Icicle Workgroup Guiding Principles and Metrics

This summary describes the IWG Guiding Principles and how they are quantified for the development of an integrated project list. Full qualitative descriptions of the guiding principles are included in the IWG Operating Procedures. Metrics for guiding principles are subject to feasibility, funding, and permitting.

Guiding Principle	Metric	
Improve Instream Flows	Icicle Creek Historic Channel: • 60 cfs minimum flows (drought years)[1] • 100 cfs minimum flows (non-drought years), short-term goal[1] • 250 cfs minimum flows (non-drought years), long-term goal[1] • 2,600 cfs maximum flow to preserve habitat function[1]	Flow improvement needed (in projects) to meet total minimum flows: 40 cfs[3]
Improve sustainability of LNFH	• Meet *U.S. v. Oregon* and other agreements specifying fish production requirements • 57 cfs supply protected long-term (at least 20 cfs conservation goal) • Diverse source availability (temperature, pathogen-free) to maximize fish health • Structures minimize unintended fish passage impediments	
Protect Tribal and Non-Tribal harvest	• Catch per unit of effort (CPUE) improved • Maintain multi-species harvest opportunities • Tribal Impacts Assessment and Adaptive Management Plan being implemented, addressing attraction flows, sediment transport, fish migration/straying, site access and amenities	
Improve Domestic Supply	• 2,300 to 4,100 acre-feet of reliable year-round supply (3 to 6 cfs average, 6 to 12 cfs peak), magnitude conditioned upon Legislation on reserve	
Improve Agricultural Reliability	• Automate / Optimize Alpine Lakes for improved reliability (plus instream flow benefit)[2] • Restore/repair 8-Mile Lake up to 2,500 acre-feet (225 acre-foot agricultural benefit, 900 ac-ft additional instream flow/municipal benefit)[2] • Current interruptible agricultural users have firm supply in average water years / agriculture water bank (2 to 4 cfs)	
Enhance Icicle Creek Habitat	• Improve passage at Boulder Field • Make investments in physical habitat improvement with consideration for high flow habitat and low flow refuge, minimize fish passage impediments, and improve limiting factor spawning/rearing • Offset project-related terrestrial impacts with land acquisition/easements	
Comply with State and Federal Law, and Wilderness Acts	• Identify and engage regulators in the process • Environmental review completed (project check) • All projects appropriately permittable (project check) • All diversions (LNFH, IPID, COIC) appropriately screened (project check)	

[1] Approved as an IWG decision on September 16, 2014.

[2] One dissenting opinion.

[3]Based on a review of historic stream gage records, and subtracting diversions, the Instream Flow Committee characterized the existing average low flow in Reach 4 as approx. 63 cfs, and the drought low flow as 10-20 cfs. To meet a Guiding Principle average flow target of 100 cfs and a drought low flow target to 60 cfs, approx. 40-50 cfs in project flow benefit is needed.