Barriers to Flow Recommendations (from River Network 2022):

Identified Barrier	Explanation
1. Identifying challenges to developing and implementing flow recommendations too early in the SMP process	• SMPs that included flow recommendations tended to have existing infrastructure that allows for flexibility in flow management (e.g., upstream reservoirs with the ability to re-time releases, as with the Yampa River through Steamboat Springs and the Rio Grande, Conejos River, and Saguache Creeks SMPs). Basins without this built-in flexibility may have a preconceived bias against flow recommendations as a solution and so limit the conversation from the beginning. • Potential projects could be cost prohibitive. In some communities, the easily identified options for pursuing flow-driven outcomes are expensive infrastructure (e.g., ditch piping) or tools for leaving excess water in the river (e.g., water leasing), both of which tend to be expensive and complicated, and this perception can limit the conversation.
2. Lack of knowledge and understanding	• There can be a lack of easily attainable technical knowledge and guidance in terms of how best to derive a flow recommendation and how to do that work in the context of a locally driven SMP. • Coalitions and stakeholders can lack understanding of how to develop a flow recommendation including the data needs, science, and process to identify flow recommendations. • There can be confusion regarding the need for an SMP to generate new flow recommendations or implementation projects when flow targets already exist in other forms (e.g., instream flow water rights) for a reach of interest.
3. Lack of external motivation	• While some communities' SMPs are motivated by regulatory action requiring the identification of flow targets and management of water around these targets (e.g., the Upper Colorado River through Grand County), this is not an impending or motivating reason in most cases. • The CWCB grant guidance that funds SMP processes articulates an expectation to identify flow needs. This expectation may not be strong enough as it is only being partially met (10 of 16 SMPs have documented flow needs) and is not resulting in flow recommendations in most SMPs.
4. Competing values	• While many basins have identified E&R needs and values, giving equal priority to those values as consumptive uses is still a cultural challenge in some areas. Additionally, stakeholders may not agree on the relative importance of values that have been identified, or even agree on what the attributes of interest are. • Navigating stakeholder conversations around flow recommendations can be challenging due to differing values, conflicting information, and established water rights determinations. For example, stakeholders may wrestle with what it means when locally defined E&R flow recommendations do not align with an existing instream flow right. Additionally, characterizing human-induced alteration to the flow regime may lead to finger-pointing and alienation of some stakeholders.

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5. Over-appropriated streams and/or rigid water rights administration systems	• Over appropriated systems where there are frequent "calls" on the river are subject to strict water administration. Alternatively, on a stream with infrequent calls, there may be more flexibility for creative and collaborative action among water users to meet identified flow needs or targets. • Water Commissioners and water users in highly administered systems can have a perception that there is no room to accommodate additional water uses/users, which can create roadblocks to address flow needs. For example, basins that have interstate compacts and/or federally managed projects can overall be less flexible. • Not all streamflow restoration tools are available in all basins. For instance, Agricultural Water Protection Rights, and Water Conservation Programs. • There can be a lack of understanding among water users/administrators regarding new policy/laws, alterative water leasing arrangements, donations, etc. that protect a water right's value. • Water users/administrators often rely on historical practices that have worked for years, and they are apprehensive about change for fear of unintended consequences for themselves or for other water users.
6. Apprehensions and misunderstanding	• There is a perception among some stakeholders that assessing flow conditions or identifying E&R needs predetermines the decision to create a prescriptive flow target and pursue specific projects (i.e., flow assessment automatically leads to pursuit of an instream flow water right or water leases, which can be unpopular among some consumptive water users). • Some stakeholders are nervous about sharing data and personal/property/water use information as they are worried it might lead to regulatory intervention or increased public attention/scrutiny on conditions that they do not want advertised.
7. Differing planning scales	• Flow needs and recommendations are best assessed and described at a reach scale, which can be at odds with the geographic scale of a SMP. For example, the Yampa River Basin Integrated Water Management Plan (IWMP) studied over 300 miles of river. Identifying flow needs at that scale may be expensive, poorly resolved, and/or challenging given the broad range of stakeholder values, extensive water infrastructure, and expansive geography.
8. Scarcity of necessary data	• The data needed to adequately characterize conditions may not exist. For example, streamflow information can be challenging to acquire due to the lack of gauging stations in appropriate locations. Additionally, river bathymetry data is particularly challenging in medium and large size rivers and can be expensive to develop. • While budget constraints have been identified by some groups, the specific issue may be that coalitions are often not prepared for funding the data collection efforts, which leads to a missed opportunity when developing grant budgets to support the level of funding needed to develop flow recommendations.