Montana DEQ Stream Restoration Policy

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Eric Trum

Background

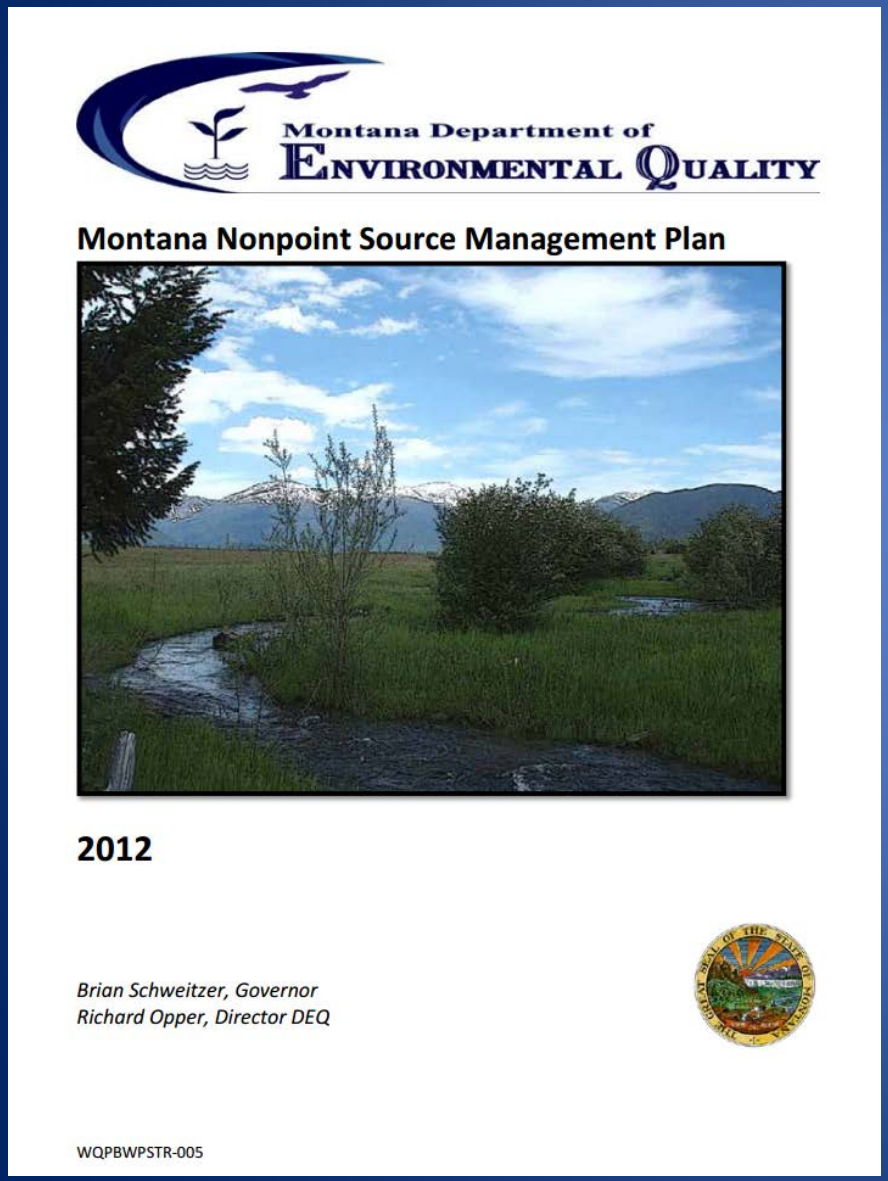
- Watershed Protection Section, MT DEQ
  - Implement Clean Water Act
  - Implement Montana Water Quality Act
  - Manage state nonpoint source management program
  - ~$1 million/year for project funding

Sources of Pollutants

Nonpoint Sources

Natural Source

NPS Management



- **Goals**
  - Inform Montana citizens
  - Set priorities
  - Identify strategies
  - Describe a set of focused, short-term activities
- **Five Year Action Plan and Priorities**
  - Develop an interagency policy for river restoration work, emphasizing restoration of natural stream processes

NPS Management?

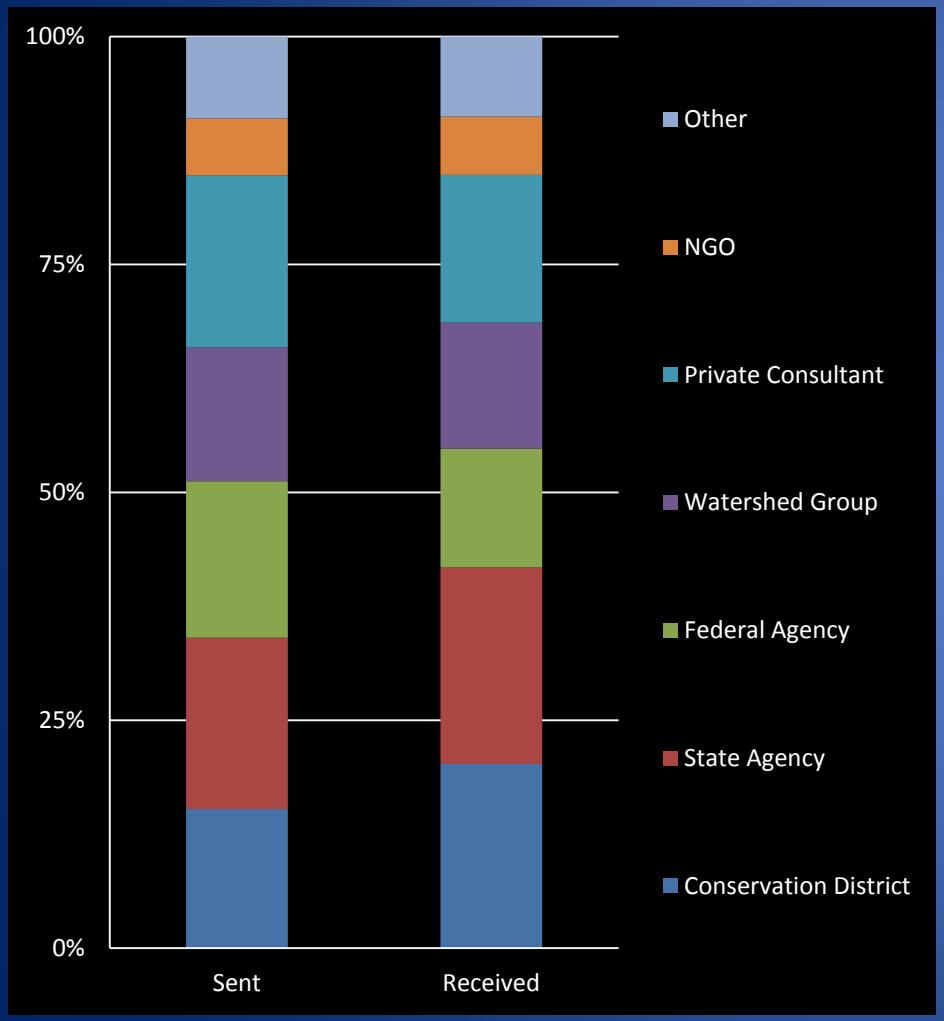
AVOID

Interagency Stream Restoration Policy

- Interagency workgroup
  - DEQ, DNRC, MDT, FWP, NRDP, USACE, NRCS, Conservation District
- Broader input from the stream restoration community
  - Consultants, Watershed Groups, NGOs, BLM, USFS, Academic, CDs
- Objective – Establish restoration project guidelines for funding and implementation
- Objective - Develop toolbox of guidance for improving stream restoration processes and outcomes

Stream Restoration Survey

Background

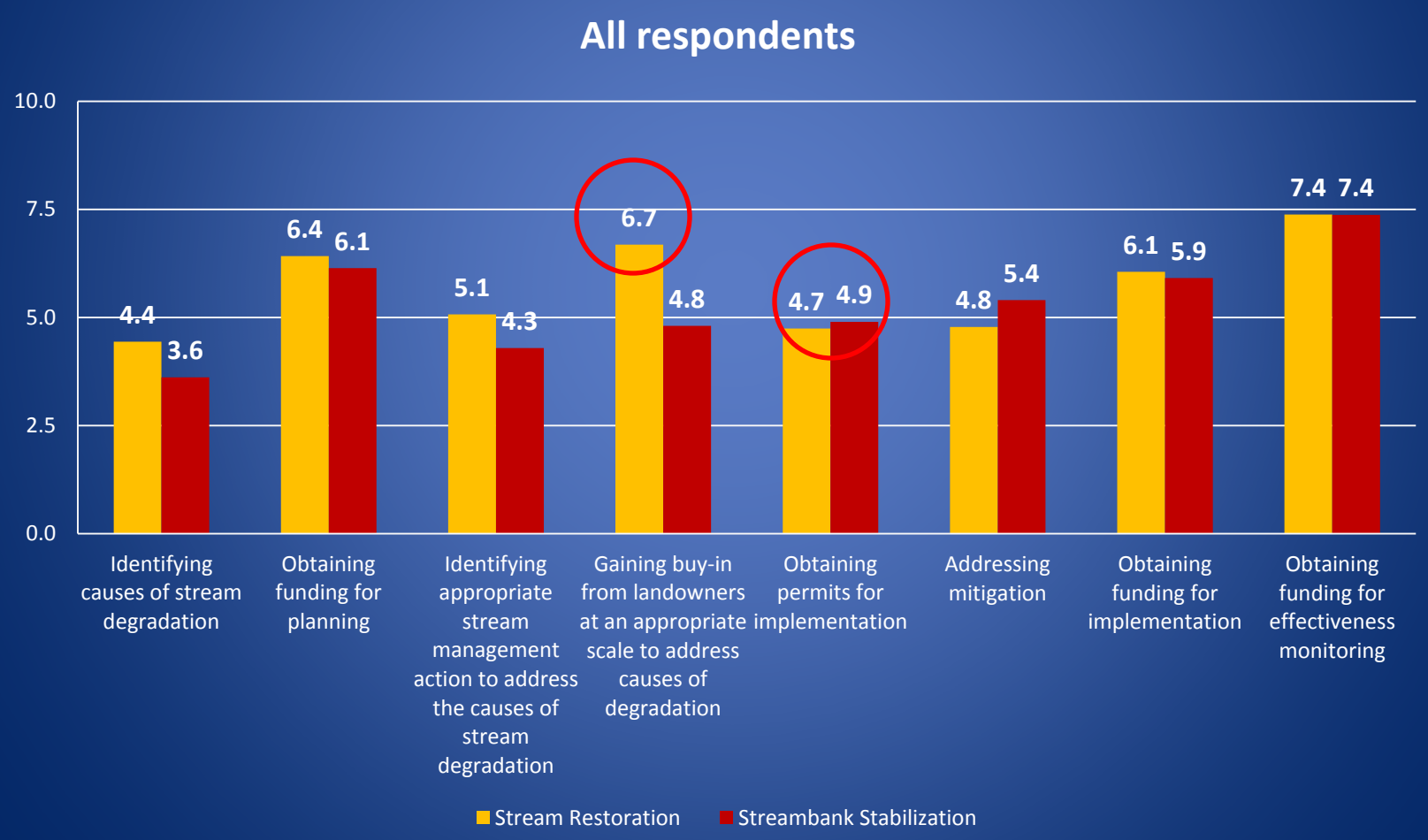


- Response rate >50%
- n = >180
- 8% of respondents administer permits
- Regions respondents work
  - Columbia River basin - 41%
  - Missouri (upper, middle, lower) - 29%
  - Yellowstone (upper and lower) – 8%
  - Statewide - 22%
- What are the issues in stream restoration?

Stream Restoration Survey

Inputs

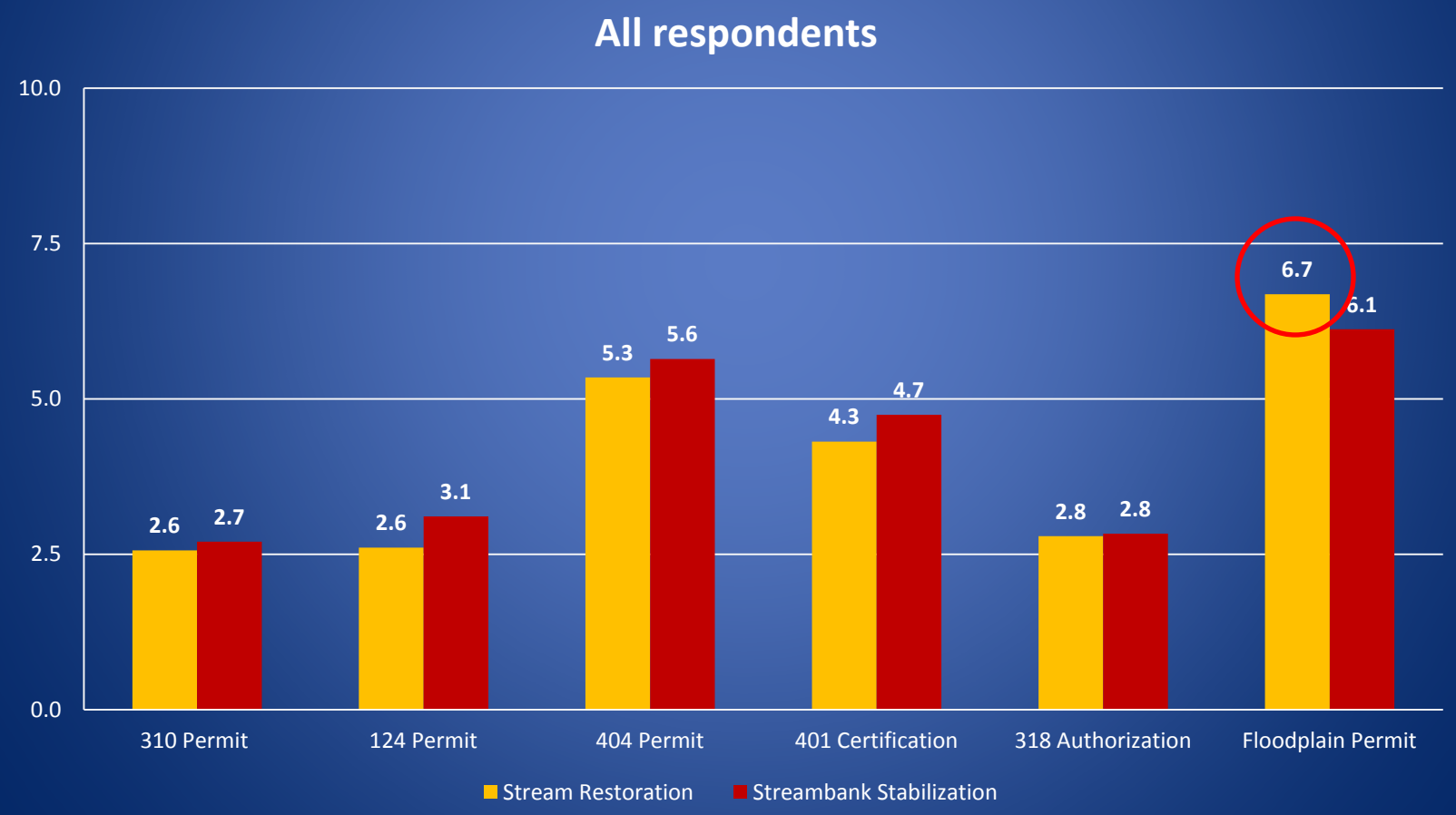
Q5: Please rate the difficulty of each of these steps in stream restoration and streambank stabilization.
0 means not difficult at all and 10 means that you regard it as extremely difficult.



Permitting

Q5: Please rate the difficulty of the permitting process for the following permits required for stream restoration and streambank stabilization work.

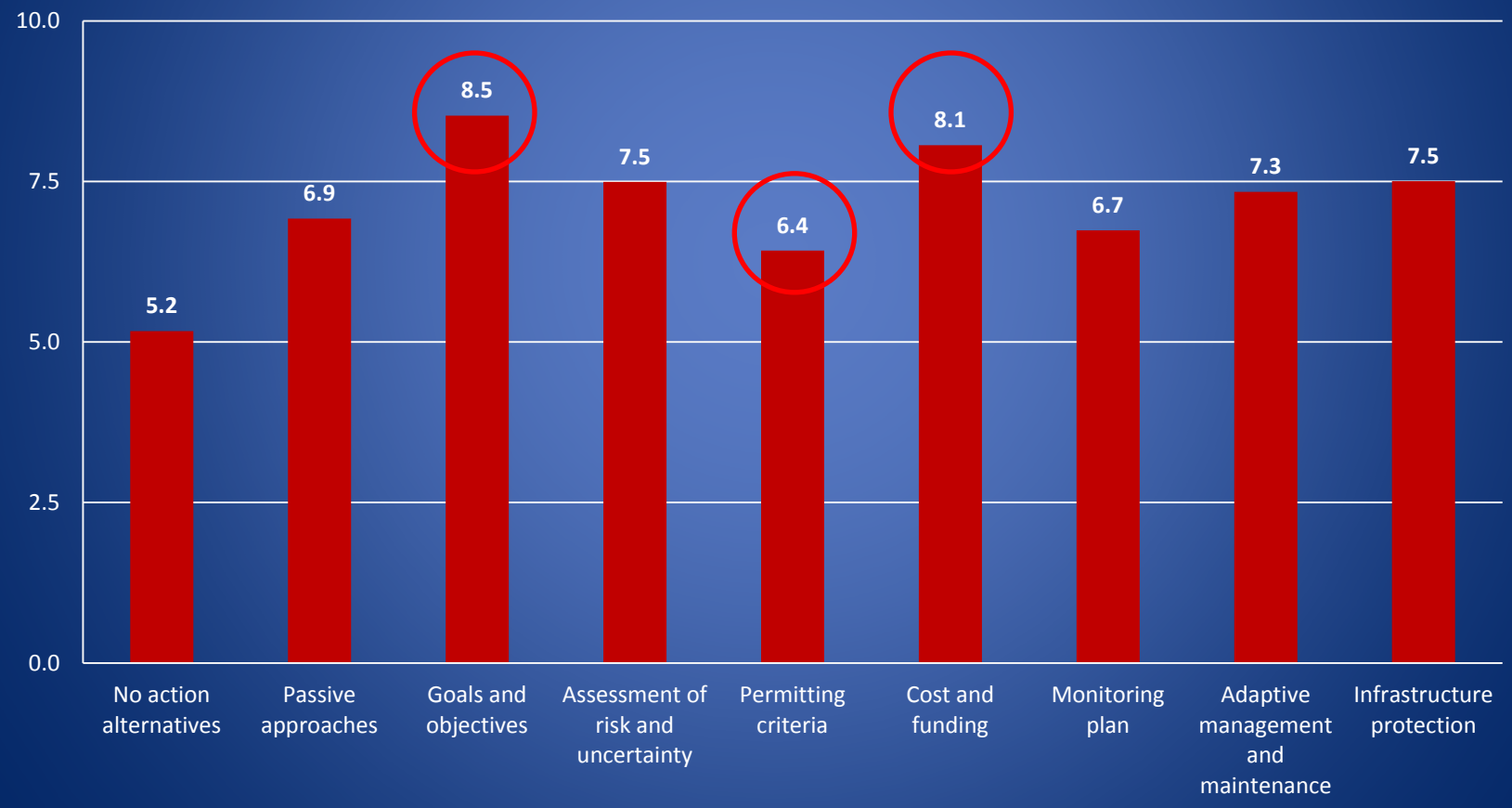
0 means not difficult at all and 10 means that you regard it as extremely difficult.



Project Planning

Q13: Please rate how important you regard the following **considerations** when planning, designing, and/or implementing stream restoration and streambank stabilization projects in Montana.

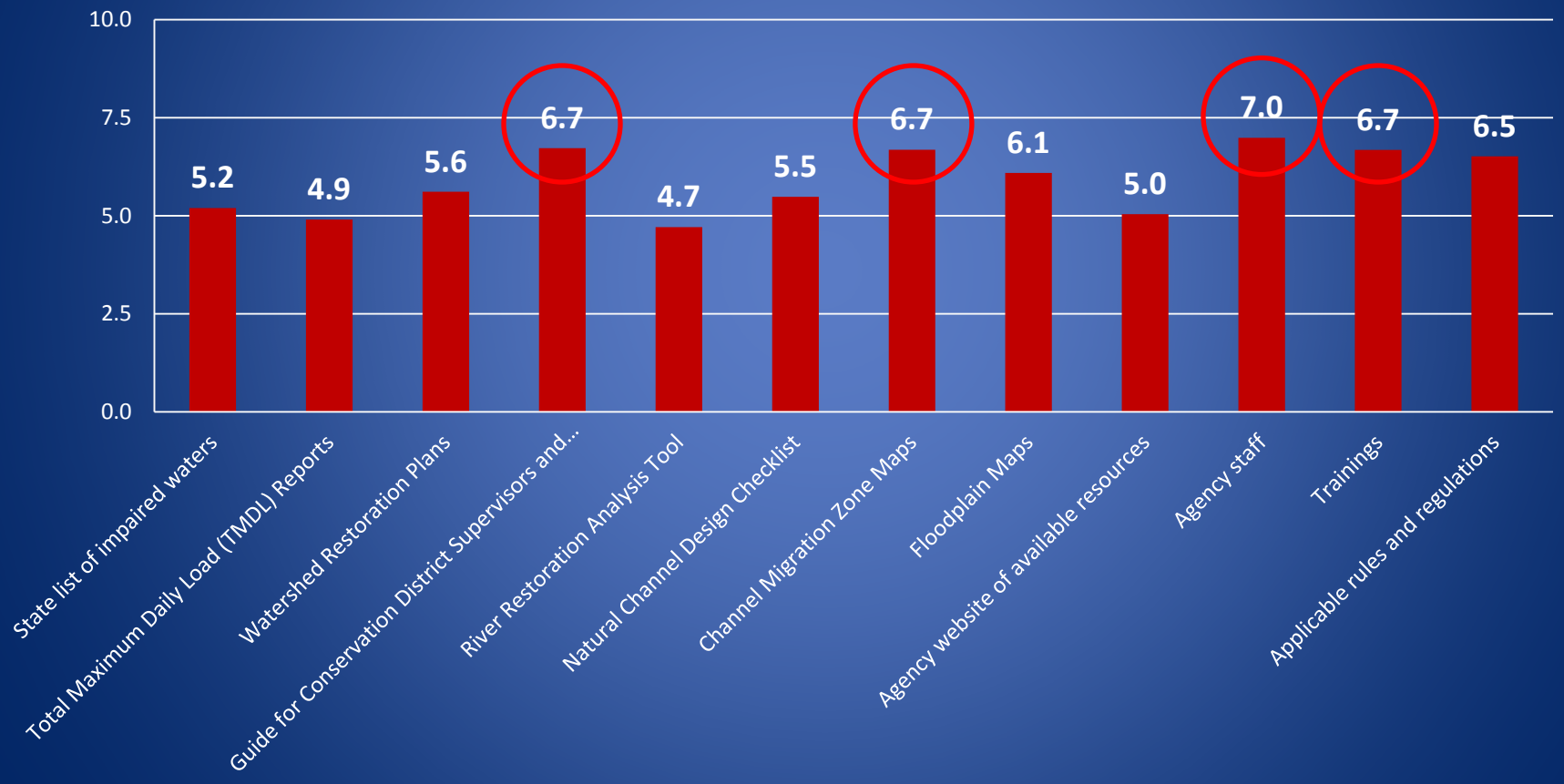
0 means not important at all and 10 means it is extremely important.



Project Resources

Q11: Please rate the usefulness of the following **resources** for project planning, review, and/or implementation.

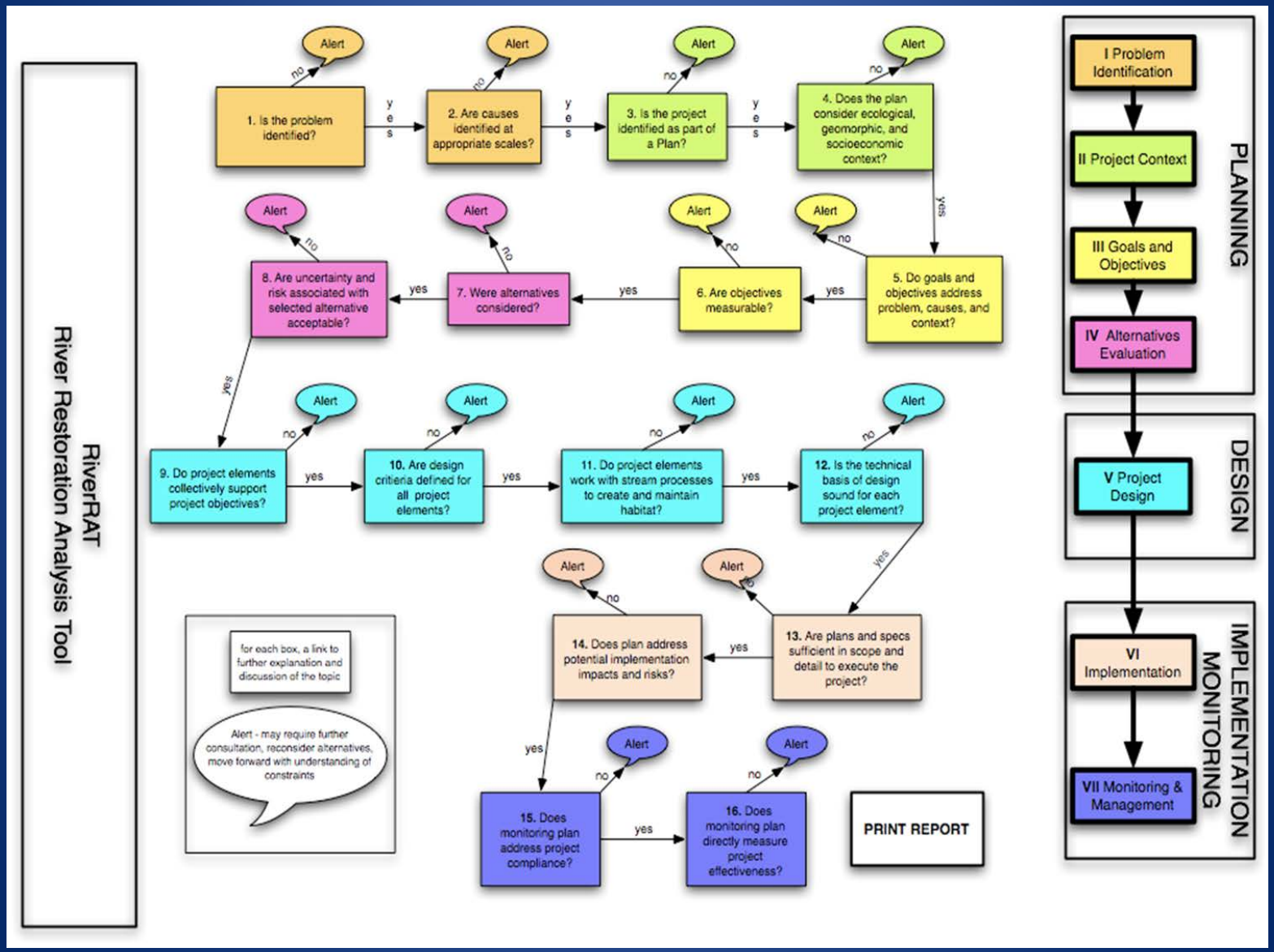
0 means not useful at all and 10 means it is extremely useful.



Policy

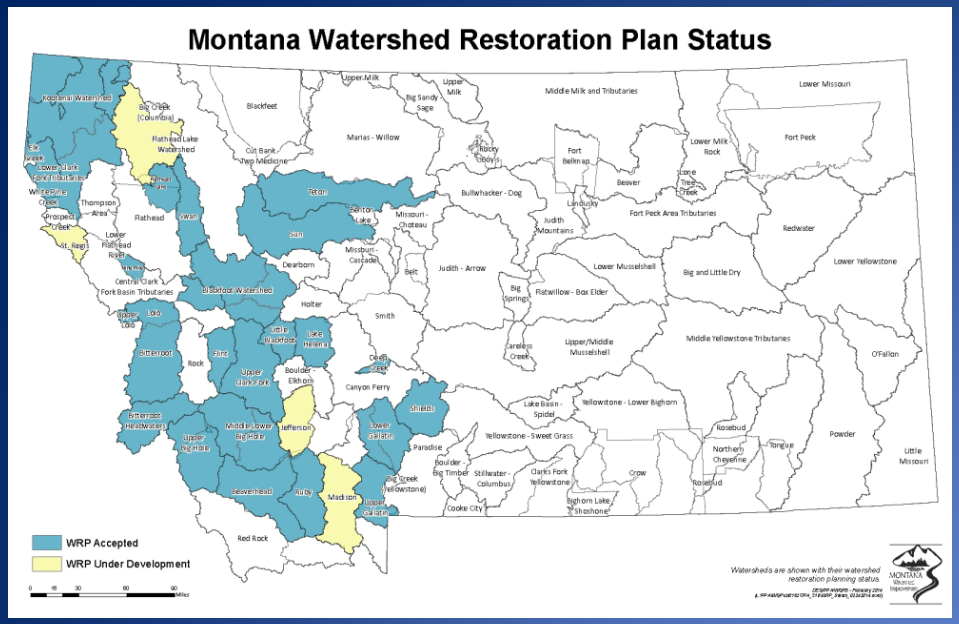
- **<u>Purpose</u>** - to provide a clear and consistent message for **broad range of stakeholders** in Montana for promoting natural stream functions and processes by implementing **contextually appropriate** stream restoration treatments
- **<u>Need</u>** – stream restoration is undertaken for a variety of goals and must address the balance between preserving and restoring ecological and hydrological functions and protecting valuable infrastructure
- Goal is to restore natural stream processes and develop projects that meet multiple objectives
  - Water Quality
  - Instream and Riparian Habitat
  - Fish and Aquatic Life
  - Floodplain function
  - Wetlands and natural storage
  - Wildlife

Policy Guidance



Identify the problem

- Consider the causes
- Consider the extent to which streambank erosion drives natural stream functions and the potential options available to address conditions of excessive erosion
- Protect existing woody riparian vegetation that provides natural bank stability and organic inputs to maintain stream functions



Site context

- Consider watershed scale planning efforts
- Consider the geological, hydrological, and ecological setting
- Consider the regulatory framework in place
- Consider the social and economic setting (local constraints)

Goals and objectives

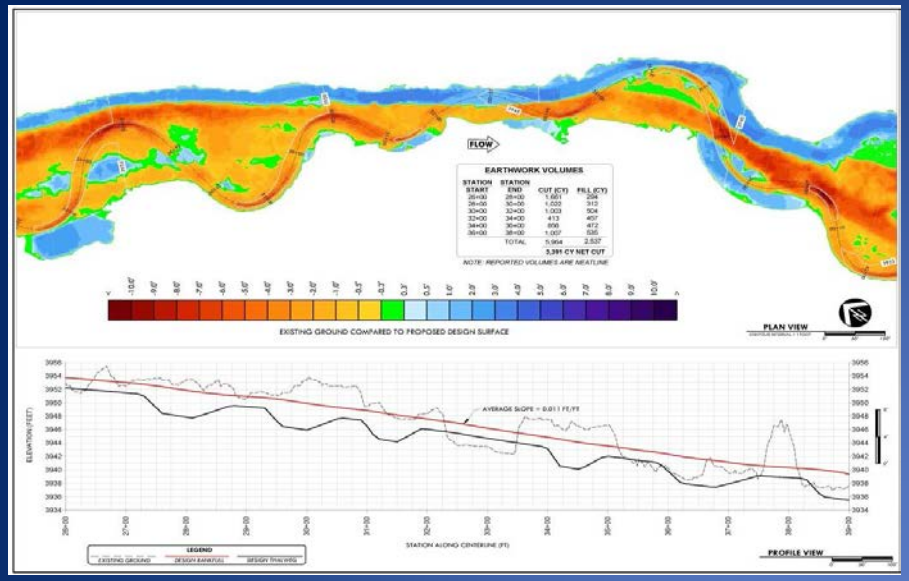
- Consider whether the goals and objectives address the primary causes and sources of degradation
- Consider whether the goals and objectives are **contextually appropriate** within the geological, hydrological, ecological and social setting
- Consider mitigation needs and how they address changes to natural stream processes

Design

- Consider the relative costs and benefits from alternative actions
- Address permit conditions and constraints
- Apply appropriate reference conditions
- Use materials most appropriate for restoration of natural stream and river functions

Implementation

- Use the restoration or stabilization approach that causes the least disturbance necessary to meet the project objectives
  - Approaches occur on a **spectrum** from no action to full stream reconstruction
  - Changing or removing the land use (instream) activities that are causing degradation or preventing recovery will result in a positive response toward restoring natural stream functions and processes
  - Limit cost and risk


FLOW
EARTHWORK VOLUMES
STATION START
STATION END
CUT (CY)
FILL (CY)
25+00 25+00 1,601 294
26+00 30+00 1,020 313
30+00 32+00 1,003 504
32+00 34+00 413 407
34+00 36+00 856 472
36+00 38+00 1,007 535
TOTAL 5,904 2,537
5,391 CY NET CUT
NOTE: REPORTED VOLUMES ARE NEATLINE
EXISTING GROUND COMPARED TO PROPOSED DESIGN SURFACE
PLAN VIEW
AVERAGE SLOPE = 0.011 FT/FT
ELEVATION (FEET)
STATION ALONG CENTERLINE (FT)
LEGEND
EXISTING GROUND
DESIGN BANKFULL
DESIGN THALWEG
PROFILE VIEW

What's next

- Finalize policy and send out for public review (May)
- Montana Stream Permitting: A Guide for Conservation District Supervisors and Others
- Additional restoration trainings
- Additional CMZ Mapping
- Online Toolbox for Stream Restoration Resources

Questions?

…streams in their winter freshets brought sand and soil to clog and to cover, and in course of time our home was ready for us again, and we moved in…

Badger, Wind in the Willows, 1908