Chapter 6: Next Steps

6.1 Phases 2 Through 5

Although premature to describe in detail at this time, the potential goals and objectives of subsequent project phases are outlined. These will be refined and changed as needed, if the project proceeds through these subsequent phases.

6.1.1 Phase 2 – Feasibility Evaluation and Design of a 10 to 20 cfs Pilot Project

Phase 2, if stakeholders and Ecology decide to proceed to it, will focus on a pilot project Feasibility Evaluation of the drainage(s) recommended in the Prefeasibility Assessment (Phase 1) and the preparation of a proposed pilot project design for a single drainage. At this time Phase 2 will be funded using the balance of the Grant awarded to LCCD for this project. As currently conceptualized, such a pilot project will be a 10 to 20 cfs project delivering water into the targeted drainage for 50 to 150 days per year, for 2 to 3 years, in the autumn, winter, and spring. If authorized, Phase 2 likely will consist of several main elements:

- Identify and engage an entity that will be the permit holder for the pilot project (for such things as water rights, SEPA, construction, etc.), own and operate the pilot project, and execute any needed land access agreements, subcontracts, and reports.
- Secure an access to a route for the pilot project, including a point of withdrawal on Lake Roosevelt, delivery pipeline routing and pump station location(s), and the targeted drainage itself – especially to satisfy the needs and concerns of public and private landowners within the targeted drainage.
- Once the route is secured:
    - Develop a preliminary engineering design for the water withdrawal, transport, and delivery system, including potential modifications within the targeted drainage as needed to alleviate landowners concerns and potential choke points.
    - Refine the conceptual hydrogeologic model based on a more detailed field examination of the targeted drainage with the purpose of better predicting areas within it that have greater and lesser aquifer recharge potential. This effort might utilize the soon to be completed GWMA groundwater model.
    - Prepare preliminary characterization and monitoring plans for the proposed pilot project.

With completion of Phase 2 the project proponents will have selected and secured a route, and prepared pilot project characterization and monitoring plans, engineering plans with

associated costs, and an implementation plan. With these documents the owning-operating entity should be in a position to prepare and submit permits needed to authorize and implement a 10 to 20 cfs pilot scale Rehydration Project, secure funding to build it, and execute contracts needed to make the pilot project happen. Permitting, funding, contracting, construction, and implementation of a pilot scale Rehydration Project will be done under Phase 3.

6.1.2 Phase 3 – Implementation of a 10 to 20 cfs Pilot Project in a Single Drainage

The current project concept for Phase 3 is to permit, fund, contract, construct, and implement a 10 to 20 cfs pilot scale Rehydration Project in one targeted drainage. This pilot project will deliver water from Lake Roosevelt to the targeted drainage approximately 50 to 150 days per year (depending on availability), generally in the autumn, winter, and spring, for 2 to 3 years. Such a project would deliver between approximately 1,000 and 6,000 acre-ft per recharge season. During the pilot project monitoring data will be collected in the target drainage and be compared to pre-project baseline data to see how the surface water and groundwater systems are responding to rehydration. Operational data will be collected and evaluated in an attempt to identify optimal operational scenarios and practices. At the completion of the pilot project several decisions will be evaluated. These include:

- Termination of the project as it is shown to not be a cost-effective way to deliver water into the project area, or
- Construction of additional pilot projects in other drainages is they are available and feasible and/or
- Expansion of the pilot project to maximize the rehydration and recharge potential in the targeted drainage.

Construction of additional pilot projects might result in an additional four 5 to 20 cfs projects in other drainages. Assuming these operate for 50 to 150 days per year, potential delivery volumes could range from approximately 1,000 to 12,000 acre-ft per season. This expansion would be done under Phase 4. Expansion in the target drainage could yield a 20 to 50 cfs project, operating 50 to 150 days per year. Such a project could deliver approximately 2,000 to 15,000 acre-ft of water to the targeted drainage each year. This expansion would be done under Phase 5. The decisions to proceed to Phase 4 and/or 5 would be based on performance and cost data collected in Phase 3.

6.1.3 Phase 4 – Expansion of 5 to 20 cfs Pilot Projects into Multiple Drainages and Phase 5 – Construction of a Full Sized, 50 to 250 cfs Rehydration Project in Multiple Drainages

In our estimation is clearly is premature to speculate at this time what potential Phase 4 and Phase 5 projects might look like. This is simply because work assessing the basic feasibility of the entire Rehydration Project being done under Phase 1 is just now complete and to be done under Phase 2 has not even been implemented. For broad brush planning purposes these projects might entail the delivery of water on the order of 25,000 to 75,000 acre-feet per year.

Nevertheless, if such a project occurs the potential water delivery and recharge volumes have the potential supply a significant part of the water currently being used by the 50,000 plus acres of groundwater supplied irrigation pumping now underway in the northeastern portion of the Odessa Groundwater Management Subarea. Under a final build-out scenario that currently envisions delivery of up to 250 cfs into the project area via several drainages in an average 150-day per year recharge window, approximately 75,000 acre-feet of water would be delivered into the project area. While this does not completely replace the groundwater pumping on the 50,000 plus irrigated acres in the project area, it would offset some of that pumping. More water would obviously be better, and would be needed to begin to replace groundwater already removed from aquifer storage. At this time though, we simply cannot predict if a larger project is feasible. That is the objective of Phase 3.

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