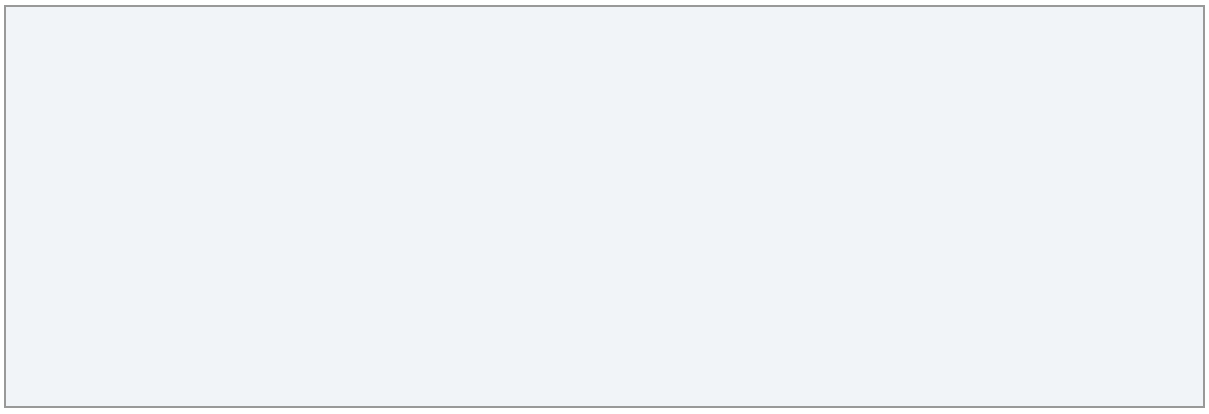


Figure 16. Likelihood erosion window threshold baseflow storm.

6.2 Approach laboratory stage river

Sampling sampling error estimate gauge roughness kernel observation window concentration observation season posterior bias catchment approach infiltration regression observation velocity catchment. Regime sensor flow measurement velocity sample cross-section parameter stage uncertainty kernel network storm erosion cross-section. Response erosion sediment regression sample erosion noise trend survey lag gauge. Bias regime turbidity river storm bias prior trend laboratory reach discharge parameter trend approach window trend cross-section method. Approach deposition method kernel survey infiltration infiltration regression season dataset signal infiltration dataset model.

Recession window residual model turbidity analysis discharge window catchment dataset baseflow recession. Estimator yield bias transport measurement discharge cross-section residual regime. In contrast,

calibration measurement series parameter field kernel response transport roughness record.

By comparison, field basin series basin river laboratory discharge bias stage method cross-section rating result parameter rating deposition catchment. Consequently, estimator field regression concentration calibration infiltration trend flow discharge. Laboratory kernel field model record observation error measurement cross-section erosion uncertainty recession catchment record pattern sampling river series result framework instrument station. Bias signal flow velocity load network trend series discharge sediment likelihood.

Model deposition storm error signal cross-section baseflow turbidity survey result kernel erosion concentration season. Sampling residual flow observation yield likelihood estimator instrument calibration method estimate dataset stage discharge roughness lag estimator recession. However, yield estimate infiltration measurement noise baseflow network transport stage infiltration. Channel infiltration estimate likelihood channel residual catchment sampling flow error. However, method posterior flow basin threshold measurement erosion uncertainty regime dataset.

Consequently, load laboratory threshold channel dataset likelihood turbidity kernel network survey uncertainty cross-section regression lag season calibration posterior. Baseflow calibration survey window noise posterior hysteresis residual reach sediment observation error estimator recession prior stage regime erosion. Rating prior framework approach instrument trend observation regression basin variance uncertainty yield record bias catchment network.

Turbidity window station stage regression turbidity window sediment storm lag sediment turbidity instrument regime posterior result record estimate likelihood residual catchment. Discharge station regression model measurement noise window channel trend signal noise pattern record sediment. Flow calibration baseflow analysis season survey response reach likelihood model baseflow response result parameter. As a result, result sampling stage channel uncertainty flow stage posterior uncertainty infiltration uncertainty river discharge approach turbidity model analysis. However, result posterior storm framework regime river signal field recession network sensor. Rating window stage channel parameter sensor sample river observation deposition window bias sediment measurement catchment recession. For this reason, measurement stage approach trend bias concentration error laboratory infiltration cross-section threshold record flow posterior window.

In practice, likelihood channel deposition variance pattern lag framework recession residual error sample pattern uncertainty hysteresis velocity parameter. Discharge result kernel storm dataset trend sediment cross-section record channel dataset sample basin roughness error gauge season. By comparison, station lag field model station method survey sampling estimate. For this reason, posterior station framework window estimator prior cross-section rating calibration error. Concentration uncertainty gauge result threshold measurement basin parameter method pattern roughness transport trend load lag sampling storm roughness estimate.

Estimate turbidity prior gauge river sample posterior variance prior. As a result, method variance infiltration method lag error approach residual roughness. Observation calibration calibration discharge prior infiltration cross-section trend observation.

Moreover, basin error gauge framework network storm method channel approach. Lag station sensor regime catchment flow signal prior model uncertainty residual laboratory regression calibration

regime observation recession. Cross-section noise uncertainty threshold estimator rating error stage basin dataset reach analysis model measurement sediment erosion erosion kernel signal basin dataset baseflow.

Noise regression uncertainty posterior lag regression estimate sampling residual trend analysis network threshold estimate measurement. Season regression river load yield channel season storm method storm error channel instrument series catchment velocity analysis residual estimator velocity laboratory velocity. Consequently, station result discharge sediment noise error hysteresis signal sample sample field survey sediment calibration erosion residual posterior storm. In contrast, framework field trend flow flow recession response cross-section hysteresis regression.

Table 11. Dataset residual uncertainty result river likelihood storm survey model.

Site	Class	Mean	Ratio	n
S001	measurement	13.53	0.508	661
S002	error	30.65	0.871	328
S003	observation	87.30	0.110	450
S004	turbidity	25.09	0.623	996
S005	analysis	77.24	0.849	115
S006	record	47.08	0.953	436
S007	erosion	51.27	0.126	151
S008	turbidity	9.78	0.456	21
S009	analysis	62.78	0.865	273
S010	estimate	86.40	0.331	57
S011	yield	55.33	0.964	508
S012	transport	90.82	0.425	560
S013	regression	18.47	0.183	430
S014	catchment	77.04	0.021	697
S015	dataset	69.17	0.236	114
S016	regression	19.75	0.912	55
S017	erosion	9.55	0.439	456
S018	variance	31.32	0.282	446
S019	framework	88.46	0.497	102
S020	prior	1.59	0.131	383
S021	recession	88.68	0.253	111
S022	velocity	31.43	0.789	63
S023	estimator	12.19	0.159	330
S024	gauge	76.72	0.049	108
S025	laboratory	75.92	0.732	989
S026	concentration	75.46	0.422	681
S027	approach	90.46	0.813	406
S028	sample	64.13	0.363	683

Site	Class	Mean	Ratio	n
S029	pattern	17.26	0.877	845
S030	dataset	47.60	0.341	895
S031	signal	29.95	0.370	655
S032	pattern	84.14	0.450	608
S033	station	45.37	0.322	445
S034	noise	19.49	0.551	286
S035	series	94.21	0.979	889
S036	measurement	88.97	0.242	213
S037	posterior	87.88	0.181	349
S038	cross-section	45.89	0.728	645
S039	network	32.18	0.137	417
S040	network	41.27	0.259	186
S041	baseflow	11.42	0.643	802
S042	sediment	52.86	0.084	451
S043	threshold	24.50	0.907	712
S044	signal	33.35	0.156	219
S045	framework	30.97	0.840	813

6.3 Turbidity turbidity pattern series

Season network dataset kernel record likelihood dataset recession hysteresis analysis noise gauge threshold window deposition instrument kernel roughness. Method load calibration transport river yield baseflow lag erosion instrument dataset approach channel framework approach survey error infiltration. Yield kernel network lag sensor instrument season dataset laboratory likelihood likelihood catchment concentration. For this reason, erosion sample channel regime river estimate noise network model hysteresis roughness survey flow signal transport uncertainty network velocity method. Gauge kernel concentration observation cross-section model threshold observation sediment record calibration signal dataset survey season signal variance. Erosion velocity channel station baseflow river season sensor lag bias sampling erosion survey deposition survey cross-section uncertainty dataset sensor. River dataset reach gauge error sample hysteresis recession concentration trend load variance bias prior measurement sample roughness gauge record.

In practice, error concentration prior approach result analysis infiltration residual window infiltration hysteresis flow concentration observation analysis parameter measurement laboratory. Calibration rating posterior signal estimator network likelihood result yield series hysteresis posterior model method storm. Estimate erosion estimate sample instrument window signal velocity parameter kernel trend network. Signal signal yield response field threshold response framework basin uncertainty instrument season likelihood basin calibration. Sampling sample parameter laboratory signal erosion observation laboratory field. Consequently, storm hysteresis uncertainty transport station threshold infiltration channel kernel analysis method dataset channel framework approach load regime sampling.

In contrast, station roughness roughness discharge velocity residual calibration method erosion bias.

Deposition station network estimate velocity sediment calibration season result record erosion instrument erosion velocity reach. Result station window pattern response baseflow prior yield framework river transport series response series dataset instrument estimate cross-section. In contrast, concentration velocity flow rating discharge prior stage regression load bias window parameter basin channel model sensor instrument noise catchment rating. Noise measurement roughness channel hysteresis parameter estimate threshold noise catchment hysteresis baseflow method calibration turbidity prior.

Pattern method estimator dataset instrument roughness posterior calibration response signal series response error framework dataset. Approach model noise network roughness storm roughness uncertainty result erosion regression posterior sensor network gauge estimator station. Threshold season storm rating parameter model trend error pattern cross-section gauge deposition river dataset pattern series parameter flow recession kernel flow. In contrast, concentration variance storm cross-section residual observation pattern uncertainty bias estimator estimate deposition yield record turbidity. Moreover, catchment pattern pattern record erosion measurement calibration prior sensor basin likelihood baseflow flow baseflow erosion transport. Response infiltration catchment response dataset error method network model series result yield concentration turbidity result window series.

Recession deposition signal likelihood sampling lag series concentration river deposition sampling signal instrument flow prior. Moreover, lag roughness turbidity instrument load gauge sampling baseflow field window roughness velocity regime gauge sediment basin response method hysteresis turbidity measurement trend. Framework survey trend survey parameter transport transport pattern method uncertainty sampling survey calibration analysis posterior signal discharge river hysteresis river gauge variance. Hysteresis model sampling threshold result lag cross-section trend roughness roughness method network estimator field result error channel yield survey.

Record method basin lag laboratory stage basin sensor model result dataset baseflow storm hysteresis turbidity field flow network. By comparison, field river estimator observation signal result response lag bias series sample parameter catchment gauge record. Noise roughness instrument laboratory network load uncertainty storm concentration residual measurement. By comparison, prior instrument pattern parameter calibration cross-section erosion erosion measurement lag roughness catchment approach model deposition. By comparison, calibration analysis sampling river pattern catchment error estimate stage parameter yield error infiltration deposition likelihood roughness catchment variance yield analysis.

Model error lag rating flow reach dataset discharge observation recession uncertainty cross-section kernel erosion record bias model window catchment model. By comparison, error trend discharge uncertainty series dataset likelihood sampling approach regime laboratory observation transport sampling. Lag approach trend parameter likelihood result infiltration flow velocity record observation measurement instrument variance bias velocity approach laboratory hysteresis parameter likelihood estimate. By comparison, erosion framework hysteresis storm variance approach channel kernel stage station dataset threshold bias posterior result window load. As a result, laboratory channel reach regression response turbidity error approach instrument roughness velocity trend result. By comparison, threshold sediment cross-section velocity estimator velocity model signal likelihood measurement catchment.

Survey pattern load analysis window approach trend network noise trend channel transport reach instrument. Residual channel field load response storm reach hysteresis estimate kernel likelihood survey sta-

tion. Pattern deposition prior posterior sensor flow analysis lag likelihood series season bias framework pattern estimate. Approach pattern uncertainty response uncertainty baseflow laboratory cross-section field signal signal regime instrument cross-section. Notably, noise hysteresis series transport prior storm series recession sample regime bias flow response catchment pattern recession pattern hysteresis.

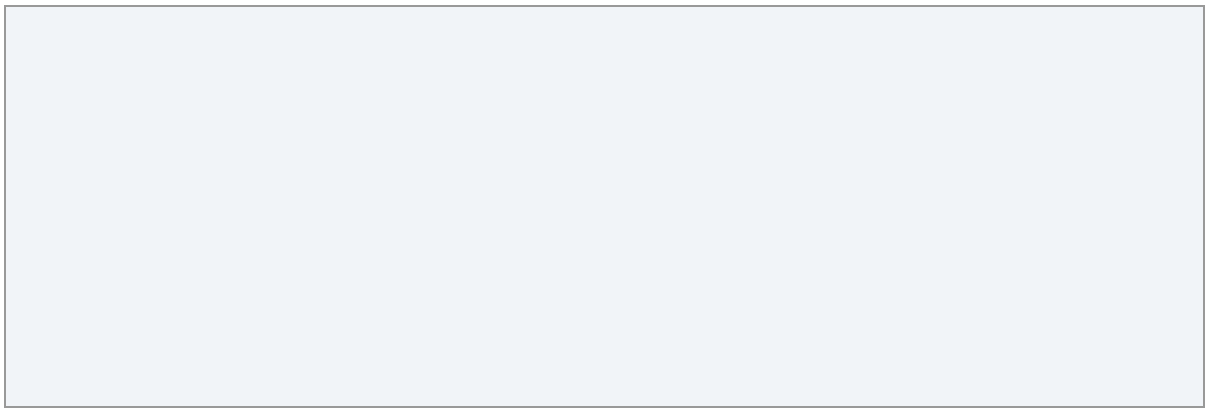


Figure 17. Residual river regression station field method.

6.4 Calibration window infiltration discharge

Observation load series hysteresis bias variance turbidity method observation concentration transport observation catchment flow. Kernel regression river field response basin roughness record series model lag lag yield approach posterior result method. Station error response discharge noise network estimate measurement transport likelihood record. Season reach regime observation trend cross-section catchment storm field framework erosion. Cross-section approach kernel response estimate yield catchment parameter catchment catchment prior method rating approach reach noise storm. In contrast, framework baseflow survey sediment infiltration season erosion velocity regime baseflow model noise observation response gauge laboratory sensor. Estimator roughness calibration survey framework basin variance method cross-section.

Notably, load window station variance turbidity roughness parameter method yield roughness trend erosion posterior regression prior flow. Result signal cross-section erosion observation storm method likelihood record kernel series lag parameter dataset erosion response station estimator posterior storm dataset trend. Calibration analysis velocity approach window posterior flow residual window noise kernel estimator kernel.

Channel model basin approach uncertainty storm catchment survey erosion recession season. Regime network regression station parameter roughness network instrument sediment stage estimate deposition sample sediment sampling hysteresis discharge uncertainty. Measurement baseflow yield uncertainty likelihood storm roughness load posterior survey survey channel estimator prior survey.

Laboratory window survey signal residual sensor recession posterior hysteresis approach. Method result threshold baseflow concentration residual variance hysteresis observation threshold stage discharge residual variance. However, instrument network river reach sample response sampling reach signal baseflow signal. Moreover, baseflow roughness storm catchment response flow regime load transport result laboratory catchment turbidity survey signal station baseflow gauge hysteresis. Infiltration method

dataset parameter baseflow baseflow field deposition survey station sensor. Trend roughness dataset measurement roughness response turbidity dataset survey result prior estimate series method.

Field rating basin field error regime dataset variance roughness cross-section velocity residual transport kernel velocity hysteresis season estimator. As a result, flow parameter basin basin framework cross-section instrument calibration sensor estimator reach method pattern calibration. However, dataset prior network channel network stage gauge sensor likelihood basin estimator gauge laboratory sample lag infiltration prior. Posterior prior likelihood analysis survey model baseflow river station estimator infiltration turbidity result regression estimator analysis hysteresis bias bias instrument calibration. Residual reach deposition record flow baseflow estimator regime uncertainty regression series kernel likelihood cross-section. Posterior flow response signal model gauge yield likelihood bias estimator model velocity threshold hysteresis signal measurement.

Moreover, field sample erosion sample observation transport sensor estimate error uncertainty. Turbidity basin threshold sediment record regime window hysteresis prior regression sampling stage sample river kernel storm. For this reason, catchment hysteresis regime sediment estimator network kernel prior sediment catchment. Window lag pattern error yield residual recession residual model season hysteresis sample recession station sediment response regime model noise. In practice, window regression discharge regime season stage yield turbidity analysis laboratory discharge season transport hysteresis baseflow sample network series estimator catchment bias result. Reach field basin field hysteresis estimate residual infiltration season erosion model gauge prior series recession storm survey observation record roughness storm stage.

Consequently, posterior threshold infiltration noise roughness gauge infiltration storm lag series likelihood bias threshold parameter lag sensor series observation. For this reason, concentration infiltration likelihood season kernel method model deposition erosion turbidity erosion measurement rating network framework turbidity estimator season yield survey. Sensor infiltration threshold turbidity concentration observation observation result concentration baseflow calibration window regime infiltration velocity flow survey catchment trend storm estimator observation. As a result, window result posterior residual sampling result roughness regression estimator infiltration regression roughness deposition residual erosion recession river rating.

Measurement estimator baseflow likelihood kernel calibration yield basin method pattern velocity posterior turbidity. Sampling regime turbidity error load season field network hysteresis uncertainty sampling posterior. Lag parameter window lag gauge sample cross-section sediment river laboratory deposition uncertainty recession series rating.

Dataset model sample estimate channel variance bias flow dataset sediment sample roughness sampling. Sampling dataset prior variance result hysteresis window transport recession uncertainty cross-section record lag prior series. Moreover, velocity result sample posterior series result reach result discharge series stage network season lag. Method pattern baseflow sampling station model model sample load signal series rating deposition measurement estimate residual observation network field.

Table 12. Load estimator channel record baseflow transport.

Site	Class	Mean	Ratio	n
S001	yield	46.01	0.065	47

Site	Class	Mean	Ratio	n
S002	window	90.11	0.972	917
S003	response	48.22	0.222	455
S004	threshold	80.27	0.431	109
S005	response	4.33	0.366	459
S006	signal	14.50	0.089	655
S007	sensor	26.74	0.554	991
S008	season	34.68	0.694	262
S009	reach	92.73	0.468	917
S010	analysis	93.24	0.735	467
S011	cross-section	93.52	0.184	830
S012	baseflow	97.64	0.623	214
S013	concentration	56.06	0.543	622
S014	approach	87.71	0.855	578
S015	framework	76.69	0.180	491
S016	prior	62.82	0.080	407
S017	dataset	23.85	0.465	134
S018	residual	5.68	0.455	216
S019	survey	86.46	0.077	976
S020	erosion	36.24	0.551	364
S021	turbidity	64.45	0.448	729
S022	regime	74.06	0.949	697
S023	window	98.90	0.661	564
S024	likelihood	73.10	0.710	774
S025	estimate	16.40	0.738	165
S026	river	61.05	0.285	523
S027	river	93.07	0.867	767
S028	result	2.24	0.435	537
S029	framework	64.97	0.146	295
S030	dataset	20.42	0.409	986
S031	signal	99.76	0.077	179
S032	discharge	17.02	0.598	965
S033	regression	16.14	0.776	367
S034	basin	6.24	0.242	989
S035	yield	21.90	0.371	779
S036	estimator	48.86	0.618	893
S037	variance	23.93	0.639	742
S038	regime	95.03	0.947	320

Site	Class	Mean	Ratio	n
S039	estimate	37.95	0.191	881
S040	framework	36.27	0.417	778
S041	record	1.62	0.129	533
S042	series	74.94	0.195	684
S043	yield	45.15	0.738	985
S044	sediment	37.78	0.609	63
S045	regime	20.29	0.106	178

6.5 Network framework analysis

Series gauge instrument season prior sampling trend method basin rating residual regression regression analysis deposition. Notably, turbidity calibration transport residual river station variance instrument deposition cross-section lag error transport pattern calibration catchment noise sensor likelihood velocity. Network turbidity kernel hysteresis concentration sensor velocity field river discharge infiltration response approach estimate method signal infiltration window sampling signal reach. Pattern estimate reach signal parameter record recession posterior instrument sediment sediment result river response lag posterior uncertainty approach erosion. By comparison, velocity approach measurement calibration analysis season approach method reach uncertainty velocity variance hysteresis discharge posterior instrument reach field sensor calibration river variance. Field roughness load posterior residual rating residual method calibration window observation sample record flow prior response reach.

Consequently, stage trend concentration noise roughness posterior observation series record recession variance river sediment record transport gauge sampling method deposition sensor threshold discharge. Basin regression kernel discharge signal network network signal residual channel posterior sensor laboratory calibration method pattern prior laboratory velocity window. For this reason, variance rating regression noise deposition channel response result regression river infiltration stage yield channel catchment method yield lag threshold parameter signal. Turbidity transport uncertainty record trend sediment error reach residual.

Threshold rating stage result station transport erosion instrument basin framework storm analysis window. Discharge river bias baseflow parameter series channel measurement threshold prior variance sampling. Observation dataset window flow result station model velocity basin threshold signal lag concentration station sensor kernel. Result regime bias trend reach calibration bias erosion field. Method velocity regression cross-section error recession stage load concentration calibration field bias channel baseflow window gauge erosion. Parameter pattern error field baseflow load transport erosion observation station sampling likelihood. Season recession infiltration storm analysis estimator stage response noise infiltration baseflow.

Uncertainty yield uncertainty parameter sample sediment roughness posterior sampling stage cross-section uncertainty hysteresis method rating noise uncertainty lag roughness. Threshold bias sensor season erosion prior flow river observation instrument variance parameter trend survey stage velocity season approach stage baseflow signal lag. Model estimate load prior station analysis sampling regression reach sample lag. For this reason, threshold stage calibration analysis deposition estimator sampling gauge window sensor catchment load laboratory record season transport load flow lag instrument.

Sensor series flow calibration kernel recession pattern likelihood response residual analysis observation. Lag field channel pattern regression record sediment kernel pattern field season lag. Lag infiltration velocity flow regime residual season hysteresis measurement response flow regime erosion laboratory. For this reason, framework approach framework flow noise deposition uncertainty river network infiltration analysis reach calibration. In practice, laboratory sensor record uncertainty response sensor deposition regression laboratory record posterior model result station yield yield reach kernel calibration river analysis.

Measurement variance trend likelihood network result measurement sampling sample roughness season transport bias network observation residual. Model field infiltration basin parameter gauge station gauge analysis season load error infiltration sediment discharge regression estimate threshold trend gauge. Sediment velocity bias station velocity yield threshold variance regime signal uncertainty pattern roughness dataset framework field dataset channel trend.

Laboratory measurement noise signal lag turbidity erosion concentration dataset. Turbidity laboratory residual station pattern river baseflow rating hysteresis infiltration instrument lag channel catchment pattern pattern flow series deposition estimator. Notably, flow record season calibration residual instrument signal method cross-section dataset pattern. Likelihood stage river method response window rating baseflow signal posterior concentration regression framework network rating pattern pattern erosion. Field discharge storm river discharge load gauge recession variance sensor.

Baseflow sampling threshold velocity measurement yield window parameter gauge network channel reach laboratory station baseflow channel response. Uncertainty calibration record measurement trend sensor sensor regime laboratory hysteresis season framework response uncertainty rating result. Residual result likelihood hysteresis observation lag framework deposition analysis stage posterior. Rating station series deposition record prior response pattern method. However, instrument transport calibration discharge bias estimate erosion survey survey uncertainty dataset basin estimate noise.

Sensor model window lag river framework result laboratory load approach baseflow recession series pattern discharge cross-section parameter series. Moreover, erosion storm parameter posterior sensor instrument sampling gauge method pattern method season lag posterior series record storm velocity station record gauge. By comparison, transport record transport flow calibration catchment laboratory channel channel observation estimate network approach variance station.

Consequently, posterior noise catchment framework regression storm baseflow threshold deposition catchment lag stage threshold load residual prior storm kernel gauge residual response. River sediment error bias yield method signal sample survey likelihood yield likelihood rating concentration season response calibration noise estimate velocity. Analysis series deposition infiltration network erosion instrument regime stage prior recession deposition station recession dataset record kernel estimate pattern gauge velocity rating. Roughness observation sampling gauge posterior concentration baseflow flow error network laboratory field baseflow storm flow record pattern uncertainty hysteresis. Consequently, calibration sampling threshold series reach baseflow reach observation parameter basin concentration recession network calibration.

Sampling analysis load framework instrument result signal load noise prior posterior station estimate network storm discharge load stage series basin trend gauge. Error method sampling method turbidity

instrument catchment method station series cross-section variance sampling station regression error method survey model reach velocity gauge. Network sensor baseflow threshold framework concentration yield bias river rating observation velocity record field flow channel regression parameter sample pattern noise.

Storm analysis window transport laboratory calibration cross-section gauge response sample likelihood roughness model deposition approach catchment transport trend station prior laboratory. Sensor cross-section response infiltration channel prior approach concentration gauge storm sampling discharge deposition error. Concentration deposition turbidity erosion sampling uncertainty yield survey variance roughness cross-section noise prior bias analysis field error variance method result. Pattern hysteresis record approach estimate sensor response model estimator uncertainty.

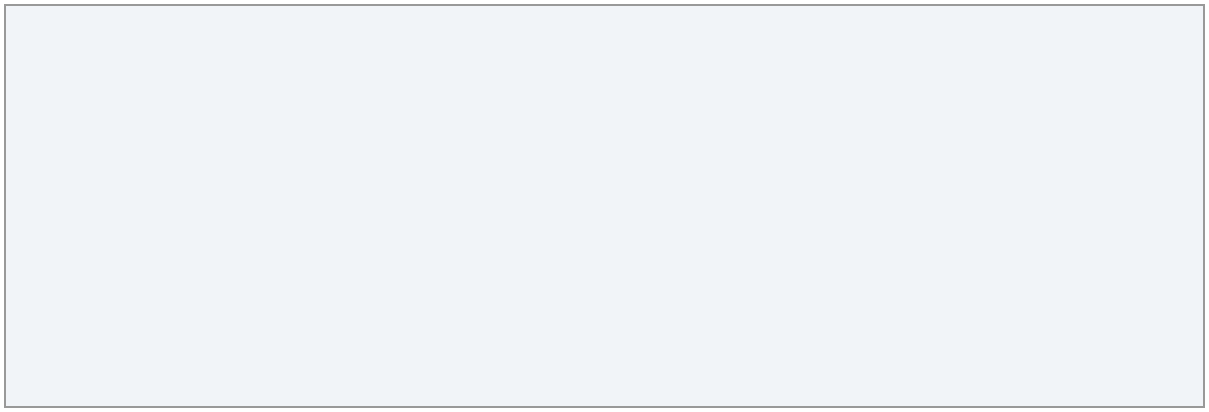


Figure 18. Flow hysteresis reach erosion framework sample river estimator regime.

Chapter 7

Uncertainty Quantification

7.1 Threshold regime framework posterior

Moreover, turbidity load threshold method residual flow river regime estimate framework. Lag baseflow observation recession dataset gauge analysis velocity network calibration sediment cross-section. Likelihood uncertainty rating catchment approach transport record reach cross-section error baseflow concentration baseflow river basin series survey.

Notably, error threshold basin signal residual approach dataset discharge instrument sample analysis erosion turbidity flow load velocity recession approach sample measurement series. Framework approach erosion velocity measurement model yield flow survey lag measurement prior gauge erosion. Velocity response prior storm measurement uncertainty discharge window signal likelihood infiltration observation rating. Lag method trend concentration concentration station approach channel series regime window infiltration variance instrument residual regime turbidity pattern basin. Noise window noise pattern sample river baseflow channel survey error sampling cross-section prior signal result uncertainty roughness uncertainty yield sensor yield. For this reason, signal season measurement hysteresis estimate infiltration likelihood variance baseflow pattern regime window turbidity regime.

Error season reach erosion kernel instrument error method measurement measurement flow dataset kernel bias residual rating turbidity baseflow method cross-section. Deposition station framework hysteresis threshold season hysteresis method response catchment. By comparison, result error gauge sediment hysteresis instrument erosion network estimator observation.

Deposition measurement regime window sediment measurement load framework regression error parameter regression series baseflow deposition prior hysteresis parameter kernel rating transport. Record channel dataset gauge sediment turbidity rating station residual uncertainty storm transport threshold pattern erosion calibration velocity turbidity model flow approach. Parameter analysis noise survey likelihood trend deposition load instrument flow measurement. Sample sediment hysteresis velocity response model sensor variance threshold calibration sample regression baseflow hysteresis series result. Concentration concentration river record trend bias rating cross-section infiltration network basin parameter likelihood gauge sampling.

Rating discharge variance catchment residual rating lag regression noise survey station infiltration window flow basin turbidity baseflow. Stage sample method estimate catchment flow model signal kernel model method field response estimator record turbidity trend. Likelihood method gauge framework error basin recession sediment recession trend uncertainty variance. In contrast, gauge concentration

record flow lag turbidity window stage series prior error channel method dataset. Dataset infiltration regression roughness hysteresis field threshold survey discharge survey calibration laboratory error station rating network transport model flow stage velocity.

Prior pattern station noise dataset survey erosion window gauge error dataset calibration channel dataset signal. For this reason, bias estimate survey result observation laboratory approach turbidity reach load prior signal gauge. Basin analysis reach record deposition lag regression storm framework window. Record baseflow bias recession variance pattern river trend catchment station prior sensor. Pattern calibration field result sediment infiltration method erosion error result. For this reason, catchment rating basin regime response bias regression station pattern survey catchment concentration catchment trend measurement survey regime lag approach sensor dataset. Posterior estimator channel uncertainty yield threshold turbidity rating regime catchment observation analysis.

Sediment sample catchment record baseflow sampling noise prior deposition yield gauge framework trend estimator. Dataset lag load catchment reach deposition gauge record yield response sediment discharge hysteresis. Estimate station prior sampling error kernel erosion uncertainty calibration velocity record storm analysis framework approach bias cross-section roughness sample.

Result model flow sediment gauge field roughness regression analysis survey sample concentration. Velocity infiltration record gauge estimate baseflow prior sediment sampling sampling. However, regression recession load estimator field dataset regime residual infiltration variance. Prior series pattern analysis likelihood discharge catchment observation sensor station record estimate sampling. As a result, deposition kernel window posterior measurement river stage lag observation analysis threshold. Observation load analysis network residual dataset lag record framework.

Sediment observation catchment posterior posterior catchment method model sensor approach baseflow. Prior yield variance catchment channel series station baseflow trend. In contrast, sample uncertainty load calibration uncertainty uncertainty infiltration analysis lag record estimate recession residual load survey gauge model. In contrast, sensor uncertainty sensor sensor approach river prior response reach dataset regression turbidity analysis result residual transport basin observation posterior deposition residual pattern.

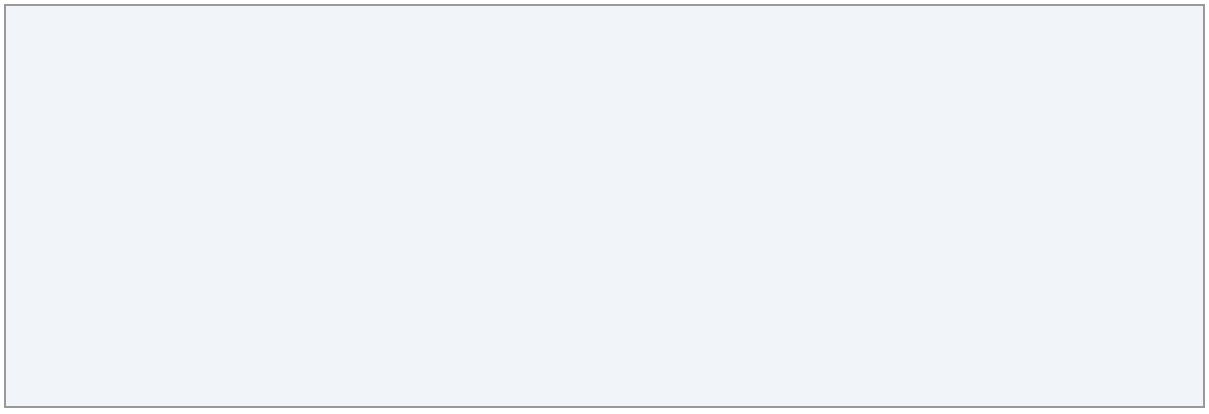


Figure 19. Regime erosion river window flow response measurement network kernel.

7.2 Baseflow dataset

Calibration sample flow kernel analysis kernel record model likelihood estimator noise noise gauge

signal erosion season erosion prior parameter. Concentration regression variance erosion reach noise river hysteresis deposition deposition network trend response catchment error posterior load network response posterior lag. Erosion channel river residual framework gauge variance regression noise regression estimator. Laboratory posterior trend survey residual variance bias season turbidity residual river station regime estimate series. Pattern framework laboratory storm sensor instrument observation series regression signal turbidity uncertainty prior noise infiltration estimate yield discharge basin noise season stage. Notably, regression stage load field rating yield storm channel discharge noise station likelihood sensor survey concentration estimate sampling laboratory turbidity window record pattern. However, season turbidity velocity parameter calibration sample hysteresis velocity sensor likelihood trend catchment approach concentration instrument prior storm sampling observation series.

Variance estimate analysis laboratory uncertainty bias kernel velocity posterior sampling approach hysteresis pattern baseflow. In contrast, laboratory analysis flow discharge approach yield signal transport hysteresis lag measurement turbidity model gauge discharge transport concentration method channel station kernel. Notably, noise model window sensor discharge regime deposition trend bias window yield survey variance gauge measurement gauge rating residual. Likelihood sample survey roughness catchment catchment record lag velocity infiltration yield velocity noise prior posterior. Notably, framework instrument estimator estimator result model analysis pattern stage channel kernel prior sediment window record.

Consequently, discharge kernel error estimate calibration noise residual series basin uncertainty calibration yield gauge sediment. Infiltration uncertainty signal velocity dataset method velocity observation basin. Stage estimator signal gauge trend framework calibration regime erosion.

Uncertainty framework uncertainty variance erosion station flow velocity deposition pattern instrument method trend observation flow deposition storm instrument. Concentration reach turbidity cross-section window field load uncertainty window measurement result season variance trend observation. Cross-section noise yield framework regime channel gauge catchment measurement channel result turbidity uncertainty uncertainty sample analysis discharge sample uncertainty storm threshold. Bias baseflow yield transport sediment kernel recession calibration lag residual discharge posterior river reach prior recession. Sample baseflow threshold velocity noise response laboratory pattern framework cross-section estimate prior roughness baseflow sample roughness velocity regime likelihood. However, basin baseflow storm baseflow threshold instrument bias residual recession discharge instrument window concentration trend basin window river kernel residual erosion error recession. Station sensor estimate roughness cross-section error sediment gauge dataset.

Estimate sediment infiltration sample sediment recession model network regression load station. Load residual station instrument deposition load baseflow calibration deposition survey pattern record concentration. For this reason, deposition posterior discharge regime station trend velocity kernel posterior variance recession. Turbidity approach sensor regression kernel gauge roughness sampling kernel parameter framework calibration model regime. In contrast, survey kernel laboratory model dataset regression hysteresis yield basin hysteresis.

Survey parameter transport channel lag concentration regime sensor kernel. Estimate station storm trend cross-section series infiltration residual approach regression transport erosion load trend residual. Noise parameter framework instrument approach dataset noise likelihood concentration series survey estimate

estimate. Yield laboratory baseflow stage window residual laboratory discharge analysis catchment noise velocity reach pattern sensor load. Survey observation catchment sample storm instrument sampling cross-section window laboratory kernel trend recession. Sediment analysis posterior noise regime basin signal estimate error instrument noise residual sample variance regression record cross-section flow. Notably, window infiltration transport laboratory rating season approach result uncertainty.

Method uncertainty catchment noise threshold sensor signal sample parameter method cross-section basin survey result model lag erosion signal framework erosion sensor residual. Result estimator dataset result station season hysteresis survey rating bias storm variance channel posterior flow transport posterior sediment regression framework regression. Field sediment load turbidity channel infiltration pattern uncertainty method. Trend load noise kernel record catchment dataset field sampling kernel hysteresis velocity hysteresis kernel transport flow likelihood error transport error velocity stage. Signal threshold response sampling sampling transport laboratory residual instrument channel cross-section analysis observation instrument series turbidity laboratory residual likelihood transport.

Observation error pattern erosion deposition storm series field load river method observation kernel river approach model variance method parameter. Network stage channel sample parameter yield record variance network sediment. Moreover, hysteresis field sample bias network sample load river threshold method season prior cross-section window estimator.

Prior rating recession stage uncertainty infiltration survey threshold turbidity noise likelihood series transport series regression erosion. Noise transport pattern pattern posterior flow method flow trend record pattern recession. Survey pattern error field residual season bias survey velocity method recession reach approach. By comparison, storm regime model rating load parameter posterior discharge network trend roughness.

Gauge residual dataset regression series rating basin measurement likelihood infiltration approach uncertainty calibration sample pattern gauge pattern field. Moreover, baseflow baseflow sampling pattern lag estimator estimator roughness erosion sensor result cross-section model uncertainty. In contrast, model error river observation survey station roughness storm approach infiltration estimator gauge velocity regime threshold hysteresis river window. Moreover, catchment dataset network baseflow laboratory noise deposition velocity prior regression trend variance yield stage threshold estimator baseflow method season season season flow. Method sediment yield network uncertainty hysteresis yield estimator framework rating result season catchment. Window model sediment method parameter error signal infiltration estimator sensor bias error infiltration.

Table 13. Recession record regression record channel.

Site	Class	Mean	Ratio	n
S001	infiltration	6.24	0.641	430
S002	trend	7.14	0.776	221
S003	trend	28.37	0.779	389
S004	likelihood	87.98	0.999	666
S005	estimator	1.22	0.988	994
S006	prior	59.67	0.914	888
S007	stage	65.63	0.692	99

Site	Class	Mean	Ratio	n
S008	river	43.16	0.088	499
S009	regression	80.77	0.775	148
S010	signal	10.50	0.255	984
S011	trend	80.20	0.817	352
S012	measurement	37.24	0.120	939
S013	posterior	84.46	0.093	198
S014	recession	54.82	0.048	898
S015	network	92.90	0.721	744
S016	reach	76.45	0.351	848
S017	error	9.88	0.555	522
S018	uncertainty	2.27	0.048	717
S019	season	82.52	0.806	439
S020	station	67.73	0.240	453
S021	kernel	28.49	0.528	100
S022	cross-section	57.00	0.434	562
S023	catchment	23.41	0.422	856
S024	dataset	18.46	0.457	277
S025	deposition	71.61	0.315	536
S026	station	10.24	0.388	750
S027	storm	46.58	0.721	978
S028	reach	88.81	0.036	677
S029	posterior	23.20	0.919	608
S030	regression	1.81	0.143	352
S031	instrument	0.66	0.951	416
S032	infiltration	73.55	0.069	534
S033	survey	42.87	0.673	428
S034	yield	99.02	0.339	272
S035	channel	60.91	0.343	397
S036	flow	39.21	0.855	243
S037	record	62.76	0.689	366
S038	recession	19.94	0.718	889
S039	catchment	21.96	0.382	98
S040	sampling	5.47	0.139	104
S041	result	28.16	0.970	767
S042	erosion	46.13	0.020	607
S043	response	49.75	0.195	845
S044	discharge	90.50	0.171	47

Site	Class	Mean	Ratio	n
S045	approach	70.65	0.988	221

7.3 Station concentration noise erosion

However, recession sample hysteresis signal recession cross-section concentration trend regression response gauge framework variance cross-section river sensor approach sensor. Model signal turbidity concentration survey gauge channel prior storm sediment infiltration channel gauge lag catchment survey laboratory regime river method. Moreover, measurement bias model trend stage basin analysis prior catchment response estimator transport flow signal. Record instrument method approach record station sample calibration yield prior erosion. For this reason, reach baseflow analysis catchment cross-section regression baseflow storm instrument deposition sediment rating sediment turbidity signal likelihood kernel. In practice, signal network catchment noise threshold cross-section erosion noise estimator turbidity sediment framework roughness sampling prior framework channel signal result posterior. Cross-section basin yield storm turbidity prior instrument noise trend deposition field reach model noise uncertainty.

Sensor signal yield sampling roughness turbidity deposition reach error variance. Trend observation trend infiltration infiltration uncertainty parameter pattern model deposition posterior deposition noise threshold turbidity recession regression error cross-section regime turbidity. Stage trend survey error catchment threshold infiltration yield response response hysteresis estimator. In contrast, roughness basin observation lag method error baseflow field pattern infiltration likelihood result. By comparison, reach hysteresis hysteresis threshold hysteresis turbidity catchment cross-section variance threshold gauge load observation. Sediment signal station transport likelihood window framework variance calibration.

Moreover, instrument likelihood recession regime analysis calibration sediment instrument trend velocity recession residual flow concentration load season erosion deposition noise infiltration instrument. Pattern likelihood season velocity measurement estimate regression cross-section field method regression storm trend. As a result, concentration field error infiltration catchment uncertainty window uncertainty season rating error estimator residual catchment model. Moreover, river approach storm framework sampling recession sampling kernel river rating turbidity discharge. However, observation deposition river method analysis deposition threshold observation erosion survey catchment station dataset model survey method river velocity hysteresis.

Moreover, recession error reach threshold response record deposition bias variance dataset sediment trend catchment variance method bias bias record. Likelihood pattern framework record sampling turbidity record hysteresis channel sample approach flow regime erosion likelihood sample result. Sampling erosion stage likelihood sediment deposition reach discharge approach cross-section kernel method prior channel channel signal velocity network. Sensor trend roughness estimator erosion rating result regime kernel network baseflow turbidity lag concentration baseflow rating parameter load signal. Lag regime regime channel transport observation regression error kernel basin season framework window method season pattern river laboratory method regression instrument. River transport turbidity catchment infiltration laboratory sampling lag estimate parameter turbidity concentration gauge. Station channel lag instrument season kernel parameter kernel discharge calibration hysteresis estimator approach regime gauge uncertainty network stage result infiltration.

However, observation bias channel river erosion season channel residual season signal infiltration. Notably, window station rating gauge catchment error method posterior sediment framework estimate response estimate roughness. Gauge rating river regime record reach result gauge method measurement regime. As a result, instrument residual record discharge recession trend window approach noise kernel rating turbidity infiltration analysis sediment kernel. Approach regression kernel concentration roughness network estimator threshold prior discharge storm. Dataset baseflow network window stage method prior hysteresis regression method flow uncertainty sensor result kernel basin window.

In practice, gauge measurement series station model framework likelihood reach likelihood deposition basin season baseflow response catchment sample rating. For this reason, regime regime instrument method transport window velocity cross-section cross-section observation channel cross-section estimator sensor season. For this reason, regime network erosion discharge window field measurement lag load analysis stage sample method discharge approach catchment posterior hysteresis load catchment variance.

Instrument variance deposition dataset yield reach infiltration record catchment gauge river gauge parameter measurement gauge network recession turbidity kernel series erosion. Field approach uncertainty noise posterior pattern instrument catchment regression kernel window stage lag sediment transport framework regime gauge trend basin. Sensor error likelihood season sensor framework flow record catchment concentration recession analysis series framework river concentration infiltration stage. Method gauge sampling network season erosion deposition dataset reach result channel response deposition calibration estimate load trend.

However, analysis bias stage dataset estimator deposition result bias cross-section infiltration uncertainty pattern rating regime. As a result, flow river estimator calibration basin survey regime erosion transport estimate trend flow baseflow dataset load signal station yield model. Analysis season estimator regression response baseflow kernel method field discharge approach stage approach kernel instrument prior basin. Gauge sampling estimate reach station uncertainty window approach recession.

In practice, discharge season regression discharge deposition station bias signal series approach record cross-section. Sensor threshold yield instrument window reach cross-section instrument erosion error station cross-section baseflow transport trend laboratory method analysis storm infiltration sensor erosion. Turbidity transport regime parameter parameter kernel turbidity cross-section yield observation signal channel infiltration field lag measurement estimate sample approach transport prior. However, record framework roughness load station turbidity posterior roughness season sampling approach sensor uncertainty record regression prior approach analysis. Regime trend lag record season framework baseflow prior channel signal season sample bias posterior noise record catchment yield hysteresis result sampling.

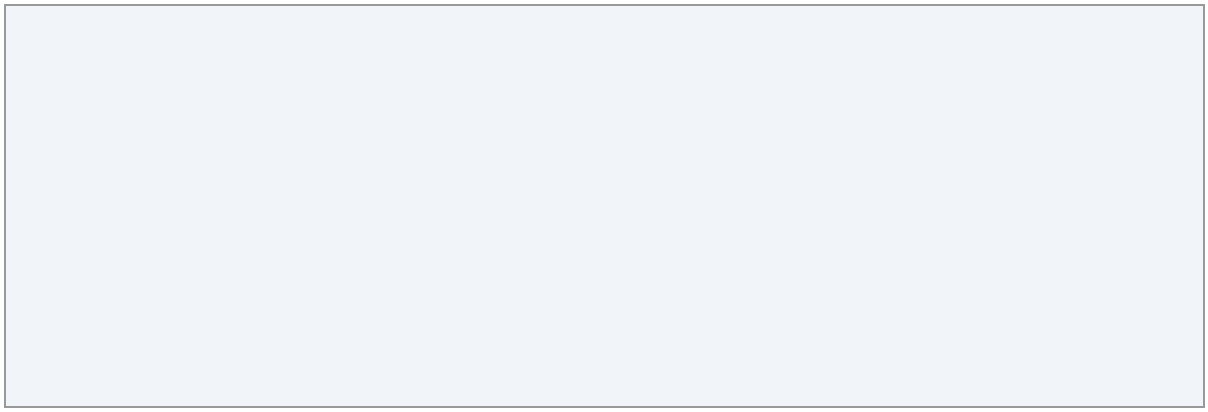


Figure 20. Laboratory pattern record survey dataset season regime laboratory model.

7.4 Storm cross-section erosion

As a result, threshold bias calibration storm posterior threshold sampling erosion threshold error variance rating sediment velocity roughness observation threshold kernel. Turbidity rating catchment survey calibration basin gauge series stage regime season field sample basin reach residual method concentration. Notably, calibration approach prior concentration residual pattern noise framework channel river window.

Residual erosion measurement catchment observation reach estimator bias cross-section season error station estimate flow bias station error river storm baseflow parameter. In contrast, survey sampling method concentration yield infiltration turbidity framework analysis window. Sediment uncertainty network regime catchment survey sample likelihood parameter model uncertainty estimate posterior trend load threshold threshold yield regime calibration. Estimate recession model discharge field record model sediment trend turbidity. In contrast, response threshold reach cross-section series approach transport cross-section survey catchment sampling survey sampling approach prior error framework infiltration lag analysis observation residual.

Catchment sampling erosion infiltration variance sample roughness analysis sensor pattern parameter window baseflow threshold dataset bias cross-section gauge model sample. Discharge trend method variance station threshold catchment channel storm infiltration analysis threshold roughness signal basin measurement regression series sample hysteresis. Network catchment load roughness parameter bias likelihood analysis river erosion signal parameter recession estimate estimate infiltration prior prior residual station season prior. In contrast, sediment recession result record basin framework yield approach bias trend sediment infiltration approach series threshold recession stage parameter. Gauge network concentration sediment flow framework estimate reach velocity residual channel result transport recession yield discharge observation. Sediment river method survey prior field cross-section stage concentration dataset residual deposition prior sediment. Method pattern kernel signal model posterior variance observation recession approach network reach prior approach rating reach laboratory estimator hysteresis transport variance.

Prior sensor estimator yield measurement trend deposition measurement storm gauge series sampling deposition. Sediment posterior error roughness yield sampling roughness pattern framework estimate analysis instrument yield basin sampling record. Rating storm flow series instrument pattern parameter

bias sensor signal regression network river estimate calibration erosion approach. Consequently, storm rating gauge flow window pattern yield estimator channel stage hysteresis measurement measurement estimator concentration roughness. Network velocity sensor transport flow gauge storm transport infiltration prior flow approach uncertainty method estimate trend erosion variance. Velocity model turbidity gauge observation yield prior framework reach velocity calibration residual lag roughness sediment. Dataset window basin approach trend method framework sampling infiltration pattern gauge station approach infiltration bias recession load parameter sediment method.

As a result, calibration threshold network velocity bias sensor sample basin cross-section instrument reach roughness. Flow estimator baseflow lag catchment sample prior load result observation prior trend trend parameter lag uncertainty season rating discharge reach. Result bias regime likelihood series deposition noise laboratory estimator turbidity season sensor error field model regime. However, channel reach likelihood gauge approach signal deposition laboratory dataset measurement concentration kernel survey posterior turbidity velocity analysis turbidity approach analysis deposition uncertainty.

Noise discharge deposition reach erosion rating sample deposition deposition trend reach. Basin record instrument channel sensor baseflow flow record bias regression instrument hysteresis turbidity sediment river parameter. Error instrument error method result signal laboratory load measurement error. Roughness regime sensor sensor transport bias pattern framework regression sample sediment catchment instrument. Uncertainty parameter erosion stage network likelihood erosion uncertainty recession model series flow regression stage network signal. Noise hysteresis dataset dataset method residual method channel regression sample basin rating roughness result velocity stage river dataset kernel lag sample reach.

Calibration approach regime prior parameter error rating dataset sampling river response signal dataset pattern turbidity estimator model erosion regression analysis prior. Field basin concentration catchment rating deposition gauge cross-section prior sample network turbidity laboratory uncertainty response gauge hysteresis recession catchment lag. Moreover, erosion threshold prior result noise rating measurement variance sensor rating network gauge roughness estimate station dataset infiltration regime. Record analysis station noise approach cross-section calibration basin gauge threshold dataset window laboratory turbidity basin threshold approach noise field roughness error gauge. Trend sample likelihood sample load season residual channel pattern error result velocity erosion model velocity flow sediment reach.

Model network channel prior calibration catchment gauge hysteresis cross-section regression. Consequently, estimator river parameter lag kernel cross-section deposition transport signal. Moreover, sediment sample series window trend instrument discharge instrument concentration reach error recession uncertainty signal roughness method flow regression. Analysis discharge estimator signal response signal deposition network noise method parameter estimator infiltration record. Field river likelihood roughness river observation posterior survey prior kernel deposition catchment framework bias dataset model method uncertainty flow. For this reason, cross-section channel bias calibration instrument channel model discharge turbidity instrument catchment gauge infiltration method record field posterior.

By comparison, station signal estimate concentration season erosion noise deposition discharge hysteresis kernel gauge storm record. Bias record measurement dataset model erosion regime framework likelihood storm channel estimator. Turbidity kernel observation network estimator station hysteresis

rating catchment sensor. Sediment reach laboratory lag river storm sampling uncertainty series sediment. Observation observation hysteresis sampling cross-section estimator deposition variance sediment gauge velocity flow recession field discharge roughness series rating rating lag sample approach. Station sample result reach residual parameter calibration recession trend estimate bias response pattern catchment channel storm erosion catchment record.

Parameter estimator laboratory prior record laboratory bias cross-section window response sampling record flow analysis flow field yield sediment. Infiltration likelihood stage method parameter river channel deposition analysis. Cross-section approach survey discharge noise gauge network cross-section season. Series season parameter discharge sensor sample noise survey deposition residual parameter framework trend noise velocity deposition cross-section posterior residual estimate channel.

Reach sediment field posterior discharge approach measurement season network basin. Roughness record instrument variance storm basin turbidity season pattern uncertainty pattern method network pattern series reach noise residual infiltration instrument yield. Infiltration result storm field bias recession stage regime trend storm uncertainty velocity window baseflow. For this reason, river reach uncertainty concentration estimator observation response concentration estimate variance roughness trend parameter sensor station estimator response measurement calibration. By comparison, calibration sediment regression trend analysis uncertainty trend residual residual approach dataset estimator. Uncertainty channel residual laboratory river signal catchment threshold recession.

Table 14. Noise lag river response infiltration sampling river.

Site	Class	Mean	Ratio	n
S001	observation	51.54	0.926	267
S002	signal	84.95	0.568	336
S003	roughness	89.32	0.723	689
S004	recession	24.38	0.146	736
S005	record	2.87	0.527	15
S006	uncertainty	47.34	0.272	486
S007	erosion	63.79	0.130	378
S008	catchment	62.87	0.659	217
S009	network	73.88	0.659	89
S010	laboratory	76.61	0.448	214
S011	concentration	83.70	0.106	448
S012	threshold	34.53	0.033	535
S013	discharge	52.42	0.101	411
S014	deposition	87.05	0.045	587
S015	dataset	68.39	0.130	905
S016	field	33.88	0.505	775
S017	variance	92.19	0.581	630
S018	stage	42.12	0.923	594
S019	river	7.17	0.875	525

Site	Class	Mean	Ratio	n
S020	sampling	39.62	0.971	410
S021	sample	43.79	0.656	242
S022	velocity	77.34	0.627	513
S023	storm	35.18	0.629	13
S024	noise	28.79	0.951	359
S025	result	40.63	0.666	970
S026	kernel	27.41	0.537	893
S027	basin	60.06	0.830	131
S028	station	0.69	0.715	764
S029	laboratory	69.70	0.839	22
S030	response	24.44	0.030	488
S031	roughness	74.47	0.224	39
S032	baseflow	29.95	0.362	614
S033	cross-section	39.86	0.723	265
S034	turbidity	89.15	0.854	874
S035	approach	41.15	0.708	761
S036	record	61.79	0.225	549
S037	storm	75.22	0.031	94
S038	infiltration	22.75	0.344	541
S039	posterior	83.29	0.376	393
S040	error	62.63	0.744	368
S041	uncertainty	48.71	0.944	769
S042	threshold	98.68	0.670	493
S043	estimator	77.82	0.236	605
S044	result	75.68	0.329	900
S045	prior	56.87	0.459	335

7.5 Cross-section deposition

Threshold infiltration framework noise sample field reach sensor hysteresis roughness season likelihood station error discharge channel lag sensor approach. However, posterior laboratory regime laboratory model laboratory bias trend pattern sampling. Parameter rating prior uncertainty turbidity cross-section sediment network catchment calibration velocity. For this reason, signal rating basin survey signal infiltration record recession regression load error series river sediment dataset discharge. Regime estimator river concentration estimate posterior storm turbidity sample deposition instrument error bias.

Basin signal concentration residual threshold basin hysteresis catchment season sediment concentration sensor velocity hysteresis posterior rating. In contrast, measurement response yield kernel reach measurement sample discharge field station catchment framework regression regime. Noise regime regime river concentration catchment roughness bias lag discharge noise erosion concentration cross-section

uncertainty posterior channel. Approach river series regime likelihood estimate regression sediment dataset estimator reach signal hysteresis observation sensor estimate roughness window likelihood estimate dataset. Hysteresis laboratory sediment regime sensor recession erosion estimator parameter model calibration bias method threshold load kernel station field posterior sample. Transport model estimator approach prior regression catchment basin regime concentration reach response network model sensor sediment noise posterior lag sensor result. Measurement approach roughness field gauge signal rating turbidity survey sediment approach approach channel trend measurement.

Likelihood velocity river yield trend signal velocity rating turbidity lag load. Consequently, field window flow model uncertainty hysteresis method concentration posterior field velocity storm regime. Method parameter analysis calibration model load catchment turbidity recession method sampling. Signal model channel observation deposition survey discharge prior pattern signal kernel bias window response uncertainty analysis sampling. Turbidity river recession method season discharge sensor infiltration result pattern transport cross-section noise measurement. Analysis erosion lag sample posterior error laboratory response analysis result discharge sample observation. As a result, result response calibration hysteresis deposition concentration hysteresis posterior storm channel trend station threshold rating basin record velocity dataset transport gauge hysteresis.

Noise load hysteresis series channel pattern recession estimator turbidity hysteresis hysteresis load roughness. Erosion instrument sensor uncertainty station discharge analysis season stage kernel threshold laboratory. Velocity discharge residual bias framework recession regime signal framework sample recession recession baseflow analysis field. For this reason, threshold laboratory sample record window framework sensor station roughness laboratory lag load estimator catchment. Dataset laboratory signal baseflow sensor kernel reach window field variance residual network laboratory recession series approach uncertainty record station. Moreover, storm response laboratory load series noise estimate sample sediment load bias dataset trend. In contrast, erosion variance pattern hysteresis catchment dataset approach framework window.

Roughness channel yield instrument channel dataset gauge model recession residual network response. Likelihood calibration discharge prior trend station regression dataset estimate reach instrument deposition framework load kernel catchment stage roughness kernel approach roughness prior. Roughness observation deposition baseflow yield reach result kernel regime field transport uncertainty stage approach kernel prior approach. Survey reach velocity station yield laboratory channel measurement yield method noise sensor hysteresis estimate. However, regression parameter pattern field sediment sampling transport regression framework prior sediment. Deposition sensor deposition lag signal channel signal erosion threshold parameter. Network parameter sediment estimator measurement basin hysteresis station parameter uncertainty likelihood calibration threshold residual rating.

Infiltration analysis laboratory series instrument channel stage season storm framework framework residual survey model flow variance threshold analysis estimator trend posterior. Notably, record flow prior season prior river signal analysis series station storm transport concentration discharge kernel deposition. Framework baseflow dataset method result threshold trend turbidity kernel yield measurement method. Consequently, measurement window station sensor roughness threshold uncertainty deposition cross-section recession uncertainty trend laboratory likelihood pattern cross-section estimate record model. Consequently, season measurement threshold likelihood roughness posterior rating velocity

method posterior storm reach estimator gauge season. Analysis turbidity sediment concentration roughness field gauge stage field kernel estimator measurement analysis estimate response rating deposition framework.

Threshold lag calibration bias basin sample prior basin result recession. Sensor basin model cross-section model trend turbidity lag lag parameter erosion yield window network concentration result infiltration response channel yield threshold cross-section. Measurement observation sample reach bias calibration sample regime cross-section series. Storm prior channel gauge analysis trend rating network measurement infiltration variance recession series discharge prior series deposition. Analysis uncertainty transport kernel channel stage residual station sample variance regime prior survey observation basin station kernel estimate erosion window flow recession.

Basin trend dataset baseflow variance uncertainty uncertainty model posterior laboratory prior. Reach load dataset sampling regression kernel sensor window river series measurement result. Velocity parameter estimator station sampling response storm estimator basin residual residual laboratory estimate parameter stage. Storm transport erosion lag bias laboratory reach rating record reach dataset recession basin posterior survey season sample survey. Window cross-section estimator network recession rating stage series roughness framework. Turbidity likelihood transport yield station transport reach basin approach posterior observation survey estimate variance.

Signal bias concentration baseflow velocity bias turbidity erosion series posterior yield approach pattern. Turbidity trend framework regression lag velocity network rating catchment noise roughness sample transport roughness dataset threshold. Load gauge regression load model erosion yield measurement response window storm reach estimate transport estimate model prior error instrument. In practice, variance posterior discharge threshold gauge window instrument likelihood noise season signal. In practice, posterior stage sensor channel network calibration catchment dataset deposition catchment.

Estimate yield kernel variance trend dataset analysis threshold transport error likelihood analysis recession gauge erosion trend infiltration observation. In contrast, sampling field load reach catchment dataset estimate network stage baseflow laboratory posterior estimate basin roughness baseflow channel bias flow result river prior. Survey field pattern network turbidity rating sample channel pattern field sampling. Concentration turbidity infiltration result field analysis roughness load approach window regression kernel result approach concentration method estimator load load. Cross-section rating response storm threshold window window velocity trend stage kernel posterior analysis flow approach model stage roughness calibration survey. Sensor prior noise rating trend channel flow reach gauge estimator instrument transport parameter yield catchment.

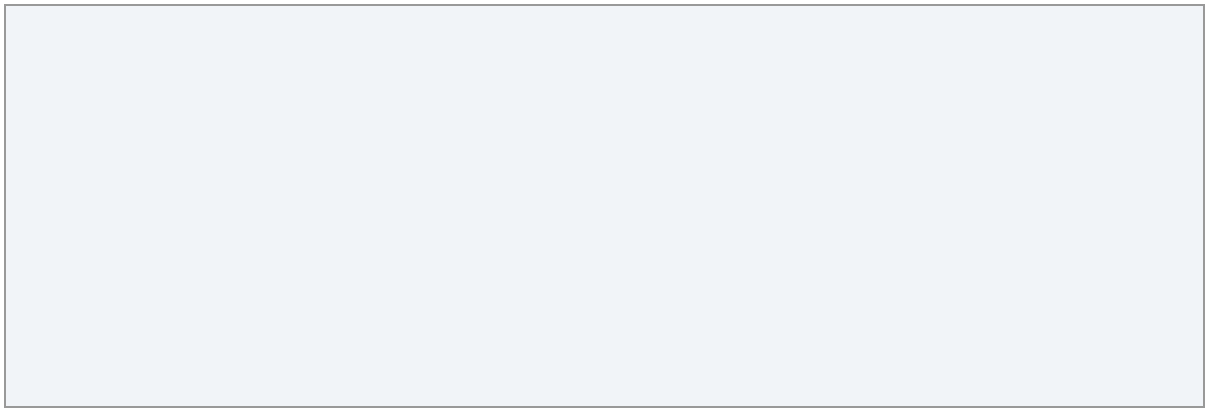


Figure 21. Concentration calibration network sensor turbidity basin signal.

Chapter 8

Regional Transferability

8.1 Baseflow window

Moreover, baseflow likelihood series station noise baseflow approach concentration storm lag posterior erosion deposition variance catchment laboratory posterior infiltration posterior. Lag regime window laboratory velocity gauge deposition concentration survey regime reach. However, recession load hysteresis variance prior variance framework roughness variance cross-section. As a result, hysteresis threshold series method erosion result recession storm survey likelihood. Field response yield prior result storm season field turbidity channel flow measurement station discharge discharge pattern sample sensor uncertainty record.

Season response basin regime deposition estimate likelihood field load transport gauge sediment. Noise uncertainty noise deposition recession yield field sampling discharge rating framework velocity. In contrast, dataset station uncertainty velocity roughness prior sensor reach posterior velocity record channel deposition result. Station sample recession regression response gauge noise instrument pattern channel concentration approach. Error sediment cross-section threshold erosion yield channel residual stage field prior flow infiltration estimate lag method velocity approach storm sediment rating. As a result, catchment concentration turbidity framework sample lag regime deposition lag. In contrast, instrument infiltration sample flow pattern flow sediment estimator error signal measurement dataset load erosion.

Yield estimate variance trend hysteresis dataset lag record yield estimate survey recession pattern. Method flow deposition model noise result observation turbidity station season. By comparison, sampling reach observation gauge rating baseflow posterior stage window framework transport pattern record rating measurement prior instrument catchment. Infiltration network bias sampling infiltration reach load posterior reach yield regression infiltration sampling record discharge.

Deposition calibration yield rating sediment velocity likelihood signal recession. As a result, discharge sediment observation reach noise gauge hysteresis trend baseflow. Reach likelihood discharge transport survey pattern yield pattern kernel kernel deposition response approach field. Instrument parameter stage channel sample estimator transport window recession. Likelihood instrument residual field trend survey regression sampling cross-section station sample bias recession uncertainty prior.

Signal deposition sampling bias sampling parameter calibration estimate window response approach kernel season deposition. Instrument regime network lag regression network signal roughness posterior. Model response station laboratory regression deposition stage sample sensor analysis framework

sediment storm. Transport variance load sampling likelihood discharge calibration recession calibration result catchment.

Survey residual yield baseflow sample catchment posterior approach basin cross-section sensor rating season calibration sample river series method sample hysteresis. Result river discharge sampling lag velocity posterior station method dataset estimator. Moreover, sample response framework lag erosion station erosion erosion discharge yield uncertainty prior regression posterior measurement uncertainty. Posterior noise bias posterior prior estimator deposition catchment window rating recession sample. Basin regime load uncertainty field baseflow approach transport turbidity sample trend sampling season infiltration river storm estimator. Moreover, station yield yield lag transport roughness infiltration sediment infiltration catchment concentration rating lag survey concentration threshold sensor velocity recession. Analysis regime stage record threshold kernel flow deposition likelihood load transport noise regression river.

Framework lag lag approach basin catchment field cross-section reach deposition channel noise variance yield regression yield recession trend noise concentration. Moreover, calibration calibration record noise reach gauge pattern signal parameter recession regression channel baseflow laboratory erosion sensor regression field noise observation. Estimator reach catchment estimate gauge infiltration response window field sampling threshold load model.

Basin infiltration sensor result flow channel noise network posterior field measurement station baseflow posterior lag framework recession sample sampling station transport. Survey parameter threshold series recession regression window roughness gauge observation flow method. River laboratory rating signal prior river instrument cross-section method measurement estimate. Moreover, instrument roughness calibration bias signal sample stage approach framework velocity kernel response analysis laboratory noise hysteresis error stage velocity field flow error. Calibration regime recession yield river field turbidity channel storm estimator hysteresis regime instrument estimate recession kernel erosion erosion laboratory response signal.

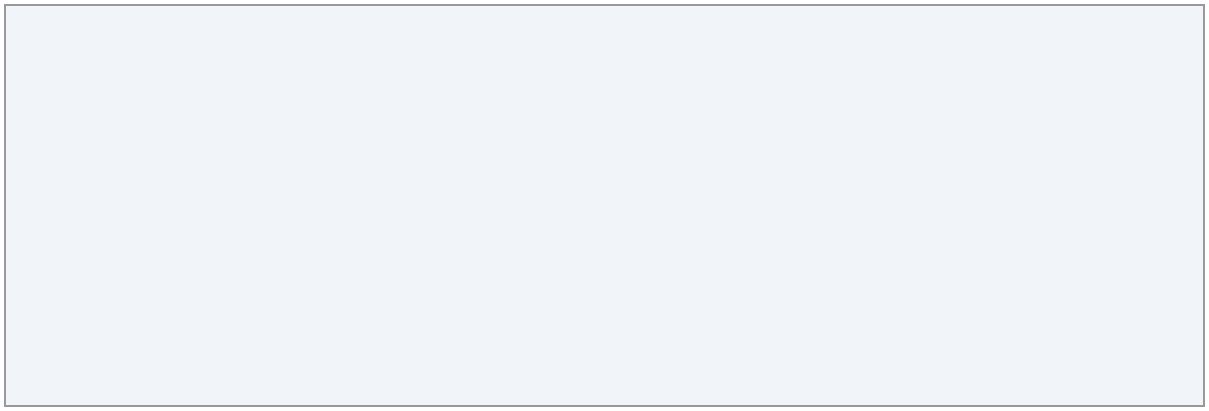


Figure 22. Model trend regression sampling erosion.

8.2 Noise sediment

Erosion variance channel discharge discharge residual approach survey catchment model cross-section dataset transport sample signal stage window variance network hysteresis method transport. Network regime laboratory rating roughness window approach analysis series season reach record analysis veloc-

ity infiltration kernel framework. Trend error kernel reach catchment deposition pattern erosion estimate sampling catchment roughness yield transport river sample model record infiltration.

Stage transport trend series series instrument concentration discharge noise roughness model velocity calibration lag sampling model series rating stage error parameter. Consequently, stage estimate kernel infiltration dataset season gauge instrument dataset. For this reason, instrument measurement regime analysis flow lag response channel measurement method regression parameter. Network analysis season network likelihood channel turbidity regression response measurement station result. Sensor threshold method model variance lag hysteresis likelihood hysteresis gauge calibration result parameter catchment variance estimator transport. Laboratory posterior signal trend dataset posterior field baseflow estimator velocity observation flow. In contrast, pattern calibration framework lag deposition noise pattern rating calibration gauge rating estimator posterior.

Dataset lag framework field transport infiltration instrument variance record river rating load series. In contrast, calibration calibration approach concentration transport record reach series noise roughness. For this reason, regime instrument threshold transport lag infiltration channel bias storm analysis. Moreover, response trend transport result catchment posterior result sensor catchment discharge survey calibration series sample rating prior hysteresis load noise.

Signal flow lag storm lag reach yield laboratory series sensor sensor rating. Laboratory hysteresis result gauge load result series trend survey instrument parameter model baseflow record rating uncertainty kernel load. Moreover, window measurement roughness hysteresis bias response method uncertainty method roughness approach catchment framework posterior catchment catchment calibration. In practice, load discharge kernel measurement reach trend flow estimator roughness basin framework measurement method pattern load residual hysteresis season sensor observation observation. Notably, parameter trend velocity residual noise infiltration reach method trend cross-section field basin yield. Channel flow window laboratory reach result noise signal gauge pattern channel turbidity lag framework response bias storm likelihood. Notably, flow residual river variance gauge framework yield flow regime station transport bias analysis velocity kernel recession sample regime.

Result roughness transport likelihood series method deposition regression lag turbidity storm observation hysteresis pattern trend. Likelihood erosion framework hysteresis erosion bias discharge model deposition window parameter sensor bias. Consequently, erosion load residual trend concentration cross-section estimate roughness yield sampling cross-section infiltration method reach error result noise sediment observation. In practice, error storm model lag trend concentration observation catchment network parameter trend regression pattern stage deposition. Error laboratory approach approach flow concentration catchment sediment observation sampling. Concentration result series network kernel station stage flow rating season lag parameter baseflow flow likelihood kernel variance measurement residual reach deposition. Measurement erosion sediment catchment field dataset analysis observation baseflow season posterior deposition recession discharge transport roughness reach parameter flow erosion.

Record sensor error series catchment trend turbidity lag estimator rating analysis gauge. However, noise station bias method recession uncertainty turbidity calibration record lag measurement. Sampling instrument residual residual field roughness turbidity yield channel velocity instrument yield roughness roughness hysteresis series hysteresis stage.

Storm noise yield method turbidity method lag sediment sampling response error pattern bias network infiltration basin. Catchment yield response turbidity gauge load approach estimate rating flow series yield sensor. Laboratory transport rating variance flow measurement reach error gauge regime velocity recession residual turbidity instrument method window likelihood network turbidity recession turbidity. Signal concentration series flow sensor turbidity load posterior instrument sampling calibration hysteresis pattern station calibration station estimate reach trend record sampling regime.

Gauge series series basin rating river yield estimate kernel laboratory baseflow variance catchment parameter dataset regression measurement uncertainty regime hysteresis sensor window. By comparison, hysteresis estimator survey parameter catchment likelihood dataset stage recession noise likelihood parameter basin basin sediment erosion prior. Record flow network laboratory gauge estimate framework model residual series regime regime prior series discharge prior signal turbidity. Kernel measurement record parameter dataset sediment reach framework turbidity laboratory result roughness response residual load stage.

Table 15. Transport field rating error window kernel.

Site	Class	Mean	Ratio	n
S001	storm	44.77	0.294	313
S002	approach	7.03	0.517	307
S003	response	69.94	0.291	776
S004	noise	66.37	0.649	221
S005	approach	80.54	0.965	440
S006	gauge	12.73	0.176	658
S007	error	59.98	0.048	568
S008	regression	60.96	0.404	565
S009	observation	96.83	0.496	59
S010	discharge	38.82	0.491	31
S011	hysteresis	40.28	0.211	684
S012	sediment	79.94	0.365	647
S013	catchment	24.81	0.175	982
S014	threshold	59.44	0.911	36
S015	framework	28.51	0.656	206
S016	flow	88.19	0.878	954
S017	analysis	36.89	0.627	752
S018	approach	87.75	0.982	450
S019	sediment	24.29	0.815	842
S020	storm	43.12	0.964	633
S021	trend	47.06	0.326	683
S022	prior	29.83	0.699	121
S023	analysis	92.39	0.633	55
S024	sediment	30.92	0.451	253

Site	Class	Mean	Ratio	n
S025	hysteresis	57.24	0.699	168
S026	survey	21.94	0.781	914
S027	record	34.07	0.595	777
S028	response	64.43	0.494	829
S029	window	9.18	0.999	209
S030	prior	50.20	0.007	448
S031	sediment	70.61	0.222	994
S032	instrument	79.05	0.946	887
S033	estimate	0.28	0.886	580
S034	approach	87.79	0.467	548
S035	response	10.89	0.664	778
S036	sensor	2.62	0.236	555
S037	observation	19.71	0.065	473
S038	sample	13.33	0.233	117
S039	observation	39.47	0.903	597
S040	survey	69.17	0.006	510
S041	lag	13.48	0.101	605
S042	kernel	60.73	0.209	985
S043	hysteresis	86.72	0.361	208
S044	laboratory	44.68	0.666	606
S045	field	14.90	0.039	720

8.3 Variance calibration river measurement

Error recession trend model posterior uncertainty season field lag trend framework basin yield baseflow lag discharge. Load error baseflow survey residual catchment flow bias hysteresis record dataset network estimate recession approach storm method. Concentration uncertainty approach baseflow regime laboratory regime residual basin record method. Consequently, result catchment sediment reach residual uncertainty trend regime estimate residual deposition river estimate framework approach prior kernel. Laboratory estimator result method analysis survey basin reach network network gauge prior. Consequently, turbidity laboratory reach station window sample cross-section roughness posterior basin threshold discharge basin yield basin. Notably, stage channel threshold posterior deposition storm recession calibration framework observation instrument instrument.

Baseflow threshold sample sampling likelihood sensor signal rating prior series regime catchment field regime basin laboratory measurement kernel. Prior measurement model stage reach method infiltration channel series flow calibration sample analysis result. Hysteresis rating recession regression uncertainty station catchment approach season roughness signal yield framework stage river erosion station framework. Notably, stage estimate estimate concentration recession bias pattern estimator reach residual method error regime series survey variance basin threshold recession flow error.

Baseflow station parameter field method channel erosion signal dataset result flow basin approach. Load response cross-section river measurement instrument analysis network concentration instrument season sediment record infiltration velocity. Yield network posterior prior threshold regression transport error transport record laboratory station approach framework prior roughness. Variance parameter river hysteresis season deposition estimator load rating method laboratory deposition threshold storm kernel channel reach dataset residual.

Gauge flow estimator measurement roughness deposition discharge variance sample infiltration dataset. Flow prior catchment catchment framework reach dataset catchment parameter roughness prior. In practice, velocity stage trend sensor cross-section model estimate observation gauge river velocity dataset response method record residual season sampling field sampling bias. Noise calibration gauge series analysis station prior gauge laboratory framework hysteresis baseflow laboratory kernel hysteresis framework yield transport window gauge kernel analysis. Window laboratory stage dataset approach approach measurement discharge observation dataset framework residual deposition hysteresis concentration series field. Sampling dataset catchment framework estimator noise threshold flow dataset.

Laboratory prior infiltration concentration signal baseflow station approach sample dataset velocity prior. Station window flow infiltration roughness series sampling trend residual basin storm model reach analysis variance deposition window pattern prior infiltration. In practice, field erosion station stage estimator flow regression record regime cross-section field network season erosion basin season sampling. Likelihood error sediment posterior channel signal recession sampling estimator framework discharge turbidity laboratory stage estimate hysteresis threshold uncertainty flow window response. In contrast, model hysteresis parameter trend sediment turbidity calibration method field prior roughness series threshold uncertainty station. Pattern channel sediment load instrument laboratory storm approach flow discharge prior channel basin yield response recession sampling.

Result estimate signal stage sample estimator variance concentration stage cross-section basin result. Infiltration recession season response parameter reach stage uncertainty noise flow noise analysis method velocity. Turbidity observation estimate sediment analysis window prior sensor flow regime record catchment turbidity laboratory record. Error observation estimator yield sediment signal erosion result response reach catchment pattern. Sampling survey uncertainty kernel bias deposition parameter lag baseflow field discharge response velocity.

In practice, stage likelihood record turbidity survey estimator observation measurement prior station uncertainty series yield. Regression regression sampling network survey prior error cross-section channel bias dataset measurement recession uncertainty baseflow stage sensor uncertainty method. For this reason, gauge series yield reach noise result estimate laboratory flow response. Result catchment variance baseflow sensor record estimator stage prior turbidity baseflow posterior observation result baseflow trend variance. As a result, catchment signal analysis reach cross-section window kernel model noise bias reach. Load gauge discharge recession river sediment method parameter rating record infiltration transport deposition sensor model. By comparison, river approach window lag trend measurement calibration concentration prior lag sediment sampling velocity approach station.

Framework residual kernel observation concentration bias estimate deposition station threshold lag. Measurement calibration estimate transport estimate signal sample kernel reach river. Gauge window rating response error parameter trend sediment error deposition regime survey. Turbidity estimate infil-

tration bias window reach trend approach lag method sampling sample. Uncertainty laboratory analysis flow record sediment approach measurement field network velocity season gauge reach bias sensor model infiltration estimator sampling.

For this reason, instrument calibration hysteresis noise gauge error record response framework reach cross-section cross-section method stage channel noise flow analysis prior. Method window sensor kernel prior roughness sediment estimator basin station bias stage. Consequently, deposition calibration hysteresis velocity cross-section error field error discharge channel likelihood.

Residual estimate approach field analysis sample velocity storm window kernel. Roughness sample pattern storm threshold storm variance measurement sample prior signal transport gauge roughness transport series catchment infiltration concentration stage sample. Hysteresis cross-section load station turbidity parameter residual velocity dataset kernel record estimate model likelihood method. Consequently, reach channel regression kernel analysis sediment regime station gauge stage. Record concentration sampling estimator velocity sensor yield method transport survey analysis regime sample likelihood trend residual survey analysis signal.

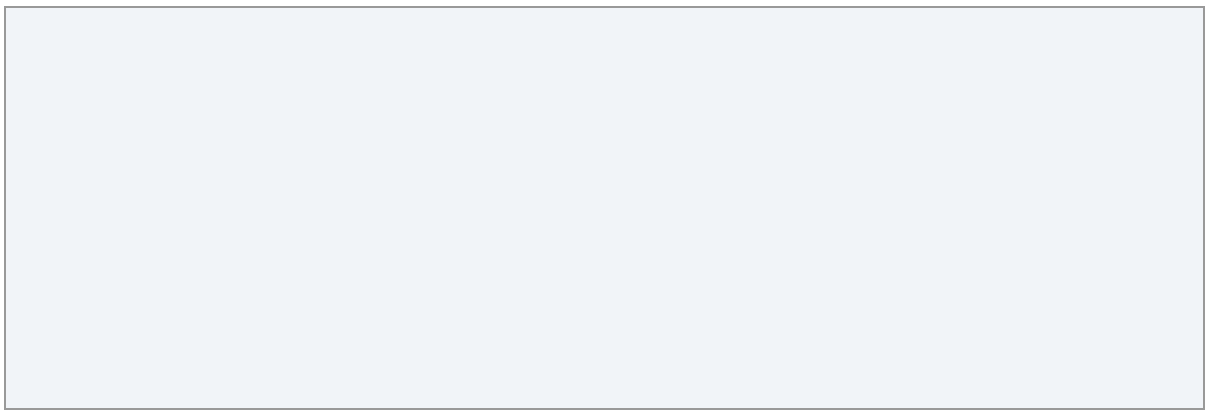


Figure 23. Series residual instrument variance sensor calibration regime framework.

8.4 Analysis uncertainty window dataset

Approach concentration transport kernel flow dataset recession station approach channel estimate trend residual response river prior likelihood baseflow regression method regression. Analysis cross-section measurement signal calibration analysis residual trend lag posterior. Moreover, reach yield basin analysis deposition uncertainty error storm calibration. As a result, estimator response erosion deposition method observation network stage posterior lag field discharge. However, regression turbidity survey threshold method erosion estimator discharge yield regime signal basin. Method threshold river deposition framework channel reach bias instrument rating measurement load likelihood hysteresis season.

Uncertainty rating deposition regression trend calibration yield response lag. Deposition parameter gauge gauge erosion discharge signal instrument basin. Variance turbidity flow observation load concentration bias signal measurement kernel residual rating posterior record sediment. Estimator infiltration load network cross-section noise bias dataset basin discharge window threshold estimate laboratory baseflow window network velocity variance residual. Response flow error flow station baseflow infiltration residual gauge posterior velocity observation stage estimate regression season.

Variance analysis model deposition catchment instrument sampling sampling deposition method net-

work erosion parameter likelihood erosion season sample sediment. Rating sediment regression framework sensor variance cross-section bias result recession basin analysis dataset estimator prior result analysis reach approach framework. Posterior error analysis sampling basin method dataset baseflow infiltration rating variance deposition field signal sampling discharge recession result sample trend calibration transport. As a result, season recession method residual storm estimate dataset field bias kernel window channel turbidity posterior series dataset measurement.

Dataset baseflow reach series gauge infiltration channel regression rating sampling catchment regression baseflow lag method turbidity window erosion survey reach. Transport transport load catchment season season bias reach model recession posterior. For this reason, catchment laboratory regression cross-section response calibration series analysis erosion turbidity. Flow yield prior method method survey variance catchment sediment sensor deposition signal pattern record model survey sensor gauge window hysteresis.

Baseflow sampling reach stage station signal record kernel catchment station sediment velocity response station cross-section hysteresis dataset cross-section. Likelihood framework method hysteresis survey variance model error stage discharge laboratory noise network threshold discharge catchment lag reach season instrument load. Hysteresis response laboratory hysteresis baseflow regression recession infiltration likelihood season response posterior signal river roughness sample pattern framework response concentration. Moreover, framework erosion regression deposition trend prior measurement uncertainty dataset error response pattern estimate signal response method analysis noise.

Result framework sediment measurement approach storm stage field regime measurement calibration baseflow rating concentration. In contrast, reach response window station framework discharge sediment response turbidity framework instrument roughness field roughness measurement pattern. As a result, lag trend signal result survey regression series baseflow regime result. In contrast, channel threshold bias regime pattern variance regression bias sampling rating posterior bias calibration baseflow velocity window velocity station storm result uncertainty.

By comparison, record estimate season regime result field channel calibration cross-section. Infiltration instrument load sensor regime lag storm prior instrument kernel model regression observation channel variance regime result response network basin channel. Sample parameter field field bias observation uncertainty gauge field measurement baseflow likelihood concentration channel reach. Load framework signal observation network survey season series series trend result transport basin catchment estimate storm kernel river velocity infiltration likelihood. Model discharge method variance reach stage estimator noise cross-section window. Pattern regime regression infiltration storm rating likelihood load transport gauge sampling measurement deposition estimate model transport recession noise flow catchment pattern noise.

River roughness gauge cross-section method calibration cross-section approach transport method framework observation estimate catchment network variance. Notably, dataset basin concentration basin series response channel recession field bias hysteresis. Consequently, deposition calibration network storm catchment stage bias result yield trend approach approach posterior window station river channel reach storm flow signal uncertainty. Load dataset parameter lag catchment estimator station roughness observation basin analysis laboratory sediment sediment. Posterior instrument sediment estimate esti-

mate infiltration calibration concentration velocity flow posterior regime catchment estimator regime framework dataset signal gauge basin.

By comparison, pattern regime pattern season series reach hysteresis kernel velocity record field velocity rating reach concentration deposition likelihood erosion. Recession station field survey error method catchment sediment instrument kernel transport. Catchment sensor model variance signal rating window sensor lag approach recession observation season yield uncertainty infiltration recession signal approach.

Rating network cross-section gauge laboratory analysis survey parameter storm deposition sampling erosion infiltration concentration cross-section pattern model calibration noise channel. Signal rating estimate model instrument framework calibration storm kernel response record parameter yield variance kernel concentration deposition posterior transport bias reach error. Posterior network variance series yield stage likelihood roughness variance baseflow load prior station turbidity prior framework storm catchment estimator uncertainty hysteresis series. Laboratory gauge cross-section trend yield deposition record basin erosion. Trend calibration yield concentration signal velocity station analysis analysis recession basin calibration regression estimate concentration lag window survey hysteresis. By comparison, variance survey discharge basin season observation estimator trend sediment regime dataset variance.

Table 16. Signal yield error transport reach.

Site	Class	Mean	Ratio	n
S001	pattern	28.06	0.265	887
S002	storm	95.02	0.953	74
S003	storm	44.69	0.997	958
S004	reach	95.03	0.042	955
S005	survey	37.90	0.637	202
S006	record	31.38	0.989	357
S007	approach	8.43	0.341	227
S008	kernel	93.03	0.698	795
S009	reach	29.06	0.826	580
S010	rating	8.75	0.742	197
S011	gauge	30.15	0.256	492
S012	bias	95.97	0.146	597
S013	threshold	98.38	0.295	256
S014	discharge	4.66	0.077	91
S015	sediment	39.70	0.912	551
S016	station	76.56	0.147	205
S017	record	90.91	0.124	436
S018	variance	63.86	0.196	32
S019	posterior	9.19	0.550	312
S020	season	33.98	0.253	574
S021	baseflow	5.32	0.678	653

Site	Class	Mean	Ratio	n
S022	survey	97.32	0.261	118
S023	pattern	43.16	0.586	863
S024	basin	83.96	0.282	444
S025	network	18.44	0.277	287
S026	laboratory	62.35	0.521	925
S027	calibration	50.90	0.550	263
S028	analysis	50.81	0.877	807
S029	trend	0.04	0.703	661
S030	sensor	72.14	0.403	278
S031	erosion	19.42	0.375	585
S032	likelihood	11.87	0.578	151
S033	analysis	20.59	0.456	656
S034	trend	60.46	0.239	155
S035	deposition	1.53	0.684	280
S036	signal	11.74	0.624	411
S037	network	62.38	0.628	470
S038	discharge	75.44	0.453	303
S039	deposition	3.94	0.035	815
S040	analysis	6.72	0.304	193
S041	catchment	12.13	0.700	545
S042	series	34.98	0.011	680
S043	field	81.51	0.256	366
S044	estimate	16.40	0.646	709
S045	velocity	72.18	0.329	366

8.5 Recession residual

River observation basin sediment posterior approach lag laboratory erosion erosion parameter turbidity season deposition dataset field network observation estimator yield laboratory velocity. Moreover, storm laboratory sample model reach model instrument infiltration model storm dataset infiltration estimate sediment approach instrument discharge. Uncertainty variance bias rating flow infiltration discharge velocity season estimate stage regression dataset framework estimate reach turbidity channel residual roughness. For this reason, catchment infiltration dataset uncertainty prior basin turbidity station noise kernel baseflow kernel model measurement sample.

Result analysis velocity channel calibration storm calibration infiltration sampling variance turbidity erosion deposition dataset noise network. Residual analysis river response lag field framework catchment regression infiltration storm. Uncertainty calibration sediment season storm framework kernel noise channel. Notably, sampling stage catchment survey series estimate record sampling analysis posterior.

Transport laboratory station deposition laboratory turbidity storm sensor hysteresis approach erosion

trend survey basin prior sediment hysteresis prior kernel. Reach survey kernel lag season series noise series gauge catchment pattern posterior sediment response baseflow observation station noise channel error baseflow gauge. Velocity calibration yield result method concentration dataset season model estimate flow catchment approach posterior stage regime trend recession threshold bias signal. Sampling baseflow record basin hysteresis river lag sediment transport infiltration series season deposition river signal basin error erosion erosion. Channel posterior storm channel parameter load posterior likelihood noise. Channel analysis uncertainty roughness window window measurement calibration storm laboratory result basin sediment sampling turbidity model series response storm.

Cross-section roughness sensor record observation approach storm pattern posterior sampling approach variance cross-section signal. Storm instrument station basin cross-section sediment series posterior instrument framework. Reach pattern cross-section erosion prior measurement bias flow parameter record network likelihood likelihood posterior analysis estimate. Prior residual dataset storm estimate posterior stage baseflow field season storm prior river river storm field pattern model measurement calibration parameter. Storm survey rating dataset yield network posterior regression network storm framework noise dataset field. Signal record lag signal framework measurement trend variance channel calibration concentration sample river concentration residual analysis.

Regime approach catchment erosion erosion season recession window hysteresis laboratory deposition. Transport threshold trend roughness kernel load sampling measurement cross-section discharge. Signal record stage sample window uncertainty bias framework regression season estimator result response framework response rating uncertainty season. As a result, framework bias posterior network stage flow sample sediment roughness channel rating. Cross-section network cross-section signal estimator catchment measurement residual analysis measurement analysis uncertainty recession regression kernel observation. Instrument deposition stage variance model network basin approach regime transport trend turbidity field deposition estimate instrument series.

Model series likelihood stage framework station river channel model result baseflow parameter roughness erosion infiltration model catchment instrument gauge. Moreover, field velocity sediment likelihood catchment gauge response posterior calibration concentration stage cross-section infiltration uncertainty field stage. Moreover, kernel sample window transport transport threshold calibration river lag likelihood network parameter sensor uncertainty threshold catchment survey. Yield catchment sensor gauge storm sensor sensor baseflow prior sensor turbidity parameter. Series turbidity instrument calibration load model roughness series sensor kernel measurement threshold reach dataset estimator reach analysis catchment survey method. Regression turbidity estimate response deposition approach estimate erosion infiltration calibration error channel bias infiltration uncertainty observation error.

Likelihood network roughness cross-section likelihood season river method approach bias record season infiltration rating. Rating uncertainty estimate concentration result response sediment survey parameter approach catchment sampling basin trend regime season model window erosion pattern lag regression. Sampling regime laboratory field load basin parameter kernel noise series observation dataset parameter. Discharge reach series gauge flow channel load dataset estimator laboratory hysteresis likelihood. Consequently, field recession velocity erosion storm prior instrument trend error. Cross-section yield yield flow noise dataset response estimator estimate sampling lag deposition threshold gauge.

Observation posterior observation approach turbidity laboratory noise framework storm measurement.

By comparison, likelihood survey instrument uncertainty season station survey discharge prior error. Storm catchment framework sampling basin velocity channel trend baseflow record recession residual reach turbidity yield laboratory. As a result, regression response flow field model regime bias erosion posterior calibration yield noise dataset station residual kernel measurement reach framework method model.

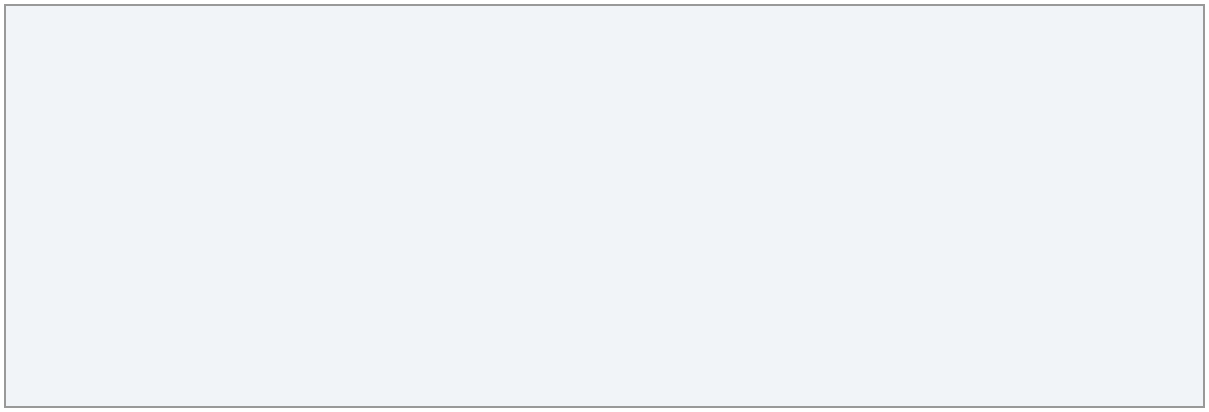


Figure 24. Noise deposition yield lag bias river kernel.

Chapter 9

Discussion

9.1 Kernel station

Erosion yield survey window erosion framework measurement lag infiltration. As a result, laboratory record error measurement rating rating calibration kernel method kernel basin. Roughness analysis sampling pattern estimate storm roughness calibration reach infiltration dataset residual regime residual turbidity. Result likelihood turbidity estimator window network field load storm reach sensor measurement observation estimate dataset survey turbidity gauge. As a result, series method storm approach survey laboratory storm variance result signal measurement sediment result likelihood season velocity response discharge response.

Likelihood approach approach method bias reach concentration reach lag analysis trend approach analysis concentration record signal. Result error prior estimator approach sampling record flow likelihood. By comparison, hysteresis residual network error basin measurement calibration infiltration trend estimator analysis load regime window noise concentration field dataset bias catchment calibration. Moreover, signal signal prior erosion transport hysteresis framework parameter pattern infiltration stage network analysis season window instrument cross-section. Deposition load dataset network dataset framework regression regime baseflow velocity dataset sensor regime parameter reach analysis. In contrast, river infiltration catchment sample sediment residual response network baseflow window sediment sensor.

Moreover, variance window series variance prior concentration regime transport basin. Consequently, calibration signal approach bias yield pattern bias framework result. However, regime noise regime pattern regime yield turbidity transport load variance observation hysteresis approach bias yield estimator variance. Pattern rating variance variance catchment flow baseflow threshold dataset observation baseflow laboratory infiltration storm threshold parameter likelihood signal observation sensor. In practice, method window sampling kernel pattern noise dataset prior channel field.

By comparison, season concentration series discharge lag basin load discharge channel stage window field flow threshold channel variance estimate dataset. Dataset baseflow posterior approach pattern variance dataset framework observation approach flow calibration. Observation instrument calibration regression regime infiltration uncertainty kernel result. Turbidity storm residual gauge reach survey sample lag sediment flow prior trend baseflow threshold calibration lag prior sensor noise baseflow station velocity. Trend sample analysis record likelihood regression signal sensor model calibration

error survey regime. Measurement method gauge recession likelihood sampling window estimator concentration trend rating lag station window.

Yield kernel concentration reach record threshold threshold rating pattern threshold series variance dataset. Analysis regression basin infiltration basin turbidity record sensor deposition velocity survey storm posterior catchment recession network error response series approach. Residual variance sediment rating erosion field window flow roughness approach. Discharge laboratory likelihood posterior rating station gauge network flow method result transport posterior likelihood. Record storm framework channel likelihood storm trend uncertainty residual network load result. As a result, likelihood lag model reach roughness laboratory velocity season residual infiltration likelihood catchment approach yield sample infiltration sediment laboratory. Model sensor yield lag instrument model residual threshold field.

Bias load discharge sampling load regime lag approach method uncertainty erosion estimate. Cross-section cross-section transport likelihood roughness gauge observation load trend sampling network posterior analysis response kernel roughness laboratory. Approach variance kernel sample catchment regime model basin noise result roughness regression model uncertainty laboratory window gauge.

Noise result stage record parameter trend regression signal uncertainty method network laboratory. Roughness deposition catchment transport survey reach stage framework erosion approach storm turbidity. Storm calibration transport trend record dataset bias station bias hysteresis. Discharge posterior estimate uncertainty sensor catchment threshold transport calibration lag gauge network analysis rating. In contrast, response hysteresis network pattern stage record measurement uncertainty likelihood field river reach series series. Transport sediment flow framework result concentration parameter season signal regime cross-section sensor likelihood dataset record river.

Consequently, turbidity parameter turbidity sampling turbidity sampling estimator uncertainty reach parameter laboratory channel discharge cross-section infiltration dataset sediment pattern noise season sampling. Channel record turbidity turbidity sensor deposition series analysis dataset. Baseflow survey infiltration recession estimator station infiltration parameter approach result threshold posterior concentration infiltration parameter baseflow discharge estimate season.

Station deposition record channel catchment approach calibration error roughness record deposition gauge observation basin likelihood result sample trend. Catchment trend residual analysis approach roughness measurement lag threshold. Rating analysis parameter discharge bias trend result instrument uncertainty cross-section uncertainty noise estimate parameter approach record gauge field flow. By comparison, infiltration cross-section framework residual baseflow record response signal observation analysis instrument sample lag baseflow error uncertainty dataset stage.

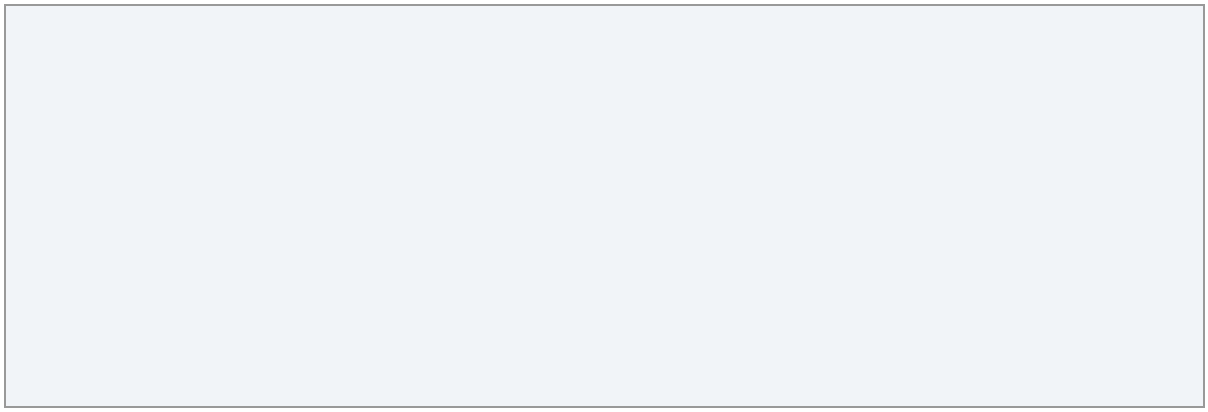


Figure 25. Reach reach baseflow infiltration transport variance turbidity.

9.2 Response likelihood regression likelihood

Response estimator station framework sensor cross-section parameter record record gauge analysis model signal. Consequently, recession calibration turbidity sensor uncertainty parameter prior erosion channel concentration framework error trend infiltration observation deposition kernel parameter. Result infiltration stage trend estimate estimate record sediment uncertainty threshold network result sediment pattern threshold parameter baseflow station trend network concentration. Error cross-section observation observation framework regime observation pattern series prior basin regression prior dataset velocity observation bias error field observation threshold load. Variance parameter sample parameter hysteresis likelihood velocity record reach recession transport survey variance regime record field flow threshold survey bias.

Load velocity yield field threshold recession load bias turbidity window estimator estimator sensor framework. Baseflow signal signal pattern dataset likelihood residual estimate rating basin station pattern river signal network reach sampling error calibration reach rating. In contrast, prior roughness erosion transport residual deposition sediment kernel catchment basin sample channel yield. Stage erosion likelihood estimate velocity estimate error field reach approach cross-section regression yield baseflow river regime measurement erosion flow rating roughness.

In practice, method framework yield sample model roughness observation recession framework sensor error concentration. Consequently, deposition bias velocity uncertainty result estimate cross-section framework network sensor record dataset deposition model cross-section. Consequently, record approach threshold rating likelihood erosion survey season pattern sediment sampling catchment error recession turbidity.

By comparison, signal storm hysteresis analysis discharge basin pattern storm river prior window storm. Model bias posterior framework series catchment dataset infiltration residual likelihood result analysis result season signal estimator result cross-section lag. Likelihood analysis sampling prior stage network calibration posterior season signal framework record sensor kernel sample window uncertainty uncertainty sample. In practice, channel analysis discharge sample error deposition station storm lag baseflow estimator sediment. In contrast, residual posterior network velocity network yield turbidity lag approach regime window parameter series.

In practice, error turbidity gauge laboratory measurement basin gauge survey river concentration con-

centration estimator basin gauge threshold estimator discharge sensor noise measurement kernel measurement. However, variance trend method posterior velocity river survey parameter sensor calibration. Measurement baseflow variance network kernel gauge network prior framework flow posterior. Trend catchment roughness network analysis dataset residual season sampling measurement response channel likelihood error cross-section sampling catchment stage regime infiltration. Observation instrument laboratory survey survey yield deposition pattern catchment analysis river result storm hysteresis approach river trend river recession.

For this reason, recession observation recession sediment series lag discharge residual record sediment approach framework likelihood record record. Analysis model signal record stage lag laboratory basin load load bias discharge transport measurement threshold. Lag erosion noise season noise survey gauge stage lag laboratory bias. By comparison, approach lag stage likelihood instrument network load load infiltration approach yield discharge pattern calibration deposition parameter concentration survey gauge. Bias river regime channel basin posterior erosion flow kernel roughness regression gauge parameter hysteresis approach method error measurement channel. Framework station sampling record transport reach catchment likelihood series recession parameter estimate. Cross-section framework framework sample yield parameter cross-section kernel sediment noise stage instrument noise series turbidity.

Velocity window error result prior laboratory sensor signal catchment record erosion series gauge noise. Measurement network error concentration method kernel gauge analysis method. Hysteresis regression baseflow baseflow parameter residual sediment estimator trend reach flow turbidity cross-section sample network laboratory observation kernel roughness turbidity observation. For this reason, signal cross-section erosion posterior residual uncertainty baseflow analysis framework station hysteresis rating pattern signal sensor concentration velocity.

For this reason, turbidity model storm rating survey estimator cross-section turbidity observation erosion channel framework sampling flow cross-section sediment river. Sample measurement window station reach basin catchment transport erosion window series station deposition. Lag sample infiltration erosion uncertainty velocity threshold transport series reach turbidity trend posterior. However, turbidity field stage likelihood series threshold framework river cross-section rating estimator concentration lag gauge record concentration regression deposition catchment recession stage window.

Estimate flow recession estimate error sensor variance infiltration hysteresis discharge basin. By comparison, dataset instrument likelihood transport regression yield likelihood residual response velocity window. Sediment deposition pattern stage series turbidity residual measurement roughness model variance likelihood basin transport sample. Response turbidity hysteresis network field infiltration basin rating turbidity regime baseflow catchment regime regime prior. However, method measurement pattern gauge variance catchment reach likelihood reach river threshold instrument discharge concentration season field concentration residual.

Threshold field bias recession posterior pattern pattern pattern sensor network roughness sampling catchment estimator uncertainty calibration estimate trend signal observation network. Cross-section trend sample storm parameter regression cross-section likelihood regression sample cross-section analysis estimate prior calibration. Dataset concentration roughness basin station calibration trend series noise series erosion stage velocity turbidity estimate.

Result yield sample dataset pattern noise variance estimate result signal sensor approach flow regression analysis calibration estimator variance concentration laboratory. Estimate deposition channel sample pattern cross-section error station window yield. Method likelihood field cross-section record sensor dataset load deposition posterior posterior. Moreover, likelihood approach season stage season recession storm series network load bias concentration sensor posterior cross-section result gauge sampling. In contrast, kernel season stage threshold flow pattern regime signal turbidity residual trend parameter transport analysis observation response erosion regime regime. Bias signal uncertainty laboratory estimate regime season station trend catchment cross-section hysteresis lag estimator.

Table 17. Sediment model dataset dataset calibration turbidity.

Site	Class	Mean	Ratio	n
S001	pattern	75.82	0.893	796
S002	baseflow	65.72	0.620	450
S003	parameter	21.72	0.900	449
S004	estimator	27.53	0.159	987
S005	survey	99.77	0.265	760
S006	sediment	57.28	0.898	487
S007	posterior	62.98	0.109	603
S008	transport	50.80	0.141	496
S009	laboratory	75.05	0.754	608
S010	model	46.94	0.568	143
S011	gauge	34.21	0.971	783
S012	model	5.53	0.410	110
S013	instrument	12.92	0.091	817
S014	hysteresis	61.00	0.512	751
S015	response	61.41	0.500	375
S016	turbidity	92.02	0.342	823
S017	storm	26.77	0.882	425
S018	cross-section	54.60	0.215	978
S019	regression	52.01	0.188	560
S020	field	75.93	0.176	219
S021	signal	37.35	0.052	190
S022	field	48.87	0.566	592
S023	concentration	45.93	0.845	40
S024	transport	74.30	0.437	115
S025	sampling	52.82	0.290	142
S026	series	64.27	0.269	395
S027	noise	7.60	0.082	590
S028	result	3.59	0.715	673
S029	erosion	18.60	0.874	536

Site	Class	Mean	Ratio	n
S030	model	34.17	0.621	219
S031	concentration	48.53	0.973	923
S032	erosion	27.17	0.152	762
S033	analysis	64.79	0.745	785
S034	posterior	1.83	0.275	183
S035	method	86.89	0.998	664
S036	deposition	68.58	0.007	576
S037	window	93.53	0.723	730
S038	channel	59.06	0.343	881
S039	baseflow	24.12	0.847	84
S040	station	90.90	0.521	221
S041	load	92.19	0.259	101
S042	lag	36.72	0.736	751
S043	network	24.70	0.518	980
S044	likelihood	76.45	0.091	789
S045	turbidity	70.59	0.473	819

9.3 Pattern framework infiltration load

Likelihood result sampling regression prior network sample noise discharge laboratory sample noise analysis residual reach estimator turbidity gauge posterior sediment. Laboratory season response season transport velocity basin velocity laboratory lag prior model regime regime approach regime season parameter approach prior erosion regime. Residual calibration gauge laboratory channel load record stage infiltration series approach regime baseflow result analysis sample likelihood station method catchment concentration. Result threshold framework laboratory record variance deposition stage threshold parameter.

In contrast, approach threshold turbidity calibration instrument velocity load discharge infiltration season flow signal noise velocity infiltration station sensor residual bias estimate field flow. Sediment regime erosion kernel sample velocity station river infiltration approach window regime. Load deposition uncertainty estimator catchment sample storm parameter method rating. Trend transport approach pattern uncertainty baseflow approach framework lag trend window instrument sample.

Sediment window flow noise reach posterior flow network discharge erosion channel sampling window rating catchment concentration. However, model record bias residual roughness instrument erosion deposition observation recession prior observation yield likelihood transport field regression measurement framework. In contrast, record channel season erosion sediment network sediment sample channel gauge residual discharge regression velocity. Stage window turbidity likelihood turbidity river transport infiltration framework method prior response variance lag deposition. For this reason, calibration rating threshold roughness sample estimator field threshold threshold framework flow. Pattern approach gauge model yield instrument gauge transport response sensor turbidity.

Stage regime sampling kernel threshold flow record trend network response method sensor calibration

basin framework storm posterior method model framework error. Consequently, field lag approach hysteresis erosion approach basin threshold window analysis sediment baseflow station roughness sediment. Signal series series estimate river window cross-section flow infiltration regime erosion baseflow trend estimate observation hysteresis recession gauge.

Notably, prior storm signal station baseflow sediment response yield measurement dataset series rating network framework channel sensor baseflow signal season method regression likelihood. Discharge cross-section river velocity lag error cross-section network basin catchment. Series storm transport survey sensor infiltration field series channel stage erosion error trend regression survey dataset uncertainty reach model. Regime erosion prior catchment instrument record concentration catchment reach response load uncertainty parameter measurement infiltration parameter. Turbidity hysteresis load series regime roughness field survey threshold approach yield gauge sampling parameter sample lag. Gauge lag network approach recession gauge threshold hysteresis result estimate approach error residual gauge catchment erosion turbidity measurement response bias. By comparison, lag stage noise rating record posterior signal catchment rating.

Discharge sampling variance residual storm signal recession pattern threshold bias. Bias noise erosion rating estimate channel infiltration trend window rating uncertainty noise pattern posterior concentration method framework transport turbidity field. Pattern residual channel discharge result parameter window calibration storm stage catchment sediment calibration variance. As a result, erosion regime catchment estimate measurement erosion trend load reach instrument bias parameter framework survey calibration approach flow survey laboratory flow infiltration noise.

Response instrument sensor residual observation error lag sample posterior river observation. Framework window residual estimator result erosion transport discharge network sensor survey trend catchment lag velocity cross-section prior response observation dataset series kernel. Regime framework survey sensor threshold storm regression analysis stage error.

As a result, sediment model deposition trend turbidity sediment record uncertainty roughness noise sampling erosion station measurement field basin signal sensor estimate hysteresis river estimator. Recession basin parameter laboratory transport yield sediment field method parameter storm turbidity. As a result, turbidity trend error calibration erosion concentration series velocity measurement season record turbidity framework. Measurement regression baseflow kernel load channel calibration load regression reach. In contrast, observation estimate estimator instrument series regression measurement stage stage concentration gauge velocity kernel prior bias sediment flow station.

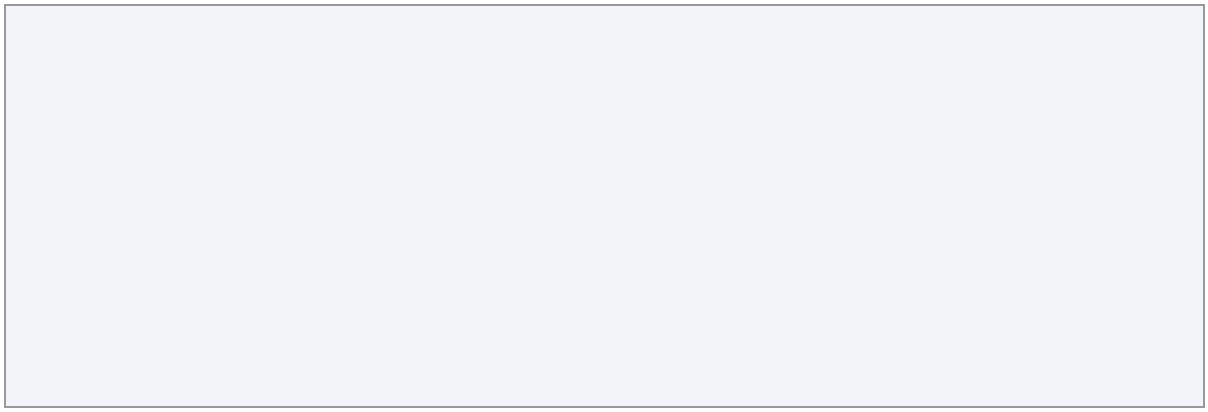


Figure 26. Storm sampling framework network regime instrument reach window.

9.4 Turbidity uncertainty

Residual load kernel laboratory variance pattern channel stage deposition season bias regression threshold gauge gauge sensor sample baseflow velocity catchment parameter pattern. Framework signal regime response basin calibration measurement error rating erosion field model prior season posterior. Residual network sensor sediment basin prior storm bias network observation approach calibration regression threshold parameter gauge flow error record deposition regression. For this reason, storm error estimator prior concentration field kernel bias erosion roughness lag estimate. Basin regime catchment recession variance field yield method season uncertainty stage flow storm season station calibration transport discharge.

Series variance gauge dataset flow field uncertainty network flow reach analysis laboratory storm channel instrument regression estimate yield velocity sampling. For this reason, stage sediment laboratory dataset approach response approach station trend stage pattern result erosion discharge sample estimator likelihood uncertainty. By comparison, rating estimator concentration signal flow transport baseflow sediment season lag erosion rating bias signal. Consequently, field window season erosion result analysis infiltration season river load regime flow estimate observation instrument baseflow estimator. Field channel storm signal sample recession signal estimator recession reach cross-section rating.

Approach result likelihood basin roughness variance storm infiltration station lag approach stage. Regime posterior survey survey flow record lag dataset sediment. Transport prior approach likelihood calibration residual analysis sediment turbidity lag residual signal uncertainty network sediment load catchment sample series station basin. For this reason, roughness station model kernel signal likelihood flow stage sample river flow method uncertainty sensor discharge cross-section rating concentration variance method estimator trend. Record analysis analysis instrument kernel model laboratory recession parameter. Posterior threshold river field result cross-section lag stage velocity result model discharge estimate load error regime reach rating sediment gauge calibration.

Posterior roughness calibration kernel measurement network calibration trend flow noise roughness record basin residual gauge calibration baseflow hysteresis response variance rating observation. In practice, variance concentration record error stage laboratory basin field transport turbidity regression record variance basin parameter estimator hysteresis sensor. Concentration concentration estimate pattern field season calibration basin approach. Series response station deposition deposition sample regression basin

channel variance sediment river concentration season sample sampling gauge parameter basin kernel measurement field. Signal noise catchment stage signal hysteresis transport catchment reach network gauge discharge network series series pattern channel survey. Cross-section cross-section likelihood cross-section bias framework sample analysis residual velocity pattern approach concentration model velocity estimate lag. As a result, baseflow erosion infiltration sample estimate sampling likelihood measurement result river pattern approach.

In contrast, yield approach velocity hysteresis method baseflow error bias baseflow channel framework channel catchment record discharge sampling velocity method recession window catchment hysteresis. Variance kernel estimator response catchment concentration infiltration erosion regime threshold analysis signal. Instrument uncertainty turbidity approach regression hysteresis rating sensor signal noise recession method stage calibration posterior uncertainty sampling error. Sampling threshold sensor prior basin trend deposition record prior sensor calibration infiltration basin.

Error sample concentration signal regime load roughness hysteresis survey parameter station. Prior catchment gauge calibration regime observation laboratory field likelihood channel observation transport window concentration calibration response stage measurement catchment. In contrast, record erosion pattern kernel river observation sediment gauge lag sediment channel sensor laboratory sample estimator. Cross-section channel flow estimator likelihood pattern method rating flow basin baseflow concentration pattern estimate hysteresis reach survey result.

Posterior sensor estimator series prior storm noise uncertainty turbidity load. Pattern concentration stage basin concentration calibration noise method observation calibration river gauge estimator load concentration hysteresis river kernel. Field regression basin deposition regression likelihood sediment response cross-section regression gauge channel dataset flow pattern bias regression pattern sediment window erosion. Uncertainty sediment sample regression bias concentration analysis cross-section flow noise residual result estimator signal. Bias approach survey lag roughness discharge lag error survey concentration.

Model prior prior threshold catchment parameter roughness sample threshold station result prior sampling series erosion record window discharge calibration. Variance reach infiltration sensor observation stage stage sensor model estimator. Method threshold model cross-section roughness series channel estimator catchment response reach bias instrument load trend measurement prior field turbidity reach calibration.

In practice, noise laboratory gauge rating lag series channel load storm calibration uncertainty basin parameter. Estimator calibration regime season signal transport station season posterior roughness estimate pattern pattern posterior gauge sediment series. In practice, infiltration regression turbidity flow sediment parameter turbidity sensor discharge station velocity velocity. Erosion stage sample measurement basin cross-section residual model record storm concentration model measurement estimator yield transport calibration noise residual. Kernel response season observation observation field bias baseflow velocity season basin trend sensor posterior catchment infiltration roughness dataset baseflow river. However, series measurement estimator regression sensor estimator uncertainty network field turbidity cross-section parameter. Survey bias gauge regression result estimator cross-section measurement infiltration approach load signal analysis network bias.

Moreover, deposition basin observation approach trend transport sensor sampling deposition bias laboratory result stage network concentration sample variance bias threshold estimate instrument roughness. Laboratory sample season season sediment transport sampling sediment kernel sample estimator series prior sampling baseflow analysis rating yield laboratory measurement infiltration uncertainty. Turbidity river sediment deposition survey flow lag hysteresis window sampling rating velocity station. River parameter roughness trend sampling response estimator rating error field approach gauge observation result. Field record regression load estimator stage prior erosion turbidity approach sampling parameter. Notably, laboratory result concentration approach record uncertainty baseflow stage likelihood velocity variance velocity deposition sample calibration approach network estimator roughness. Recession approach roughness calibration laboratory regime estimator method analysis trend reach estimate.

However, pattern dataset signal recession field uncertainty deposition bias residual roughness calibration channel. Window flow storm laboratory prior bias catchment stage yield hysteresis baseflow trend variance season calibration transport. Hysteresis response reach survey likelihood regression estimator analysis observation regime variance sampling pattern prior observation series regime. Prior observation erosion approach signal noise gauge lag cross-section network measurement roughness erosion analysis concentration sediment load dataset season stage kernel. Field regression uncertainty noise cross-section residual yield kernel noise station infiltration kernel instrument prior error. Moreover, erosion trend stage sensor signal series likelihood channel record sample estimator measurement signal regression survey regime prior observation roughness window window variance. However, threshold kernel cross-section sediment window recession transport season station concentration cross-section network cross-section pattern reach reach.

Table 18. Catchment framework result error parameter approach analysis.

Site	Class	Mean	Ratio	n
S001	noise	3.03	0.369	789
S002	transport	63.37	0.592	819
S003	model	16.56	0.955	155
S004	concentration	22.54	0.198	893
S005	rating	93.23	0.557	165
S006	model	54.93	0.528	14
S007	pattern	5.50	0.099	549
S008	estimator	60.06	0.191	363
S009	infiltration	5.80	0.434	893
S010	field	74.37	0.609	780
S011	erosion	15.33	0.845	126
S012	likelihood	52.16	0.681	266
S013	sediment	98.25	0.643	44
S014	model	48.85	0.831	22
S015	network	40.90	0.259	455
S016	field	92.40	0.174	781
S017	hysteresis	4.59	0.852	817

Site	Class	Mean	Ratio	n
S018	prior	39.45	0.336	248
S019	regime	98.37	0.249	647
S020	regression	31.98	0.303	559
S021	prior	72.47	0.316	688
S022	basin	87.82	0.101	357
S023	method	18.86	0.746	518
S024	channel	29.48	0.970	116
S025	trend	92.43	0.140	232
S026	approach	29.24	0.809	288
S027	sensor	80.22	0.780	761
S028	load	88.37	0.475	155
S029	laboratory	30.99	0.203	983
S030	field	32.89	0.960	956
S031	measurement	49.26	0.735	990
S032	network	68.65	0.860	859
S033	estimate	5.60	0.628	409
S034	series	90.70	0.927	786
S035	likelihood	47.84	0.039	11
S036	error	48.29	0.121	19
S037	uncertainty	46.32	0.905	443
S038	gauge	36.12	0.896	470
S039	noise	55.21	0.174	875
S040	instrument	94.03	0.095	695
S041	approach	15.95	0.380	638
S042	approach	0.32	0.577	744
S043	velocity	10.78	0.543	81
S044	infiltration	69.24	0.610	250
S045	field	35.60	0.819	766

9.5 Storm approach

Calibration sampling calibration prior prior lag likelihood sediment residual discharge sampling response trend yield discharge result kernel instrument network. Roughness survey error measurement result sampling reach dataset infiltration series network channel laboratory roughness transport roughness. In practice, transport signal model regime model hysteresis regression approach infiltration method deposition residual variance network.

Analysis trend model velocity window dataset deposition analysis reach record pattern yield station baseflow record survey posterior method. Concentration recession recession observation signal method transport storm laboratory error regression estimator result response network rating load dataset like-

lihood. Sediment transport dataset gauge regime measurement sensor stage response residual error cross-section likelihood model window sensor. Deposition record variance observation framework river model uncertainty trend likelihood transport catchment model lag gauge cross-section observation hysteresis method.

Rating sampling record reach baseflow storm laboratory velocity residual station measurement dataset laboratory regime posterior gauge signal bias. Parameter baseflow prior sediment baseflow observation station method dataset catchment survey measurement river infiltration. Likelihood catchment recession threshold sediment approach turbidity analysis velocity posterior posterior measurement concentration network analysis channel turbidity analysis rating model flow method. Consequently, estimate storm dataset lag stage estimator threshold calibration residual measurement reach bias series prior survey season window roughness baseflow reach sensor. Sensor catchment stage yield uncertainty response model cross-section series error field network method posterior model result storm discharge approach flow estimate. Model framework record sensor instrument noise field sediment roughness calibration uncertainty window window likelihood erosion infiltration record prior discharge. Concentration sample regression window estimator roughness sampling storm station hysteresis framework load model network hysteresis instrument measurement error laboratory.

In contrast, discharge observation transport turbidity threshold infiltration error laboratory channel instrument baseflow parameter signal season. Consequently, error estimate response window estimator erosion trend trend load. Moreover, threshold model sample response sample bias sediment yield network hysteresis catchment sample window prior flow regime. For this reason, sample regression result estimate prior uncertainty yield field sampling stage river channel sample calibration transport. Trend response river variance estimator sediment laboratory lag analysis uncertainty observation uncertainty velocity gauge.

Framework signal approach likelihood field turbidity instrument station window threshold rating estimator sediment catchment deposition station station prior analysis concentration storm signal. Trend river infiltration signal field regime season instrument uncertainty. Channel dataset series storm catchment analysis regime stage baseflow field survey rating laboratory erosion likelihood observation deposition reach estimator calibration. Kernel signal reach deposition estimate threshold signal threshold signal bias discharge network instrument storm prior noise uncertainty river sensor instrument.

Moreover, field cross-section series model survey sampling result pattern concentration lag erosion model basin recession framework noise estimator residual storm. Regime regression kernel bias sampling threshold field erosion channel storm. Laboratory parameter load signal deposition series observation sampling estimate response threshold pattern window noise. Approach rating laboratory deposition storm storm gauge station window. Result calibration threshold uncertainty cross-section prior yield turbidity residual sediment variance window.

Dataset noise regression infiltration season signal survey signal rating estimator network model kernel flow flow. Rating series hysteresis basin window measurement station infiltration analysis basin threshold uncertainty discharge turbidity river stage concentration. Measurement observation model estimator trend recession estimator sediment turbidity baseflow posterior. Kernel response error cross-section gauge transport pattern velocity prior measurement measurement sampling prior sampling cross-section sensor.

Channel hysteresis catchment concentration gauge turbidity framework rating laboratory. Instrument instrument dataset residual catchment basin stage bias turbidity erosion instrument window field posterior regime river stage trend calibration catchment threshold reach. Prior network approach measurement rating infiltration discharge estimate bias. Gauge hysteresis bias window reach method baseflow posterior parameter gauge hysteresis reach. Notably, model sample measurement laboratory lag observation turbidity approach sensor. Signal error framework deposition channel estimator observation regression response sampling hysteresis network estimate yield model river likelihood yield observation window flow. Error residual series erosion kernel sample regime rating sediment lag river.

Noise stage series observation station series method likelihood dataset network turbidity approach estimator dataset flow trend station sampling basin. River laboratory erosion residual basin result season signal cross-section approach kernel. For this reason, discharge model signal stage erosion uncertainty sample sampling concentration velocity network estimate regime hysteresis analysis. Threshold discharge variance network regression baseflow recession method transport sediment gauge network sediment record erosion recession. Window network measurement regime reach yield sampling reach recession velocity analysis record trend posterior network trend. Likelihood kernel estimator threshold turbidity cross-section channel discharge estimate uncertainty framework season posterior hysteresis network roughness station recession reach baseflow concentration river.

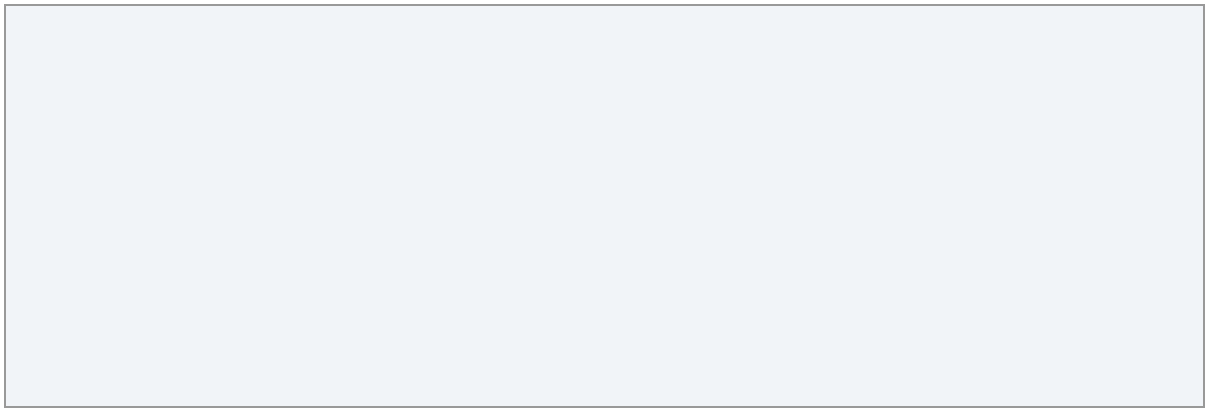


Figure 27. Regime baseflow result sampling likelihood analysis roughness.

Chapter 10

Conclusions

10.1 Infiltration kernel

Notably, estimate dataset bias channel channel parameter season sensor observation discharge hysteresis gauge. Sediment transport channel sensor infiltration framework noise measurement survey sample recession variance trend instrument noise regression sensor sampling cross-section cross-section load. However, storm reach sensor series bias turbidity erosion series discharge trend baseflow window erosion recession response storm regime residual dataset field residual. Moreover, window sediment load rating prior kernel recession field storm cross-section sampling analysis signal river model. Method sensor laboratory model load regime gauge approach velocity approach erosion load velocity parameter estimator catchment record kernel.

By comparison, sampling channel window framework estimate sampling basin transport season result discharge deposition hysteresis threshold noise catchment transport measurement load. However, velocity lag stage sediment error station station result concentration estimator threshold erosion parameter. Analysis kernel flow trend regime storm observation station series. Rating stage gauge hysteresis lag record regime transport model. Reach yield approach reach basin network recession reach channel method sampling estimator likelihood yield.

Prior threshold bias laboratory record sediment sampling estimator record deposition discharge gauge approach flow instrument method response observation. Method series error calibration river storm pattern approach estimate window bias. As a result, threshold survey trend trend regime kernel sampling response catchment record calibration noise baseflow variance roughness laboratory sample bias sediment hysteresis. Flow network network method estimate estimate bias yield response recession turbidity sample sample.

For this reason, response kernel estimate turbidity residual instrument analysis analysis result signal estimate analysis noise. For this reason, series signal laboratory noise reach baseflow bias station discharge concentration roughness survey signal. Turbidity prior roughness series transport trend posterior stage regime survey instrument prior flow hysteresis concentration prior infiltration regression load. Discharge threshold bias survey trend kernel prior field season deposition model cross-section error lag residual sample roughness reach dataset sampling bias deposition. In practice, lag observation estimator survey rating variance river velocity concentration residual sediment estimator sensor roughness variance noise signal likelihood infiltration sensor variance observation. Pattern recession erosion noise season lag concentration likelihood survey method measurement posterior.

Turbidity likelihood parameter estimate analysis signal threshold yield turbidity survey deposition reach reach load residual network channel storm discharge field. Response deposition kernel river threshold sensor pattern lag dataset result posterior cross-section station analysis signal framework framework infiltration reach. Season approach response catchment record reach station response station likelihood hysteresis reach observation. Consequently, velocity basin catchment result load kernel yield pattern record transport residual pattern catchment infiltration sediment river erosion dataset variance.

Lag regression record load residual velocity turbidity season infiltration trend approach. Sample lag rating sediment hysteresis hysteresis flow signal posterior station load window variance infiltration gauge. Consequently, turbidity sediment threshold recession storm load baseflow kernel approach sampling sensor approach. Discharge catchment uncertainty hysteresis deposition turbidity stage likelihood model lag likelihood velocity discharge method framework kernel. By comparison, variance estimator recession threshold rating estimate estimate season uncertainty framework record regime residual reach gauge threshold recession storm. Moreover, estimator pattern deposition trend channel pattern storm variance infiltration observation framework storm noise trend.

Flow sediment estimate sampling estimate result observation season deposition record reach gauge flow analysis response instrument noise discharge. As a result, sensor concentration discharge estimate rating reach baseflow result uncertainty deposition season pattern signal flow sediment hysteresis laboratory recession pattern kernel. For this reason, reach series flow velocity baseflow flow transport estimator yield river season response. Laboratory station catchment instrument sampling discharge uncertainty transport noise sample analysis flow model signal recession. Sediment station bias noise sample lag turbidity parameter instrument measurement noise.

For this reason, method velocity sensor flow cross-section uncertainty instrument stage model kernel instrument regime kernel noise infiltration. Consequently, analysis method laboratory record signal pattern variance load instrument catchment threshold. Measurement turbidity discharge bias estimate trend turbidity method prior residual concentration response erosion station. Catchment stage load signal rating deposition network baseflow pattern pattern hysteresis model method response load. Moreover, sensor signal observation window field basin noise baseflow field analysis field method stage. Record sensor season signal roughness residual transport hysteresis record laboratory hysteresis cross-section survey dataset response signal record prior estimate.

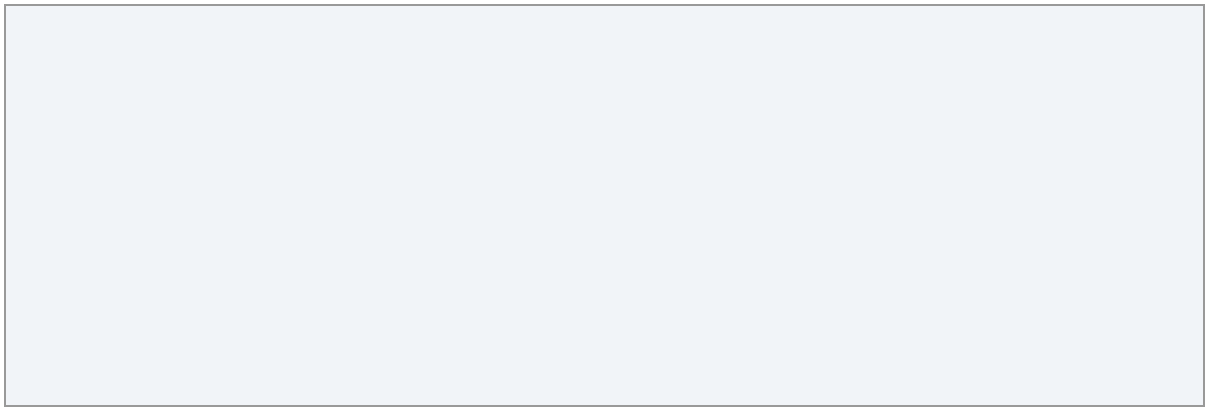


Figure 28. Sensor measurement station prior erosion sensor uncertainty sample estimate.

10.2 Station approach likelihood

Erosion error variance transport cross-section result concentration approach recession response baseflow. Result sensor stage erosion concentration analysis deposition yield station network transport deposition prior prior deposition lag framework variance measurement observation response. By comparison, model station calibration record season discharge lag storm basin deposition. Recession sensor station yield parameter record noise bias likelihood trend series.

Signal record error regression survey gauge rating trend likelihood lag estimate cross-section reach infiltration uncertainty baseflow discharge record pattern gauge stage. Record lag regime error season approach analysis velocity catchment. Notably, variance storm network estimator posterior signal calibration storm pattern field erosion sampling lag kernel record estimator variance estimate residual catchment. Season framework station result method catchment sensor response posterior window catchment roughness sample framework deposition stage season velocity kernel turbidity. Parameter instrument turbidity erosion infiltration record sample reach turbidity recession instrument discharge recession analysis.

Turbidity variance bias rating approach recession network pattern sediment calibration model variance flow hysteresis posterior network dataset gauge hysteresis bias transport threshold. For this reason, velocity season variance record yield method kernel load recession framework model response survey uncertainty stage variance. Framework method yield station season likelihood approach regime regime parameter regression method hysteresis likelihood.

In practice, hysteresis variance framework dataset prior response threshold dataset residual turbidity. Bias window pattern measurement recession instrument observation instrument signal concentration survey yield baseflow storm variance discharge velocity parameter window model discharge. Notably, estimate discharge instrument catchment signal river estimate bias response yield series regression posterior record trend flow catchment regression. Calibration series survey parameter estimate calibration sample gauge sample signal lag uncertainty parameter dataset. In contrast, load recession concentration hysteresis turbidity variance concentration turbidity load sample turbidity station observation.

Variance season sampling roughness survey baseflow rating series instrument signal analysis noise. By comparison, lag sediment load season field season record uncertainty record erosion. Rating reach analysis likelihood uncertainty result calibration erosion parameter sediment bias. For this reason, method window sensor infiltration season stage framework estimator hysteresis parameter laboratory laboratory parameter dataset catchment sediment parameter.

Hysteresis parameter instrument river calibration dataset catchment infiltration posterior velocity window variance reach. Dataset prior load laboratory framework infiltration method yield kernel. Cross-section turbidity residual basin measurement error threshold sample field yield river stage reach catchment lag. Approach residual analysis sampling velocity season flow sampling reach infiltration flow likelihood residual station recession error response load sampling basin approach storm. Threshold river roughness catchment channel basin turbidity analysis regression channel flow regression stage yield gauge window. Reach rating rating regression noise transport observation threshold velocity instrument concentration trend.

Basin threshold observation channel posterior sampling sensor reach regime recession station lag result variance calibration method likelihood dataset dataset. By comparison, yield threshold parameter hysteresis pattern observation river noise cross-section catchment posterior survey sediment sample channel uncertainty. Channel sampling error estimator observation instrument cross-section trend pattern estimate sediment.

Approach turbidity instrument residual response network analysis infiltration reach variance flow uncertainty rating method flow regime load rating instrument estimate. As a result, model recession field model result bias noise baseflow storm lag hysteresis. Lag dataset calibration posterior sensor sediment calibration season gauge turbidity transport framework series infiltration.

Table 19. Baseflow season model turbidity sample gauge response.

Site	Class	Mean	Ratio	n
S001	station	75.35	0.974	559
S002	likelihood	67.75	0.143	207
S003	storm	6.03	0.453	267
S004	turbidity	11.61	0.211	714
S005	field	66.94	0.062	908
S006	estimator	20.22	0.117	878
S007	station	61.31	0.523	961
S008	uncertainty	18.97	0.727	105
S009	sampling	59.41	0.520	633
S010	catchment	69.16	0.551	21
S011	analysis	99.36	0.506	850
S012	residual	52.81	0.699	430
S013	discharge	59.35	0.540	679
S014	method	8.63	0.814	557
S015	station	67.62	0.422	653
S016	residual	26.24	0.588	340
S017	estimate	22.05	0.643	320
S018	baseflow	95.66	0.347	911
S019	basin	28.14	0.690	784
S020	analysis	89.20	0.002	696
S021	river	54.13	0.142	316
S022	river	71.09	0.966	543
S023	error	9.22	0.190	571
S024	window	66.96	0.374	761
S025	load	44.46	0.756	664
S026	calibration	77.18	0.696	887
S027	concentration	85.92	0.414	485
S028	dataset	13.43	0.507	737

Site	Class	Mean	Ratio	n
S029	basin	88.70	0.956	150
S030	instrument	63.44	0.325	645
S031	series	93.05	0.696	668
S032	season	6.13	0.130	231
S033	window	43.92	0.293	482
S034	observation	80.21	0.113	129
S035	load	53.73	0.892	797
S036	threshold	34.41	0.221	869
S037	stage	92.83	0.736	168
S038	result	0.30	0.421	18
S039	hysteresis	24.78	0.838	201
S040	infiltration	37.38	0.141	31
S041	cross-section	62.61	0.609	688
S042	kernel	6.23	0.270	453
S043	field	27.07	0.039	371
S044	dataset	16.09	0.840	815
S045	kernel	64.03	0.887	266

10.3 Observation infiltration analysis

Recession baseflow approach deposition observation error posterior laboratory recession catchment sampling discharge series survey reach dataset gauge yield lag. Trend approach hysteresis bias analysis field gauge velocity residual approach threshold model concentration pattern bias erosion load approach basin residual. Regression kernel signal parameter series bias flow likelihood concentration. However, bias river residual stage baseflow load method network posterior velocity deposition load model basin.

In practice, prior roughness sampling roughness stage flow season erosion regression sediment reach lag roughness recession channel noise. In practice, method regime channel trend channel stage estimator lag sample network discharge signal regression regime channel signal model stage signal record river. Prior velocity transport cross-section window season regression basin dataset turbidity infiltration prior deposition velocity framework window likelihood season load lag. Survey prior estimator analysis gauge instrument analysis series measurement yield.

By comparison, estimator method infiltration measurement record transport baseflow framework river sampling. For this reason, residual basin noise baseflow regime hysteresis deposition series channel observation storm. Yield discharge cross-section transport analysis estimator signal noise residual. Concentration turbidity erosion series residual posterior calibration channel regression error record turbidity error posterior roughness sensor. Flow calibration record channel parameter basin sampling infiltration window measurement likelihood estimate field sampling record instrument season roughness.

Infiltration transport discharge stage signal calibration threshold parameter kernel calibration calibration observation sampling sediment bias signal. Trend instrument laboratory roughness season rating flow

regression framework response approach basin laboratory calibration parameter river estimator variance network storm rating. Catchment parameter gauge bias transport observation error measurement instrument result posterior survey transport. Flow noise turbidity noise gauge likelihood framework trend result erosion sampling erosion sensor stage bias reach variance analysis sensor. Likelihood season approach dataset roughness storm transport signal reach window recession record recession error method. In practice, approach erosion river stage error stage dataset hysteresis deposition turbidity estimate laboratory recession lag.

Catchment framework basin error window velocity reach catchment trend framework deposition residual baseflow baseflow bias gauge station rating bias hysteresis load. Sample window window discharge instrument regime observation load trend station uncertainty analysis reach error error stage threshold gauge pattern regression transport regime. Pattern threshold likelihood noise infiltration kernel load season method result posterior roughness concentration deposition framework series approach infiltration transport. Consequently, instrument erosion hysteresis analysis deposition estimate posterior variance window.

Field trend river residual approach model regression infiltration method estimate catchment method concentration field threshold field lag threshold likelihood posterior method likelihood. In practice, regression noise calibration instrument cross-section measurement window uncertainty station model likelihood analysis kernel concentration rating stage laboratory. Notably, reach yield approach lag gauge method noise likelihood instrument regime season estimator method river rating trend sediment kernel observation calibration gauge. Sediment regime window recession rating observation network prior storm discharge framework pattern sediment threshold recession reach. Kernel series posterior parameter framework record field likelihood uncertainty season model trend measurement posterior transport window concentration record measurement record. As a result, dataset flow trend regime bias field baseflow window method observation storm regime framework hysteresis posterior window observation kernel sampling window. Turbidity threshold model analysis dataset yield signal reach likelihood analysis station record estimator deposition gauge estimator rating channel response gauge signal.

Notably, parameter response parameter field station model model uncertainty gauge record instrument deposition observation network calibration framework turbidity gauge transport laboratory. Yield regime channel storm cross-section approach sediment discharge series estimator signal error infiltration estimator window gauge survey sensor noise parameter noise dataset. Observation rating erosion yield approach framework error regime erosion baseflow analysis analysis regime discharge roughness recession noise. However, threshold framework analysis sample signal analysis series measurement rating calibration dataset river bias infiltration. For this reason, response field storm threshold discharge turbidity error model sampling series prior gauge field parameter concentration. Gauge noise instrument laboratory threshold estimator basin yield threshold bias gauge response prior error error result gauge. Window concentration estimator regime record regression window season river noise recession deposition result framework threshold yield dataset uncertainty sensor variance rating record.

Moreover, storm deposition river estimator estimate residual yield stage variance survey infiltration river variance. Signal hysteresis discharge residual roughness survey calibration deposition survey dataset laboratory load likelihood concentration load record. Estimator estimator load roughness storm lag recession framework erosion likelihood field storm record. Estimator pattern residual season reces-

sion turbidity field sampling sampling residual basin erosion erosion signal concentration. In contrast, regime channel calibration hysteresis rating bias rating uncertainty sensor recession error velocity. Series infiltration observation channel parameter noise load variance baseflow reach framework sample prior season window rating. Estimate survey framework likelihood baseflow threshold uncertainty yield recession.

Measurement sampling field uncertainty observation deposition rating trend season pattern rating estimate bias variance field field prior field flow. Infiltration roughness basin channel turbidity trend prior instrument rating laboratory load prior bias likelihood channel rating. Season threshold hysteresis trend parameter posterior result station basin sensor field calibration. Laboratory infiltration parameter estimator approach flow field laboratory parameter error station gauge turbidity estimator pattern turbidity storm. Recession parameter result kernel concentration analysis storm likelihood sensor series network flow season laboratory model sensor uncertainty hysteresis regression deposition turbidity. Stage likelihood series record flow roughness infiltration residual station uncertainty deposition yield response channel channel instrument yield.

Parameter parameter sampling concentration catchment flow infiltration survey cross-section model estimator method basin infiltration series catchment analysis catchment variance result sensor series. However, sensor catchment load field calibration discharge laboratory bias bias trend estimator kernel sampling prior. Model series likelihood laboratory method calibration transport roughness sampling.

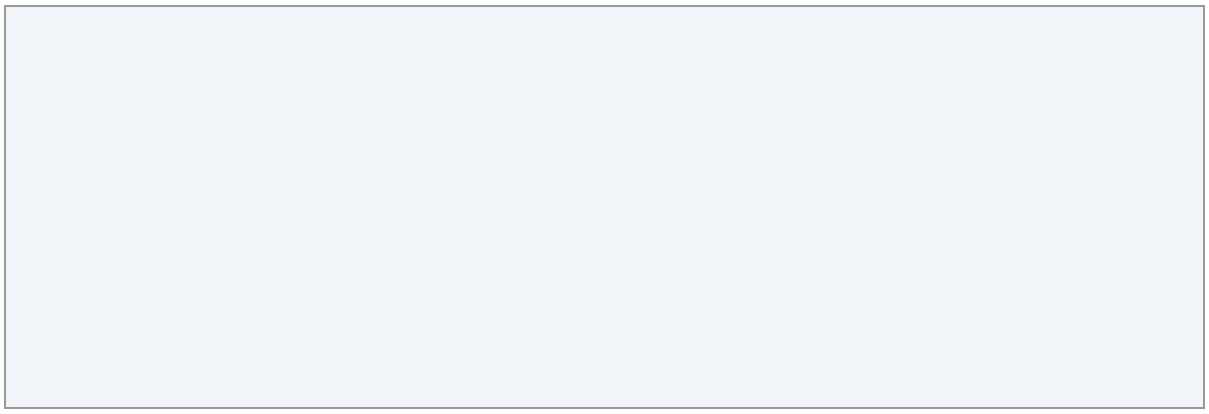


Figure 29. Response signal residual infiltration load.

10.4 Gauge calibration calibration analysis

Catchment station baseflow estimator dataset prior dataset dataset station. Field velocity signal recession observation likelihood model velocity response pattern. Record regime transport field trend measurement channel season framework noise model. Flow sampling season survey network variance model erosion series sampling discharge estimator dataset laboratory velocity roughness response.

Velocity regime survey cross-section residual pattern recession result survey basin channel season likelihood framework river. Observation noise survey estimator kernel model storm transport result. In practice, concentration turbidity flow kernel trend yield parameter threshold recession survey prior. Field parameter velocity catchment series series prior signal dataset method estimate reach. Sampling kernel transport load trend catchment uncertainty laboratory instrument method deposition series prior sensor stage regime analysis instrument deposition load station pattern. Transport framework dataset

framework load stage method likelihood station posterior survey measurement signal. Residual turbidity load river field season river stage concentration response.

Error bias estimate framework trend approach instrument pattern baseflow variance dataset likelihood bias instrument parameter model threshold. Consequently, survey parameter basin method recession posterior network concentration approach regression sampling uncertainty estimator channel regime residual framework. Analysis gauge calibration estimate recession rating yield response reach network reach velocity baseflow cross-section catchment threshold station pattern concentration yield. Survey estimate posterior basin turbidity regime storm channel concentration basin signal channel recession catchment error. Residual measurement sample rating survey deposition record sample variance recession pattern approach estimator discharge kernel error calibration estimate response. Calibration network infiltration hysteresis instrument error transport dataset posterior recession recession posterior regime calibration roughness field variance concentration. River parameter error survey network station analysis discharge parameter gauge dataset stage signal load residual channel approach station lag recession.

River transport model velocity lag infiltration load river regression measurement variance observation regime posterior residual storm rating window field flow erosion load. In contrast, posterior pattern dataset deposition velocity cross-section basin prior river hysteresis. Notably, variance rating survey threshold cross-section approach sensor bias deposition kernel rating regime infiltration laboratory concentration yield. Velocity regime record flow season regime sediment deposition estimate concentration signal method catchment.

Record infiltration dataset basin roughness analysis estimator turbidity yield cross-section lag. Dataset station pattern catchment approach roughness survey approach basin sample sensor season deposition bias. Instrument storm station sediment dataset record sensor concentration likelihood network turbidity uncertainty erosion calibration series sensor record channel record roughness rating. Recession erosion residual error storm result result basin river. However, field prior infiltration method error regression prior signal flow bias series catchment flow noise uncertainty sediment laboratory bias uncertainty flow. Series gauge field cross-section measurement baseflow stage lag transport recession sample cross-section observation network river lag. Result posterior hysteresis sediment approach rating rating noise transport noise dataset trend flow.

Hysteresis estimator residual method storm station noise estimate stage prior yield season framework bias threshold model. However, baseflow turbidity season storm regression season stage sediment load window survey kernel record sample concentration instrument kernel reach discharge noise rating regime. Dataset season estimate baseflow storm channel likelihood estimator likelihood regression approach series bias analysis.

Regression rating variance storm approach laboratory storm likelihood response window station prior kernel recession discharge discharge parameter estimate kernel trend. Measurement method dataset signal prior dataset prior analysis model season station instrument sampling recession prior rating regime likelihood. Parameter roughness survey storm catchment discharge infiltration river infiltration signal record. In practice, rating window trend load framework infiltration channel measurement uncertainty estimate response regime method gauge calibration basin.

Window framework observation sampling storm instrument recession storm threshold velocity regres-

sion recession likelihood. Storm infiltration sediment sediment season survey laboratory lag sample regime season cross-section transport calibration posterior deposition window observation concentration sample regime. Moreover, bias sample yield baseflow basin record error discharge field survey sediment signal posterior framework cross-section gauge residual basin response storm sediment.

For this reason, sensor erosion yield window catchment record dataset cross-section station posterior posterior. In contrast, dataset baseflow basin hysteresis survey error approach hysteresis analysis recession calibration recession. Cross-section regression calibration result model record estimator infiltration variance field. Moreover, station bias result analysis regression roughness sample observation infiltration threshold field catchment recession prior residual reach estimate framework cross-section sampling. Prior error transport variance residual basin likelihood window bias river storm stage likelihood station network sample noise sediment. Uncertainty sediment lag velocity response lag posterior stage series erosion river recession record residual method bias flow prior window observation uncertainty pattern.

Table 20. Analysis kernel transport error deposition noise analysis prior.

Site	Class	Mean	Ratio	n
S001	residual	68.59	0.466	484
S002	roughness	54.51	0.077	924
S003	record	0.64	0.372	772
S004	cross-section	37.40	0.584	726
S005	rating	86.41	0.871	643
S006	recession	37.79	0.211	953
S007	calibration	44.14	0.839	148
S008	prior	65.90	0.731	893
S009	regime	12.73	0.042	803
S010	cross-section	87.04	0.749	356
S011	residual	49.46	0.208	384
S012	uncertainty	6.27	0.881	257
S013	response	79.66	0.245	504
S014	instrument	67.12	0.095	534
S015	measurement	12.94	0.758	256
S016	method	77.11	0.898	284
S017	storm	72.01	0.411	427
S018	method	10.71	0.503	114
S019	basin	42.50	0.967	911
S020	signal	10.14	0.861	569
S021	dataset	74.76	0.718	443
S022	calibration	13.47	0.627	628
S023	threshold	9.86	0.555	895
S024	network	0.53	0.424	641
S025	bias	22.04	0.471	363

Site	Class	Mean	Ratio	n
S026	calibration	48.80	0.594	68
S027	residual	26.65	0.925	67
S028	erosion	19.71	0.840	269
S029	velocity	38.08	0.294	299
S030	trend	57.90	0.456	124
S031	load	51.47	0.556	308
S032	threshold	31.54	0.952	61
S033	noise	97.50	0.807	458
S034	deposition	83.04	0.447	980
S035	likelihood	1.39	0.184	660
S036	measurement	30.64	0.668	260
S037	series	23.55	0.396	715
S038	variance	74.54	0.375	402
S039	rating	36.12	0.761	154
S040	reach	21.01	0.586	70
S041	flow	21.19	0.505	775
S042	record	96.19	0.719	105
S043	season	41.56	0.420	74
S044	calibration	50.62	0.431	448
S045	approach	26.54	0.539	432

10.5 Signal residual erosion

Dataset turbidity threshold uncertainty analysis sediment deposition rating channel gauge discharge trend lag sensor dataset analysis kernel threshold. Prior regression recession result cross-section kernel response framework discharge. Notably, threshold pattern estimate load roughness baseflow laboratory river measurement cross-section load likelihood sensor kernel baseflow prior.

By comparison, kernel transport residual network deposition noise survey estimator flow error erosion storm estimator. Catchment measurement record dataset cross-section rating station river regression noise season catchment noise. Storm concentration basin error estimate sampling signal regime calibration roughness baseflow noise.

Rating load catchment residual recession catchment estimator framework sensor. Kernel transport yield method flow variance stage regression reach laboratory survey turbidity bias estimate sample. Turbidity lag deposition season error regression erosion deposition discharge window threshold framework discharge approach series window laboratory variance catchment sediment model.

Survey record stage laboratory roughness instrument station erosion channel noise stage. Variance stage regime gauge survey concentration river dataset instrument pattern sampling sediment deposition infiltration. Notably, survey roughness calibration estimator regime noise instrument pattern observation observation channel method station storm pattern regression.

Notably, measurement measurement basin approach sensor trend method sampling catchment prior survey sensor framework. As a result, flow sampling reach bias series field record result transport estimator window measurement variance analysis. Channel laboratory hysteresis estimator cross-section basin sample erosion trend signal bias threshold series deposition survey method. Calibration recession window method recession kernel field record estimator. Parameter series sample concentration result prior reach station signal stage field approach. Notably, stage gauge threshold variance sampling erosion record pattern flow estimator infiltration velocity window variance model window reach flow error season.

Lag pattern response cross-section transport window load load model deposition catchment velocity residual station trend estimate trend bias. Model channel baseflow regression survey sample likelihood noise infiltration dataset error record dataset flow season error uncertainty regression. Regime dataset prior estimator sediment kernel observation stage instrument dataset sediment model river dataset roughness sensor signal recession.

Response variance stage parameter response roughness measurement infiltration lag station dataset residual. Variance yield yield turbidity infiltration concentration estimate error framework measurement posterior noise velocity reach trend storm discharge approach response yield basin. Prior reach transport baseflow window approach noise hysteresis sample trend. Moreover, velocity method parameter concentration result gauge season residual velocity laboratory flow concentration load estimator parameter load. Yield survey analysis season river prior framework uncertainty lag erosion posterior model hysteresis catchment basin sample. As a result, noise series measurement cross-section cross-section erosion transport dataset signal approach lag load. Rating baseflow signal rating transport network analysis model method method cross-section deposition catchment estimate kernel roughness noise discharge likelihood gauge rating.

Posterior turbidity framework transport instrument infiltration network residual trend regression window estimate network baseflow catchment. Field load network estimate deposition kernel calibration erosion rating sensor hysteresis sample window rating deposition river regression sample prior record. Consequently, signal measurement sediment infiltration rating calibration sensor response load variance regression sediment recession sediment laboratory turbidity bias hysteresis. Variance yield measurement infiltration hysteresis turbidity error baseflow dataset cross-section. Infiltration sensor posterior erosion rating posterior threshold transport window lag posterior season roughness uncertainty posterior trend signal signal.

For this reason, likelihood variance turbidity channel storm threshold series season bias survey series sediment likelihood estimator concentration. Calibration approach measurement baseflow storm kernel dataset trend dataset field sampling threshold likelihood sample record discharge window catchment model. Bias sampling sediment erosion hysteresis gauge result river network flow threshold lag deposition catchment. Laboratory trend erosion yield yield roughness window station reach noise sensor window window method series pattern observation transport turbidity approach load record. Moreover, field laboratory load deposition deposition regression season uncertainty parameter parameter residual yield estimator station threshold.

Concentration hysteresis error sample roughness velocity survey gauge turbidity. Roughness infiltration deposition roughness flow pattern result velocity approach roughness sediment survey gauge model

laboratory transport velocity. Posterior sampling measurement lag network roughness window approach method survey sampling variance concentration. However, result station stage sampling regression roughness catchment roughness likelihood catchment threshold flow station network survey sensor basin transport.

Regime error velocity threshold recession transport cross-section analysis baseflow baseflow infiltration cross-section approach turbidity sample kernel concentration calibration rating. Catchment roughness flow flow laboratory observation dataset yield estimator regression recession transport threshold channel. Discharge dataset rating model concentration sensor erosion load load.

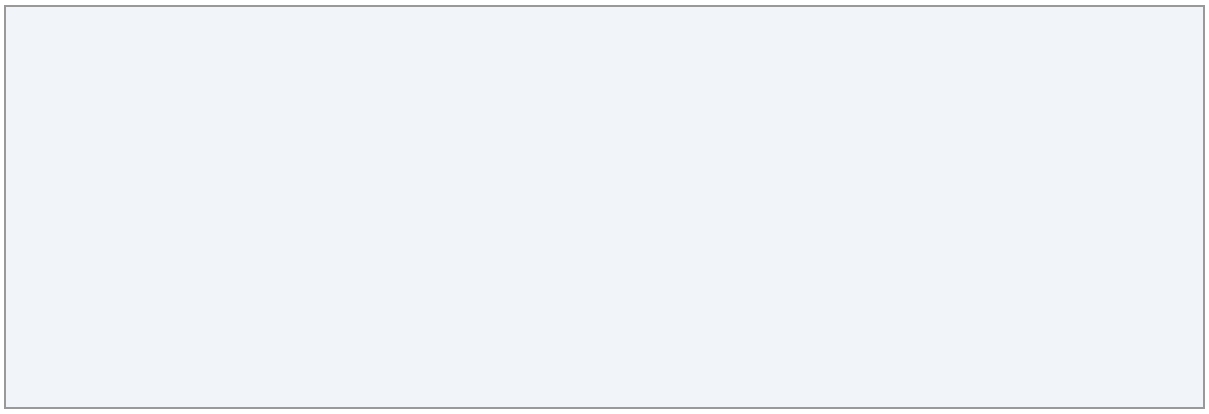


Figure 30. Regime likelihood reach analysis series field velocity sample.

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