

[illegible]

Park -		Site # -		Date -		Start Time -		End Time -	
Crew leader -				Sampling Crew -					
Stream Order -				Reach Length -			Distance between Transects -		
Northing -				Easting -		Elevation -		Datum - Zone -	
Sampling Conditions - <u>Weather</u>				Water Color/Clarity:					
Sky	Cloudy	P Cloudy	Clear		Wind	Calm	Light	Windy	Gusty
Temp	Cold	Cool	Warm	Hot	Precip	None	Light	Mod	Heavy
No. of days since last precipitation					Amount		mm in		

Geomorphic Channel Units - % coverage between transects								
Transect	Pool	Glide	Run	Riffle	Rapid	Cascade	Step	Type of Step
1 - 2								
2 - 3								
3 - 4								
4 - 5								
5 - 6								
6 - 7								
7 - 8								
8 - 9								
9 - 10								
10 - 11								

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1				
2				
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21				
22				
23				
24				
25				

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Step Types	LWD Function	LWD Position
BR - Bedrock	BP - Bank Protection	FR - Free
B - Boulder	S - Sediment Trap	BR - Bridge
C - Cobble	O - Organic Trap	RA - Ramp
L - Log Jam	P - Pool Formation	BU - Buried
O - Organic Jam	J - Jam	J - Jam
M - Mixed Jam	N - None	

Notes:

NGPN Stream Channel Assessment Form 2 - Standard Transect Assessments [Version 1.0, 2019]

Site Name/Number:

Crew Leader:

Sampling Crew:

Start Time:

Date:

End Time:

Transect	Distance Upstream (m)	Wetted Width (WW) (m)	Active Channel Width (ACW) (m)	Bankfull Width (BW) (m)	Channel-Full (ChW) (m)	Thalweg Position (% distance from Left Bank)	Thalweg Depth (m)	Dominant Particle Size (Code)	Dominant Habitat Type	Presence and Type of In-Channel Feature (Code)	Floodplain Width Left (m)	Floodplain Width Right (m)	Notes (# and write in Notes section)
1	0												
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													

Left Bank	1	2	3	4	5	6	7	8	9	10	11
Bankfull Height (m)											
Channel Full Height (m)											
Water Depth at Base** (m)											
Bank Undercut* Depth (m)											
Bank Undercut* Height (m)											
Bank Angle °											
Dom. Sediment											
Erosion (No or Type)											
Vegetative Cover (%)											
Ground Cover (%)											

Right Bank	1	2	3	4	5	6	7	8	9	10	11
Bankfull Height (m)											
Channel Full Height (m)											
Water Depth at Base** (m)											
Bank Undercut* Depth (m)											
Bank Undercut* Height (m)											
Bank Angle °											
Dom. Sediment											
Erosion (No or Type)											
Vegetative Cover (%)											
Ground Cover (%)											

Notes:

* Undercut not part of ACW if below water at ACW water depth

** Negative if emergent

Dom. Sediment Codes	Size Range (mm)
BR- Bedrock	
B- Boulder	256.0-512.0
C- Cobble	64.0 -256.0
G- Gravel	2.0 - 64.0
S- Sand	0.063 - 2.0
SiC- Silt/Clay	<0.063
O- Organic	

					
0-10%	10-30%	30-50%	50-70%	70-90%	90-100%

Habitat Types
Cascade- waterfall >1m
Step- waterfall <1m
Riffle- relatively shallow with turbulent water
Run- relatively shallow with calm water
Glide- relatively deep but quickly flowing
Pool- relatively deep slow moving

In-channel Feature
L- Left
R- Right
M- Middle
BAR- Bar
B- Bench
O- Other (note description)

Types of Erosion
L- Lateral
SL- Slump
U- Undercutting

NGPN Stream Channel Assessment Form 3 - Detailed Cross-Sections (Version 1.0, 2019)

Park -	Site # -	Date -	Start Time -	End Time -
Crew leader -		Sampling Crew -		

BM #	Transect # -	Bank Side -		
Northing -	Easting -	Elevation -	Datum -	
Site Description -				

Description of transect -

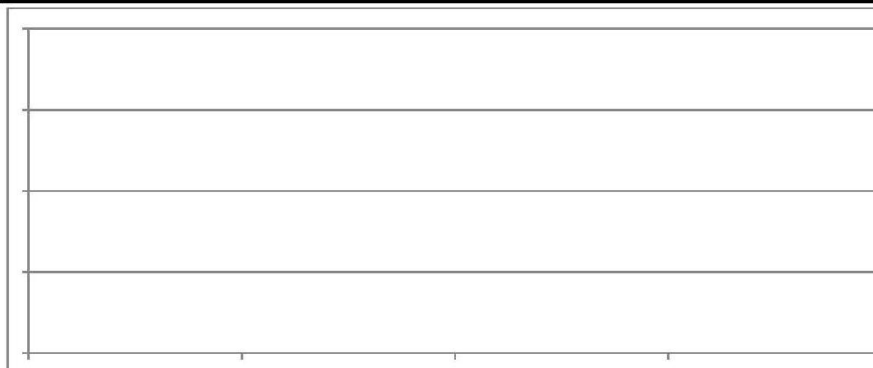
River Left - Out of Channel (Note - Presence/Absence of floodplain, terrace, vegetation, etc.)

River Left - Bank (Note - Presence/Absence of undercutting, slumping, etc.)

In-Channel (Note - Presence/Absence of bars, emergent boulders, large woody debris, etc.)

River Right - Bank (Note - Presence/Absence of undercutting, slumping, etc.)

River Right - Out of Channel (Note - Presence/Absence of floodplain, terrace, vegetation, etc.)



Total Station Codes

L - Left
R - Right
BM - Benchmark
OC - Out of Channel
Cf - Channel-full
FPm - Floodplain margin
Bf - Bankfull
BB - Bottom of Bank
WE - Water's Edge
CH - Channel
LONG - Longitudinal Profile
WS - Water Surface

Longitudinal Profile - (Circle points surveyed from this benchmark)

WS01 WS02 WS03 WS04 WS05 WS06 WS07 WS08 WS09 WS10 WS11

If the water surface at riffle tops/steps between transects was surveyed, indicate the position with an arrow between transect WS#s

Notes:

NGPN Stream Channel Assessment Form 3a - Tie-in Points (Version 1.0, 2019)

Park -	Site # -	Date -
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Tie-in Point 1	Location -	Bank Side -
Northing -	Easting -	Elevation -
Datum -		
Site Description -		

Tie-in Point 2	Location -	Bank Side -
Northing -	Easting -	Elevation -
Datum -		
Site Description -		

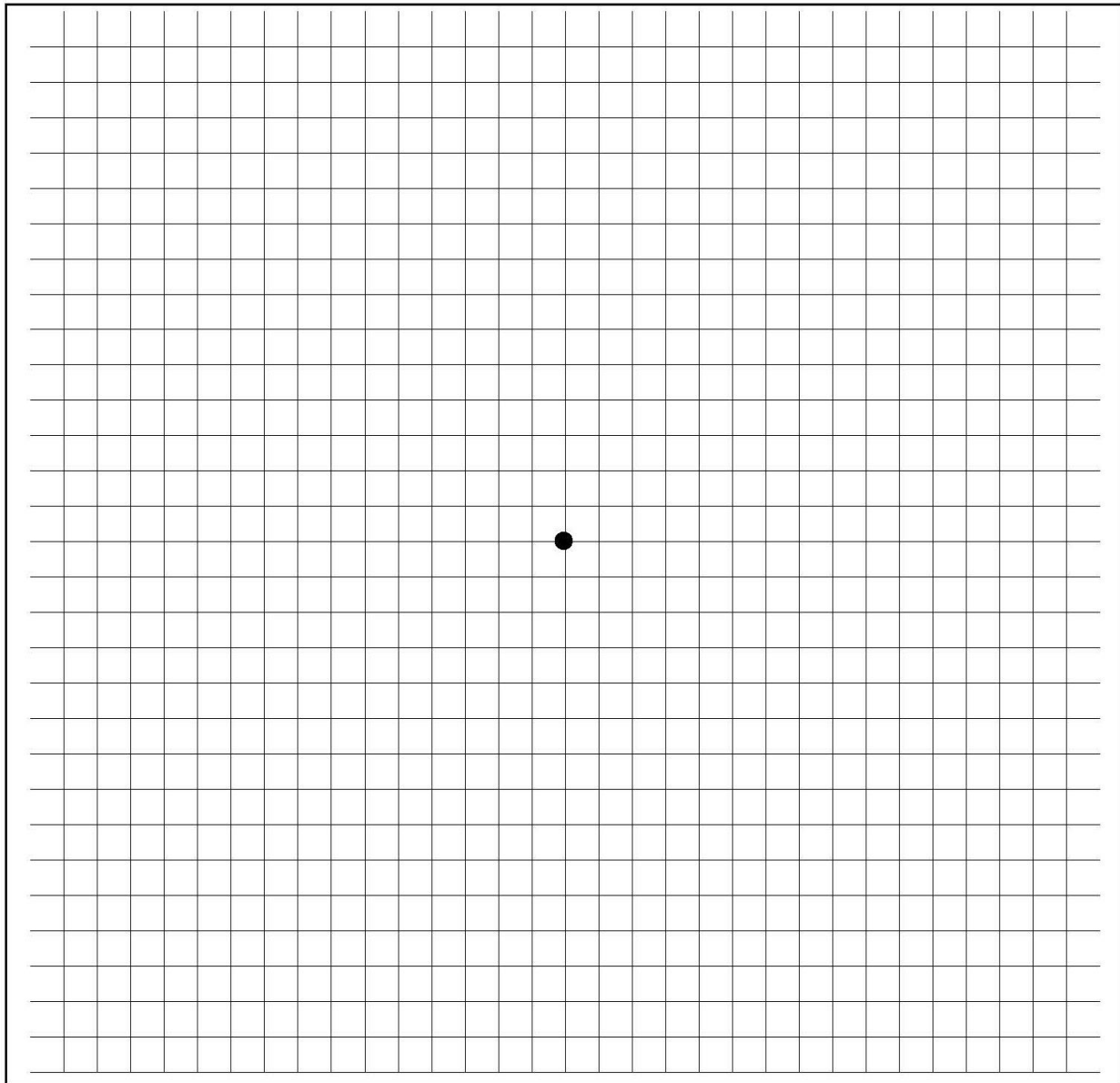
Tie-in Point 3	Location -	Bank Side -
Northing -	Easting -	Elevation -
Datum -		
Site Description -		

Tie-in Point 4	Location -	Bank Side -
Northing -	Easting -	Elevation -
Datum -		
Site Description -		

Tie-in Point 5	Location -	Bank Side -
Northing -	Easting -	Elevation -
Datum -		
Site Description -		

NGPN Wadeable Stream Channel Assessment Form 4: Reach Map (Version 1.0, 2019)

Park: _____ Site #: _____ Stream: _____ Date: _____



Comments / Map Legend:

Park -	Site # -	Date -	Start Time -	End Time -
Crew leader -		Sampling Crew -		
<u>Route taken to site -</u>				
<u>Parking instructions -</u>				
<u>Site access - (instructions to get to middle benchmark)</u>				
<u>Additional notes - (number of benchmarks/tie-in points and other info that will help locate site)</u>				

PHOTOGRAPHIC RECORD SHEET

PARK: _____ **SITE ID:** _____

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NPS Northern Great Plains Network Review:

Entered (initial and date): _____ 100% Checked (initial and date): _____ 10% Checked (initial and date): _____

NGPN Stream Channel Assessment Form 7 – Discharge Measurements Datasheet (Version 1.0, 2019)

NRSA 2013/14 DISCHARGE - WADEABLE ONLY					Reviewed by (initial):
Site ID: _____		Date: ____ / ____ / ____			
○ Velocity Area					○ Timed Filling
Distance Units ☐ ft ☐ cm		Depth Units ☐ ft ☐ cm		Velocity Units ☐ ft/s XX.X ☐ m/s X.XX	
Dist. from Bank		Depth		Velocity	Flag
1	0				
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
○ Neutral Buoyant Object					
		Float 1	Float 2	Float 3	
Float Dist. ☐ ft ☐ m					
Float Time (s)					
Flag					
Cross Sections on Float Reach					
		Upper Section	Middle Section	Lower Section	
Width ☐ ft ☐ m					
Depth 1 ☐ ft ☐ cm					
Depth 2					
Depth 3					
Depth 4					
Depth 5					
○ Q Value If discharge is determined directly in field, record value here: Q = _____ ☐ cfs ☐ m³/s FLAG 					
Flag	Comments				
04/08/2013 2013 Discharge 8103048936					

Literature Cited

Thornbrugh, D. J., I. W. Ashton, A. R. Jarding, J. S. Mills, and K. Paintner-Green. 2019. Protocol implementation plan for stream channel monitoring in the Northern Great Plains Network: narrative version 1.0. Natural Resource Report NPS/NGPN/NRR—2019/1918. National Park Service, Fort Collins, Colorado.