

[illegible]

The NGPN will directly implement the peer-reviewed and approved protocols and methods in SECN's SOP 1.2.18 Using a Total Station to Conduct a Stream Survey—Version 1.0 (McDonald et al. 2018). Available at: <https://irma.nps.gov/DataStore/Reference/Profile/2254016>

Differences in methods

- None

Procedures

Follow SECN [SOP 1.2.18 Using a Total Station to Conduct a Stream Survey—Version 1.0](#) from the Southeast Coast Network Wadeable Stream protocol, using the permanent transect index marks as benchmarks and tie-ins to existing benchmarks in the park whenever possible. Use the methods and procedures as written. Take care to select the correct UTM zone for your location (13 or 14 for NGPN parks).

Literature Cited

- McDonald, J. M., E. N. Starkey, J. W. Riley, and M. B. Gregory. 2018. Using a Total Station to Conduct a Stream Survey—Version 1.0. Southeast Coast Network Standard Operating Procedure NPS/SECN/SOP—1.2.18. Southeast Coast Network, Athens, Georgia.
- 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.