

LTPBR WORKSHOP



PROJECT OBJECTIVES

CHOOSING INDICATORS AND CLARIFYING GOALS AND OBJECTIVES



OUTLINE – PROJECT OBJECTIVES

I. WHY GOALS AND OBJECTIVES

- Role in LTPBR Projects

II. FRAMING OBJECTIVES

- Characteristics of Good Objectives
- Examples from Project Planning and Design

CHAPTER REFERENCE

Chapter 3: Planning for LTPBR

Chapter 3 - PLANNING FOR LOW-TECH PROCESS-BASED RESTORATION



Prepared by:
Stephen N. Bennett, Joseph M. Wheaton, Nicolaas Bouwes, Christopher E. Jordan, William W. Macfarlane, Jeremy D. Maestas, Elijah Portugal, and Scott M. Shahverdian

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IMPLICATIONS FOR PRACTICE

- Planning for low-tech process-based restoration is similar to planning for other forms of restoration. We adapt the Conservation Planning Process to show what aspects of the process are distinctive to low-tech process-based restoration. The Conservation Planning Process follows an adaptive management framework and has three phases: i) a Collection and Analysis (focused on planning), ii) a Decision Support (focused on design), and iii) an Application and Evaluation (focused on implementation).
- For low-tech restoration, we pose four screening questions to identify where and if low-tech process-based restoration is appropriate. In the Collection and Analysis Phase, current conditions of the riverscape (valley bottom), constraints and recovery potential are identified to help frame appropriate and realistic treatments and objectives in the design. In the Decision Support phase, we set expectations for how many treatments might be necessary (and design). Therefore, in the design phase of a self-sustaining riverscape, the need for additional treatments to achieve the long-term restoration goal of a self-sustaining riverscape will be met if the processes of wood accumulation and/or beaver dam activity make the transition from being mimicked and promoted by treatments to occurring on their own in a self-sustaining fashion. As such, the need for additional treatments versus recognizing the project has achieved its goals is evaluated with respect to the sustainability of these processes.

PROJECT OBJECTIVES

Why Goals and Objectives...

- I. Expectation Management
- II. Integral in Funding and Permit Acquisition
- III. Prioritization of Limited Resources
- IV. Adaptive Management – i.e., Project Management

BRIDGE CREEK EXAMPLE Module 2C

BEFORE – ca. 2007



AFTER – ca. 2015



Yeah, just like
that...?

REIMAGINE WHAT'S POSSIBLE

But, let's have
some reasonable
expectations...




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PROJECT OBJECTIVES

Why Goals and Objectives...

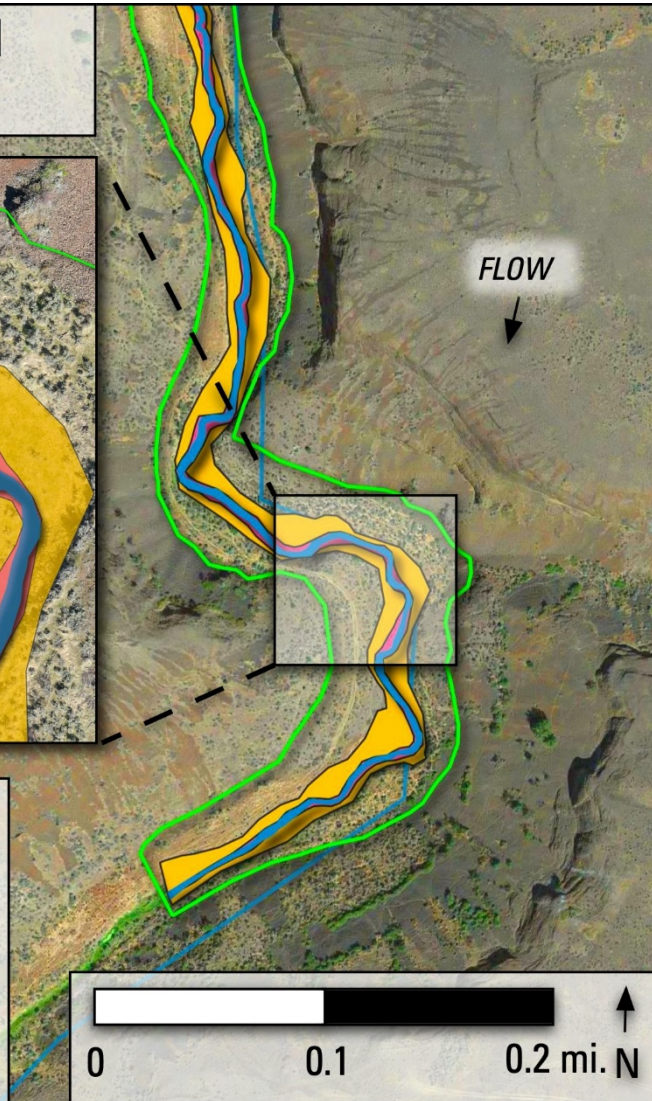
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RESTORATION PRIORITIZATION

GEOMORPHIC COMPOSITION NORTH FORK BUTTE CREEK



- Valley Bottom
- Active Channel
- Current Active Floodplain
- Target Active Floodplain
- Recovery Potential

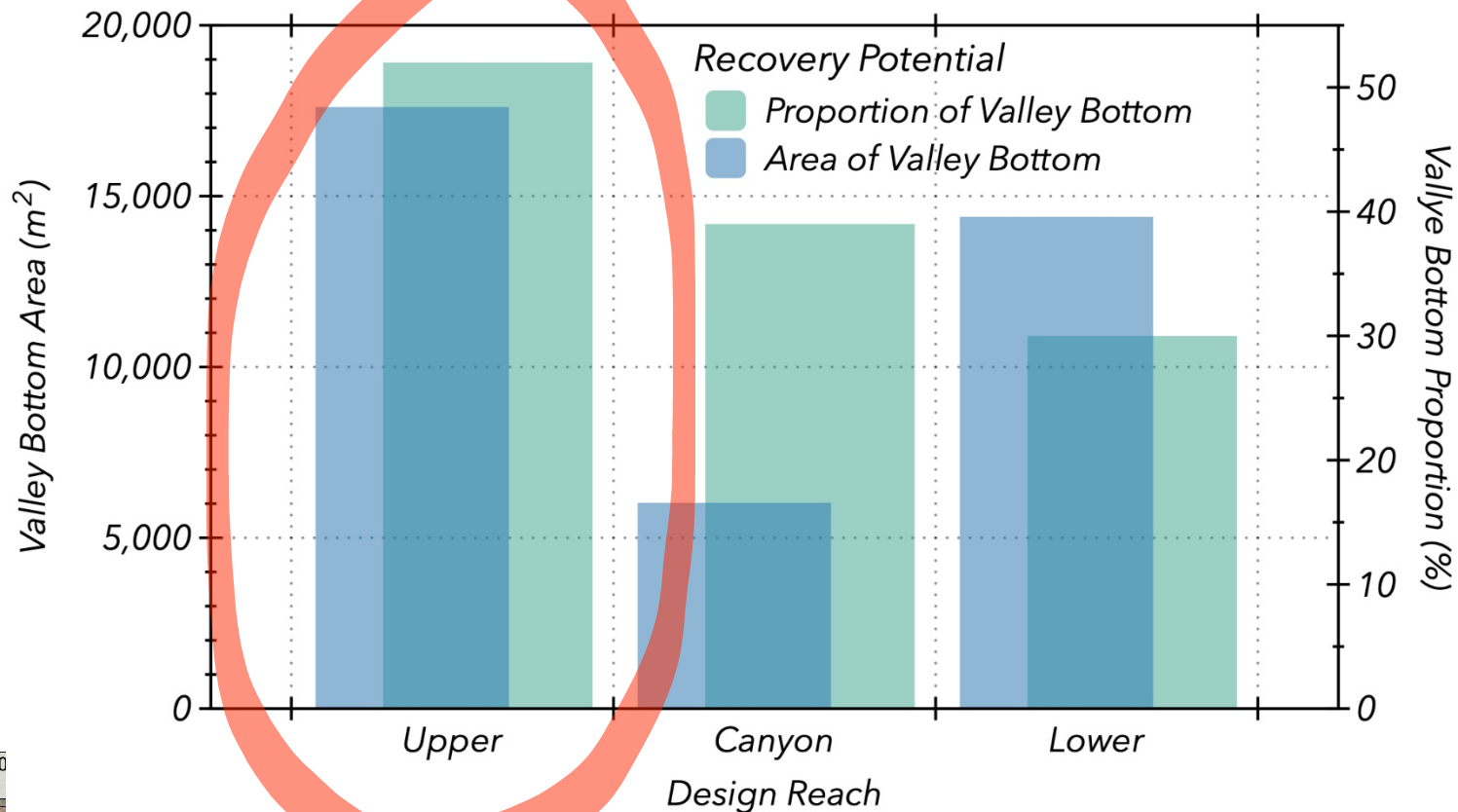


RECOVERY POTENTIAL

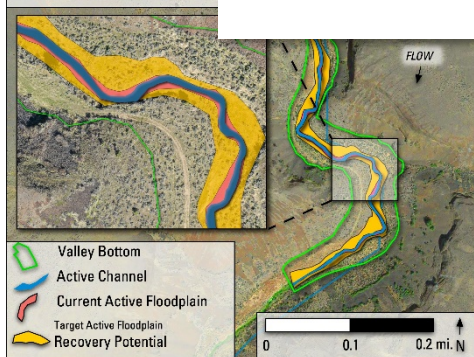
VALLEY BOTTOM

- Total Area
- % of Total

RESTORATION PRIORITIZATION



GEOMORPHIC COMPOSITION
NORTH FORK BUTTE CREEK



*WHERE TO FOCUS LIMITED
RESOURCES?*

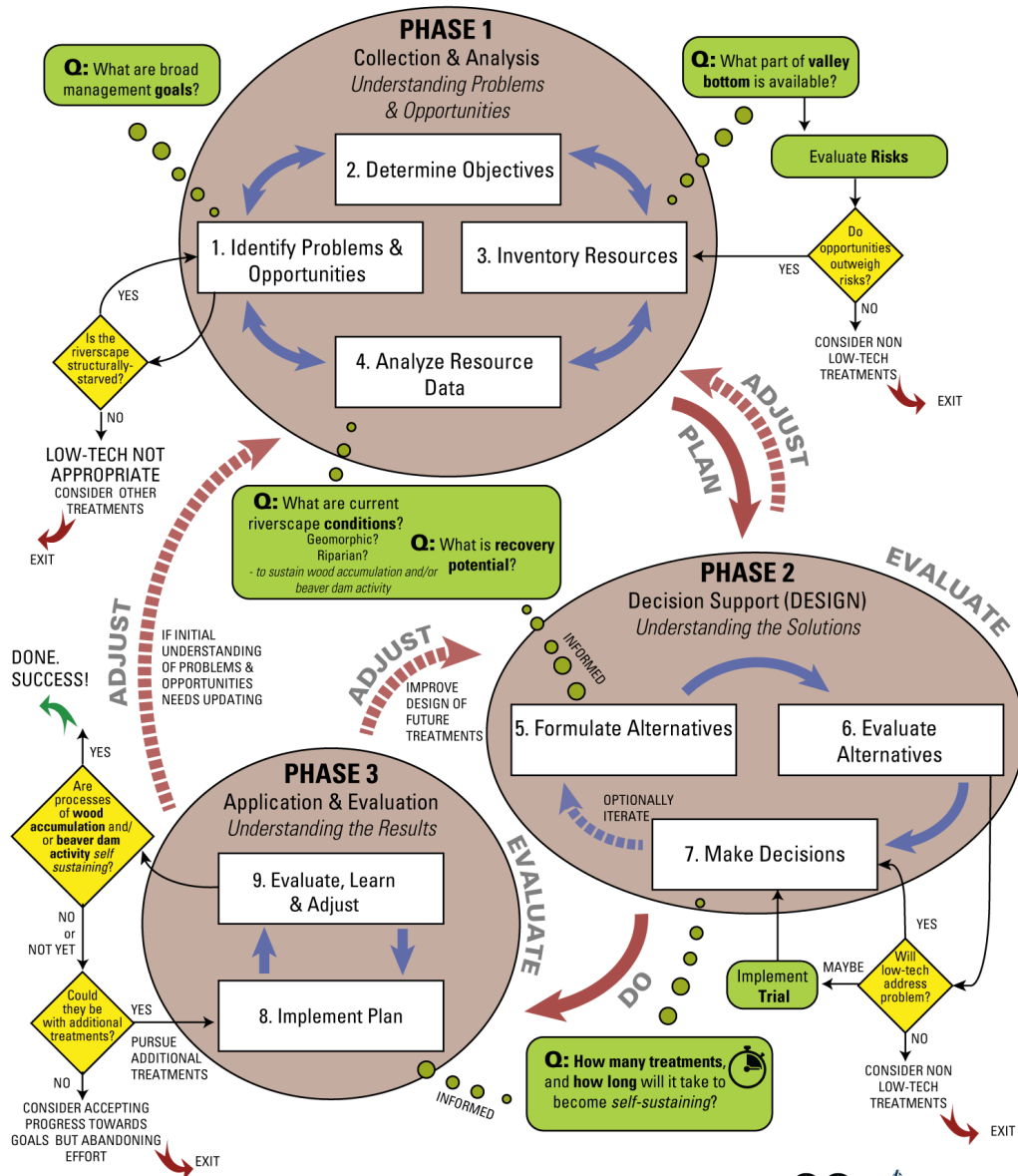


PROJECT OBJECTIVES

Why Goals and Objectives...

- I. Expectation Management
- II. Integral in Funding and Permit Acquisition
- III. Prioritization of Limited Resources
- IV. Planning Process – Adaptive Management

PROJECT PLANNING



Module 5F

ADAPTIVE MANAGEMENT

*Informed by Objectives
and Indicators*

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SPECIFIC: Clear, concise statement of what could be achieved

MEASURABLE: Parameters can be measured

ACHIEVABLE: Geomorphically and biologically possible

RELEVANT: Clearly linked to project goals

TIME BOUND: Bound by specific time frame

WILLOW SPRINGS – WHYCHUS CREEK

LTPBR Implementation – Summer 2021



SMART INDICATOR TABLES

INDICATOR	GOAL	TIME HORIZON				
		HISTORIC	EXISTING (Current)	AS-BUILT (0 Years)	MEDIUM (3 – 5 Years)	LONG (5 – 10 Years)
VALLEY BOTTOM ACTIVE (% of Valley Bottom Area)	GOAL 1: ACTIVE FLOODPLAIN	90% ± 10	20%	25 ± 5%	40 ± 10 %	90% ± 10
CEM STAGE (% of Valley Bottom Length)	GOAL 1: CEM STAGE COMPOSITION	S0: 80% ± 20 S8: 15% ± 10 S7: 5% ± 5 S5: 0% S2: 0%	S0: 0% S8: 25% S7:35% S5: 10% S2: 20%	S0: 0% S8: 25% S7: 35% S5: 10% S2: 20%	S0: 0% S8: 75% ± 10 S7: 15% ± 10 S5:<5% S2: <5%	S0: 80% ± 20 S8: 15% ± 10 S7: 5% ± 5 S5: 0% S2: 0%
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WETTED CHANNEL LENGTH (miles)	GOAL 3: FISH HABITAT QUANTITY AND QUALITY	4.0 ± 0.5	1.8	2 ± 0.2	3 ± 0.5	3.5 ± 0.5
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WILLOW SPRINGS – WHYCHUSE CREEK

PROJECT GOALS

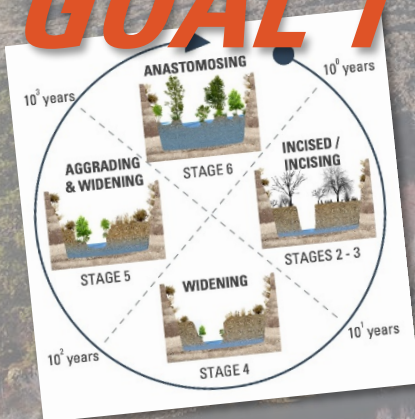


GOAL 1: Increase CEM Stage - 0

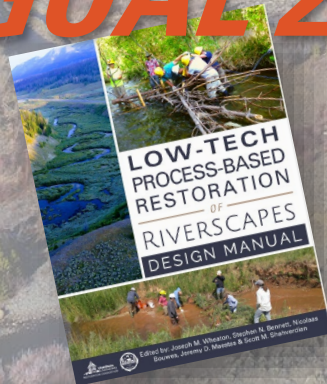
GOAL 2: Promote LTPBR Riverscape Principles

GOAL 3: Increase Salmonid Habitat Quantity

GOAL 1



GOAL 2



GOAL 3



S.M.A.R.T & RELEVANT

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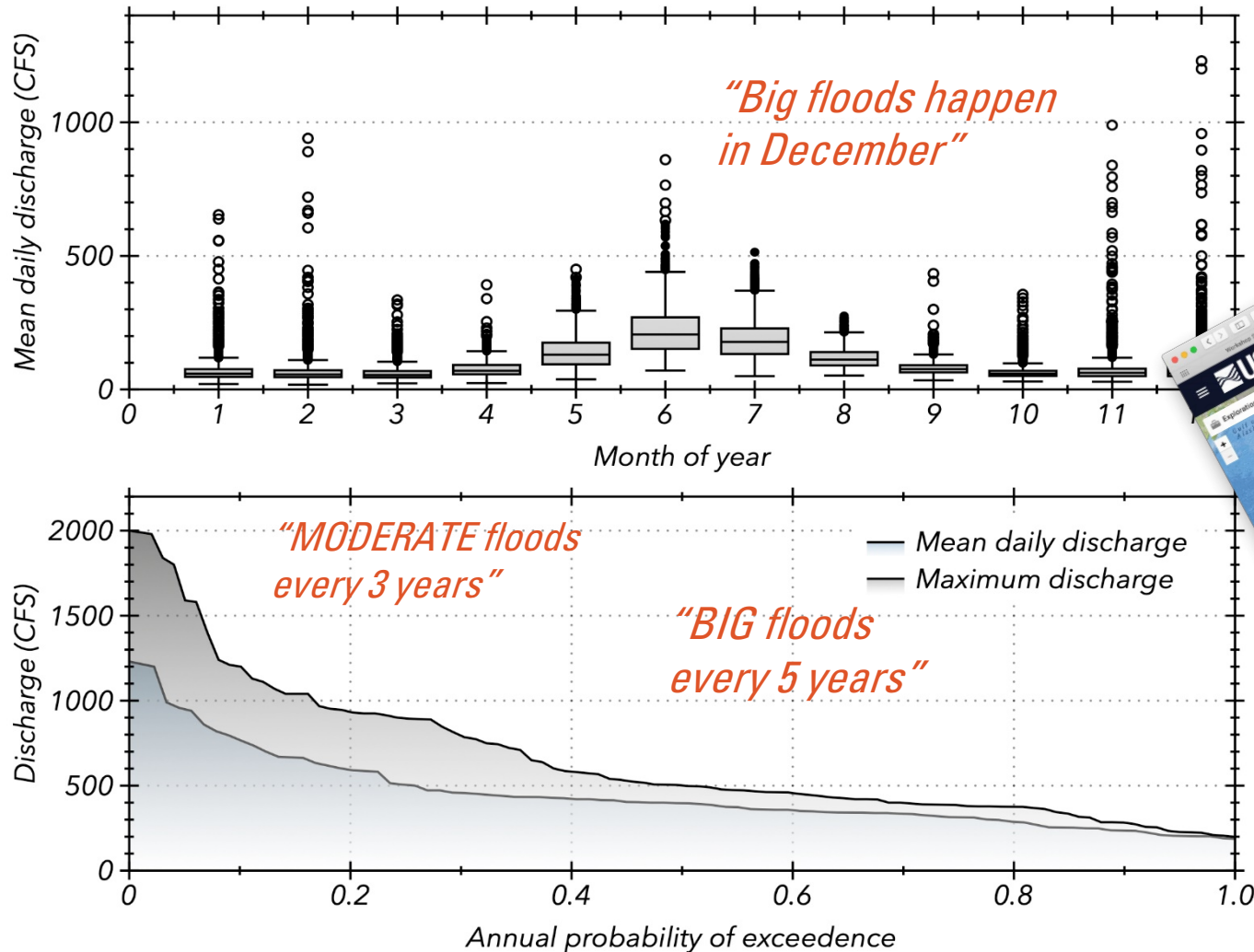
TIME BOUND: Bound by specific time frame

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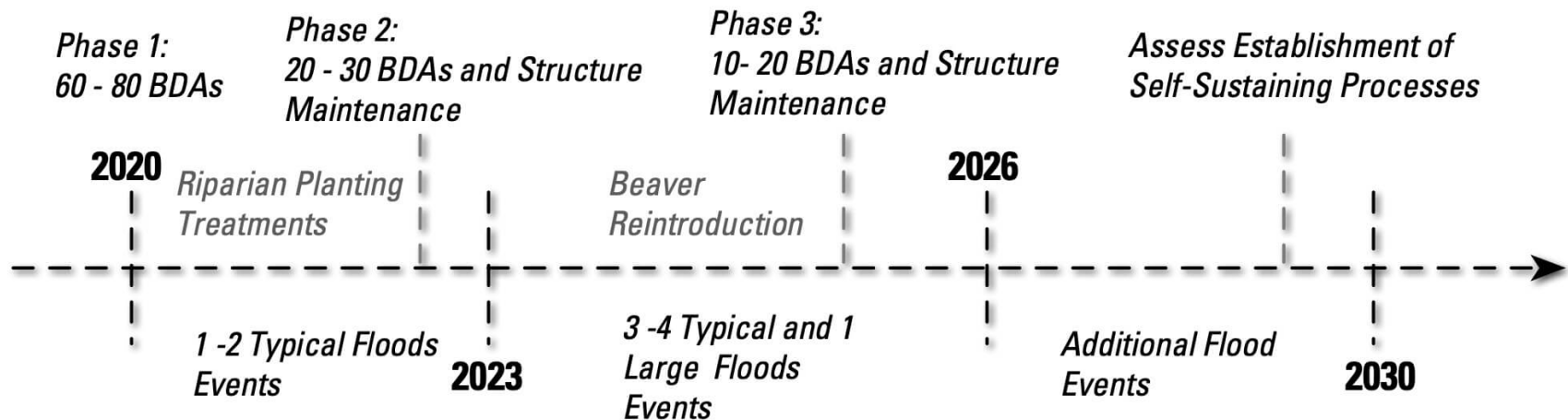
S.M.A.R.T & TIME BOUND

PROCESS FREQUENCY AND MAGNITUDE



streamstats.usgs.gov

S.M.A.R.T & TIME BOUND



IMPLEMENTATION SCHEDULES

- Pilot and Phased Structural Treatments
- Riparian Planting Treatments and Establishment
- Grazing Management Plans
- Beaver Management Plans

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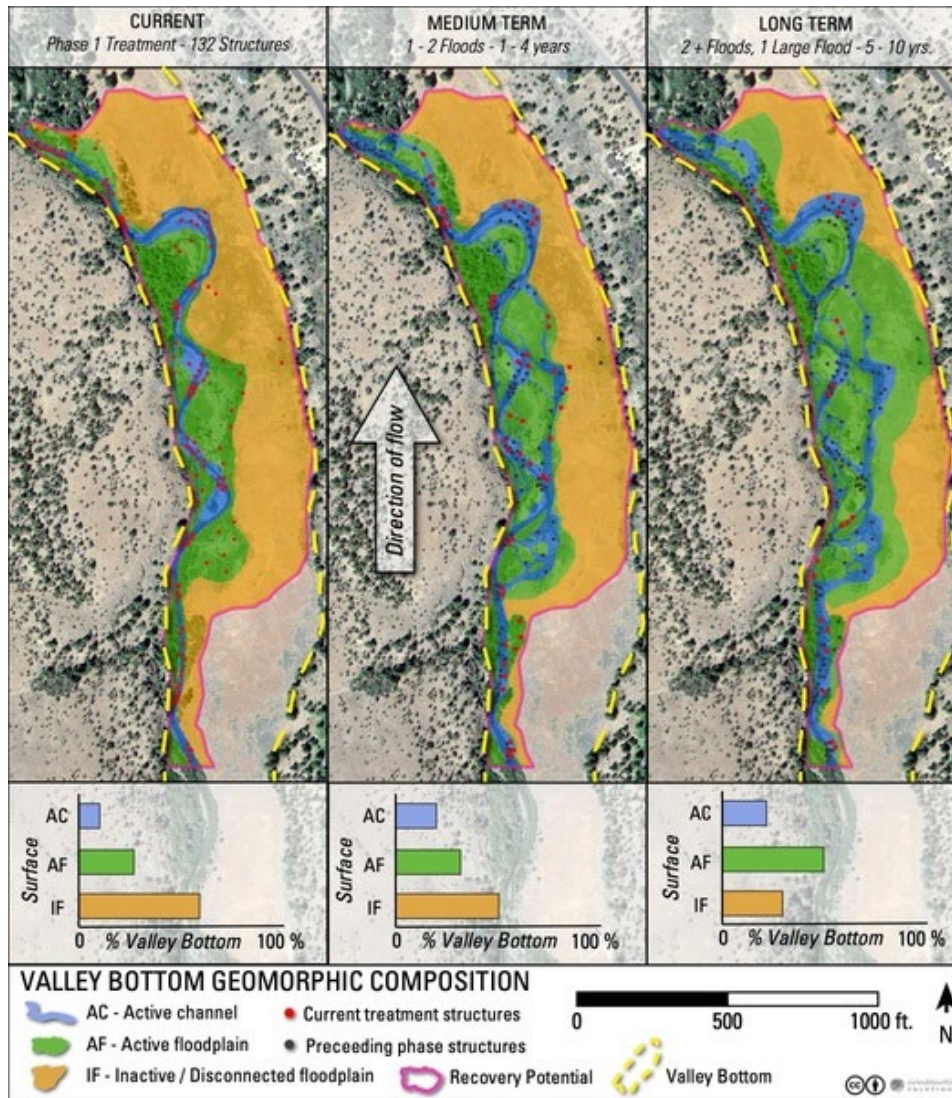
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S.M.A.R.T & ACHIEVABLE



VALLEY BOTTOM

- Capacity (space) for Adjustment*

RECOVERY POTENTIAL

- Achievable, Timebound Expectations*

Starting point for ACHIEVABLE objectives

S.M.A.R.T & SPECIFIC AND MEASURABLE

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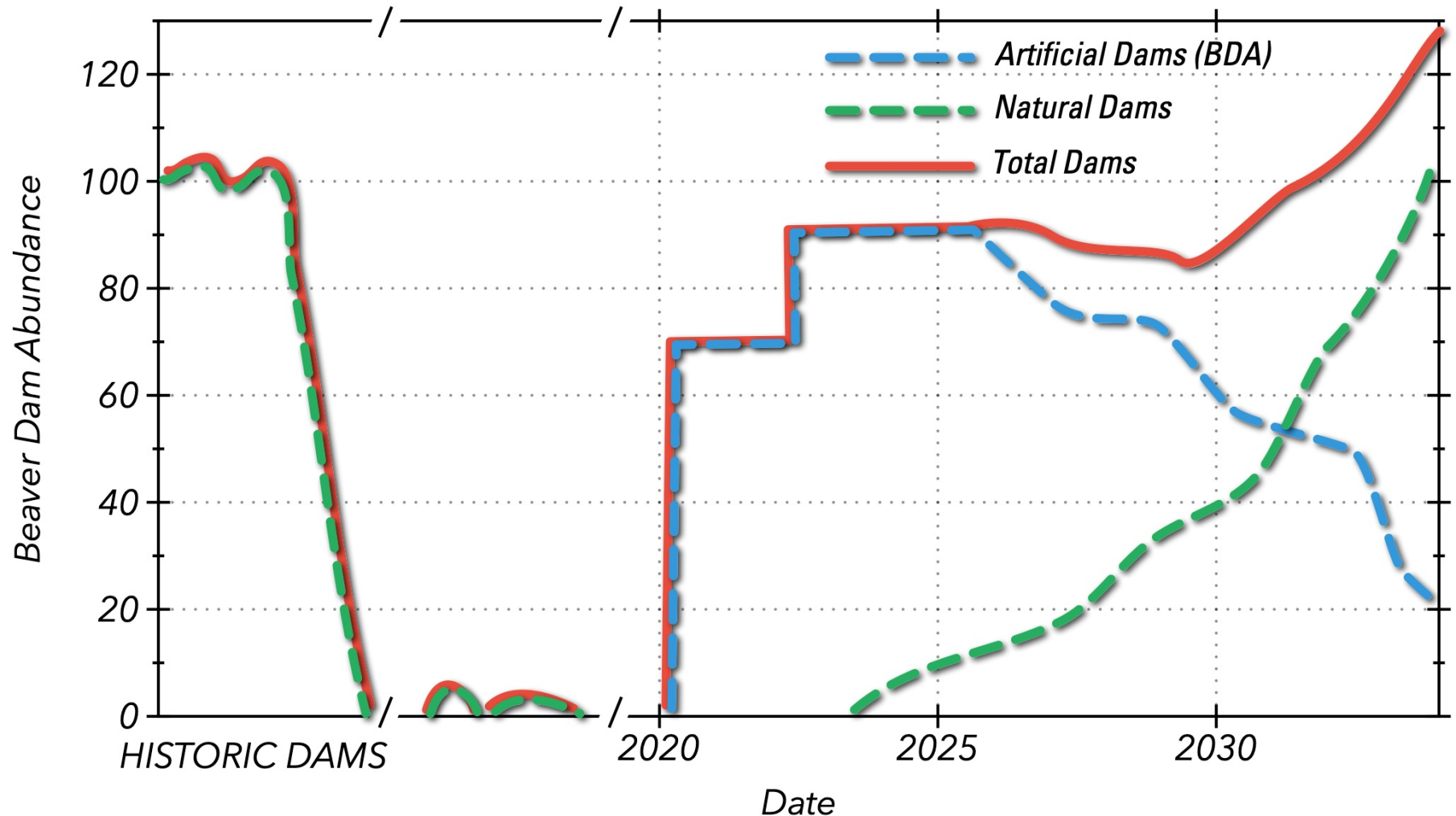
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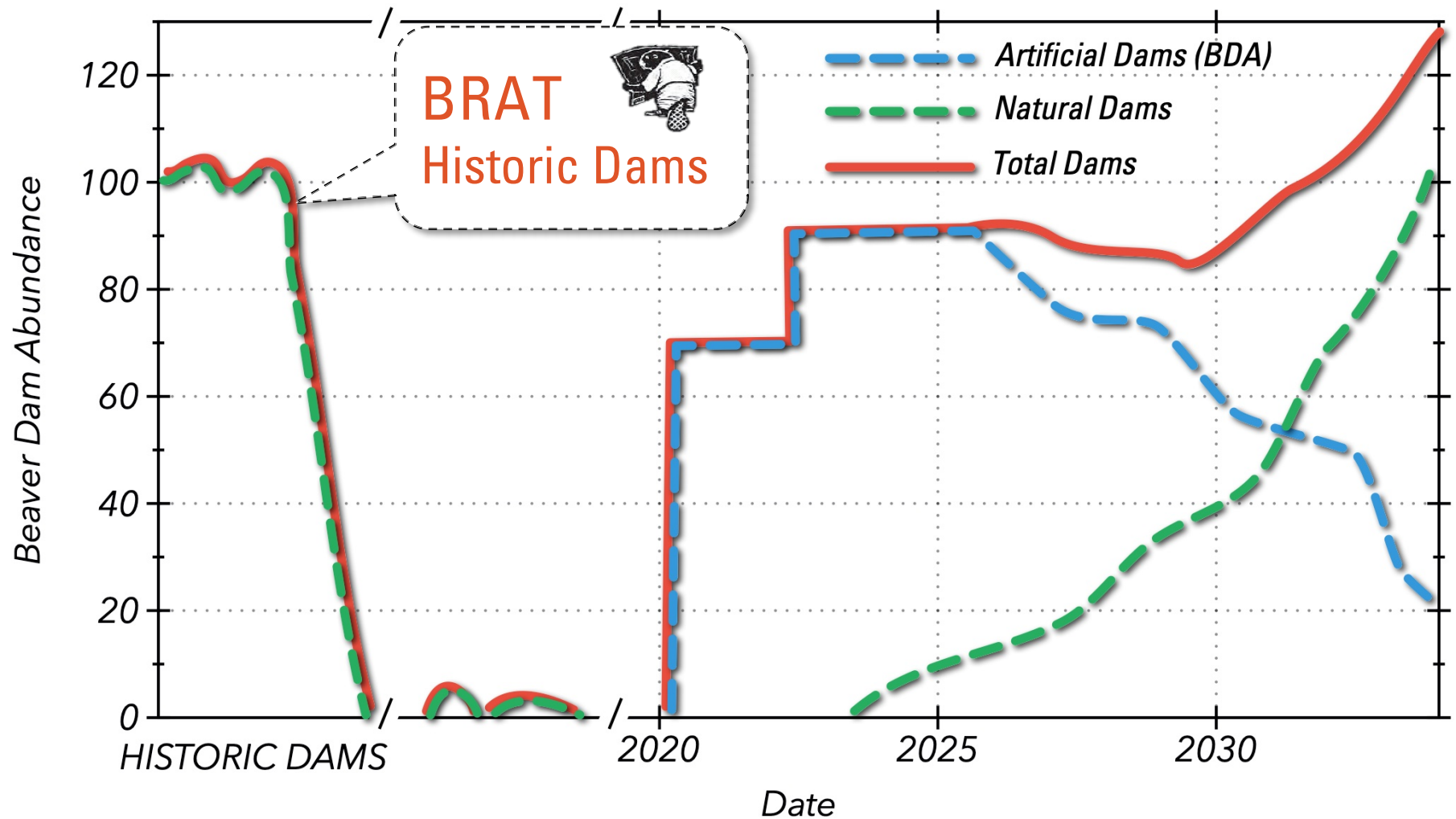
SMART RESTORATION INDICATORS

Indicator Example: Dam Abundance



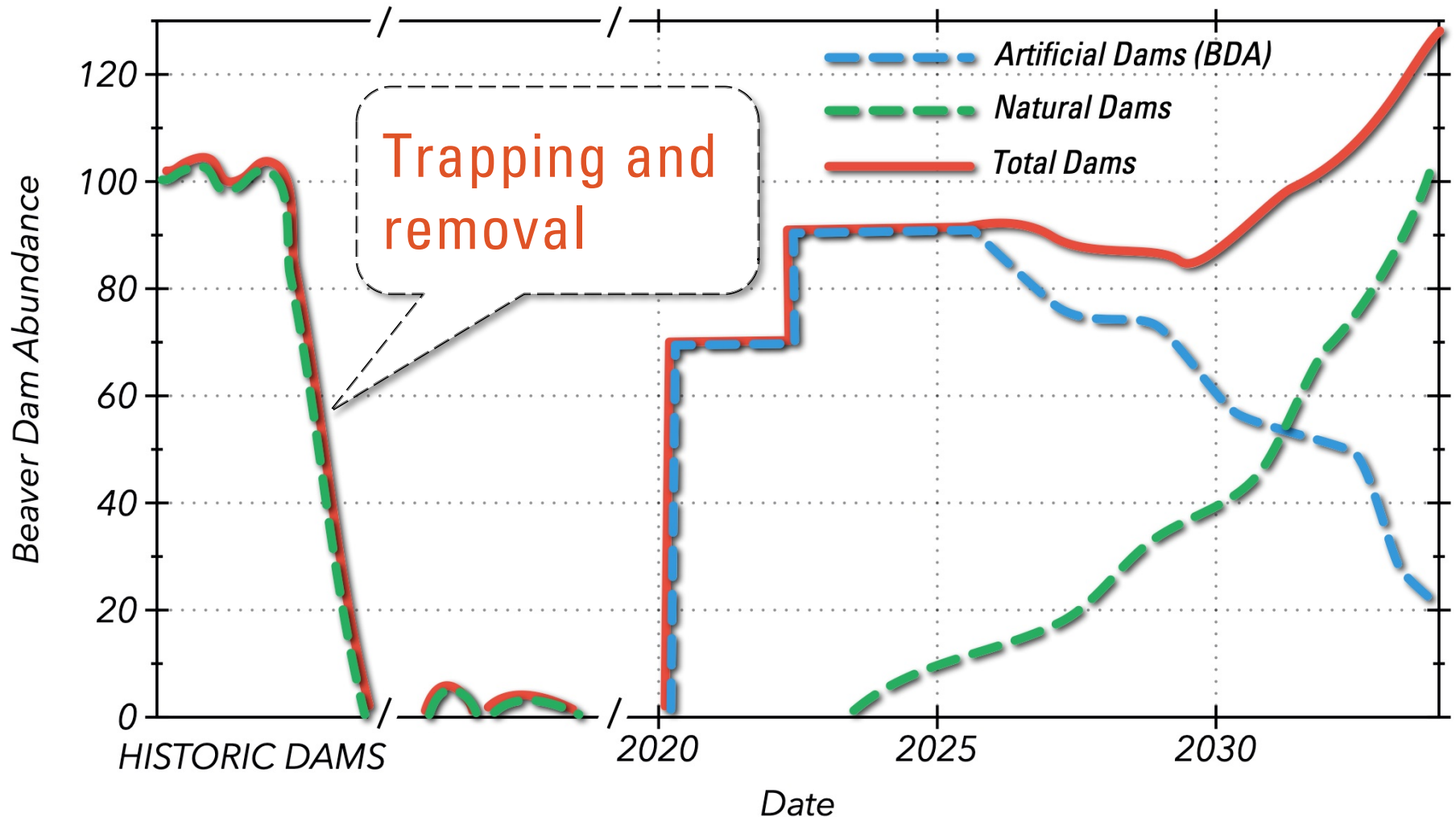
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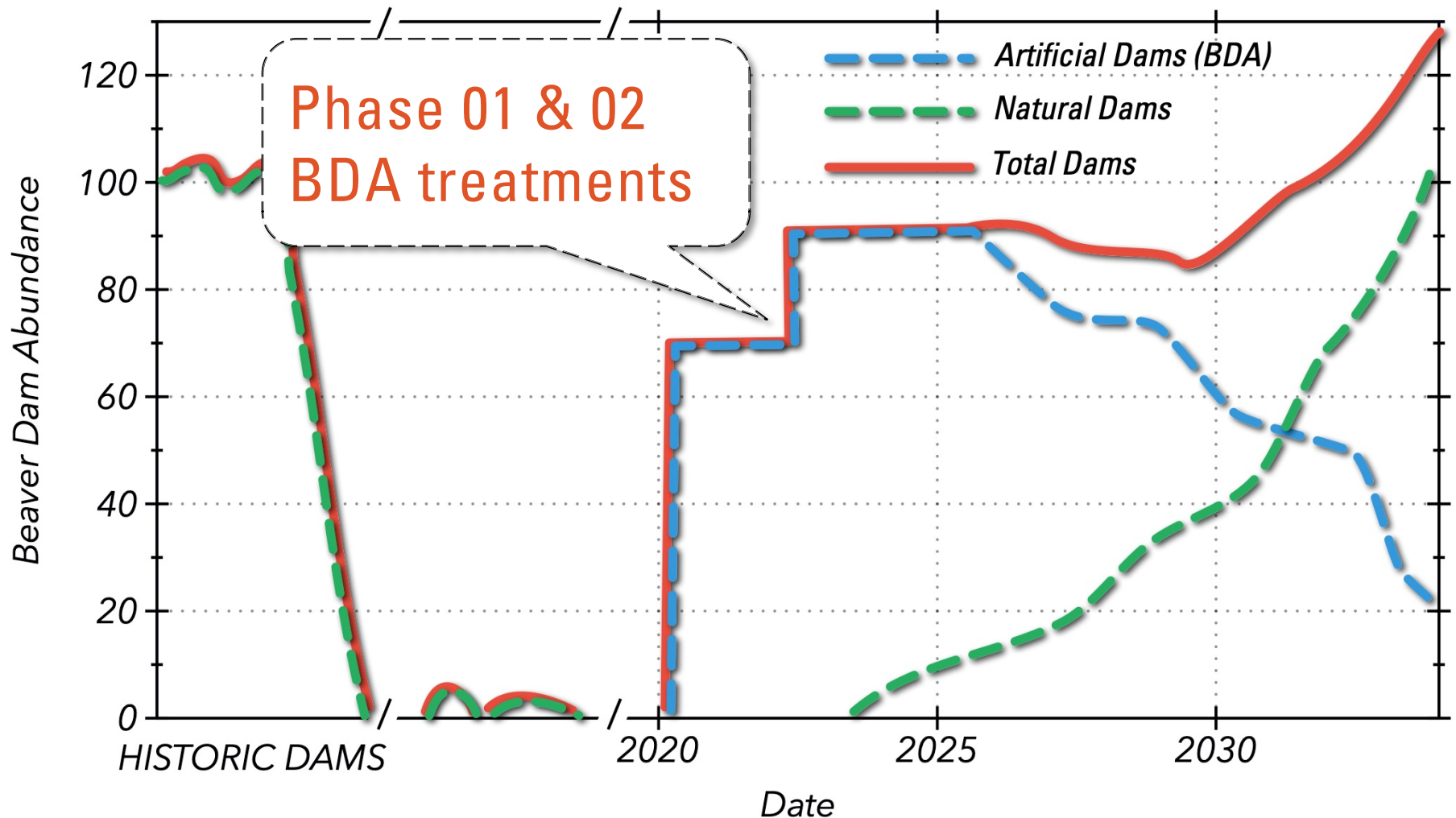
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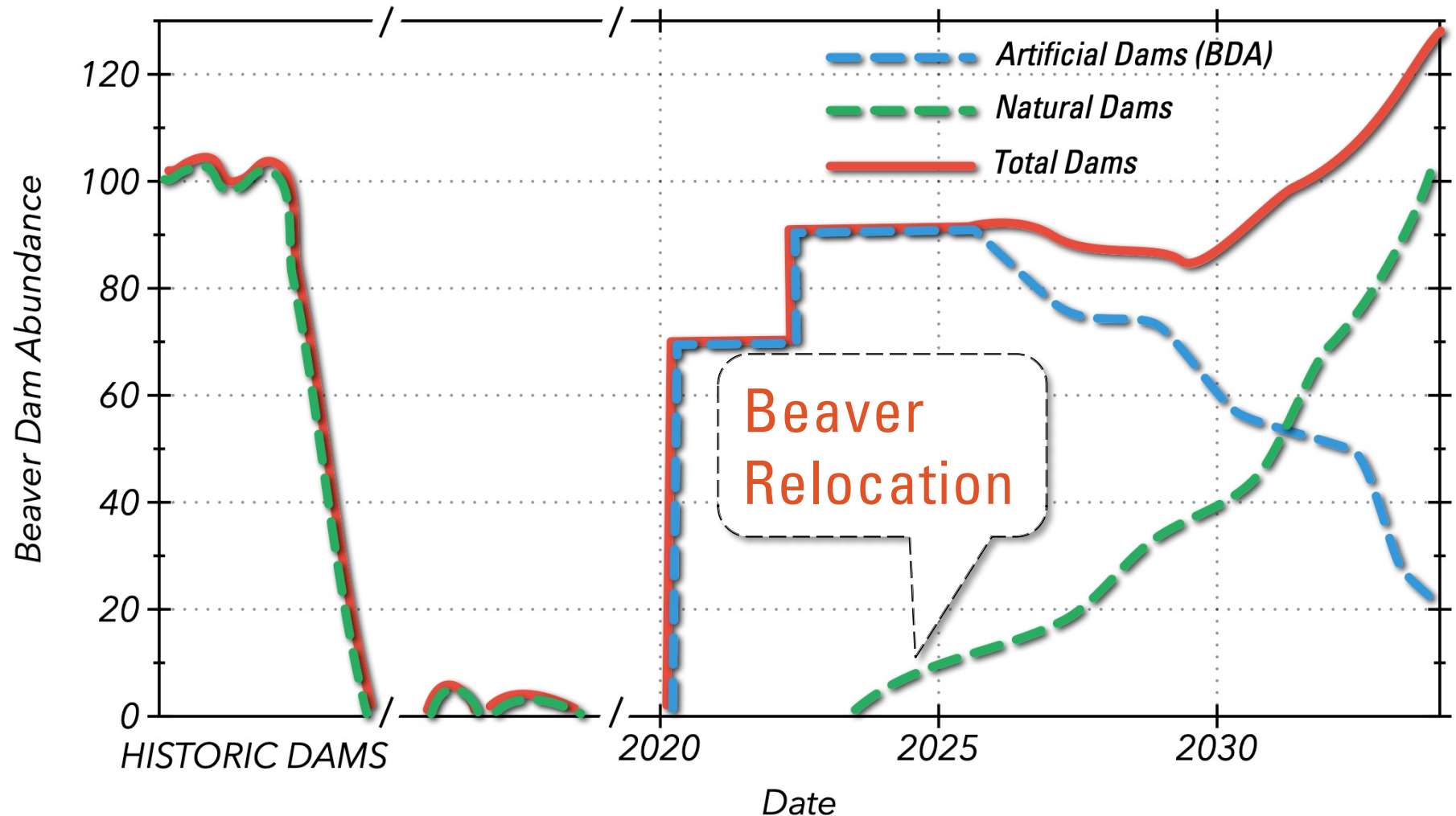
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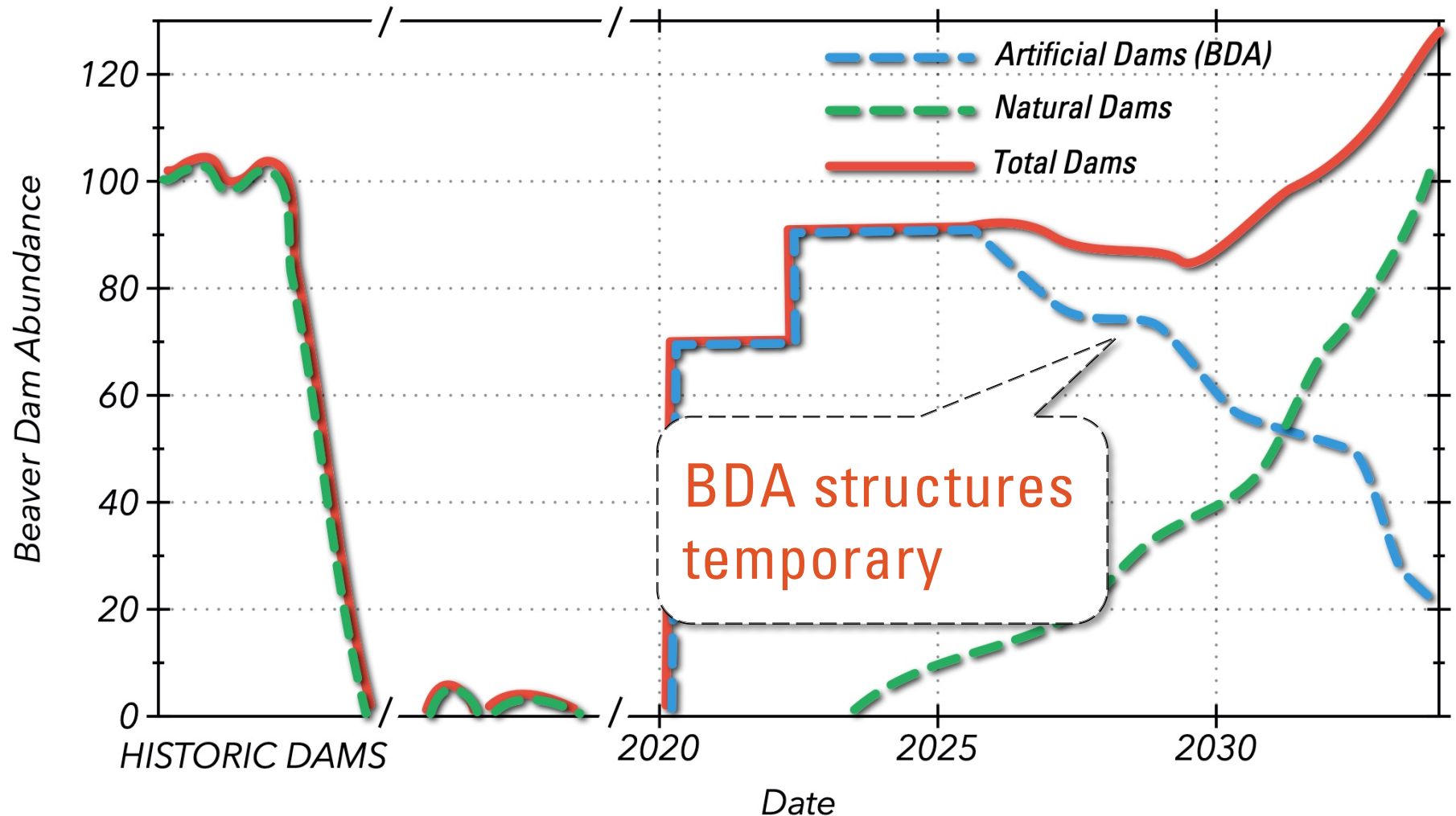
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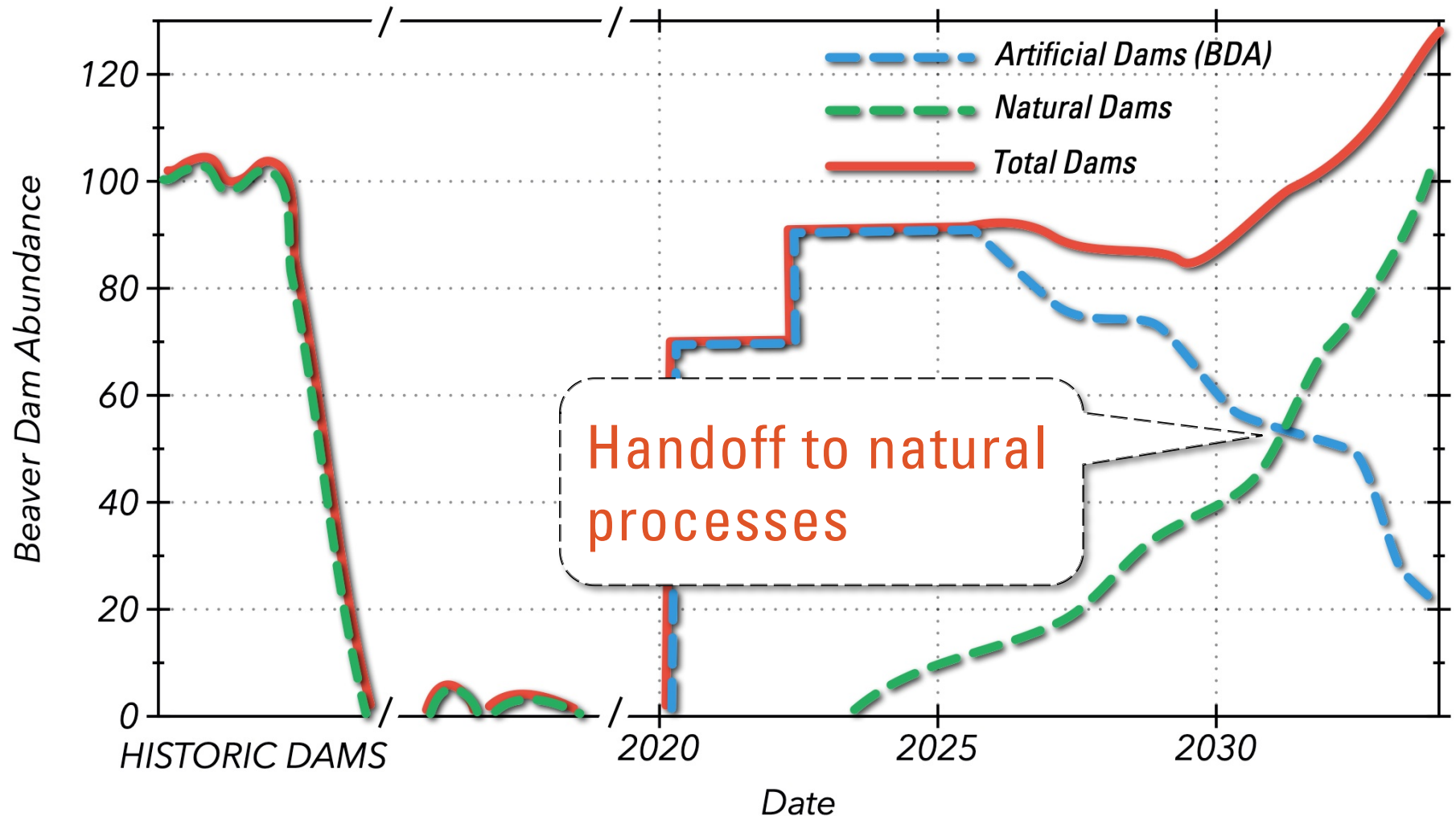
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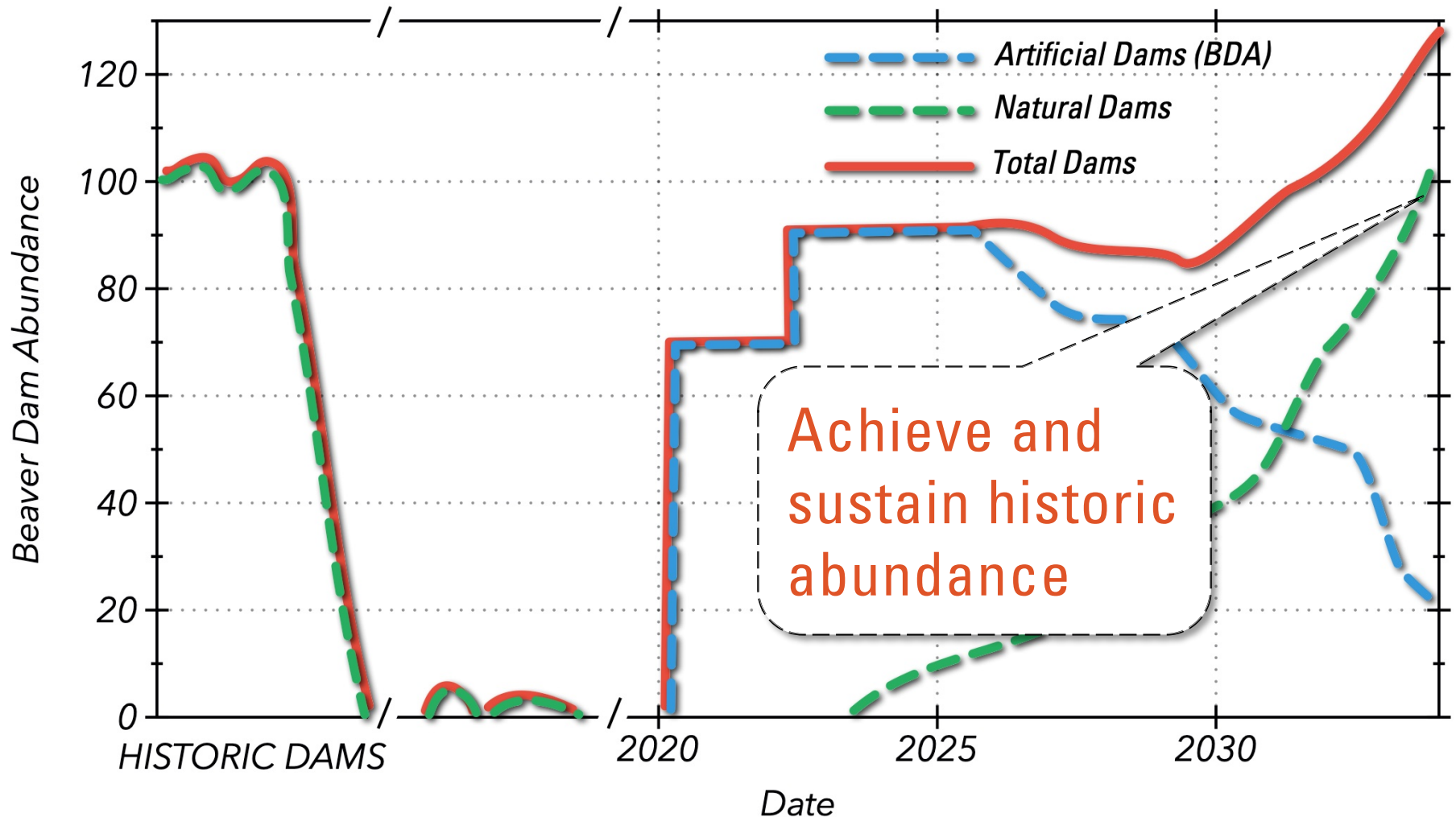
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