Bitterroot Conservation District Projects

- Irrigation Management Study
- Cost Share Program

BCD Basics

- District's jurisdictional area is all of Ravalli County
- Responsible for implementing the Natural Streambed and Land Preservation Act ("310 law")
- Other activities include educational outreach and special projects focused on top natural resource concerns in Ravalli County:
  - Forest health
  - Pasture, range, and cropland health
  - Water quantity
  - Water quality
  - Noxious weeds

Morrison Maierle
engineers • surveyors • planners • scientists

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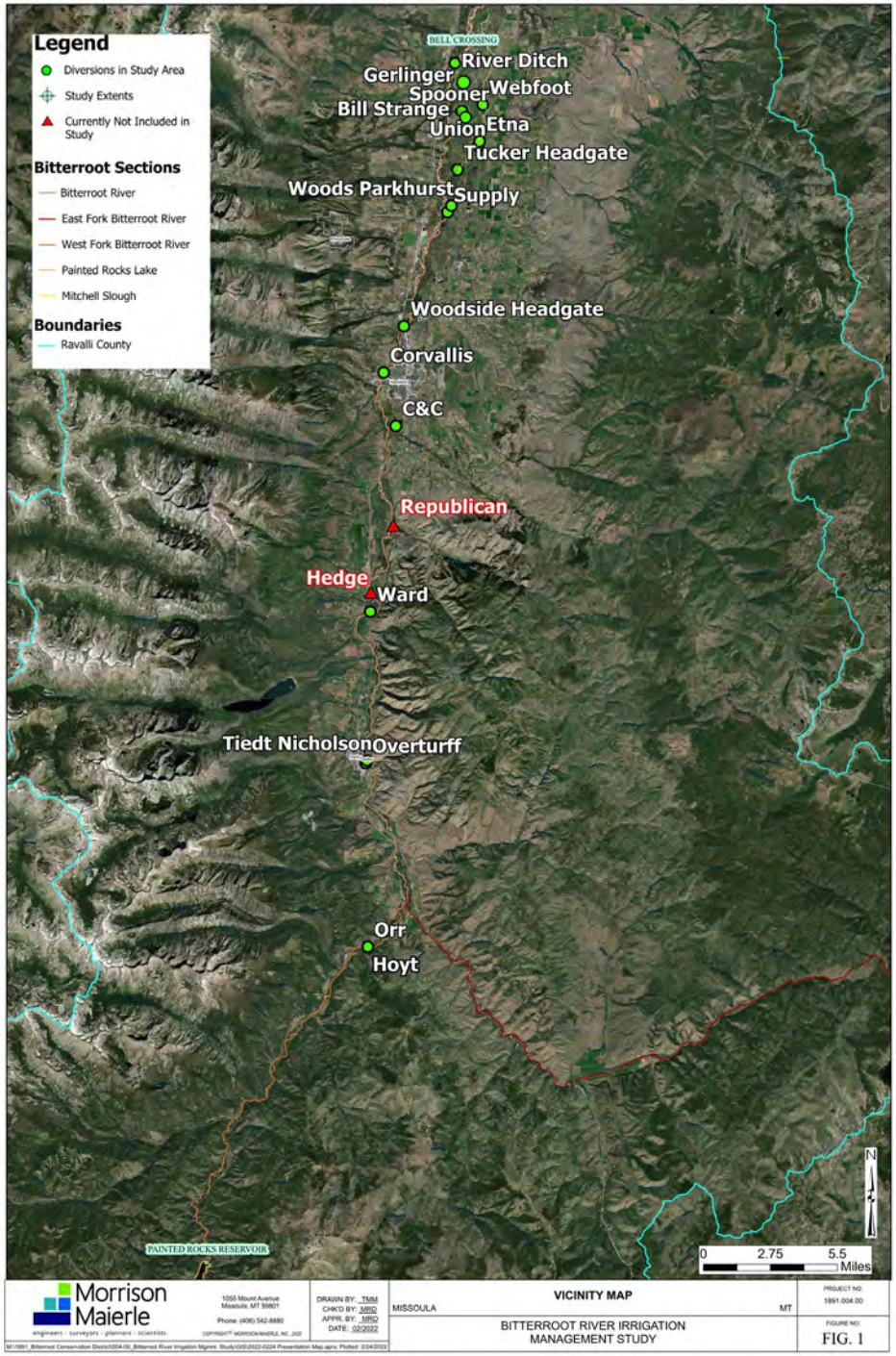
Bitterroot Irrigation Management Study

Bitterroot Conservation District

February 2022

BITTERROOT IRRIGATION MANAGEMENT STUDY

- In 2021 the BCD received a $125,000 Renewable Resource Grant from the DNRC to identify opportunities for optimizing irrigation water delivery along the Bitterroot River.



STUDY EXTENTS

- Study area extends approximately 60 miles of the main stem and the West Fork of the Bitterroot River from Painted Rocks Reservoir to Bell Crossing.
- The subject reach includes approximately 20 irrigation diversion points.

MASTER PLAN

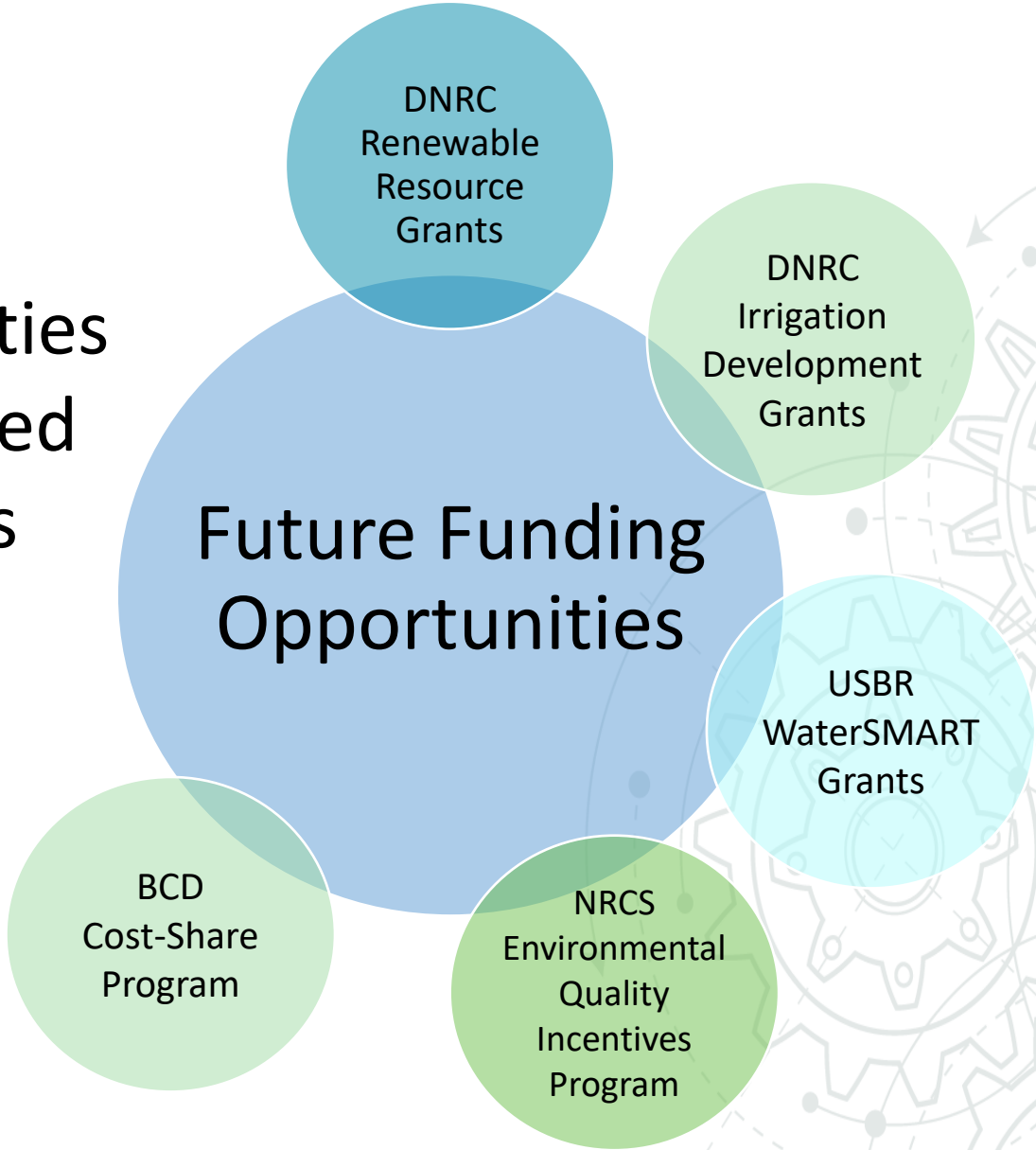

1. Information Collection & Literature Review
2. System Inventory & Assessment
3. Survey of Select Irrigation Structures
4. Hydraulic Assessment
5. Capital Improvements & Implementation Recommendations
6. Conceptual Designs
7. Final Report

SCHEDULE

Date	Task
October 2021	Information Collection & Lit. Review
November 2021	System inventory & Assessment
November 2021	Survey
Dec. 2021 – Apr. 2022	Hydraulic Assessment
April 2022	Flow Measurements
Dec. 2021 – May 2022	Capital Improvements & Management Plan
June – July 2022	Conceptual Design
June – Aug. 2022	Final Report

- Potential projects will be ranked according to criteria shown at right.
- Conceptual designs will be prepared for up to ten of the highest ranking projects.

- Funding opportunities will also be identified for priority projects



FINAL REPORT

- The results from this study will be summarized in a final report to the BCD that will be accessible to irrigators as a guidance document for future system improvements.

- Before finalizing the report, findings will be shared with irrigators and stakeholders in an open house setting.

DESIRED OUTCOMES

- Identify opportunities to conserve and manage surface water in order to provide more efficient use of irrigation water diverted from the Bitterroot River.
- Provide irrigators with information needed to undertake future projects with the greatest potential to improve water conservation and management.

BCD Cost Share Program

- BCD will pay up to 70% of project cost, up to $7000; Landowner must pay at least 30% of project cost
- Projects must be on-the-ground, within Ravalli County, private sector only, one project per person/group per year
- Applications accepted between July 1 and September 1; contracts awarded in October
- Grants awarded based on merit of the project proposal and benefit to a natural resource of area concern
- Examples of project areas:
  - ✓ Stream/fisheries improvements
  - ✓ Wildlife habitat improvements
  - ✓ Erosion Control
  - ✓ Upland improvements

Contact BCD office for more information

QUESTIONS???

Information Collection & Literature Review

- All available background information regarding the diversion of water along the stretch of the Bitterroot River being studied will be gathered and summarized in a technical memorandum and included in the final report.

SYSTEM ASSESSMENT

- Irrigation systems within the study area and will be inventoried and assessments will be performed for each headgate, flow measurement device, and diversion.

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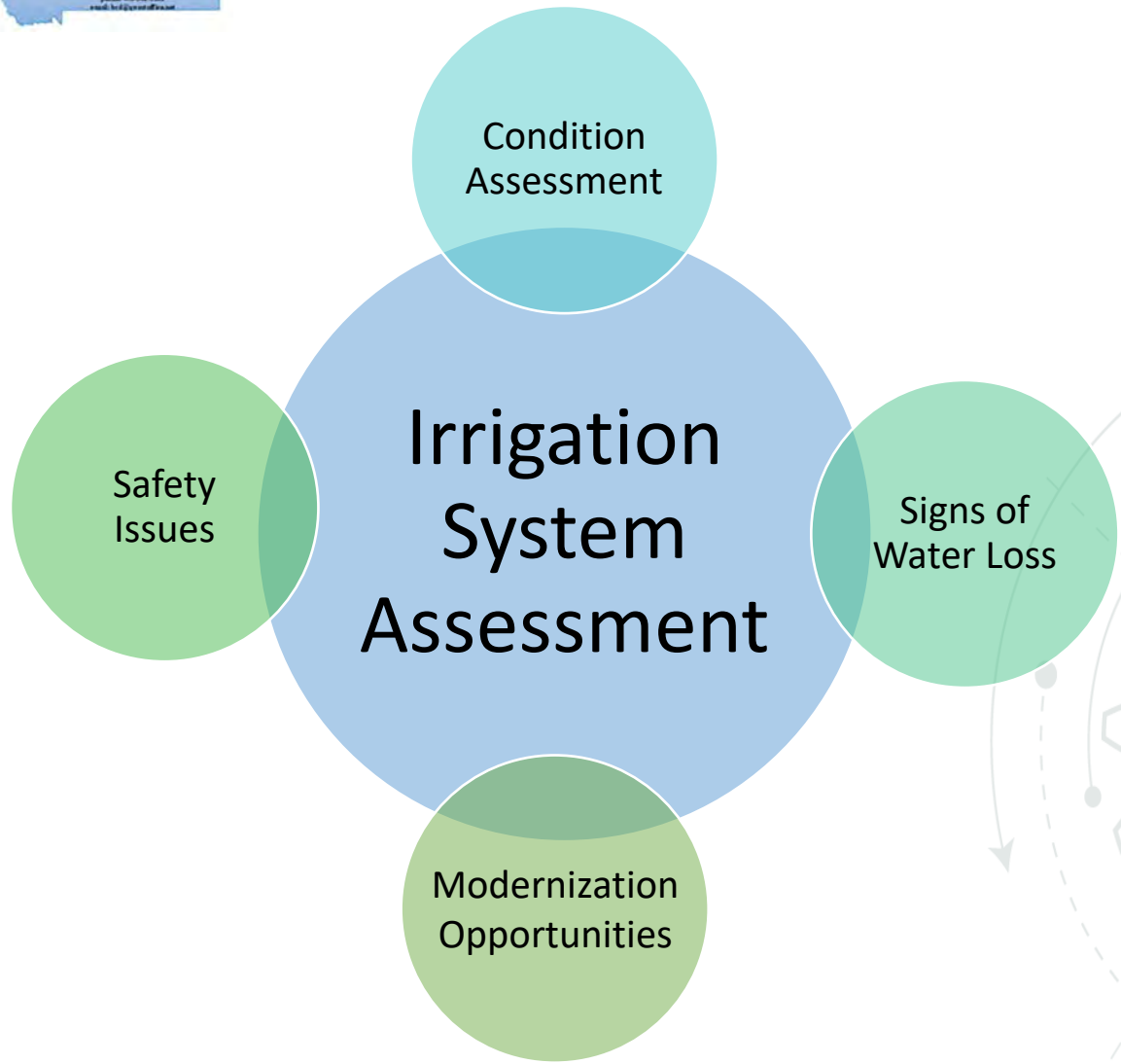

IRRIGATION SYSTEM ASSESSMENT

- Upon inventory and condition assessment, the structures will be rated with a standardized ranking system on their observed condition as (good, fair, poor, or lacking.)

SURVEY OF SELECT IRRIGATION STRUCTURES

- Topographic surveys will be completed for structures identified as fair, poor, or lacking.

- Local control survey and structure measurements will additionally be done for a limit of twenty select structures.

HYDRAULIC ASSESSMENT

- Hydraulic calculations will be conducted, as necessary, for priority sites identified in the Capital Improvement and Implementation Plan.

- The hydraulic assessment will be used to appropriately size infrastructure and estimate capacity and measurement at each headgate.