



Public Meeting #3

Moon Brook Pond Modification Project



City of Rutland | July 24, 2017

Agenda

7:00 – 7:10 Piedmont Pond – Welcome and introductions

7:10 – 7:20 Piedmont Pond – Review alternatives

7:20 – 7:45 Piedmont Pond – Review modeling of alternatives

7:45 – 8:00 Piedmont Pond – Voting on alternatives

8:00 – 8:10 Combination Pond – Welcome and introductions

8:10 – 8:20 Combination Pond – Review alternatives

8:20 – 8:45 Combination Pond – Review modeling of alternatives

8:45 – 9:00 Combination Pond – Vote on alternatives

Public Meetings

- ~~Meeting #1. Introductions, values, and initial information exchange.~~
- ~~Meeting #2. Review values and objectives. Discuss alternatives and preferences. Select options for ANR to model.~~
- Meeting #3. Alternatives analysis model results. Select a preferred alternative to develop visualizations and concept design.
- Meeting #4. Present photo-simulations and concept design. Seek consensus on the preferred alternative to advance design.
- Meeting #5. Design review.

Staying Involved

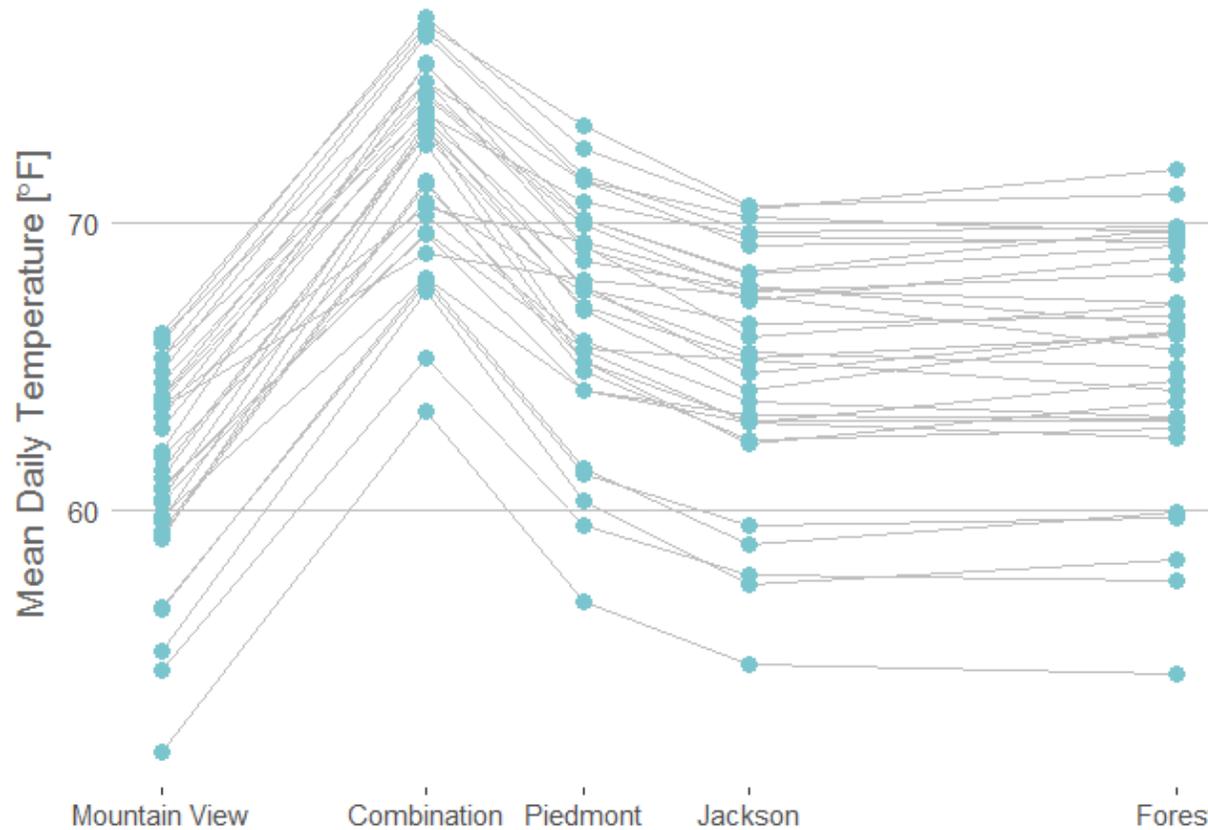
1. Attend public meetings.
2. Share information.
3. Request individual meetings.
4. Help reach consensus.
5. Follow information on website.

www.rutlandcity.org/ponds

2016 ANR Water Quality Data

Moon Brook Water Temperature

Data collected 8-25-2016 to 9-25-2016



Location	River Mile	River Kilometer	Maximum temperature (°F)	Maximum temperature (date)	Hours above 70°F	% above 70°F
E. Mountainview Drive	3.6	5.7	68.0	8/26/2016	0.0	0%
Combination Pond outfall	2.7	4.3	82.4	8/27/2016	529.3	67%
Below Peidmont Pond dam	2.2	3.5	77.3	8/29/2016	193.5	25%
Jackson Street	1.7	2.7	74.0	8/26/2016	82.8	11%
Forest Street	0.3	0.5	75.2	9/9/2016	113.8	14%

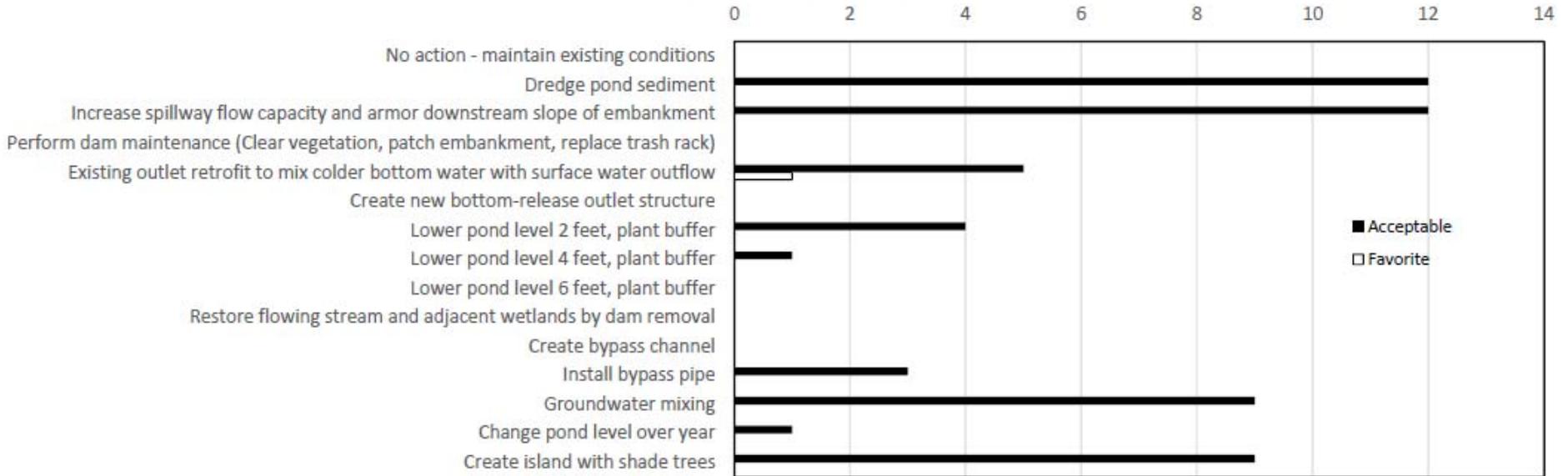
Review Key Project Requirements

1. Improve Moon Brook water quality.
2. Improve dam safety.
3. Treat stormwater runoff
4. Start construction by October 1, 2018.
5. Create an insurable setting.
6. Reduce financial exposure of City and taxpayers.

Results of Alternatives Voting

Initial Alternatives Voting for Combination Pond

(Collected at a public meeting on February 23, 2017)



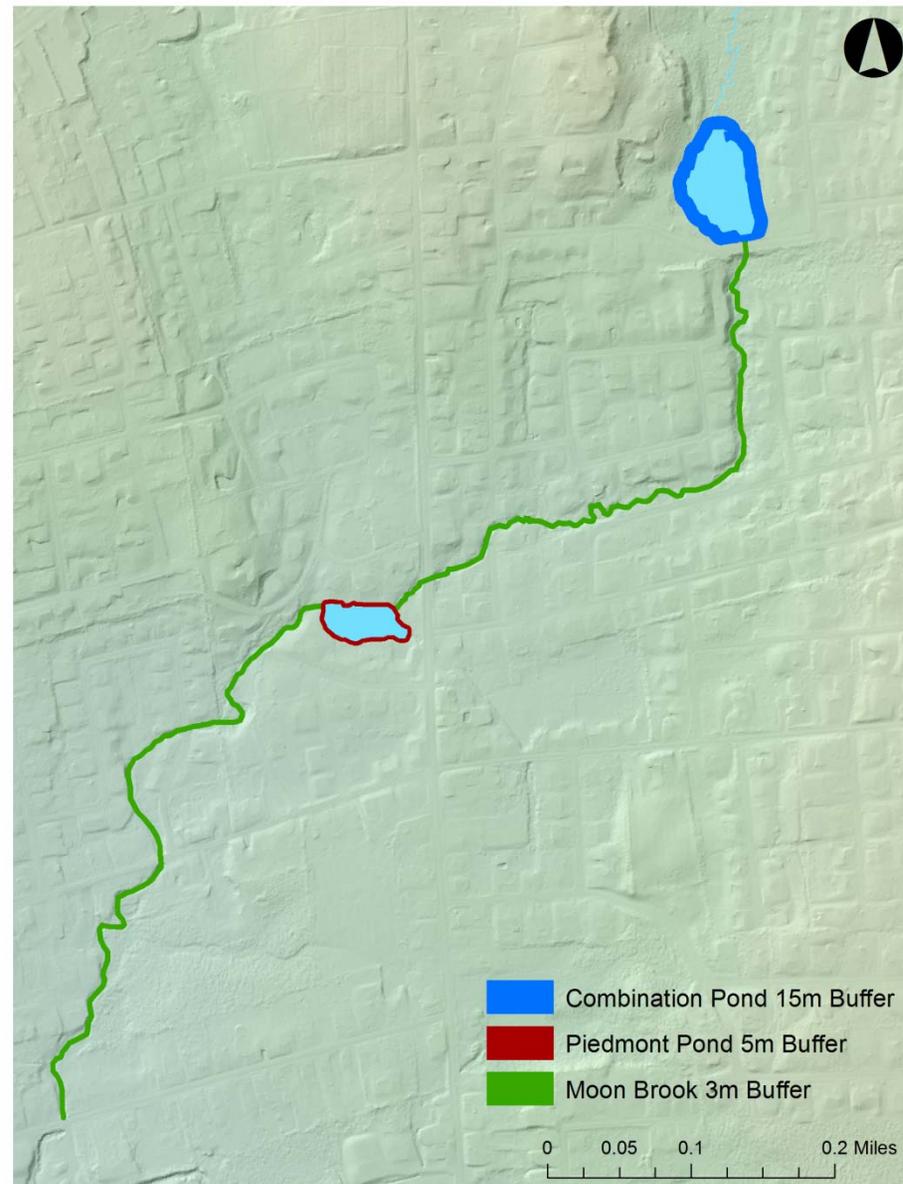
Model Scenarios

Model Run ID	Combination Pond*	Piedmont Pond*
1	Lower pond 2 feet, add riparian shading, dredge fine sediment	Add riparian shading, dredge fine sediment
2	Bottom release, add riparian shading, dredge fine sediment	Add riparian shading, dredge fine sediment
3	Lower pond 2 feet, add riparian shading, dredge fine sediment	Lower pond 2 feet, add riparian shading, dredge fine sediment
4	Lower pond 2 feet, add riparian shading, dredge fine sediment	Remove dam, add riparian shading, dredge fine sediment

*All model runs include adding riparian shading around the Moon Brook channel.

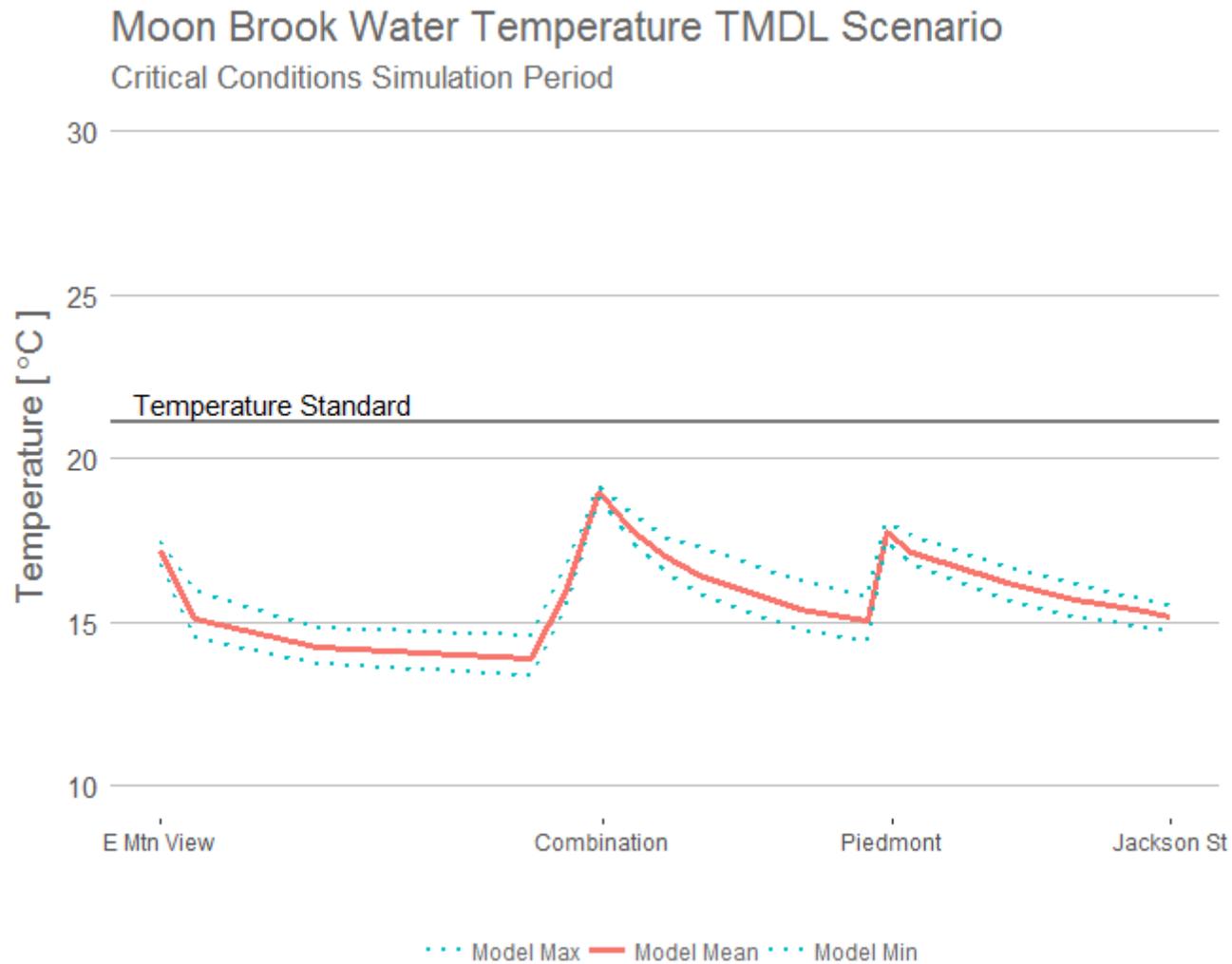
Model Run 1: Definition

- Lower Combination Pond 2 feet and add riparian shading around pond edge with reduced aerial extent.
- Add riparian shading around existing edge of Piedmont Pond.
- Dredge fine sediment from ponds.
- Add riparian shading around existing edge of Moon Brook channel.



(ANR, 2017)

Model Run 1: Results

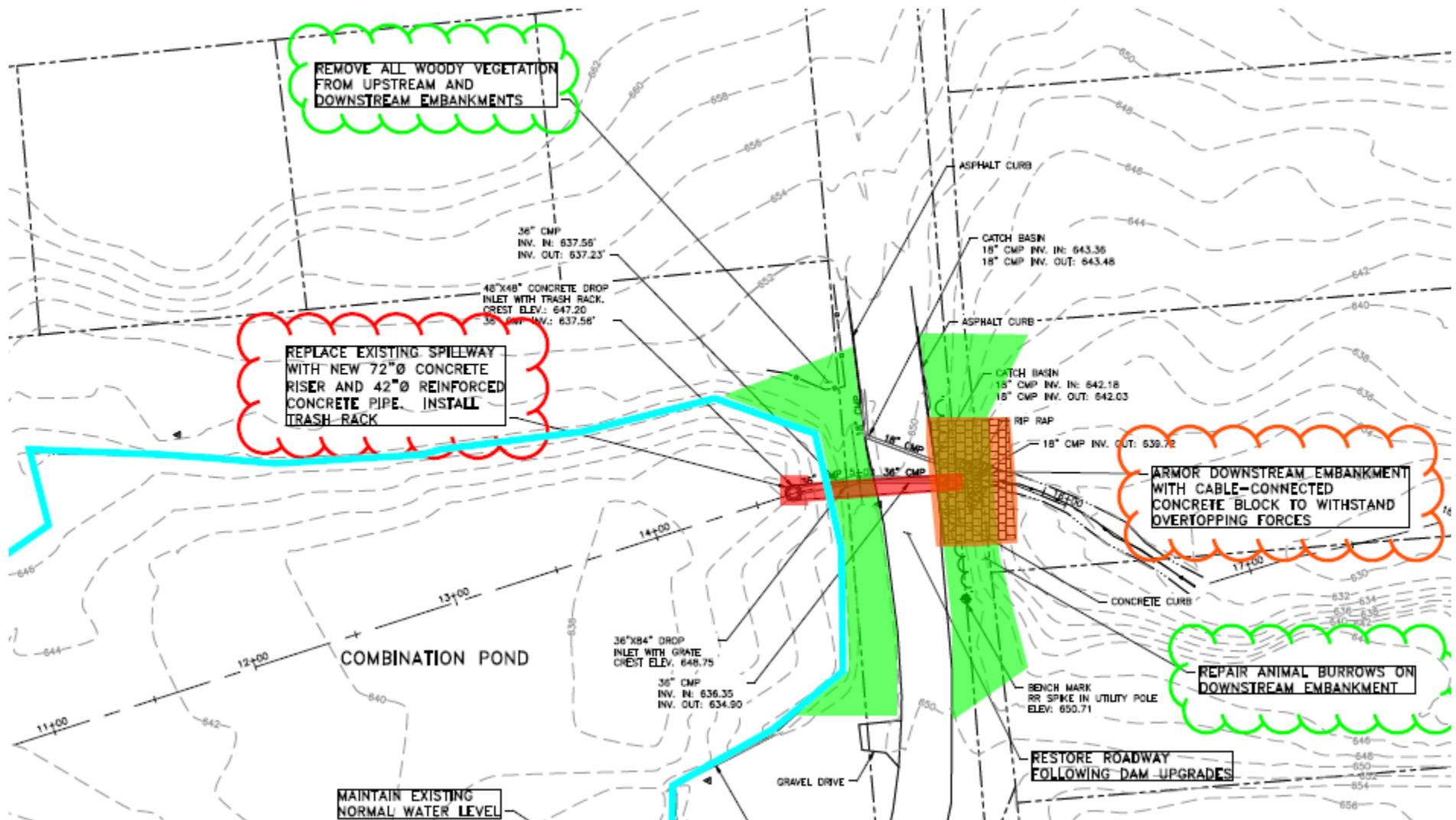


(ANR, 2017)

Lower Water Level 2 Feet



Update Dam



(D&K, 2012)

Revegetate Edge of Pond



Buffer Plantings

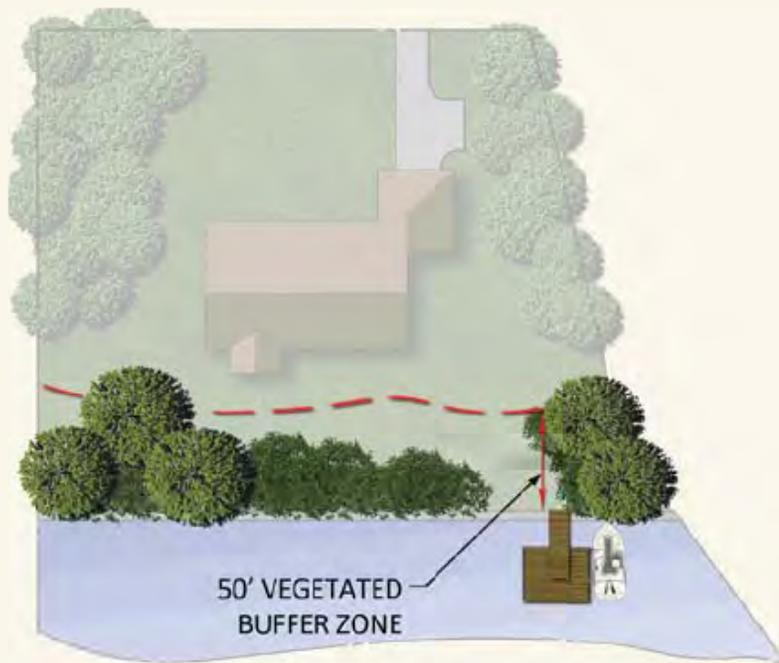


Limbed trees provide shade while maintaining lake views, privacy, & vegetation along both sides of the property

(MMI, 2014)

Buffer Plantings

Natural Buffer After 20 years



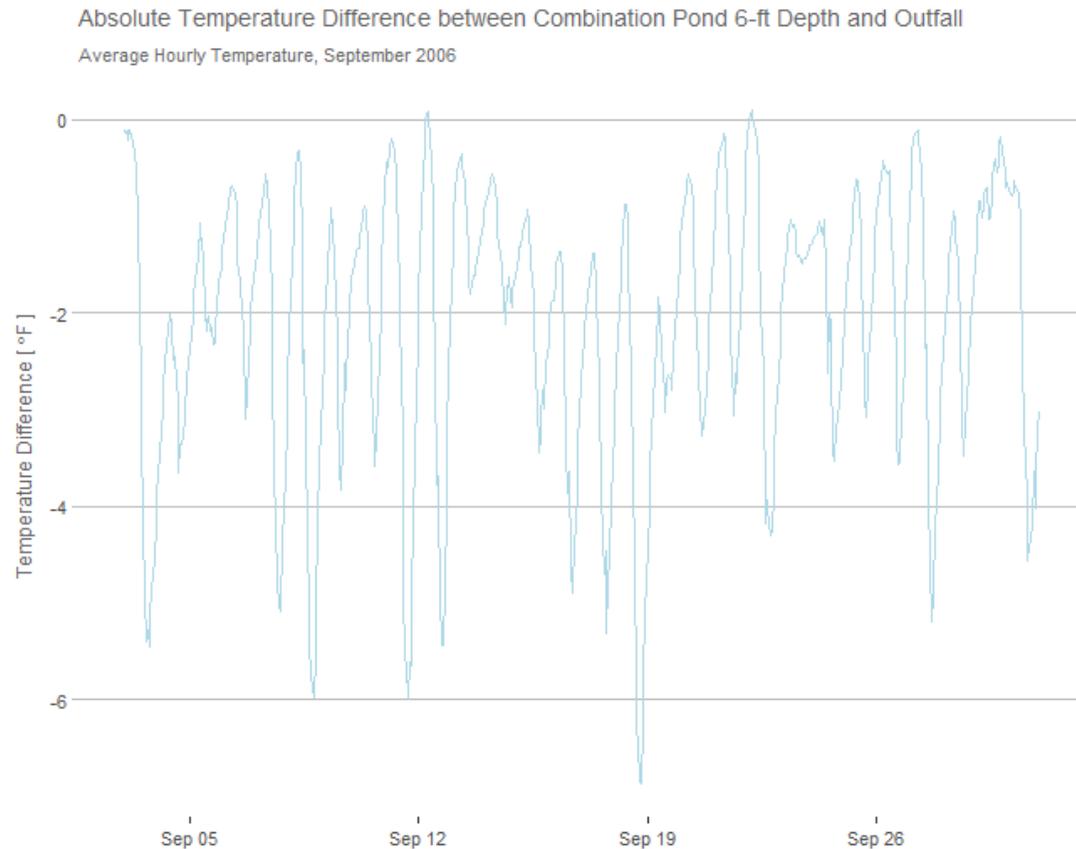
Natural buffer - Layout View



Natural buffer "No-Mow" zone with larger established trees, shrubs, and herbaceous vegetation

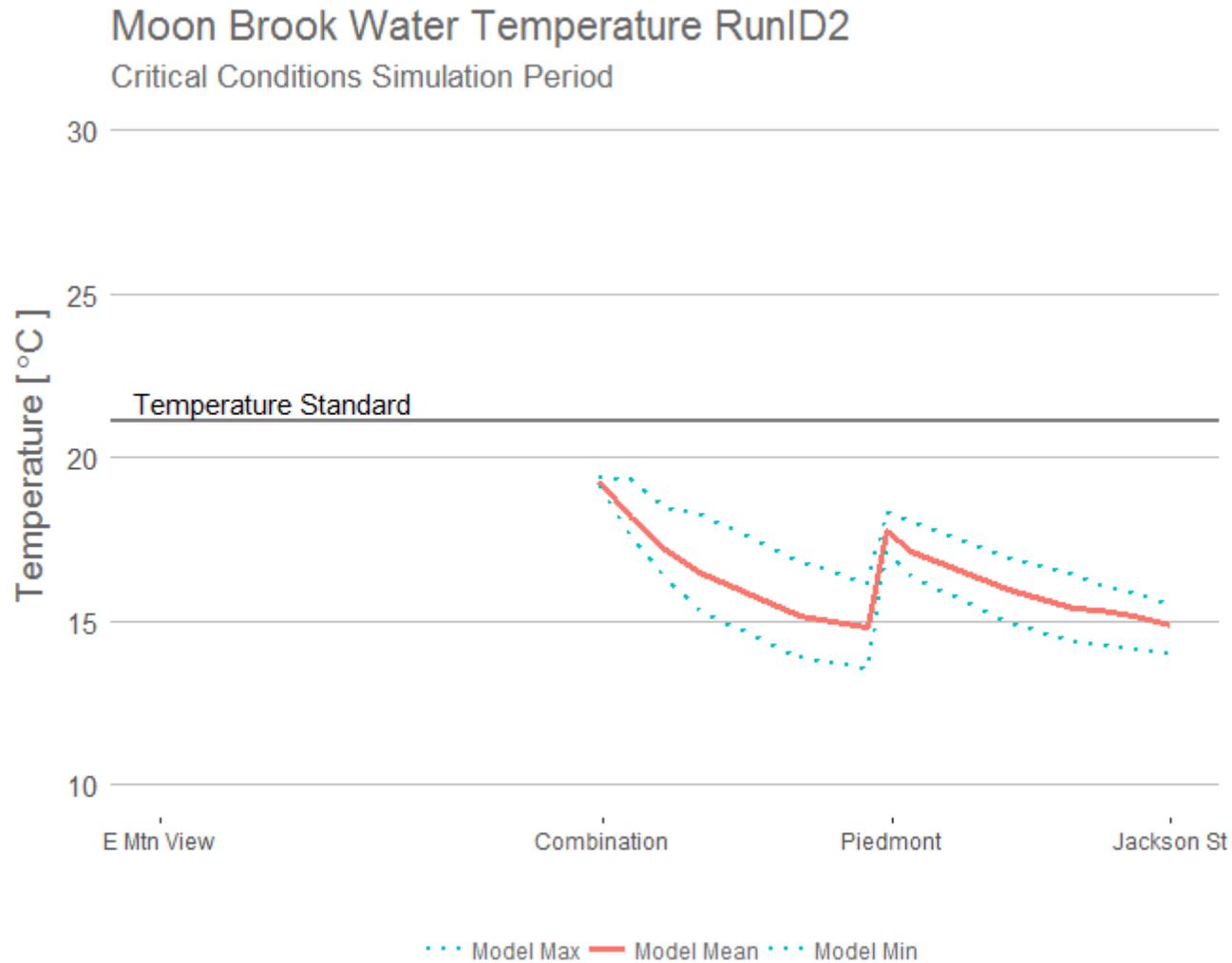
Model Run 2 (Bottom Release): Definition

- Install bottom release outlet structure at Combination Pond and add riparian shading around existing pond edge.
- Add riparian shading around existing edge of Piedmont Pond.
- Dredge fine sediment from ponds.
- Add riparian shading around existing edge of Moon Brook channel.

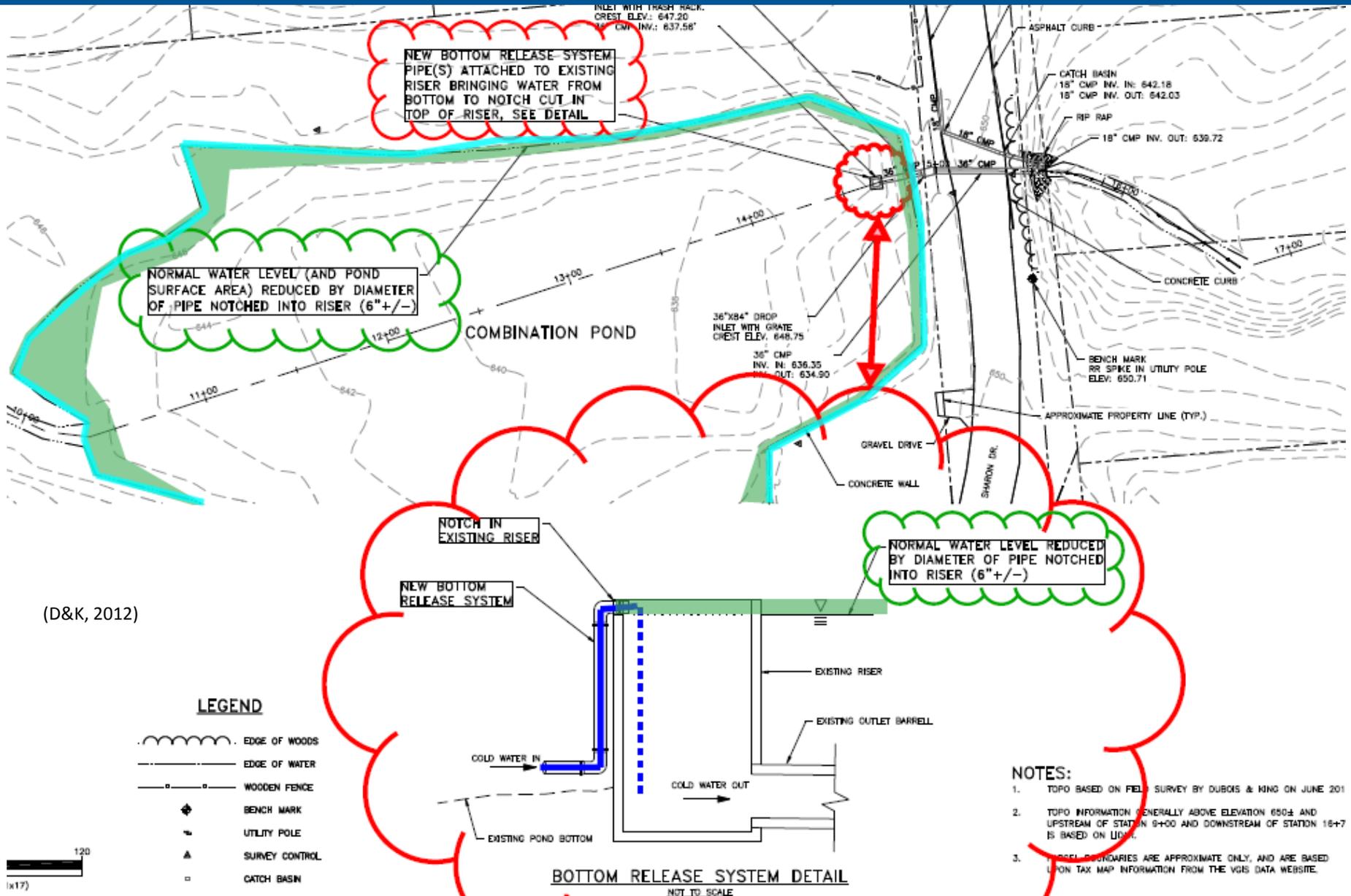


(ANR, 2017)

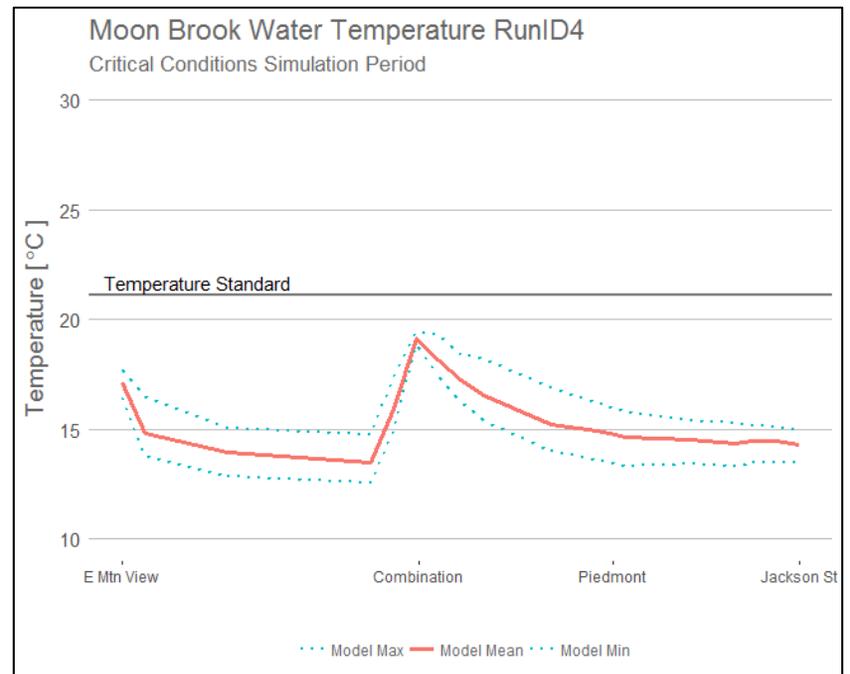
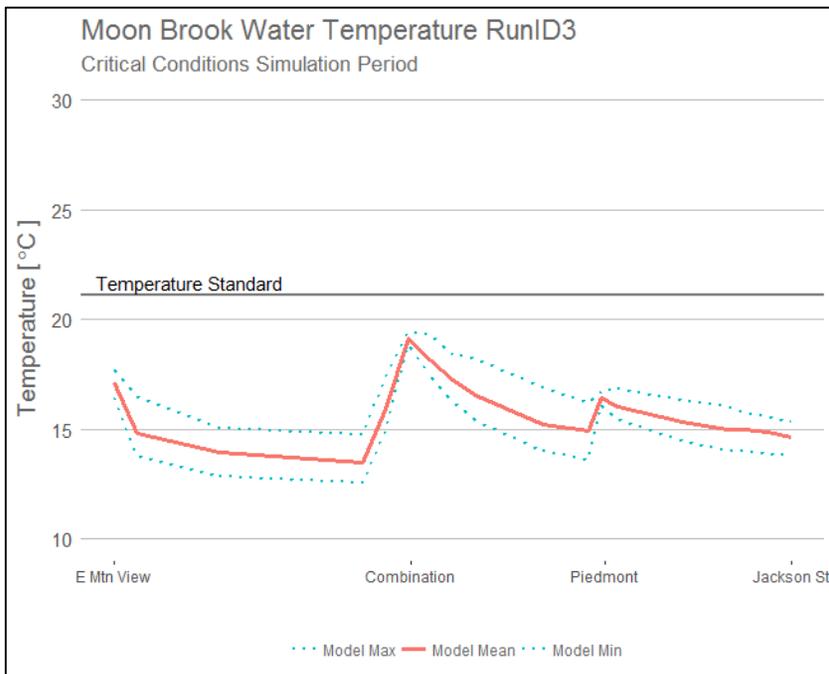
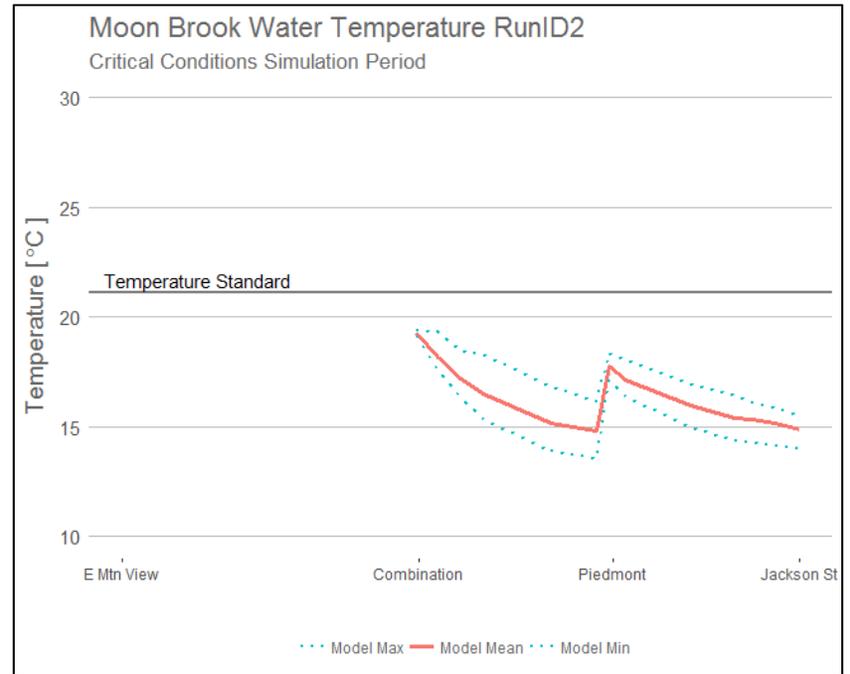
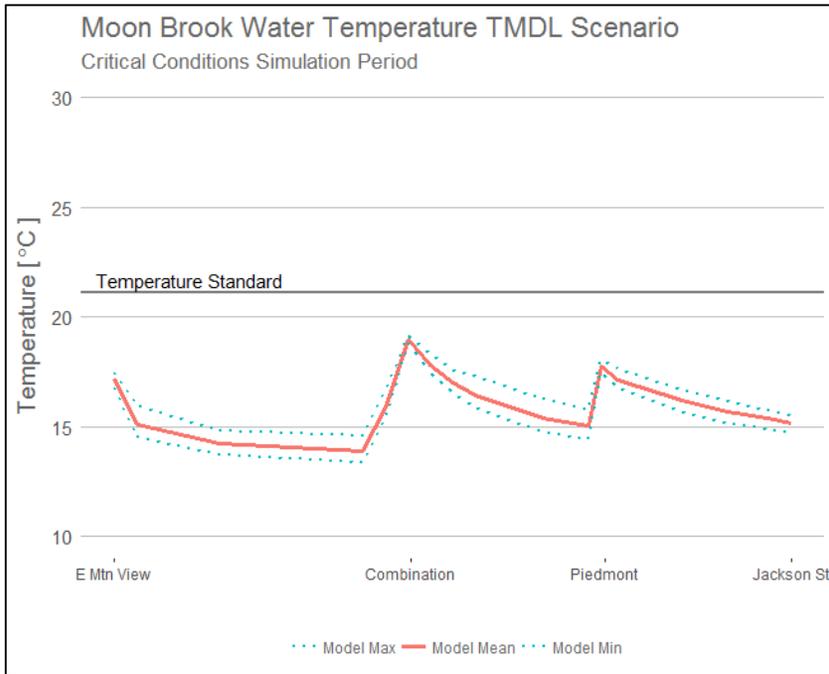
Model Run 2 (Bottom Release): Results



Release Bottom Water



(D&K, 2012)



Summary

Model Run ID	Combination Pond*	Piedmont Pond*	Improve Water Quality	Treat Stormwater	Improve Dam Safety	Reduce Liability
1	Lower pond 2 feet, add riparian shading, dredge fine sediment	Add riparian shading, dredge fine sediment	yes	no**	yes	yes
2	Bottom release, add riparian shading, dredge fine sediment***	Add riparian shading, dredge fine sediment	yes	no**	NO	no
3	Lower pond 2 feet, add riparian shading, dredge fine sediment	Lower pond 2 feet, add riparian shading, dredge fine sediment	YES	no**	YES	YES
4	Lower pond 2 feet, add riparian shading, dredge fine sediment	Remove dam, add riparian shading, dredge fine sediment	YES	yes	YES	YES

*All model runs include adding riparian shading around the Moon Brook channel.

**Can be included through additional project elements in different location.

***Feasibility unknown due to likely warming of pond with bottom release.

What is your
preferred
alternative?