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October 20, 2021

Lyons River Valley Park
302 McConnell Dr.
Lyons, CO

RE: **September 2021 Water Quality Results – Lyons River Valley Park**

Dear Dave Cosgrove:

We are pleased to submit the September 2021 water quality results for Lyons River Valley Park North and South ponds. Samples were collected on September 16, 2021. Results are shown in Tables 1-2 (attached).

September water quality of both ponds was considered to be very good overall. In the North Pond, CO₂ levels were slightly above the recommended range. However, this is not a reason for concern. Carbon dioxide levels fluctuate regularly in the warmer months as vegetation growth fluctuates. We expect this elevated parameter to return back within the recommended range shortly.

In both ponds, chlorophyll-a levels were also slightly elevated. At the time of sampling, there was a significant algae bloom in both ponds. This excess of algae is likely what is causing this increased parameter. As the algae dies off, chlorophyll-a levels should return to normal concentrations.

Overall, results demonstrated that the current management program continues to be successful. Please feel free to call me if you have questions about the attached water quality results.

Sincerely,

Jack Pritchett
Project Biologist

ECORESOURCE SOLUTIONS, INC.

*Ecological Inventories & Studies (aquatic, wetland, rangeland, etc.)
Wetland Delineation, Permit Support & Mitigation
Aquatic & Terrestrial Habitat Evaluation & Enhancement
Stream Habitat Restoration (instream & riparian)
Laboratory Services (water/soil chemistry & biological organisms)
Development
Pond & Lake Management / Design & Construction
Endangered Species Consultation and Environmental Impact Assessment*

*Environmental Compliance Studies & Support
Fishery & Wildlife Assessment & Management
Eco-asset Evaluation & Management
Lake & Land Mapping / Lake Dredging Design
Recreational Property Improvement &
Fishing & Hunting Property Management
Hydrographic and Bathymetric Surveys*

Attachment

TABLE 1. – Summary of water quality results from samples collected September 16, 2021 from the South Pond (RLR = recommended level or range for optimal lake and fisheries management).

Water Quality Parameter South Pond	Result	RLR
Temperature (°F)	66	33 - 85
pH	7.0	6 - 9
Ammonia nitrogen (mg/L)	.25	< 0.5
Nitrite nitrogen (mg/L)	<0.05	< 0.05
Alkalinity, total (as CaCO ₃ ; mg/L)	82	20 – 400
Chloride (mg/L)	< 75	< 75
Carbon dioxide (mg/L)	8.0	< 10
Hardness, total (as CaCO ₃ ; mg/L)	180	20 - 300
Dissolved oxygen (mg/L)	8.5	>6
Chlorophyll <i>a</i> (mg/m ³)	16.13	< 10

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TABLE 2. – Summary of water quality results from samples collected September 16, 2021 from North Pond (RLR = recommended level or range for optimal lake and fisheries management).

Water Quality Parameter North Pond	Result	RLR
Temperature (°F)	61	33 - 85
pH	6.0	6 - 9
Ammonia nitrogen (mg/L)	0.5	< 0.5
Nitrite nitrogen (mg/L)	<0.05	< 0.05
Alkalinity, total (as CaCO ₃ ; mg/L)	96	20 – 400
Chloride (mg/L)	< 75	< 75
Carbon dioxide (mg/L)	>10	< 10
Hardness, total (as CaCO ₃ ; mg/L)	100	20 - 300
Dissolved oxygen (mg/L)	5.0	>6
Chlorophyll <i>a</i> (mg/m ³)	17.6	< 10

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