‘Design With Nature’ going forward:

The matrix illustrates how to integrate the work of Daniel Pauly (left column), **Richard Horner and Chris May** (top row) **to apply science-based understanding & adapt to changing conditions:**

From top to bottom - **illustrates a watershed’s progression through three stages along the Shifting Baseline (before, now and in future).**

From left to right - **describes the implications for each of the four Limiting Factors for stream system integrity at each stage of the progression.**

Shifting Baseline	Road Map for Protecting Stream System Integrity				
		Watershed Hydrology	**Riparian Corridor**	**Within the Stream**	**Quality of the Water**
	Nature As It Was Before Settlement	Clean and clear water supported aquatic habitat, fish lifecycles, and community uses of streamflow	Intact corridor provided multiple functions related to water quality and beneficial nutrients	Instream gravel supported spawning; large woody debris moderated streamflow and sheltered fish	Beneficial water quality, in particular temperature, supported ecosystem functions and community uses of streamflow
	Cumulative Impacts After Development	Changes in water balance distribution resulted in erosion, degrading of habitat, drought, or flooding	Habitat removal exposed fish to interventions and resulted in multiple impacts	Streams no longer support fish lifecycles	Toxic liquid wastes destroyed habitat, killed fish, and impacted community uses of streamflow
	By Designing with Nature	Water balance approach can restore hydrologic integrity & habitat function	Restoration of riparian integrity can restore ecosystem functions	Streams can again support fish lifecycles	Source-controls can prevent toxic liquid wastes from entering streams