

## Coolin Sewer District Special Meeting Minutes October 29, 2025

The Coolin Sewer District Board of Directors met on October 29, 2025, at the Coolin Civic Center. Those present were Paul LaCasse, Josh Christensen, and Jake Copeland. Jim Morse was absent. Also present were Chris Morris, Skyler Day, and Jordan Brooks. Keller Associates was represented by Kyle Meschko and Zack Wallin. Jake called the meeting to order at 4:07pm.

The purpose of the meeting was to receive an update on existing flow data and to further discuss the Wastewater Treatment Plant Preliminary Engineering Report (WWTP PER) to be drafted for improvements.

Zack and Kyle explained that the purpose of the PER is to further define previously identified improvements as stated in the Wastewater Facility Plan, approved by the Idaho Department of Environmental Quality (IDEQ) on 11/5/24. Zack stated that this is a necessary step in the improvement process.

An outline of what was discussed, including notes from Keller Associates are attached.

Zack and Kyle provided an update on the recent submission of the *Wastewater Facility Plan Amendment – Capacity Update Tech Memo* Revision #1 to IDEQ. The amendment is showing available additional connections for LIDs, based on the original design criteria as indicated. The intent is to receive support from IDEQ to allow the handful of LIDs that are ready to connect to the system. IDEQ has stated that the Design Seasonal Average Daily Flow (DSADF) for the District is what will be used when deciding. When DSADF is used instead of the Average Daily Flow (ADF) there's a difference of 10 million gallons, which automatically puts the District over capacity. Zack reported that Chris Westermen at IDEQ is reviewing it. The amendment was first submitted in the summer; after IDEQ requested additional details, all information was provided in the resubmission.

Kyle noted funding for improvements will need to be addressed soon, whether it be just enough for LIDs or enough to plan for some growth. He cautioned that there will never be a cheaper time to make improvements than there is now.

Amy Anderson commented that planning for growth is not always the case. Jake stated zero growth has been discussed and that Keller did bring that up when working on the facility plan. At the time, the Board had decided to plan for a small amount of growth, which is what is shown in the facility plan.

Paul motioned to adjourn the meeting at 6:04pm. The motion was seconded by Josh and carried.

Submitted by,  
Jordan Brooks  
Clerk | Treasurer  
Coolin Sewer District

# Coolin Sewer District

Meeting Sign in Sheet

10/29/25

Print your first and last name below. Thank you!

1. Steven & Lori Yob
2. Mike Budig
3. Jaime Yob

Amy Anderson  
Ryan Yob

- 4.
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Coolin Sewer District  
WWTP PROJECT  
Kickoff Meeting Agenda

**Project:** Wastewater Treatment Plant and Reuse Expansion Improvements      **Date:** October 29, 2025

**Client:** Coolin Sewer District      **Project No:** KA# 223016 -TO 09

**Attendees:**

District: *Paul, Jordan, Jake, Chris, Skyler, Josh*  
Keller: Kyle Meschko, Zack Wallin

**PROJECT OVERVIEW**

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- Introduction
  - PER Purpose
    - Further Define previously identified improvements required to:
      - Meet new weather station (Priest Lake) for allowable irrigation (anticipated DEQ revised permit)
      - Capacity for existing LIDs (not yet connected)
      - Capacity for future growth
    - Provide a draft Preliminary Engineer Report to progress towards improvements
  - Existing Flows Review
    - Flows received from District (6/1/2023 through 9/6/2025)
      - Average Daily Flow = 50,700 gallons/day
      - Maximum Daily Flow = 131,300 gallons/day
      - Design Seasonal Average Daily Flow (required by DEQ) = 76,100 gallons/day ***This flow refers to Memorial day to Labor day flows, which is the highest flow period of the year***

***The table below is a reference point to existing system characteristics in terms of the reuse site.***

| Row Labels                        | Existing |
|-----------------------------------|----------|
| Existing Land Application (acres) | 52       |
| Existing Storage (acre-ft)        | 48       |

- Projected Flows
  - Potential Scenarios for project phasing
    - Scenario 1: Existing Flows



- No new connections (moratorium continues)
- Includes DEQ's design flow and new permit

| Row Labels                                | (gal/day) | (gal/day/ERU) |
|-------------------------------------------|-----------|---------------|
| Design Seasonal Average Daily Flow        | 76,100    | 120           |
| Average of Daily Flow for all data points | 50,700    | 80            |
| Max of Daily Flow for all data points     | 131,300   | 207           |

| Row Labels                        | Scenario 1 |
|-----------------------------------|------------|
| Required Land Application (acres) | 90         |
| Required Storage (acre-ft)        | 62         |

- Scenario 2: LID expansion
  - Increase capacity for paid in LIDs connections (not open to general public)
    - 633 ERUs plus the remaining 190.5 LID connections.
      - District confirms that is the correct number outstanding LID connections? ***District to confirm this is the correct number***

| Row Labels                                         | (gal/day) |
|----------------------------------------------------|-----------|
| Design Seasonal Average Daily Flow for 824 ERUs    | 99,000    |
| Average of Daily Flow for 824 ERUs                 | 65,900    |
| Max of Daily Flow for all data points for 824 ERUs | 170,800   |

| Row Labels                        | Scenario 2 |
|-----------------------------------|------------|
| Required Land Application (acres) | 115        |
| Required Storage (acre-ft)        | 79         |

- Scenario 3: Facility Plan projected growth
  - 2043 projection identified in facility planning study (940 ERU's)



| Row Labels                                         | (gal/day) |
|----------------------------------------------------|-----------|
| Design Seasonal Average Daily Flow for 940 ERUs    | 113,000   |
| Average of Daily Flow for 940 ERUs                 | 75,200    |
| Max of Daily Flow for all data points for 940 ERUs | 195,000   |

| Row Labels                        | Scenario 3 |
|-----------------------------------|------------|
| Required Land Application (acres) | 130        |
| Required Storage (acre-ft)        | 90         |

- Questions
  - What is the current sludge depth in each lagoon? **Chris with the District estimates about 2.5 ft of sludge are in the existing lagoons.**
  - Please describe current irrigation operation-assume valve open to lagoon, pumps manually turned on **No alarms or shutoffs are in place, the pumps are set to a timer, from 4 am to 4pm (12 hours)**
  - Any known issues with clogging in the existing pumps? **Existing pump type occasionally clogs. District is okay with operating these pumps for now, but would prefer an alternate pump type to reduce maintenance associated with clogging. RC worst reportedly clears pumps of debris 1-2 times per year.**
  - Any influent data available for TKN, BOD, TSS? **District does not have this data. District plans on collecting several influent grab samples over the next few months.**
- Project Elements
  - Additional Winter Storage Lagoons
    - Recommend 12 ft deep;
    - Deeper lagoons are more difficult to pass leak test, **Especially lagoons installed after the 2007 rule change, which reduces the amount of exfiltration allowed for a passing leak test.**
    - Surface aeration is possible with 12 ft deep lagoons; can be more easily phased than diffuser system
  - Additional Irrigation Area
    - Valves to allow isolation of irrigation areas
    - Piping improvements
    - Match sprinkler head spacing
  - Pump Station Improvements
    - Replace Pumps
      - Size pumps for 16 hours per day, 7 days per week operation in July **District prefers to keep current timing of 5 days per week, 12 hours per day.**
      - 3 pumps, two active, one on standby **DEQ regulations do not necessarily require a redundant pump like in a lift station, but since most the irrigation takes place in July and August, if a pump is down, and the system cannot remove reuse water from the lagoons, there is risk of an overflow event.**
        - **At a minimum, District prefers to have one pump as a shelf spare in case of emergency. The shelf spare pump does not necessarily need to be installed.**

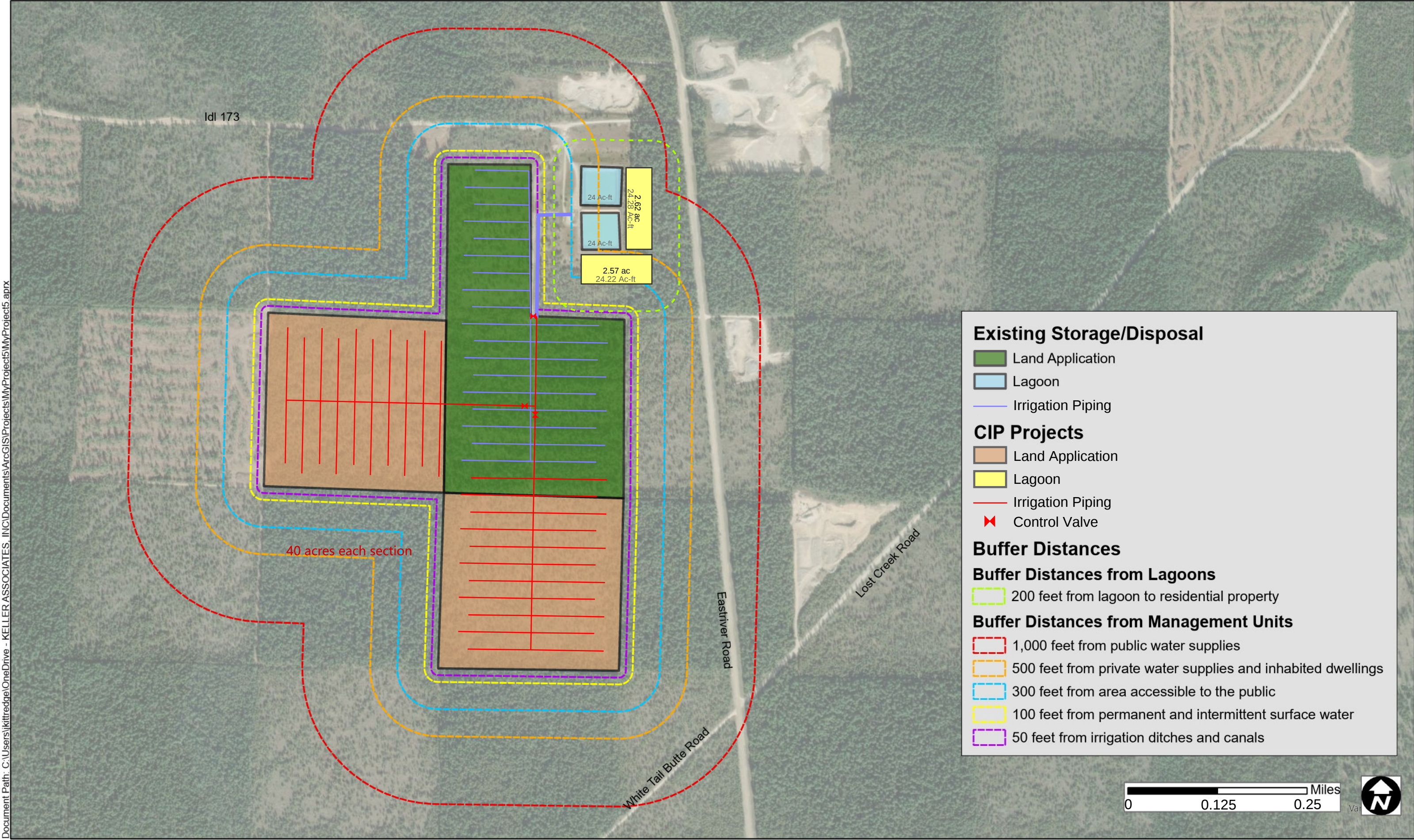


- ~320 gpm per pump per the above **Flows per pump will increase to accommodate 5 days/12 hours per day.**
  - Replace piping
    - Prefer to use existing structure-to be confirmed **KA to coordinate with pump supplier to confirm type and fit of alternate pump.**
  - Reuse 36" chlorine contact pipe
    - Detention time of 37 minutes based on the proposed pump scenario, and 12,240 gallons of storage within the pipe **Increased flows will reduce detention time.**
    - **Pipe is already 200'+ long consider parallel pipe to reduce length.**
- Opinion of Probable Cost
  - Scenario 3
    - ~\$10.2 million **Public asks if this is the "Cadillac" version of a project. KA confirms that this is a preliminary value and will be updated again before completion of the PER.**
  - Cost savings measures (compared to Facility Plan)
    - Shared dike walls for lagoons
    - Shallower lagoons
    - Reuse existing pump station
    - Surface aerators instead of diffuser system
    - Reuse chlorine contact pipe
  - Opportunities for reduced project scope
    - One storage lagoon and reduced irrigation area
      - Lower capacity (fewer ERUs allowed to connect)
    - Pump replacement phasing
    - Include Aerators at a later phase
- Permitting and Leasing Requirements
  - Idaho Department of Lands
    - Acquisition approach-acquire land in phases, or all at once? **District leans towards acquiring/leasing all of the land at once, or at least reserving all of the land needed for future reuse.**
    - Any additional coordination between District and IDL? **No additional coordination has taken place at this time. KA to reach out to IDL to confirm acquisition of additional lease land is still feasible. IDL has previously expressed that lease cost may increase 3x. District notes that the IDL application itself is only one page.**
    - **A Member of the public expressed concern over environmental protections with the system. Member specifically is concerned with phosphorous limits (which are listed as monitoring only in the current permit, and anticipated future permit)**
      - **KA/District-the proposed project is meant to meet anticipated permitted limits set by DEQ. DEQ sets the permit. As an effort to protect the environment, District is planning on installed monitoring wells (which are not yet required by DEQ) to gain data and insight into the local groundwater quality.**
      - **DEQ is the entity responsible for setting the permit, not the District. The District intends to continue open dialogue with DEQ incase there would be permit changes/revisions.**
- Funding
  - Possible ways of getting funding for projects.
    - Increase user rates



- Private Bank/financial institution loan
  - Another LID...
  - Continue applying for DEQ funding...
- Key Deliverables:
  - PER Deliverables
    - PER and Drawings
- Project Schedule
  - Overall PER Schedule
    - Workshop Meeting-Early December
    - Draft PER to Owner on or before 1/06/2026
  - Upcoming Meetings
    - Kickoff Meeting w/ Client: Today
    - PER review Meeting w/ Client: Early December-Poll to follow
- Action Items
  - ***District is interested in carrying through Scenario 2 and 3 at this time.***

Document Path: C:\Users\kittredge\OneDrive - KELLER ASSOCIATES, INC\Documents\ArcGIS\Projects\MyProject5\MyProject5.aprx



**Existing Storage/Disposal**

- Land Application
- Lagoon
- Irrigation Piping

**CIP Projects**

- Land Application
- Lagoon
- Irrigation Piping
- Control Valve

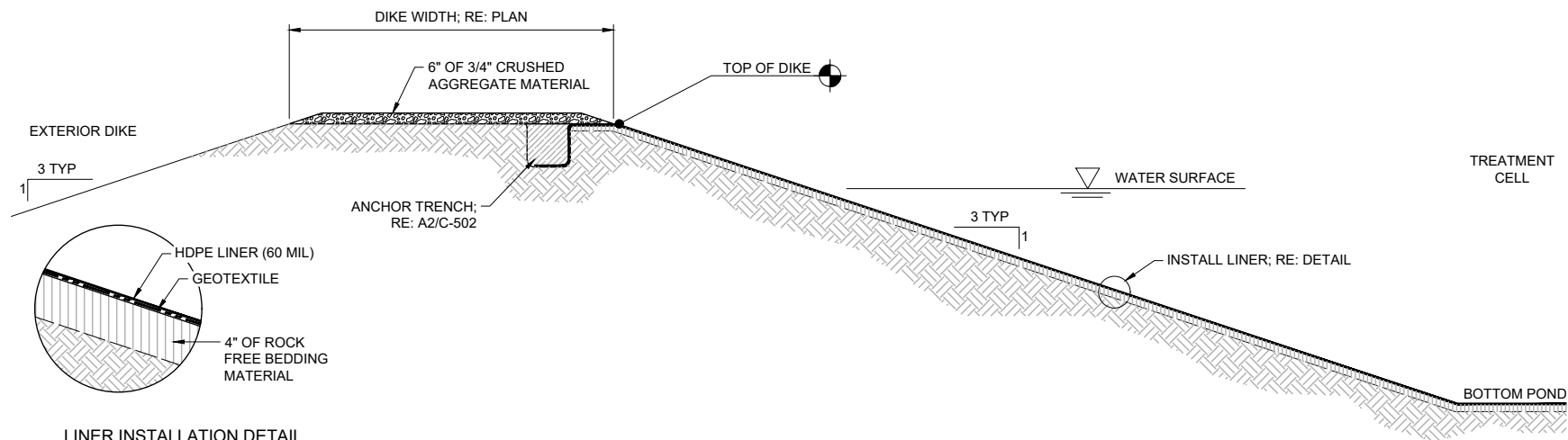
**Buffer Distances**

**Buffer Distances from Lagoons**

- 200 feet from lagoon to residential property

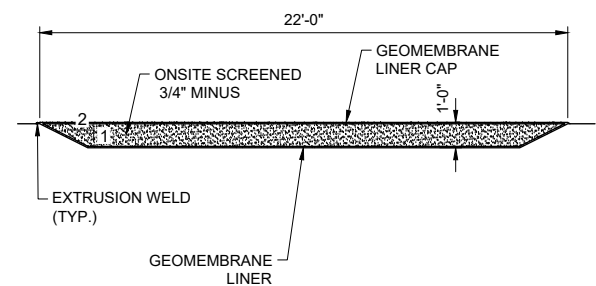
**Buffer Distances from Management Units**

- 1,000 feet from public water supplies
- 500 feet from private water supplies and inhabited dwellings
- 300 feet from area accessible to the public
- 100 feet from permanent and intermittent surface water
- 50 feet from irrigation ditches and canals

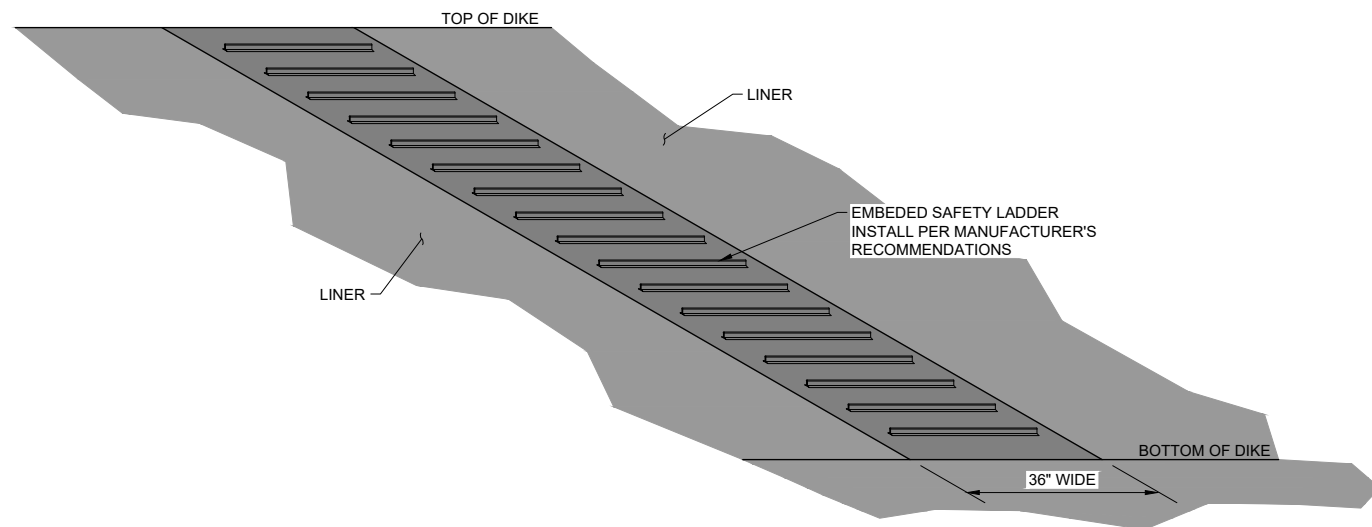


LINER INSTALLATION DETAIL

C3 TYPICAL LAGOON DIKE SECTION  
N.T.S.



C1 BALLAST TRENCH  
N.T.S.



B3 LINER SAFETY LADDER  
N.T.S.

30% Not for  
Construction

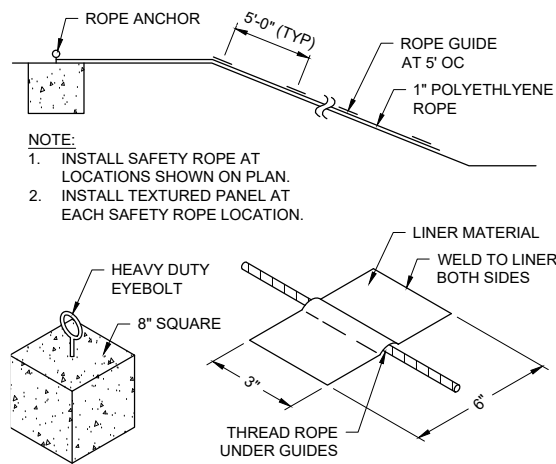
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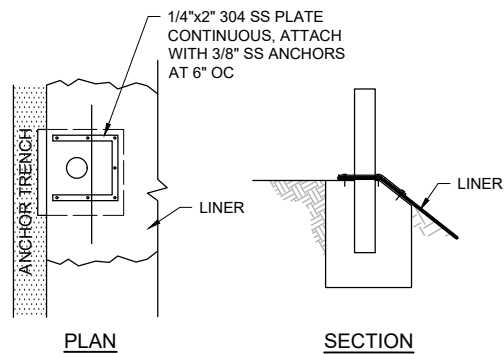
CSD Reuse Improvements

Lagoon Details

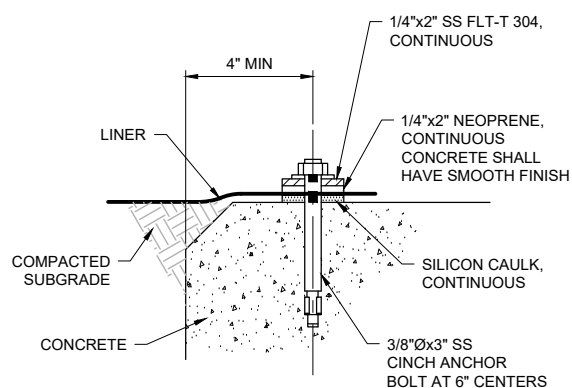
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| C-500                                         |        |



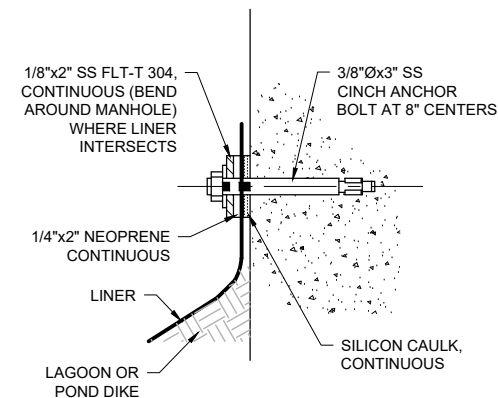
**C2011** SAFETY ROPE DETAILS  
N.T.S.



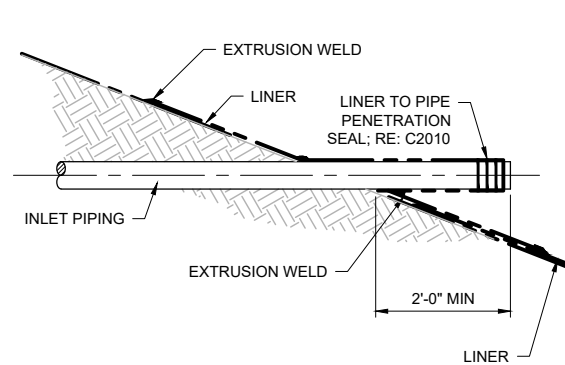
**C2006** LINER TO AERATOR ANCHOR  
N.T.S.



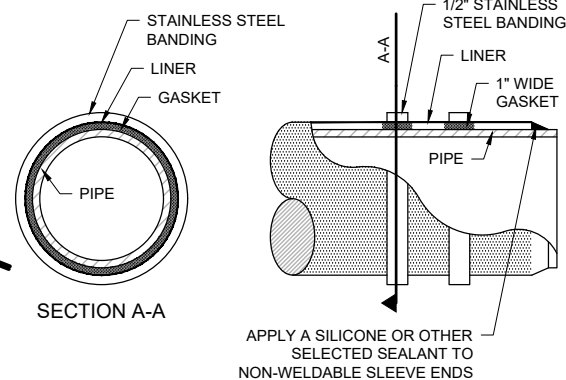
**C2007** LINER TO CONCRETE BATTEN  
N.T.S.



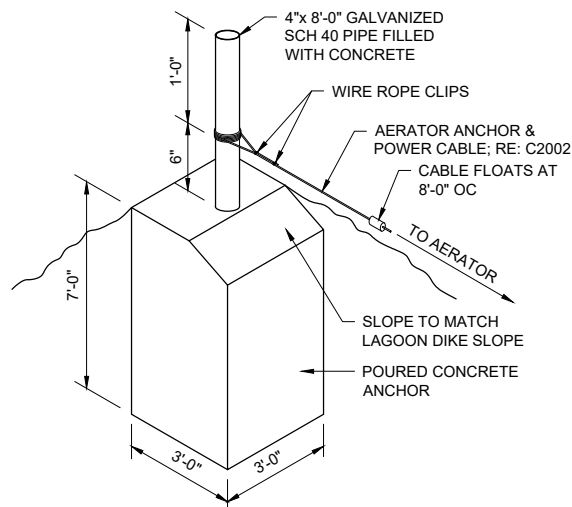
**C2008** LINER TO CONTROL STRUCTURE  
N.T.S.



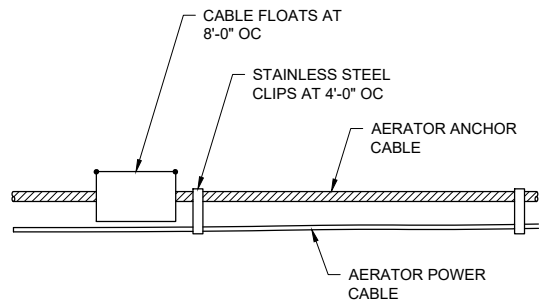
**C2009** LINER PIPE PENETRATION  
N.T.S.



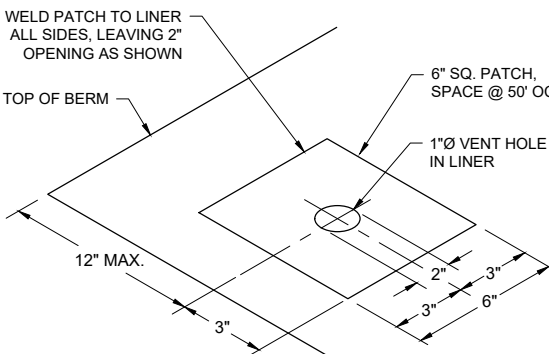
**C2010** LINER TO PIPE PENETRATION SEAL  
N.T.S.



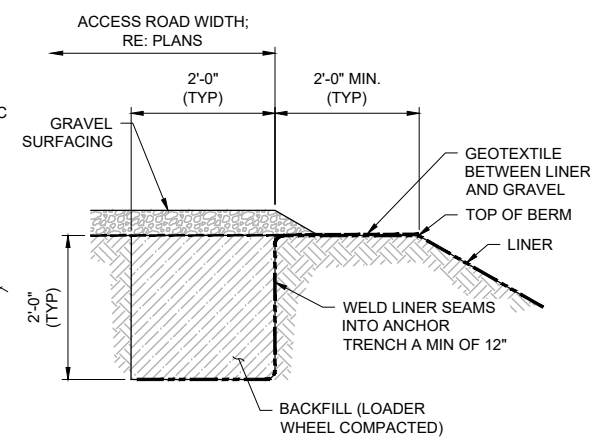
**C2001** AERATOR ANCHOR PIER  
N.T.S.



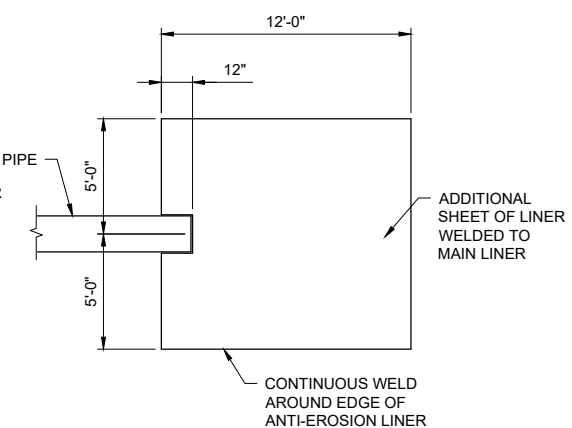
**C2002** AERATOR ANCHOR & POWER CABLE  
N.T.S.



**C2003** LINER AIR VENT  
N.T.S.



**C2004** LINER ANCHOR TRENCH  
3/4 inch = 1 foot 0 inch



**C2005** LINER ANTI EROSION PAD  
N.T.S.

30% Not for Construction

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CSD Reuse Improvements

Lagoon Details

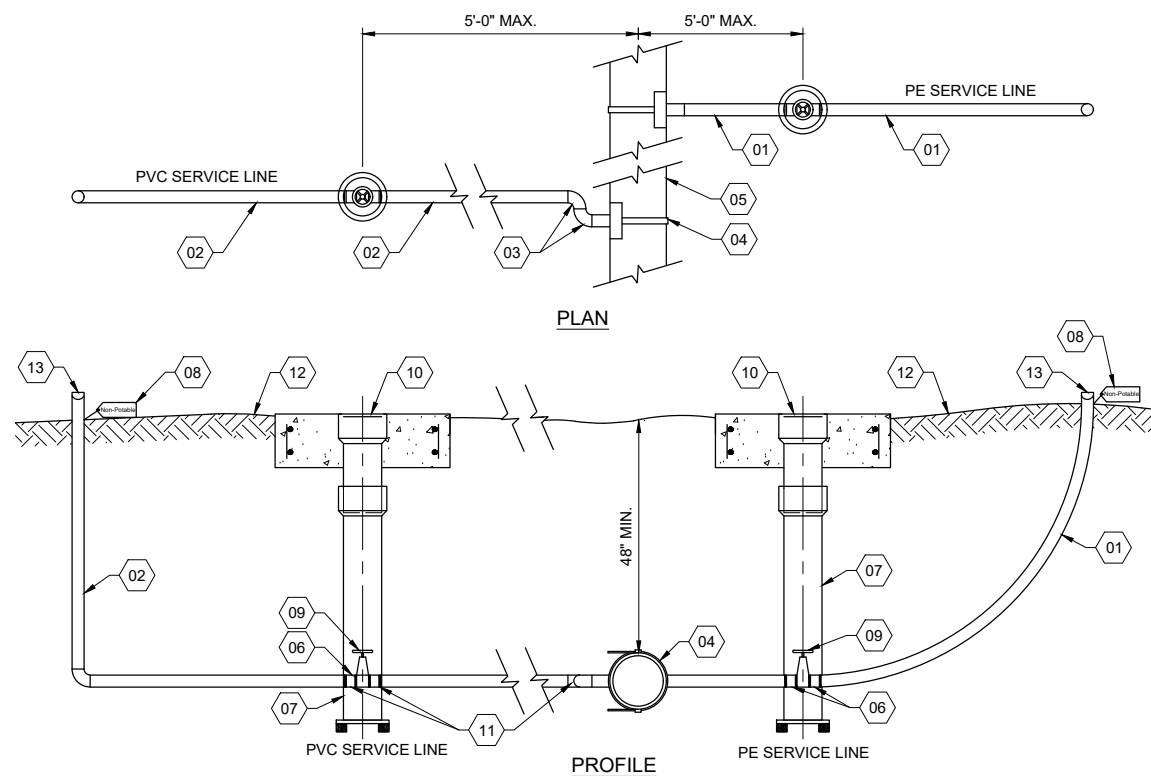
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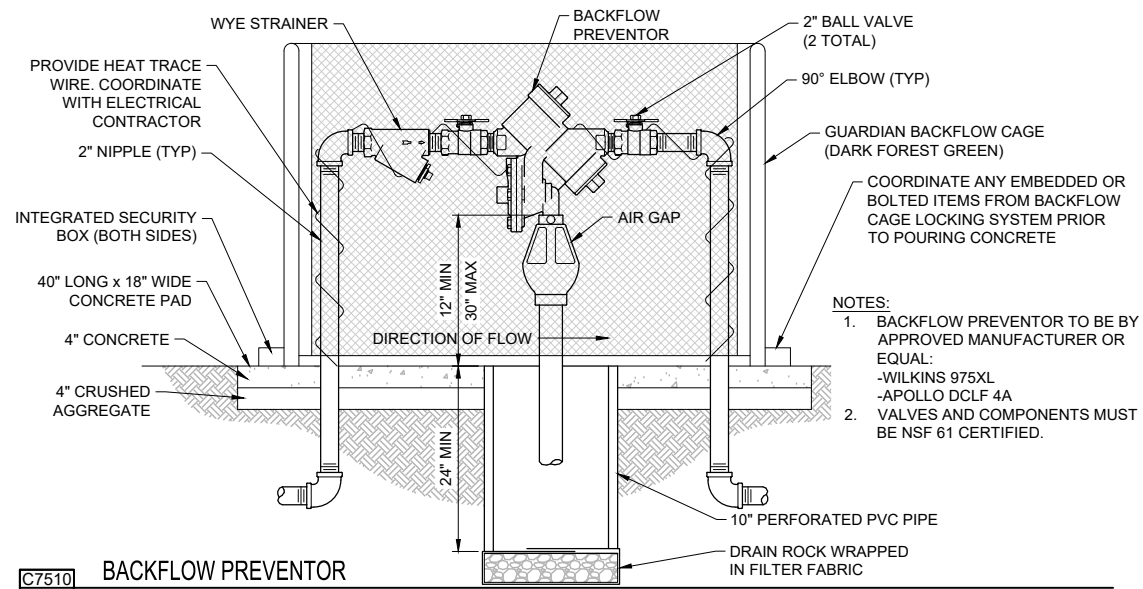


CSD Reuse Improvements  
Irrigation Details

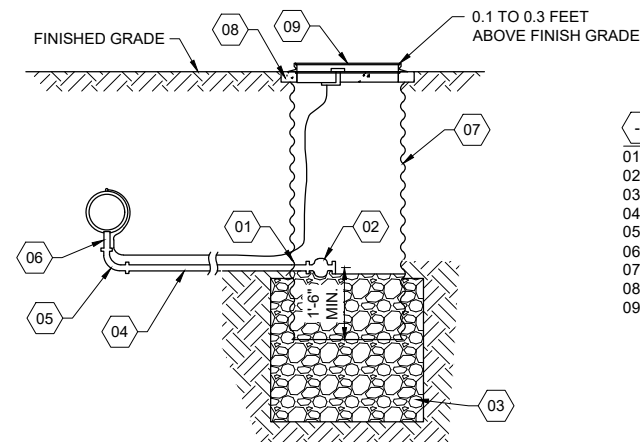
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- KEYNOTES**
- 01 PE PIPE WITH CURB STOP VALVE
  - 02 PVC PIPE (SCHD. 40)
  - 03 90° THREADED STREET BELOW PVC. (SCHD. 80)
  - 04 SADDLE W/FIPT
  - 05 MAINLINE PIPE
  - 06 MIPT X INSERT BRASS ADAPTER WITH TWO STAINLESS STEEL CLAMPS.
  - 07 SLOT SLEEVE TO FIT OVER VALVE AND SERVICE PIPE.(SCHD 80)
  - 08 NON-POTABLE TAG, TO BE CLEARLY VISIBLE ON PIPE TERMINATION
  - 09 GATE VALVE
  - 10 VALVE BOX AND LID
  - 11 SOLVENT WELD x MIPT PVC ADAPTER
  - 12 FINISHED GRADE
  - 13 PLUG (TYPICAL)



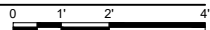
**C7510 BACKFLOW PREVENTOR**  
N.T.S.

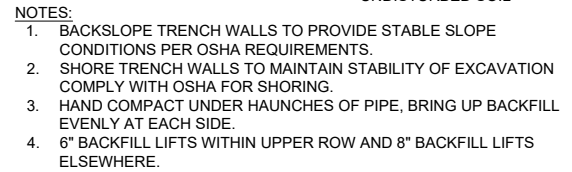
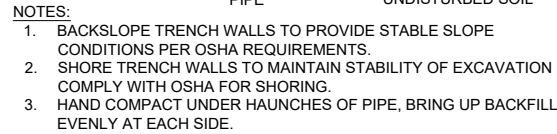


- KEYNOTES**
- 01 COMPRESSION COUPLING
  - 02 1-1/2" CURB STOP BALL VALVE
  - 03 DRAIN ROCK, MIN. 1 CU.YD. WRAPPED IN GEOTEXTILE
  - 04 1-1/2" DRAIN LINE, IPS CLASS 200 POLY
  - 05 BRASS STREET ELBOW WITH COMPRESSION COUPLER
  - 06 1-1/2" SADDLE
  - 07 30" DIA. X 44" MIN. LENGTH CMP
  - 08 6" CONCRETE MANHOLE GRADE RING
  - 09 STANDARD 24" DIA. MANHOLE RING AND "IRRIGATION" COVER

**C7502 IRRIGATION PUMP OUT**  
1/2" = 1'-0"

**C7501 PRESSURE IRRIGATION SERVICE WITH 4" PVC VALVE BOX**  
N.T.S.





1/2" = 1'-0"

0 1' 2' 4'



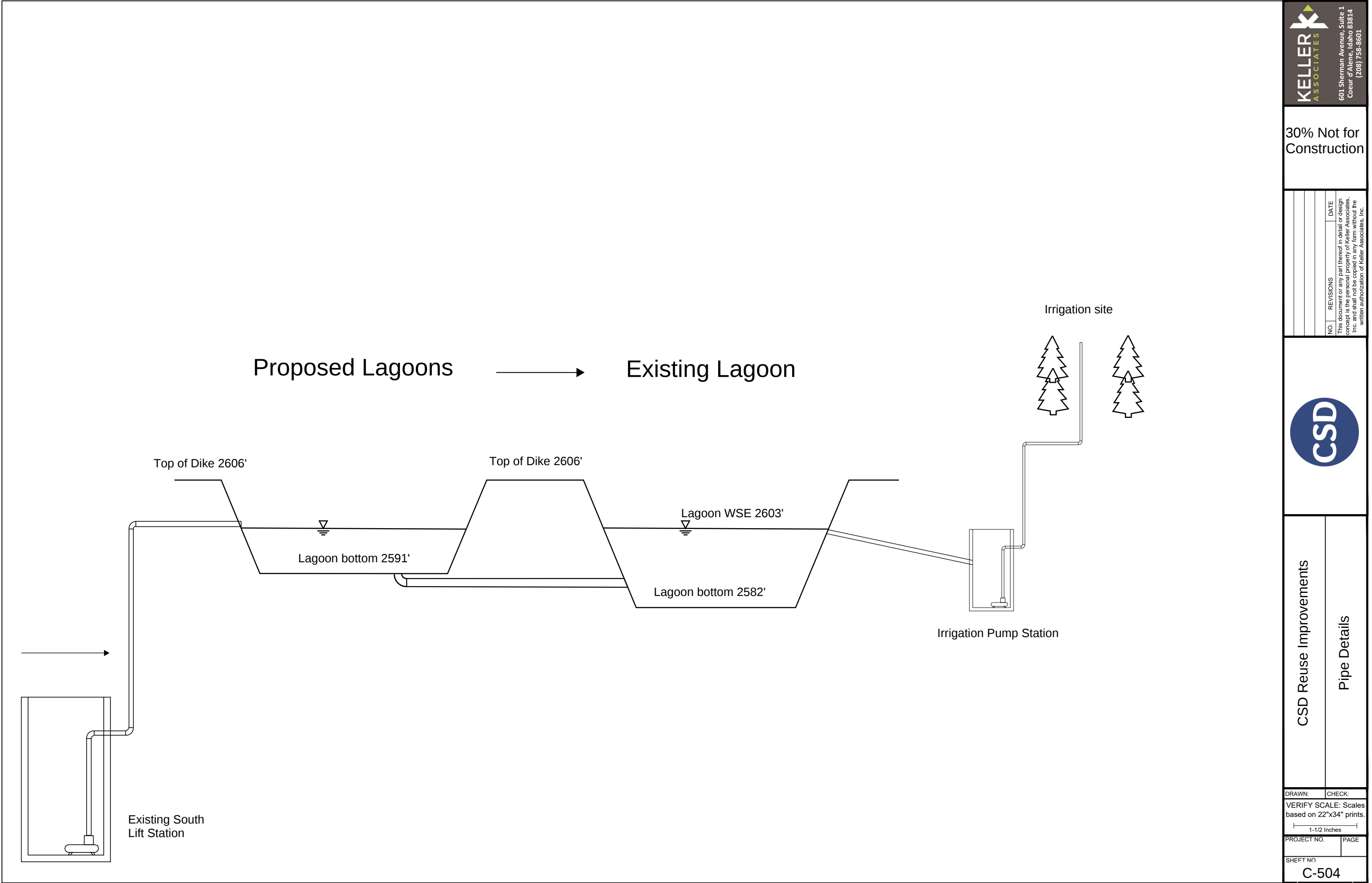
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## CSD Reuse Improvements

## Pipe Details

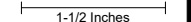
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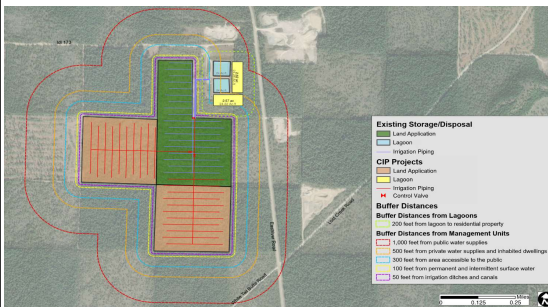


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| CSD Reuse Improvements | Pipe Details |
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| Project Title:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  | Location:                                                                          |      |              |                     |                           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------|------|--------------|---------------------|---------------------------|
| Coolin WWTP expansion                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  | WWTP site                                                                          |      |              |                     |                           |
| Project Identifier:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |  |      |              |                     |                           |
| Need for Project:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |                                                                                    |      |              |                     |                           |
| Expands reuse site capacity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |                                                                                    |      |              |                     |                           |
| Objective:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                                                                                    |      |              |                     |                           |
| Build new winter storage lagoons, improve treatment, expand disposal system                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |                                                                                    |      |              |                     |                           |
| Considerations:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |                                                                                    |      |              |                     |                           |
| Setbacks (200 ft lagoon setback, 100 ft private structure to land application setback, 500 ft residential water system to land application setback), capacity, crop type. IDL lease is still an unknown.                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |                                                                                    |      |              |                     |                           |
| General Line Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  | Estimated Quantity                                                                 | Unit | Unit Price   | Item Cost (Rounded) | Total Cost (2025 Dollars) |
| Treatment Upgrades                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |                                                                                    |      |              |                     | \$279,000                 |
| New Surface Aerators                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  | 4                                                                                  | EA   | \$ 25,000    | \$ 100,000          | 5.61%                     |
| Lagoon Baffling                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  | 1                                                                                  | LS   | \$ 25,000    | \$ 25,000           |                           |
| Sludge Removal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  | 3,600                                                                              | CY   | \$ 40        | \$ 144,000          |                           |
| Site Work                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  | 1                                                                                  | LS   | \$ 10,000    | \$ 10,000           |                           |
| Two New Winter Storage Lagoons                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |                                                                                    |      |              |                     | \$2,037,000               |
| Clearing and grubbing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  | 32,250                                                                             | SY   | \$ 1.5       | \$ 49,000           | 40.99%                    |
| Dike Cut                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  | 41,803                                                                             | CY   | \$ 12.0      | \$ 502,000          |                           |
| Dike Fill                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  | 43,592                                                                             | CY   | \$ 12.0      | \$ 524,000          |                           |
| Import Fill                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  | 1,789                                                                              | CY   | \$ 45.0      | \$ 81,000           |                           |
| Membrane Liner                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  | 270,131                                                                            | SY   | \$ 3.00      | \$ 811,000          |                           |
| Installation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  | 1                                                                                  | LS   | \$ 30,000.00 | \$ 30,000           |                           |
| Misc items-Moisture conditioning, membrane anchor, gas release, geotextile                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  | 1                                                                                  | LS   | \$ 40,000    | \$ 40,000           |                           |
| Pumps and Discharge Piping to Control Vault                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |                                                                                    |      |              |                     | \$265,000                 |
| New 320 gpm pumps                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  | 3                                                                                  | EA   | \$ 60,000    | \$ 180,000          | 5.33%                     |
| Pump Discharge piping upsizing to 6"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  | 120                                                                                | LF   | \$ 70        | \$ 9,000            |                           |
| Pump and Piping Installation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  | 40                                                                                 | %    | \$ 1,890     | \$ 76,000           |                           |
| Control Vault Upgrades                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |                                                                                    |      |              |                     | \$140,000                 |
| Control Vault Piping upsize to 8" DI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  | 30                                                                                 | LF   | \$ 160       | \$ 5,000            | 2.82%                     |
| Gate Valve Upsizing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  | 3                                                                                  | EA   | \$ 4,000     | \$ 12,000           |                           |
| Check Valves                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  | 3                                                                                  | EA   | \$ 4,000     | \$ 12,000           |                           |
| Flow Meter Upsize                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  | 1                                                                                  | LS   | \$ 15,000    | \$ 15,000           |                           |
| Control Vault and Pump Station Demolition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  | 5                                                                                  | %    | \$ 15,450    | \$ 78,000           |                           |
| Vault Equipment Installation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  | 40                                                                                 | %    | \$ 440       | \$ 18,000           |                           |
| Irrigation Improvements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |                                                                                    |      |              |                     | \$1,328,000               |
| Remove brush from new disposal site                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  | 80                                                                                 | Ac   | \$ 4,500     | \$ 360,000          | 26.72%                    |
| Main line upsize to 8" PVC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  | 190                                                                                | LF   | \$ 12        | \$ 3,000            |                           |
| New 6" Plug Valves for zone control                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  | 3                                                                                  | EA   | \$ 3,000     | \$ 9,000            |                           |
| New forcemain - 6" C900 PVC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  | 3,625                                                                              | LF   | \$ 25        | \$ 91,000           |                           |
| Sprinkler lines - 4" PVC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  | 21,000                                                                             | LF   | \$ 20        | \$ 420,000          |                           |
| Sprinklers (Matching existing spacing)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  | 168                                                                                | EA   | \$ 1,000     | \$ 168,000          |                           |
| Irrigation Piping Installation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  | 40                                                                                 | %    | \$ 6,910     | \$ 277,000          |                           |
| Other                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |                                                                                    |      |              |                     | \$513,000                 |
| Isolation Valve Replacements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  | 10                                                                                 | EA   | \$ 4,000     | \$ 40,000           | 10.32%                    |
| Remove Brush from 15 acres of land (Existing)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  | 15                                                                                 | Ac   | \$ 4,500     | \$ 68,000           |                           |
| Fencing around entire site (3 strand barbed wire)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  | 13,728                                                                             | LF   | \$ 4         | \$ 55,000           |                           |
| 4-inch Dia Monitoring Wells (175 ft deep)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  | 5                                                                                  | EA   | \$ 70,000    | \$ 350,000          |                           |
| Electrical Improvements (1.1D)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |                                                                                    |      |              |                     | \$408,000                 |
| Electrical/Controls                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  | 1                                                                                  | LS   | \$ 183,000   | \$ 183,000          | 8.21%                     |
| Transformer replacement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  | 1                                                                                  | LS   | \$ 125,000   | \$ 125,000          |                           |
| Generator/ATS-Pumps, Aerators, monitoring/controls equipment, lights (~200 kW)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  | 1                                                                                  | LS   | \$ 100,000   | \$ 100,000          |                           |
| Construction Subtotal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |                                                                                    |      |              | \$                  | 4,970,000                 |
| Additional Elements (estimated % of above)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                                                                                    |      |              |                     |                           |
| Mobilization and Administration                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |                                                                                    |      | 10%          | \$                  | 500,000                   |
| Bonding                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |                                                                                    |      | 2.5%         | \$                  | 130,000                   |
| Contractor Overhead and Profit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |                                                                                    |      | 10%          | \$                  | 500,000                   |
| BABA/AIS (amount subject to change pending funding package)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |                                                                                    |      | 2%           | \$                  | 100,000                   |
| Prevailing Wages                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                                                                                    |      | 2.5%         | \$                  | 130,000                   |
| Contingency                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |                                                                                    |      | 30%          | \$                  | 1,500,000                 |
| Total Construction Subtotal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |                                                                                    |      |              | \$                  | 7,830,000                 |
| Plans and Contract Documents                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |                                                                                    |      |              |                     |                           |
| Engineering Design and Bid Phase Services                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |                                                                                    |      | 15%          | \$                  | 1,180,000                 |
| Engineering - Construction Contract Administration                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |                                                                                    |      | 5%           | \$                  | 400,000                   |
| Permitting-Land Application                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |                                                                                    |      | LS           | \$                  | 100,000                   |
| Geotechnical Investigation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                                                                                    |      | LS           | \$                  | 75,000                    |
| Land Acquisition Surveying support                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |                                                                                    |      | LS           | \$                  | 16,000                    |
| Biosolids management Plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |                                                                                    |      | LS           | \$                  | 30,000                    |
| Topographic Surveying                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |                                                                                    |      | LS           | \$                  | 30,000                    |
| Environmental                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |                                                                                    |      | LS           | \$                  | 15,000                    |
| Legal, Administrative, and Funding                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |                                                                                    |      | 2.5%         | \$                  | 242,000                   |
| Inflation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |                                                                                    |      | 2.5%         | \$                  | 248,000                   |
| Total Project Costs (rounded)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |                                                                                    |      |              | \$                  | 10,166,000                |
| The cost estimate herein is based on our perception of current conditions at the project location. This estimate reflects our opinion of probable costs at this time and is subject to change as the project design matures. Keller Associates has no control over variances in the cost of labor, materials, equipment, services provided by others, contractor's methods of determining prices, competitive bidding or market conditions, practices or bidding strategies. Keller Associates cannot and does not warrant or guarantee that proposals, bids, or actual construction costs will not vary from the cost presented herein. |  |                                                                                    |      |              |                     |                           |