LAKE BOREN PARK MASTER PLAN

APPENDIX

November 14, 2016

PARTNERSHIP berger

Memo

To: Jeff Brauns **Date:** 4/27/2016

From: Leo Zheng **Page:** 1 of 3

Subject: Lake Boren Park Master Plan | Schedule

11/10/2015 DRAFT Survey questions due to City

11/17/2015 City/CAC Response to DRAFT survey questions due to Berger

11/30/2015 DRAFT Early Win ideas due to City

12/01/2015 FINAL Survey questions due to City

12/04/2015 Survey goes live (means/methods/distribution TBD)

12/07/2015 City/CAC Response to Early Win ideas due to Berger

12/09/2015 DRAFT deliverables (Public Involvement Strategy narrative, Storyboard Graphics) for Public Meeting #1 due to City for review and distribution to CAC

12/xx/2015 Early Win goes live (means/methods/distribution TBD)

12/22/2015 Mailer, Notice & Kiosk Graphics Due to City/Printshop

12/30/2015 DRAFT Public Meeting #1 Boards PDF due to City

01/12/2016 Public Meeting #1 – 6:30 pm @ Newcastle Elementary

02/23/2016 DRAFT deliverables for Public Meeting #2 due to City for review and distribution to CAC

03/10/2016 Public Meeting #2 – 6:30 to 8:00 pm @ Seattle Revival Center, 12636 SE May Creek Park Drive

04/15/2016 DRAFT deliverables for Public Meeting #3 due to City for review and distribution to CAC

04/26/2016 Public Meeting #3 – 6:30 to 8:00 pm @ Hazelwood Elementary, 7100 116th Ave SE, Renton, WA 98056

Memo

To:	Jeff Brauns	**Date:**	4/27/16
From:	Leo Zheng	**Page:**	2 of 3
Subject:	Lake Boren Park Master Plan | Schedule		

4/29/2016 Provide DRAFT of Survey no.3 Ideas and graphics for survey [Berger]

5/2/2016 Provide updated exhibit for Kiosk to City/Minuteman Press [Berger]

5/11/2016 Project update to CAC [City]

5/13/16 Take down kiosk boards and tags and provide tags to Berger [City]

5/13/2016 Wrap-up Survey no.2 and provide final results [City]

5/13/2016 Survey no.3 goes live [City]

6/13/2016 Survey no.3 wrap up and provide final results [City]

6/13/2016 Collect Kiosk Tags (take down kiosk?) and provide to Berger for compilation [City]

Week of 6/12/2016 Compile data and share findings summary [City]

Week of 6/12/2016 Meet with City/Berger to review data and concept plan

6/21/2016 Newcastle Town Hall Meeting 5:30 to 8:00 pm @ Newcastle Golf Club

Week of 7/3/2016 Draft Master Plan and Sepa Checklist to City/CAC [Berger]

7/4/2016 City of Newcastle 4th of July Event – showcase project at City's booth [City]

Week of 7/10/2016 Discuss draft plan individually with Councilmembers

7/13/2016 Meet with City/CAC to review Draft Master Plan and receive feedback

Memo

To: Jeff Brauns **Date:** 4/27/16

From: Leo Zheng **Page:** 3 of 3

Subject: Lake Boren Park Master Plan | Schedule

Week of 7/17/2016 Draft Master Plan and Sepa Checklist to City for review [Berger]

Week of 7/24/2016 Draft Master Plan Presentation to City for review [Berger]

Week of 7/31/2016 Pre-Final Master Plan and Sepa Checklist to City for review [Berger]

Week of 7/31/2016 Final Master Plan and Sepa Checklist to City for review [Berger]

8/10/2016 Present Final Master Plan to CAC for approval [City]

9/6/2016 Present to City Council

Summer/2016 Adoption of Master Plan by City Council

New Summary Report - 22 January 2016

1. How/where do you enter the park

	Car		Walking		Bicycle		Other		Total	
SE 84th Way (main entrance)	84	80.0%	49	46.7%	12	11.4%	2	1.9%	105	100%
129th Ave SE	23	32.9%	54	77.1%	12	17.1%	1	1.4%	70	100%
Coal Creek Parkway SE	33	42.9%	50	64.9%	11	14.3%	5	6.5%	77	100%
From Olympus	1	100.0%	1	100.0%	0	0.0%	0	0.0%	1	100%
SE 84th Way	1	100.0%	1	100.0%	0	0.0%	0	0.0%	1	100%
water line trail	1	100.0%	1	100.0%	0	0.0%	0	0.0%	1	100%
Neighborhood trail	0	0.0%	1	100.0%	1	100.0%	0	0.0%	1	100%
Trails	0	0.0%	1	100.0%	0	0.0%	0	0.0%	1	100%
Varies, we come from all ways	0	0.0%	1	100.0%	0	0.0%	0	0.0%	1	100%
Walking path via Coal Creek Parkway	0	0.0%	1	100.0%	0	0.0%	0	0.0%	1	100%
Waterline Trail	0	0.0%	1	50.0%	2	100.0%	0	0.0%	2	100%
waterline from SE MayCreek Parkway	0	0.0%	1	100.0%	0	0.0%	0	0.0%	1	100%

2. When do you use the park?

	Spring	Summer	Fall	Winter	Responses
Weekday - AM	**55** 73.3%	**73** 97.3%	**52** 69.3%	**36** 48.0%	75
Weekday - PM	**68** 70.1%	**93** 95.9%	**63** 64.9%	**33** 34.0%	97
Weekend - AM	**69** 79.3%	**86** 98.9%	**64** 73.6%	**39** 44.8%	87
Weekend - PM	**76** 72.4%	**101** 96.2%	**75** 71.4%	**37** 35.2%	105

3. What do you like most about Lake Boren Park?

Count	Response
1	1 simple natural beauty. 2. ease of access
1	Accessibility, trails, pathways
1	Acess to the lake and the trails that go throught it
1	Amount of open space

Count	Response
1	Clean and close
1	Cleanliness, feels safe, close to home
1	Close by, feels like the center of the community
1	Close to home. Good play equipment for kids.
1	Close to where I live, green space
1	Concerts
1	Concerts, playground
2	Events
1	Facilities are nice but not overdeveloped.
1	Family friendly, open space
1	Free Concerts
1	Good size park accomodates a variety of activities
1	Great playground, tables, both covered and uncovered, short walking trail.
1	Great walking paths.
1	I Like the layout of the park a lot.
1	I like most everything about it currently.
1	I love the events in the park, the playground and event shelters.
1	IT IS IN MY NEIGHBORHOOD
1	It has a community feel
1	It is a clean , safe place to enjoy with the family
1	It is clean and big and well kept and safe.
1	It sits back from the road and is quiet, nice walking path, great playground, good for events
1	It's close proximity and trails to walk/run/bike
2	It's peaceful and has a large open area for events, nice walking path
1	Lake
1	Lake access swimming myself, cooling off the dog on hot days
1	Large park with a variety of uses.
1	Location
1	Lots of unique spaces and varied landscapes
1	Nice place to take a power walk with my dog.
1	Nice playground and walking path. Love the grass area for summer concerts.

Count	Response
1	Nice walking path with elevation and near pond
1	Open Fields
1	Open area
1	Open space for events, pickleball court
1	Open spaces
1	Open spaces, large play equipment for the kids
1	Park has a little of everything - nice balance on the whole
1	Pathways and number of activities available
1	Paved walking path
1	Play area and picnic tables
1	Play areas, walking paths, restrooms, the green spaces
1	Play ground & walking paths
1	Play structures
2	Playground
1	Playground and events
1	Playground, bathroo
1	Playground, bathrooms
1	Proximity to the library
1	Proximity to trails and my home.
1	Proximity to trails.
1	Proximity to where we live in Olympus
1	Quiet/not crowded
1	Relaxed paths and presence of lake
1	Safe, family oriented
1	Somewhat well maintained.
1	Sports courts, it's small and local
1	THE LAKE
1	Tennis courts, need more in the area, maybe partner with Renton for an indoor facility...
1	The Lake
1	The Lake & waterfront trail & pier
1	The SPACE - great place for the summer concerts, festivals, meet-ups with friends

Count	Response
1	The lake, walkways, open space, playground, group areas, restrooms
1	The natural state and walking path
1	The playground and all the open space
1	The playground equipment
1	The space
1	The walking paths
1	The walking trails
1	Trail around park, bathrooms n
1	Variety of ways to walk around with and without dog, community events
1	Views, proximity
1	WELL MAINTAINED
1	Walking around the park
1	Walking distance from home
1	Walking path
1	Walking trail, tennis courts, open spaces
1	Walking trails/restrooms
1	accessibility
1	amenities
2	big grassy field area as a community area
1	courts
1	events and walking path
1	it is a community park
1	its quiet and not too busy
1	mixture of landscape, tennis courts, lake
1	natural beauty
1	natural open space with trails
1	nice place for families and events
1	nice walking path
1	open community gathering space
1	open space
1	openess, picturesque location

Count	Response
1	play area, lake
1	play area, music in the park, fourth of july, proximity to home
1	playground and walkways
1	playground, walking path
1	size, proximity, play area, not over crowded
1	size, wide/open, many different uses
1	super nice playground equipment, shelters, concerts in park
1	the events offered there
1	the natural setting
1	the serene setting
1	very quiet and peaceful with lots of grass and not a lot of traffic or crowds and its a big park
1	walking out on the dock; playground when kids were little
1	walking trail, lake view
1	walking, restrooms and drinking fountain
1	walkways
1	so far I really enjoy the open grassy areas and h ope they keep them especially these days where concrete is everywhere...its fun to fly kits, play sports and have dogs and kids and people have lots of roaming space..i hope they keep the grassy areas and also the trees and not cut down any more trees please:)
1	Playground for the kids, Concerts in the Park during the summer, large grass area, though it would be better if it was more flat to accommodate pickup games of soccer/football/frisbee/etc.
1	it looks clean but not overly "manicured" which i like and doesn't have a lot of concrete which i also like...tall trees and scattered bushes
1	the tranistion from active spaces (tennis, basketball, kids swings, etc.) to pastoral walkway to the lake.sd)d
1	The playground is great! I also like the proximity to the lake. It's a nice, BIG park so everyone can spread out and enjoy it. I really enjoy the concerts in the summer and any community events that are held there.
1	Special events like concerts in the park, 4th of July and Newcastle days; also think it is a very well maintained and beautiful park.
1	Large unstructured green spaces, interesting playground (especially large sandbox and high climbing structure), access to lake, loop path, wooded entrance over stream, trees and wildlife, wild blackberries
1	Great for families. Love to park there and run with stroller or bike with kids. Lots of nature and open space. Well maintained. Love the coverts in the park and all other events!
1	The figure 8 walk within the park. It is close to a Starbucks to extend the walk and have a break in between, to re-enter the park on the Coal Creek Parkway side again. It is well maintained, clean and friendly. Very nice open spaces, etc.
1	Trails, events (especially concerts and fireworks), access to "mutt mitts" in case of emergency.
1	lots of open grassy areas plus cute things like native flower preserve with small bench which we enjoyed...

4. What do you like least about the park

Count	Response
1	Access to water
1	Aesthetics
1	Allowing use of amplified sound for private functions
1	Amenities
1	Bad sidewalks
1	Busted up walking trail
1	Could be bigger with trails, wetlands
1	Development next door, leash laws
1	Dock at the lake is very slippery when wet.
1	Dog without less
1	Dogs
1	Dogs loose in park with small children
1	Dogs running off-leash
1	Drainage, muddy in some places. No off-leash area.
1	GRASS AREA
1	I can't think of anything.
1	I wish it had a canoe/kayak facilities.
1	I wish it had better parking access.i
1	I wish there was a food/consession option like Marymoore park has.
1	If you are between the ages of 6 and 15, there isn't much to do there except get in trouble.
1	It could be more dog friendly , especially early in the morning
1	It isn't used as much as it could be
1	Lack of accessible canoe entry
2	Lack of parking
1	Lack of walkway along Lake Boren shoreline
1	Lake access.
1	Limited court facilities
1	Maintainance Facility
1	More amenities
1	NA

Count	Response
1	NOTHING
1	Need benches with view of rainier. Not enough flowers
1	No Swimming Allowed at lake
1	No off leash area for the dog
1	No off leash dog area
1	No parking
1	No shade for play structure during sunny weather
1	Not a lot of areas for kids to explore.
1	Not enough benches to sit on
1	Not enough parking and not enough tennis courts
1	Nothing
1	Parking
1	Parking and bathrooms are far away from the smaller children play equipment.
1	Parking could be increased
1	Parking issues at times- summer
1	Parts of the park has some dead grass
1	Pesticide use, smoking
1	Playground could have more features like bridges and slides
1	Playground isn't shaded; bathrooms a long walk from playground for little legs
1	Restrooms not open when needed
1	Smell from wastewater treatment plant.
1	Sometimes very muddy!
1	The Playground
1	The Restrooms seem to always be really dirty.
1	The crowding on the weekends.
1	The fact that you can't walk around the Lake
1	The grass tends to turn into a mud bowl below the playground
1	The north area has lots of wasted and unused areas
1	The old bathrooms
1	The walking paths are broken and have trip hazards
1	There are no trails around the lake or swimming

Count	Response
1	There's not enough parking
1	Unsure
1	Unused spaces, lack of enough picnic tables and limited access to lake
1	Use of grass space
1	Very little parking, grass area not flat.
1	Water drainage issues on paths, off leash are would be nice
1	Water fountains
1	You can't swim in the lake.
1	bad sidewalks, skateboards, dogs
1	better connections to trails
1	dogs in the water
1	dogs running loose
1	lack of parking
1	lack of parking during big events, it often prevents us from attending events at the park
1	lake access is only on the dock
1	large groups BBQ
1	litter, questionable water quality in lake
1	muddy shore at access to Lake
1	no access to the lake
1	no dog park
1	no lights on tennis courts
1	no off leash dog park
1	not enough coordinated activities, playfields field, etc
1	nothing
1	nothing comes to mind
2	parking
1	people drive to the park
1	poor drainage in field below playground
1	quite a bit of unusable park
1	road noise
1	running track

Count	Response
1	too much grass
1	trash
1	unleashed dogs
1	walk trails too short
1	Dogs, dogs, dogs. Let's face it, dog owners care more about themselves and their dogs and do not care to follow the park rules. I often take a break from coming to the park because of my frustration over the dog owners and their disrespect to others. IF they can't handle the rules then I say ban the dogs altogether.
2	the area in the middle of the walking loop closer to the lake, doesn't feel as safe, not as broadly visible
1	No more boat ramp. The lake used to have access for small craft, float tubes car toppers. Now it is very hard to get a small vessel in and out of the lake.
1	"strangers" sitting in their parked cars and difficult access from water line trail - need steps and handrails
1	The small flower area needs some attention. Does not have a designated leash/off-leash area for dogs. The single house in the middle of the park, hopefully this can be purchased/annexed demolished and land added to the park
1	Needs a flaoting island and a decent sand area to come and go from. Perhaps a paddle board launch area on east side at the old dock or old boat ramp
1	The lower area near the lake is largely underused. I would love to be able to use the lake for swimming and kayaking

5. What is missing from the park or what would you change about the park?

Count	Response
1	I like it the way it is. No changes needed.
1	A food option. A small cafe on the water or bakery! PLEASE!
1	A frisbee golf course would be fun
1	A small floating dock for kayaking.
1	A swimming option would be awesome.
1	ADD A SKATE PARK BECAUSE MY FRIENDS AND I HAVE TO RIDE THE BUS ALL THE WAY TO DOWNTOWN RENTON
1	Add a splash park and a zip line
1	Add lights on the tennis courts
1	Add water recreation
1	An off leash area for small dogs
1	An off-leash, enclosed dog area would be fantastic!
1	Better access to the water
1	Better access to water
1	Better view and acces to the lake

Count	Response
1	Bike racks near playground
1	Boat ramp
1	Canoes, paddleboats, other lake access amenities.
1	Covered areas.
1	Covered play equipment.
1	Do not change the park. Leave the park the way it is now.
1	Dog Park
1	Don't know.
1	Enforcement of leash requirements Include more walking paths into new areas
1	Expand the playground area to include more equipment
1	Fenced Off leash dog area similar in size to robbinswood
1	Fix and update the dock
1	I think we need an off-leash area, however small. A swimming beach would be nice too.
1	I would like to see a private community pool.
1	I would like to see some natural areas with native plants, to encourage birds and other wildlife.
1	I would prefer that we keep the natural setting and not add a lot of "development".
1	I would turn the stage area into more of an amphitheater setting with tiered seating.
1	Indoor tennis courts
1	It could use canoe/kayak facilities.
1	Lights, even if closed
1	Make the basketball area covered for year round use. Enforcement of leash law.
1	More Level Parking Area
1	More covered areas Keep the grass looking healthy Bigger play ground
1	More family activities (kids concerts, sports leagues, etc). Bigger play structure for kids.
1	More jogging/walking paths maybe along perimeter of park
1	More parking space
1	More play structures and play areas
1	More walking trails with connection to other parks, city/businesses/bus transportation
1	My kids would love to swim in the lake
1	NA

Count	Response
1	Not sure. It's fairly natural and that's nice.
1	Nothing
1	Nothing other controls on what goes in the lake from the new construction
1	Off Leash dog area
1	Off leash dog park
1	Off leash dog park
1	Picnic tables and benches in the sun View of the lake Paddleboats on the lake Better parking
1	Skateboard park, more for tweens to do.
1	Soccer field More areas for organized sports, fields It would attract families and keep it safe
1	Splash park, summer movies, ball field
1	Sports fields
1	Swimming/beach area
1	Theatre! It would be great to have a playhouse/theatre
1	Water fountain by the playground, workout areas.
1	Water toys for kids, no stage for performances, historic signs and interpretation signs
1	Waterfowl, which may be a good thing
1	We love the park as is!
1	activities for older kids
1	mayb a few more benches or sitting areas in the quiet areas of the park.
1	need more parking
1	newer bathrooms
1	permanent stage / amphitheater, another covered picnic area, more bathrooms,
1	swimming area, amphitheater
1	walking track, kid bike riding area
1	wifi connection
1	so far I really enjoy the open grassy areas and h ope they keep them especially these days where concrete is everywhere...its fun to fly kits, play sports and have dogs and kids and people have lots of roaming space..i hope they keep the grassy areas and also the trees and not cut down any more trees please:)
1	Incorporate more mining history especially in the play ground with play structures that are trains, coal cars, and tunnels.
1	Flat, central play field. The current center area below the playground is uneven. A baseball/softball field.

Count	Response
1	It would be so fun to have a seasonal pool (private) with a club membership available to people living in the area. I grew up and had access to Sheridan Beach and it shaped my childhood in a profound way. You could have swim lessons, swim meets and just a place for neighbors to come together and build community.
1	Maybe a few more lights on the north end of the park but overall park is fine the way it is, don't feel it needs any improvements
1	1. Upper parking area (?overflow during well attended events). As you know, both sides of the grassy roadway, especially the more western side, have deep "ditches", that are a real hazard for parking. We've witnessed cars dragging their rear bumpers or fenders, trying to back out, even at an angle, after accidentally driving too far down into the ditch. Any chance there could be some improvement to the whole area, or at very least, fill dirt to level out the ditches? 2. The lake dock is getting a little "tired". It could use some renovation. 3. Beach: Such a big draw for little ones! Enlargement and cleaning up of the area, with a load or two of sand, to make it more user (kid) friendly and more inviting for all.
1	It would be great if the property between Coal Creek and the park could be purchased. I think there's a home or two down there, off of a single drive.
1	I haven't actually been to the park yet, but I saw a teenage boy doing skate tricks in the library's parking garage one night so I thought "what if there was a skate park at Lake Boren park?
1	Something for older children. Everyone wants to appeal to toddlers and very young children but they grow up and then there isn't much for them in Newcastle.
1	There is a lot of open space. You could put up more activities like sports net, horse shoe etc, a off leash dog area would be amazing!!!
1	More trails, maybe some features that other parks have that we haven't thought of. I wish it could extend over toward School Woods to help preserve what's left.
1	I would like to see the park expanded by buying out the properties at the south end of Lake Boren.
1	Need map of all connecting Newcastle trails. Open to the public message board. Need a covered stage for programs.
1	Need more carved area this area raining a lot And summer at noon too sunny to play outside to have damage with the sun
1	One thing I would like to see at Lake Boren is a dog park for small dogs (20 pounds or less, or the accepted standard for small dogs). I see many small dogs around Newcastle while walking my own, and there are few places in the Seattle area where small dogs can romp leash-free without being intimidated by larger dogs.
1	Demonstration gardens, maybe a community pea patch might be nice. I've often thought that a public pool or other "big use" might be nice, but it would probably diminish other uses and cause access issues for those trying to enjoy the more passive spaces.
1	I'd extend the trail around the south end of the lake on boardwalks, and expand the park to include a true esplanade on the east side, tree-shaded & shielded from traffic noise. Also a waterside gazebo with benches.
1	Maybe make an entry point for canoes and kayaks next to the current pier. Maybe summertime rentals for kayaks and canoes.
1	It would be nice if there was a dog park included in the park. Raise the path to access the lake dock, it is often under water
1	Add parking closer to the playground so little children don't have to hike up the hill to get there. Also, leveling the main grass area between the main parking lot and the playground and making it drain better would be ideal. Lastly, creating a beach area near the main dock for accessing the lake on foot would be HUGE!

Count	Response
1	Lake Boren Park is almost perfect the way it is --- probably the biggest reason we moved to Newcastle. I would say that additional city resources would be better invested in keeping the library open on Sundays or in limiting high-density development. However, I would urge Newcastle to follow the lead of other Northwest cities and NCAP in making Lake Boren park pesticide-free. (I find it somewhat baffling that the most visible environmental organization in Newcastle, the "Weed Warriors," is a group dedicated to killing things.)
1	I WOULD LIKE THE AREA IN THE BACK TO BECOME AN OFF LEASH DOG PARK. EVEN IF YOU ONLY DEDICATE SOME OF THE AREA I KNOW THAT IT WOULD MAKE A LOT OF PEOPLE HAPPY.
1	I think Lake Boren should become the Green Lake of the Eastside. This would bring so many people through commerce area on Coal Creek and businesses would benefit. Having an amazing park like that would boost home values across Newcastle.
1	Off leash dog area in the center area toward the lake--slope between the tress--should be fenced off with multiple gates around for access with running water for dog drinks. The original proposed area off 84th was too close to the homes above the water pipeline--too noisy for residents. This area is never used by anyone--festivals, games etc.
1	We would like to be able to catch fish and swim in the lake. We love concerts in the park! It would be nice to have more evening concerts.
1	Remove the play structure that goes around and around..hazard/safety issue when big kids spin it too fast for the younger kids.
1	Indoor Facilities/Community Center for winter, bike rentals in summer, more trails, and better lake access
1	Better kayak/canoe access. A climbing wall. Disc golf. Interactive water features for summertime.
1	More drainage for the grassy area across from the bathrooms. Also, additional climbing toys and repaint the stage (my kids have gotten splinters on it a number of times).
1	The new construction nearby has removed a ton of trees, would be nice to see some replaced so it has a cozy park feel, instead of being so open to the street
1	Lack of access to the water for swimming, boating (human powered). A community garden would be nice.
1	Baseball Field, Kayaks/Canoes for the Lake, Better Playground that is also accessible for toddlers, Picnic Shelter with a lake view
1	A Dog park would be a GREAT addition! I would love to be able to bring my dog to a (leash free) enclosed area just for dogs where my dog can run free while my kids play.
1	Add walkway along Lake Boren shoreline. Add Frisbee Golf. Add dog park (east of lake?), with access to lake. Connect main park with east side of Lake Boren for walkers.
1	Paddle board launch, swim island/dock. Also buy properties on north shore and open a swim in brew pub in one of the houses.
1	More landscape screening from Coal Creek Parkway, maintaining the privacy from car traffic that we used to have before the parkway was widened. More shade trees, possibly lining the walkways. The climbing tree is missing.
1	Better signage about the dog rules. Make the rules large and obvious. The other thing missing is enforcement for folks who run afoul of the park rules.
1	I would like to see a dog park for small dogs. There are quite a number of small dogs in Newcastle and few free areas in Seattle devoted to their play.
1	There used to be a small boat ramp before Coal Creek Pkwy was widened. It would be nice to have a non-muddy place to launch a small row boat or canoe. My son and his friends used to love canoeing on the lake.

Count	Response
1	An leash/off-leash dog area. Hopefully it would be placed adjacent to the Coal Creek Parkway area, and some of the trees are left standing, so the possible barking noise of the dogs will be absorbed / projected towards the Coal Creek Parkway, where it will be absorbed by the road noise.
1	Off leash area for dogs. With all the new housing (100+) units being built, I would anticipate an increase in dog ownership. Currently, residents have to drive to other off leash locations. Has this been considered? If not, I would like to request that the City pursue looking into the feasibility of this happening.

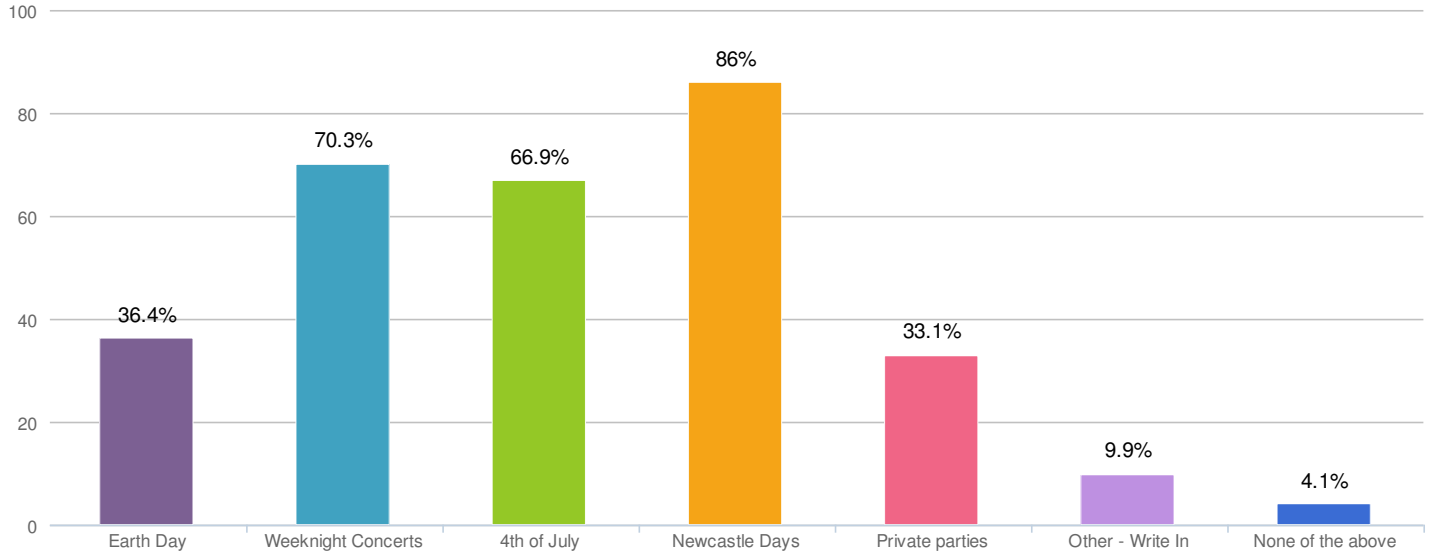
6. What do you find most challenging about the park?

Count	Response
1	Nothing
1	0
1	Access to the lake
1	Affording the cost of reserving a shelter
1	Balancing demands of growth and traffic noise with the aesthetics of the park.
1	Central grass area is often muddy.
1	Climbing the hill!
1	Dogs loose in park.
1	Don't know
1	Getting time on the tennis courts
1	Hills
1	It is a great park now--no challenges.
1	Its an OK park. It could just be so much better.
1	Limited Parking
1	Limited lake access
1	Limited parking
1	Maintain grass during summer when dry
1	My walk there will not be nearly as pleasant once the School Woods is wrecked.
1	N/A
1	NA
1	NOTHING
1	NOTHTING
1	Need to open up the parking along the power line.
1	Needs more swing sets.

Count	Response
1	No challenges I can think of at this moment.
1	No complaints.
1	Not much.
2	Nothing
1	Nothing Not sure what this question means or how different from prior questions
1	Nothing challenging.
1	Nothing really.
1	Off leash dogs
7	Parking
1	Parking Lack of seating
1	Parking
1	Parking at events, especially 4th of july
1	Parking availability; play area gets really hot on sunny days
1	Parking on busy days during the summer.
1	Parking.
1	Parking. Sometimes the hills of the paved trails.
1	Parking...but in the grand scheme of things, it's not that bad.
1	People not picking up their dogs' feces
1	Security car broke in or car driving in the park At night the gate need to lock at nighttime.
1	The Playground
1	The grass gets really wet in the winter. Sometimes the bathrooms get trashed after the weekend.
1	The parking on the weekends. No parking
1	There's no place to grab a drink or a snack. Parking is also a challenge at peak times.
1	Uneven ground because I'm getting older. My problem though - not the city's.
1	Use of the lake. It would be nice to have a small sandy beach area next to the dock.
1	Very little. Perhaps a true flat area for sports play on grass
1	Walking across the grassy areas without rain boots.
1	Water fountains Seating areas
1	finding parking
1	nothing
1	off leash dogs

Count	Response
5	parking
1	space
1	the area between the walking loop isn't that appealing. parking is sometimes a challenge.
1	unleashed dogs
1	Nothing - other than the dog owners. I know, sorry, but this is the one thing I cant stand about the park.
1	My child is afraid of noisy hand-driers so paper towels would be amazing but I know why they're not offered. I'm struggling to come up with problems. :-)
1	There have been some drainage issues in the past that make the fields very muddy, which can be trouble for small children, but I think recent efforts have largely addressed this concern to the extent that is reasonable.
1	parking (except during summer events with access to the water line) dog poop vandalism with car tracks and tree hacking limited access to lake
1	Tirane - it is sometimes challenging with small children to access the play equipment from the lower parking area. And if the bathroom is needed during our park this can also be challenging.
1	Too many people attending the 4th of July. I think the numbers are unmanageable and possibly a hazard to the attending public and neighborhood. Lack of lighting to access the water line trail parking during functions at night. Need steps and access to trail.
1	Having the restrooms and parking lot so far away from the playground. The field is often very soggy and wet and not good for running around on.
1	Nothing, it is an excellent park. I wish they would maintain the swings better, they seek so bad and it is so loud. Love that there are large swings though.
1	That the city wants to add things to the park when we go to a park for the nature and greenery. Parks should be nice, free open spaces.
1	it doesn't drain very well and the space between the playground and the tennis court is ofter very "boggy" (wet0.
1	It would be great to link the water more to the park itself. There are some wonderful tree groves that could maybe be utilized more as reflection spots or something.
1	It will likely end up causing more congestion/traffic with all the new developments adjacent to it and roads in and out not able to accommodate. The park as it is doesn't have enough parking for large summer time events but with the new homes/condos there will definitely not be enough space
1	There isn't a view of the lake from the park area. Parking can be challenging but we moved within walking distance so solved that problem!

7. What events do you attend at the park?



Value	Percent	Count
Earth Day	36.4%	44
Weeknight Concerts	70.3%	85
4th of July	66.9%	81
Newcastle Days	86.0%	104
Private parties	33.1%	40
Other - Write In	9.9%	12
None of the above	4.1%	5
	Total	121

Statistics	
Sum	324.0
Average	2.7
Max	4.0

Responses "Other - Write In"	Count
Left Blank	123
Dog walking	1
Easter Egg Hunt	1
Pickleball games in the evening.	1
Playing	1
Walking	1
annual church service at park	1
church services	1
family events	1
family outings	1
fireworks	1

Responses "Other - Write In"	Count
movies -like to see more	1
weed control workparties	1

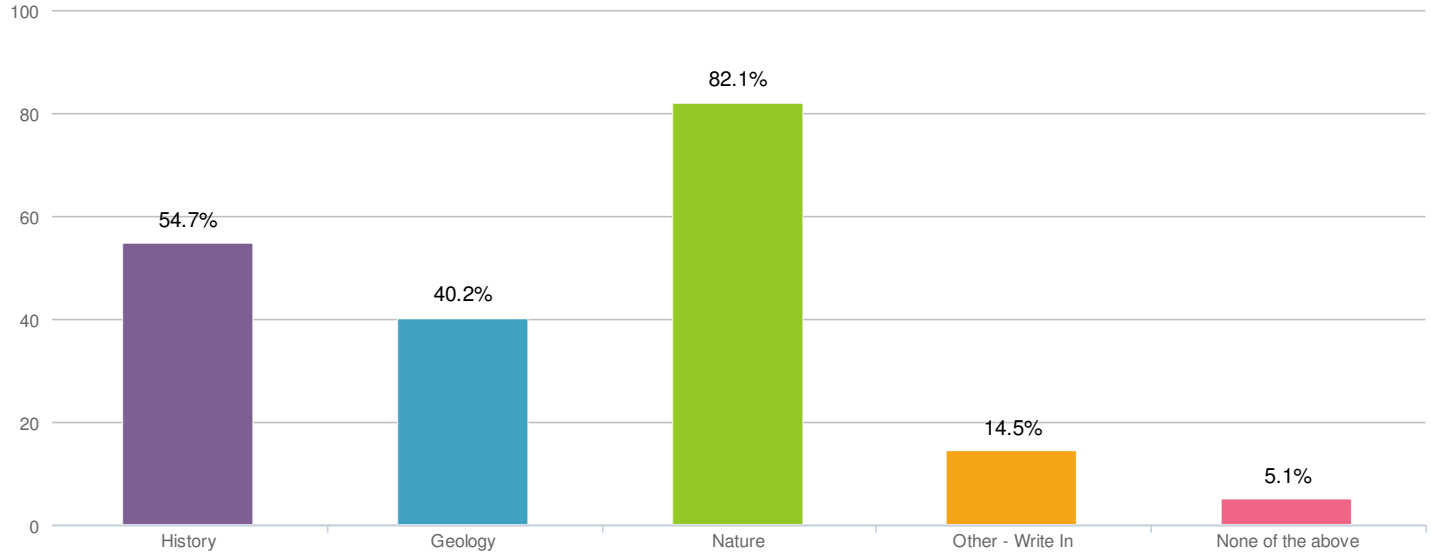
8. If you attend events, what improvements could be made to the park to enhance your experience?

Count	Response
1	Nothing
1	slightly Bigger stage with cover
1	A central gathering area such as a concrete stage with pergola
1	A nicer stage area, more parking
1	At the very least improve the walking paths so they aren't cracking and uneven.
1	Availability of water at the picnic shelters.
1	Beer garden at concerts
1	Better Parking
1	Better food options.
1	Better music more vendors
1	Better parking and traffic flow.
1	Better parking experience.
1	Better parking management
1	Better parking. A snack/food option.
1	Better stage area
1	Better stage, covered.
1	Better stage. An amphitheatre.
1	Better well known performers
1	For a small town park, I can't think of anything. It's pretty cool.
1	I think they do an amazing job with the events!
1	IT WOULD BE GOOD TO HAVE MORE FOOD VENDORS.
1	ITS GREAT NO NEED FOR IMPROVING
1	It would be fun to have the beer garden at the 4th of July festivities!
1	Keep the grass as nice as possible.
1	More bathrooms brought in for events especially concerts at the park
1	More concerts

Count	Response
1	More diverse food trucks
1	More examples of native plants
1	More food trucks
1	More involvement of lical businesses, food trucks etc
1	More other culture activity and art far this area is more other minority's moving in .
1	More picnic tables would be nice.
1	More real bathrooms.
1	More shaded areas
1	NA
1	Need two dedicated pickleball courts, preferably covered.
1	None. Most events are well run.
2	Parking
1	Provide port-a-potties
1	Sell beer and wine at the concerts. Better food at the concerts.
1	The playground could use more varieties of toys and more space for the kids to play
1	better stage - covered
1	better weather
1	early start times
1	more hours for the beer garden, more food options for events
1	more parking
1	more picnic tables, seating areas
1	more vendor booths
1	newer bathrooms
1	none
1	none at this moment
1	permanent stage / amphitheater,
1	permanent stage structure needed more to do
1	See above about parking access to water line trail. Cleaner restrooms... floors are dirty and smell. Better provisions for recycling, food scrap waste and garbage collection. Vendors should be required to provide universal types paper plates, napkins, cups, flatware - all compostable. Waste Management does this for fair in Monroe. Better stage & lighting for evening events. Sound is sometimes too loud; volume should not be controlled by musicians.
1	The lines for the bathroom are extremely long for the 4th of July. More vendors would be appreciated.

Count	Response
1	I would like more performances and more variety at the summer concerts. I have attended less and less often in recent years because it seemed like it was the same flavor of classic rock cover bands playing every week. I just don't get that excited about hearing middle aged rocker dudes play hits from the 80s every week. Maybe, I'm unusual, but I would love to hear a string quartet or other chamber music, jazz, big band, original singer songwriters, world music. More diversity!
1	For us no improvements needed since we always walk to the park but seems there may be an issue with not enough parking
1	More food trucks...lines were so long for the limited food sellers. Healthier food options should be added.
1	Again, I think the park works very well as it is --- the topography even provides natural stadium seating :-) In particular, I would discourage any further development of the stage structure, since this is a favorite spot to play with kids during the vast majority of the time when no events are being held. In general, events are rare enough that I don't think they justify special investments in improvements to the park.
1	Pre-announce food vendors--better food-- so you can come prepared to purchase and bring money with you.
1	It would be fun to have a little theatre their--like The Bathhouse on Greenlake. Then, the park could be used year-round and it would bring vibrancy to the park in the off-season.
1	Better sound and seating options Landscaping for adult appreciation (not just playground for kids)
1	Increase the food vendors during weekend evening concerts. It is hard to come home from work and get dinner ready before heading off to the concert.
1	Two permanent grills at the pavilion by the tennis courts. Most folks grill and have to bring their own.
1	The stage could be aligned with the natural fall line of the grassy area to create a more natural "amphitheater" feel. The current stage location makes some weird slopes for viewing the band comfortably from your couch or lawn chair.
1	I avoid music events whenever possible because they are too loud, and I've always tried to protect my hearing.
1	The Easter Egg Hunt should be staggered. Dismiss the different age groups in waves and use a megaphone so we can ALL hear. However, we love that this is available to us!
1	Don't overdo things. It seems like there's a nice balance now. If it gets too developed it will lose the small town feel.
1	Grade the center area flat for concerts and events. Maintain the grass. This past year someone tore up the lawn and it wasn't in good shape.
1	Many of the concerts are too loud in my opinion, I can't believe parents let their kids dance in front of the stage, can't be good for their ears. Would be nice if more recycling bins available.
1	Amphitheater type setting in the stage area to improve sound. Add a walkway or trail that circles the lake and the park. Find a way to incorporate restaurants into the setting.
1	More parking...and not just expanding the existing lot. Allow for entering off Coal Creek or the power line road above the Park.
1	The music at the concerts could be a little quieter so it is possible to have conversations with friends, neighbors, family without having to yell. I really appreciate the FREE kid experiences at Newcastle Days- I'm a single mom on a tight budget and it's really great that my kids can participate.

9. What defining characteristics of Newcastle should be represented in the park?



Value	Percent	Count
History	54.7%	64
Geology	40.2%	47
Nature	82.1%	96
Other - Write In	14.5%	17
None of the above	5.1%	6
	Total	117

Responses "Other - Write In"	Count
Left Blank	119
Access to other trails	1
Community	1
Don't remove anymore trees.	1
Fitness	1
Friendly neighborhood park	1
Native Plants/wetland protection	1
Trail System	1
connection to cemetery; explanation of wetland function of Lake Boren	1
culture	1
group project opportunities	1
it's fine as is	1
musical culture	1

Responses "Other - Write In"	Count
partial of the above	1
sense of community	1
Comment to the above: I would be happy to have information about History and Geology in, for instance, displays on the restroom buildings, but I don't feel these are the main focus of the park. (Perhaps City Hall.)	1
Fun, relaxing, family, dog friendly. It's a place to play. Put the history in the cemetery and library or buy Lee's property (old Newcastle) for an historical park	1

10. What is your interest in the following aspects of Lake Boren Park?

	Average	Max	StdDev	Responses
Natural drainage system	6.74	10	3.24	69
Native plants	7.10	10	2.64	78
Ecology	7.28	10	2.65	68
			Total	85

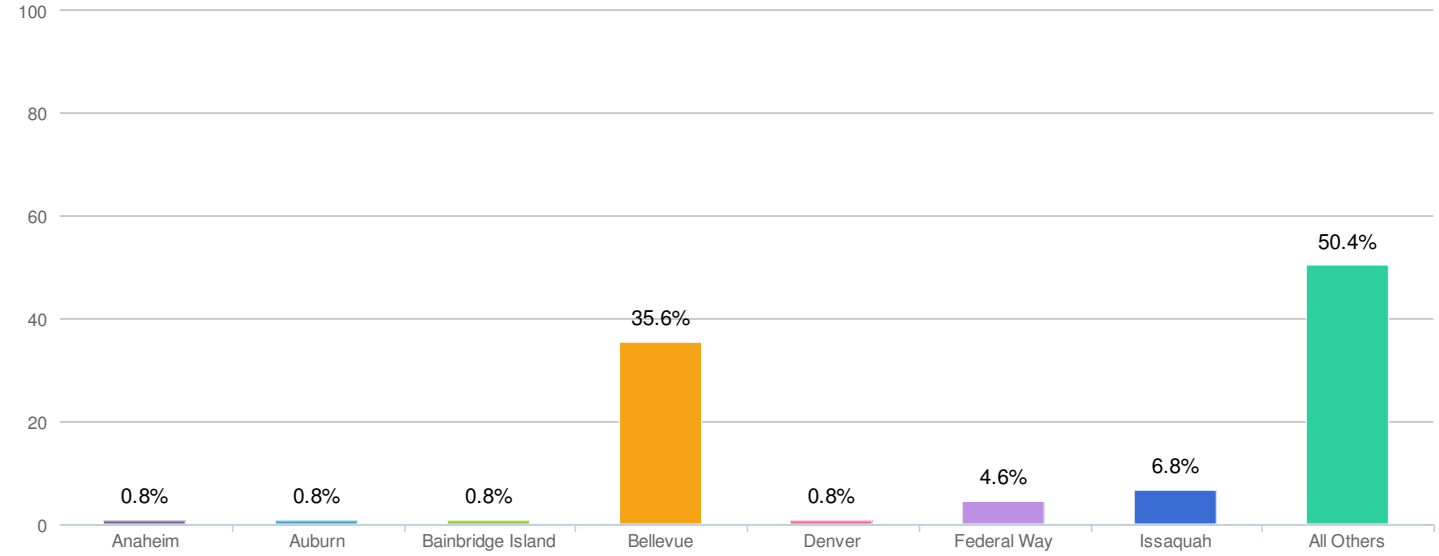
11. Is there anything about the park you have not already shared on the previous questions but want to share?

Count	Response
1	Anything to improve bicycle access or bike trails would be awesome.
1	Bring back movie night at the park!
1	Consider adding a fitness walk with suggested exercises along the path.
1	Cute maintenance workers. :)
1	Good luck trying to make something as nice as this park even better!
1	Good signage is important, including an updated trail map.
1	How clean is the water in lake boren?
1	I WANT A SKATEPARK
1	I would like to see a map of the connecting walking trails and information on the cemetery
1	I would like to see some facilities that would attract teens for group play.
1	I'd love to see more community events.
1	I'm so glad we have this park in our little city.
1	Improved signage and history/geo markers
1	It's one of my favorites in Newcastle. A comfortable place to be around neighbors.
1	Look at ways to utilize the park in the cooler months (November-March)
1	NA

Count	Response
1	NO
1	No
1	No, but thank you for seeking the public' ideas!
1	Paint the maintenance building roof as it is an eyesore from above.
1	Please do not overdevelop the park-i.e create more parking. Its a park-leave it that way!!!
1	Police presence during events should be increased. More people not from our town attend events.
1	Poor survey
1	The city staff if see some damage in the park need to taking care right away .
1	We are lucky to have the park. I like that it is a pretty simple park, pleasant and safe.
1	We do NOT want to see an off leash dog park added to the current park.
1	no
1	Don't turn it into a Seattle Greenlake type park. Don't push out the current lakefront homeowners by imminent domain for a trail along the lake (and I am not a lakefront homeowner). DON'T make 129thSE a through street through the park.
1	No--I think the park is nice the way it is. If you improve it too much --you will attract non-residents and we end up paying for it--
1	Play facilities are adequate for most ages. Access to the park from surrounding neighborhoods could be improved to take burden off of 84th Street access. More people should know they can access the park from a trail on Coal Creek, from 129th - walking (car access from 129th should be discouraged). Access from the west should be provided through Olympus - an easement should be found.
1	Always a great park to take the kids to play on the playground and the fields as well as checking out the wildlife closer to the lake. Good for walking too!
1	Is there a way to actually utilize the lake more for the people of Newcastle - kayaks, canoes? The events should also help foster community a bit more -- do that through meet/greets, etc.
1	Again, I feel the park is really a jewel of Newcastle, and not in need of major changes. The greatest threat to enjoyment of the park is probably the tremendous housing growth in the surrounding area, so I'd prefer to see attention and funding devoted to mitigating these concerns. If Newcastle wishes to invest more in its public resources, the best improvement I can think of would be to have the library open on Sundays.
1	The city council and city administration's interest in altering and landscaping the park appears to be a great waste of money as well potentially damaging to the natural beauty and use of the park. "If it ain't broke, don't fix it."
1	Early in the AM , prior to 9 , dogs should be allowed to run off leash . The park on weekends is just not that crowded at that time of the day.
1	I just enjoy the fact that its not overcrowded and has a lot of open space and benches in quiet areas for meditating, etc with lots of natural trees winding through the paths around the lake
1	My property looks over the park at the north end. The maintenance shed is an eye sore. The shed should be painted, including the roof, green to blend in with the surrounding trees. It currently is bright in the sunshine and very noticeable. it should blend in like the bathroom building and be consistent style as the other structures in the park. Also, the entry sign is hideous. if the old wooden one is still available, reinstall it or replace. The original signage was way more esthetically pleasing.
1	Keep some of the natural shore and swamp where that nasty old house is, put a trail around the lake. Add docks. Buy lake front and expand. Add a pub.

Count	Response
1	I don't want to see a lot of money spent by the city on fluff - the park is fine right now. All a park should be is what Lake Boren Park is. We don't need any fancy stuff added that will just be vandalized and broken eventually anyway. Save the money for more maintenance and repaving the paths when they need it, stuff like that.
1	We haven't lived here long, but are so glad to have such a well-cared for park within walking distance of our apartment.
1	Make an up front investment in making the park amazing and you will get paid back ten fold over through Real Estate tax revenue. THINK BIG and be a part of this city's history.
1	Love the park, just would like it to be a little more "comfortable" for spending more time there. No place to really sit and enjoy when on a walk, without bringing our own chairs, because the ground is so often wet.
1	What about a Japanese garden or a wild flower garden? Art work and statues needed to enhance the park.
1	Disappointed that the dog owners views were ignored when the issue of a dog leash area came up a couple of years ago. Also, I am annoyed that huge group functions consisting largely of non-Newcastle residents are allowed. On weekends they often take up all of the space and parking making it impossible for Newcastle residents to enjoy the park.
1	Excellent park, also our dog a "Westie" loves it, it is his most favorite park. An off-leash area, which is not just an open field, but has trees, etc, would be most welcomed, as described above. And finally, hopefully the house in the middle of the park on Coal Creek Parkway side can be purchased/annexed and its land added to the park.
1	No major improvements needed. SAVE the money to solve TRAFFIC congestion problems that WILL arise when the 300+ new housing units immediately surrounding the park will be completed. No skate park please!!
1	Overall, it's a great asset for our community. The most important thing Is to make sure it is well protected from vandalism to keep the park and playground clean and safe for residents.
1	Please fully consider the impact that changes to the park will have on the surrounding neighborhoods
1	Love the shade garden with its collection of hardy fushias and ferns. Would be interested in helping weed/maintain shade garden.
1	Park overall is perfect the way it is, no need to make any improvements. Good idea to use the funds to continue to keep the park well-maintained. Very much appreciated that the doggy poop bags are always filled
1	We love this park, I hope Newcastle does NOT market the park to areas outside of Newcastle. I like that it is local, I would hate for it to become like Newcastle Beach or even worse Coulon.
1	There are plenty of plants and wildlife, lets do something for the residents and provide more parking and food options!
1	Lake Boren Park Development was funded with Recreation Conservation Grants (RCO) (formerly known as IAC) and there are requirements that features funded with those dollars remain or a conversion will happen and the City will be on the hook. Want to make sure that aspect is considered and consulted with the State before making any decisions that could impact the City. I believe there were also King County Conservation Futures dollars used to acquire property on the south and east side of that Lake. There are requirements that must be complied with associated with those specific parcels that were funded with those grant dollars.
1	For 15 years, we lived one block away from Greenlake inot Seattle. We moved to the Trails community about 9 months ago and have been pleasantly surprised about the amenities and activities available to us at Lake Boren Park. We like the community feel of the events at the park. We attended each of the concerts this past summer and we loved the fireworks. We walk over to the park most days for a walk with our dog.
1	Any chance we could have a Bocce court put in? Lake Forest Park Civic Club has one and it's a lot of fun!

Source Cities



Value	Percent	Count
Anaheim	0.8%	1
Auburn	0.8%	1
Bainbridge Island	0.8%	1
Bellevue	35.6%	47
Denver	0.8%	1
Federal Way	4.6%	6
Issaquah	6.8%	9
Kent	6.1%	8
Kirkland	0.8%	1
Klamath Falls	0.8%	1
Lynnwood	0.8%	1
North Hollywood	0.8%	1
Renton	9.1%	12
Sammamish	11.4%	15
Seattle	15.2%	20
South Gate	0.8%	1
Tacoma	3.8%	5
Yakima	0.8%	1
	Total	132

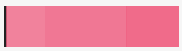
Report for Lake Boren Park Master Plan Concepts

1. Rank your top three favorite elements from Concept 'A'.

Overall Rank	Item	Rank Distribution	Score	Total Respondents
1	(17) Lakeside promenade		38	19
2	(5) Stage & amphitheater bowl w/ outcrops		38	17
3	(11) Trestle boardwalk & natural beach		36	17
4	(4) Opportunity area (dog park, skate park)		26	12
5	(2) Mining play/learning area & level play lawn		24	10
6	(10) Rebuilt dock		19	11
7	(6) Accessible primary path network		18	7
8	(8) Park entrance w/ parking		18	10
9	(13) Accessible secondary path network		17	10
10	(7) Fern, moss & rock garden		14	6
11	(15) Natural beach		14	8
12	(18) Rebuilt dock		14	7
13	(22) Native plant restoration area		11	7
14	(3) Newcastle plaza & festival tents (ephemeral)		11	5
15	(1) Accessible path connection		11	5

Overall Rank	Item	Rank Distribution	Score	Total Respondents
16	(16) Opportunity area (dog park, skate park)		10	6
17	(21) Improved shelter amenities		9	5
18	(14) Outcrop viewpoint		7	4
19	(19) Rebuilt dock platform		6	3
20	(12) Relocated structure and forest meadow		4	3
21	(23) Rain garden/swale		4	2
22	(20) Stair connection to existing concrete steps		3	2
23	(9) Maintenance facility screening		2	1

2. Rank your three least favorite elements from Concept 'A'. (select only 3)

Overall Rank	Item	Rank Distribution	Score	Total Respondents
1	(4) Opportunity area (dog park, skate park)		43	18
2	(2) Mining play/learning area & level play lawn		30	11
3	(9) Maintenance facility screening		27	13
4	(8) Park entrance w/ parking		21	10
5	(7) Fern, moss & rock garden		21	10
6	(3) Newcastle plaza & festival tents (ephemeral)		19	7
7	(16) Opportunity area (dog park, skate park)		19	9
8	(5) Stage & amphitheater bowl w/ outcrops		18	8
9	(14) Outcrop viewpoint		15	8
10	(20) Stair connection to existing concrete steps		13	9
11	(1) Accessible path connection		13	6
12	(15) Natural beach		8	5
13	(12) Relocated structure and forest meadow		8	5
14	(22) Native plant restoration area		7	4
15	(19) Rebuilt dock platform		7	4
16	(17) Lakeside promenade		7	3

Overall Rank	Item	Rank Distribution	Score	Total Respondents
17	(23) Rain garden/swale		6	4
18	(21) Improved shelter amenities		6	4
19	(11) Trestle boardwalk & natural beach		5	3
20	(10) Rebuilt dock		5	3
21	(13) Accessible secondary path network		4	2
22	(6) Accessible primary path network		4	2
23	(18) Rebuilt dock		2	1

3. Rank your top three favorite elements from Concept 'B'.

Overall Rank	Item	Rank Distribution	Score	Total Respondents
1	(29) Natural swim beach		33	15
2	(8) Expanded sports courts		24	9
3	(36) Lakeside promenade		23	12
4	(32) Trestle boardwalk		23	13
5	(15) Community center		20	9
6	(33) Opportunity area (dog park, skate park)		20	8
7	(11) Mining play/learning terraces		18	8
8	(19) Adventure path		16	9
9	(5) Expanded parking		16	8
10	(24) Amphitheater bowl w/ outcrops		16	8
11	(12) Hillside slides		14	7
12	(23) Stage		13	6
13	(4) Accessible path connection		12	5
14	(9) Underground stormwater vault		9	5
15	(3) Accessible primary path network		8	3

Overall Rank	Item	Rank Distribution	Score	Total Respondents
16	(2) Accessible secondary path network		8	5
17	(13) Mining rock scramble		7	4
18	(26) Turnaround park entrance w/ parking		7	5
19	(31) Native plant restoration area		7	4
20	(21) Fern, moss & rock garden		6	3
21	(10) Improved shelter amenities		6	3
22	(28) Rebuilt dock		5	3
23	(37) Rebuilt dock		4	2
24	(17) Forest edge lawn / community garden		4	2
25	(6) Rain garden/swale		4	2
26	(34) Cabled boat crossing		3	3
27	(18) Canopy walk trestle		3	1
28	(39) Stair connection to concrete steps		3	2
29	(20) Outdoor living room structure		3	2
30	(16) Newcastle plaza & festival tents (ephemeral)		2	1
31	(25) Maintenance facility screening		2	1

Overall Rank	Item	Rank Distribution	Score	Total Respondents
32	(30) Gathering area		1	1
33	(14) Level play lawn		1	1
34	(38) Rebuilt dock platform		1	1

4. Rank your three least favorite elements from Concept 'B'.

Overall Rank	Item	Rank Distribution	Score	Total Respondents
1	(34) Cabled boat crossing		56	25
2	(15) Community center		38	18
3	(11) Mining play/learning terraces		32	12
4	(5) Expanded parking		18	7
5	(8) Expanded sports courts		16	7
6	(16) Newcastle plaza & festival tents (ephemeral)		13	6
7	(26) Turnaround park entrance w/ parking		12	5
8	(33) Opportunity area (dog park, skate park)		11	7
9	(9) Underground stormwater vault		10	4
10	(25) Maintenance facility screening		9	5
11	(13) Mining rock scramble		8	5
12	(12) Hillside slides		8	5
13	(6) Rain garden/swale		8	3
14	(17) Forest edge lawn / community garden		8	5
15	(18) Canopy walk trestle		8	4

5. List any elements which may be missing from the design(s).

Count	Response
2	JSB TEST
1	Area here or elsewhere in city for community garden.
1	Baseball Field
1	Benches/seating scattered around park; ensure varied ages play structures stay (most important) and tennis, basketball and volleyball. Love the potential to have trails and natural areas around more of the lake shore. If a skate park is included (not preferred) place it away from other more all-ages and serene elements of the park.
1	Bike Trails?
1	Expanded restrooms
1	Fuschia garden
1	Handicapped accessibility
1	Honestly, my major wish is for an off leash dog park!
1	I just would love to see the walking path repaved. Get rid of the roots cracking up the walk. I think that was on the plan B but not sure if it was on A. Very well thought out. I'd love you to come help us on our school playground and nature area!
1	In plan A, the underground storm water vault.
1	Just a comment - there are several neighborhood parks in Newcastle and they all have play areas for little kids. How about addressing the needs of older kids in Lake Boren Park.
1	More benches

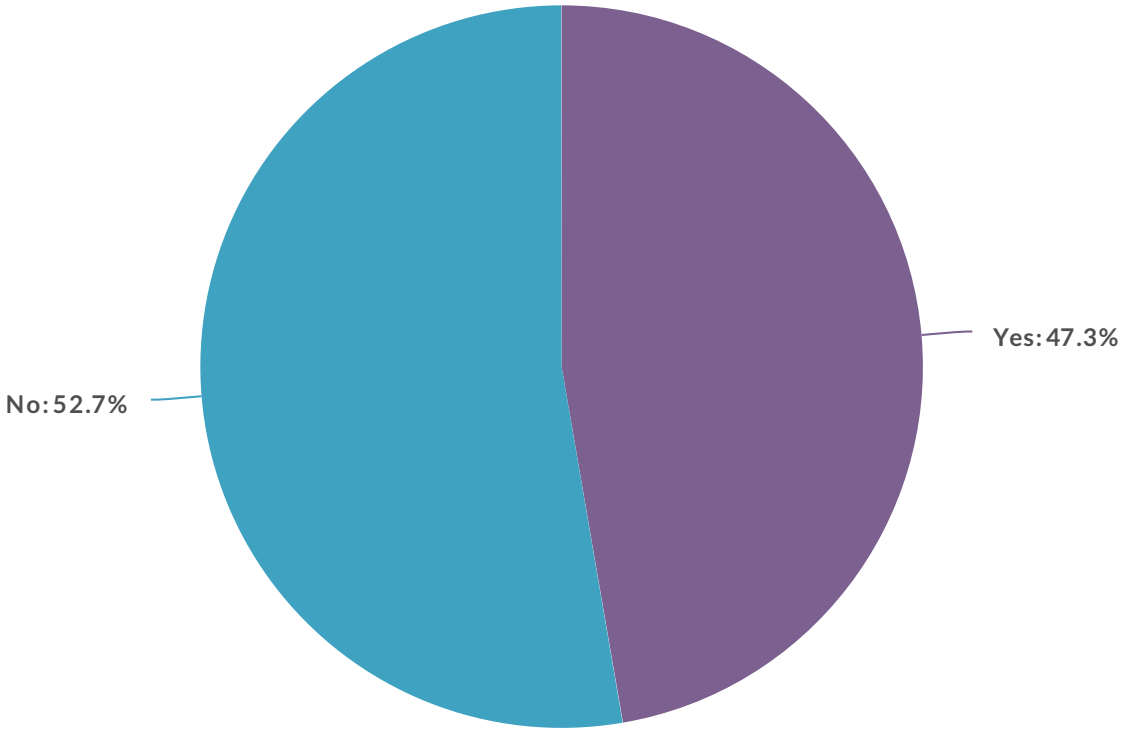
Count	Response
1	More plantings along Coal Creek Parkway to screen the lake from noise.
1	Move maintenance building off site.
1	One of the reasons parents like the stage near the playground is that we can listen to music and watch our kids play on the playground. By moving the stage closer to the lake, parents might feel a little more timid to let our kids play freely.
1	Open roof covered play area, open area for exercise
1	Perhaps a public open air shower so those utilizing the lake may summarily rinse themselves off before returning to their car or other method of transportation.
1	Practicality. Both A and B try to do too many things to serve too many people.
1	Sand Volleyball court

6. List activities you would like to see or participate in at the Park; this can include activates which already take place in the park which you would like to see continue. Following are a few examples for reference: Newcastle 5k, 4th of July, Earth Day, fishing, organized walks/jogs/runs/stroller walks, restoration/replanting of native areas, and Newcastle Days.

Count	Response
2	JSB TEST
1	4th of July
1	4th of July, restoration/replanting
1	4th of July/concerts in the park/fishing
1	A time early in the morning in which dogs can be off leash in the park . The park should be for everyone's use and there are not that many people in the park from 6 am to 9 am .
1	All current activities are wonderful Community events inspire the community.Suggestion: Expand the summer concert series, its really wonderful! !
1	All listed activities plus a farmer's market on Sundays
1	Bring your dog to the park day.
1	Community gathering in the outdoors, all of the above are wonderful and we participate regularly in most.
1	Concert in the park/ 4th of July--fireworks. We need a 4th of July parade/ kids parade/ small floats/ dog parade--something all around park for people to watch in afternoon--

Count	Response
1	Concerts, plays, festivals, larping
1	Earth Day, more exercising activities, Concerts in the Park, Newcastle Days, 5K, BBQ's, and family days
1	Greater fishing access through the repair of docks on both sides of the lake and the introduction of a path or boardwalk akin to element 32 from concept B would serve to connect the new portions of the park and bring in many previously deterred fishermen and women.
1	I generally only go to the 4th of July fireworks and go for walks at the park. When my children are born, I may come more often for family events and play at the playground.
1	I like all of the events that are currently held at the park
1	I like the existing programs especially the concert series during the summer.
1	More benches, seating around trails
1	More concerts in the park! :)
1	More concerts, dog off leash area
1	More performances in the park, theatre, concerts, neighborhood festivals.

7. Do you support the idea of a community center in the park?



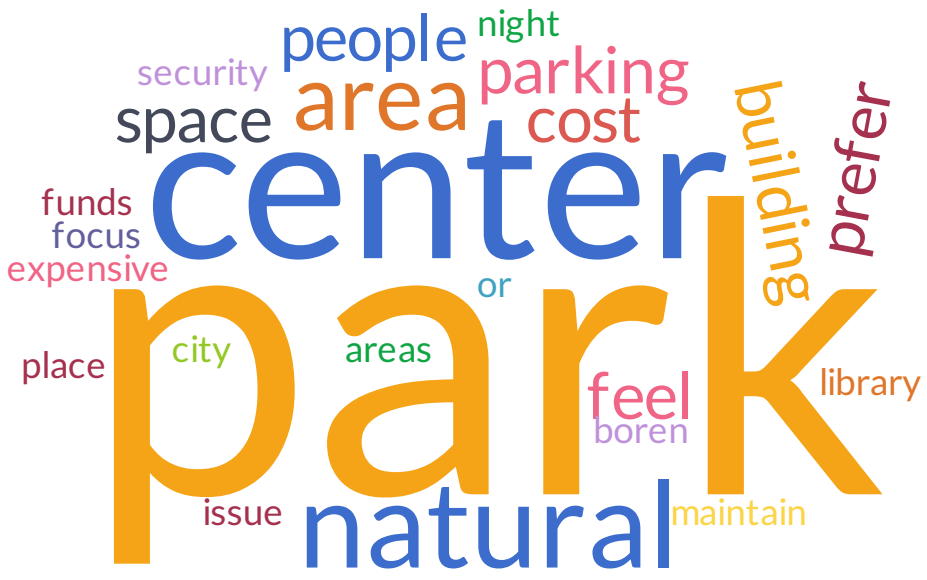
Value	Percent		Count
Yes	47.3%		26
No	52.7%		29
		Total	55

8. Please list some activities you would like to see at the community center.

Count	Response
1	A community center is always a nice area to gather. I think a summer day camp program might be offered. I don't know if we have enough areas for community center activity with the library in our area, that is my only concern. I personally wouldn't use the center but I understand why they are good for the community.
1	Anything all-inclusive. Given the proximity to local schools and the Coal Creek YMCA, some youth activities may serve as an excellent community building opportunity.
1	Art, athletic, social activities for youth and seniors-
1	Children's organized activities, there are so many families moving to Newcastle.
1	Crafts for kids, movie nights, Read aloud to kids/adults (book club?), game nights (board games, video games, community bonding games)
1	Crafts, Kids activities, History of Newcastle, Hands on activities, games (bingo, foosball, etc.). community meetings,
1	Crafts, story time, Cub/Boy Scouts, card/board games
1	Daily yoga or exercise programs. HOA meeting site. Community education programs. Senior programs.
1	Dance classes for kids, soccer offered. Basically anything offered at the Renton Community Center so I don't have to drive there
1	Fitness and classes - varied, but particularly sports/dance/arts classes for kids. Yes please!!
1	Gardening workshops, volunteering opportunities, children's nature classes
1	JSB TEST

Count	Response
1	Kids and Adult classes like soccer, gymnastics, dance, mom and baby classes, yoga, etc... Also family friendly evening and weekend activities and events/clubs.
1	Meeting place for various clubs (i.e. reading, running, fishing, cooking, pilates and other hobbies)
1	Possibly having rooms to reserve for girl/boy scout; PEPS
1	Senior activities/classes
1	Summer Camps
1	Theatre Concerts Classes (visual art, theatre, music, etc. for people of all ages)
1	There is a lack of lease friendly buildings in the area. My family and a few friends are interested in leasing such facilities for large events like Birtdays/weddings/reunions. So having a facility on the lake nearby would be a huge plus!
1	Yoga Art Music

9. Please indicate why you do not support the idea of a community center in the park.



Count	Response
1	Boren is a calm park and that's why it's so widely used. The implementation of a new community center could turn into a rowdy place and scare people away.
1	Cost to build and maintain.
1	Cost to the home owners property taxes
1	I don't believe the cost will support the lack of use it will get
1	I don't think Newcastle has the tax base to take on the costs of building and maintaining a community center.
1	I don't think it's necessary. The park already offers shelter areas for gatherings & this is not a very large park and I feel it would be too large for the area. I would like to keep it looking as natural as possible.
1	I doubt that would be something I would use, and I would rather see funds spent on the other aspects of the park.
1	I like the idea of a community center, but feel it (and its parking) should not displace green space.
1	I need to know more about it, it sounds expensive, and a security issue at night.
1	I think the park should be kept as natural as possible
1	If you enact adequate taxing to pay for staffing then I support.
1	It's a heavily used park and that needs to be the focus. Trying to cram a community center into the space doesn't make sense.
1	JSB TEST

Count	Response
1	Let's keep the natural feeling of the park. WE don't need added infrastructure
1	Like the park the way it is. Would prefer to keep it as nature like as possible.
1	Maybe I need to learn more about it to understand the benefits. It sounds expensive and requires maintenance. Security might be an issue as an attractive space to break into at night.
1	Not enough room or parking
1	Not needed. Too hard to maintain and control vandalism.
1	Not the best use of limited funds. People need more exercise so I favor paths and activity additions
1	Park just cannot be everything to all. It will get too much wear and tear.

10. [OLD VERSION] The design concepts include a number of improvements along the shoreline including rebuilding of docks, a boat crossing, and natural beaches. A primary consideration of the design concept(s) is increased access to the lake.

	Yes	No
Have you been out on Lake Boren in a boat?	2 20.0%	8 80.0%
Have you participated in lakeside activities at Lake Boren?	7 70.0%	3 30.0%
Are you interested in seeing/participating in other activities on/around the lake?	4 50.0%	4 50.0%

11. The design concepts include a number of improvements along the shoreline including rebuilding of docks, a boat crossing, and natural beaches. A primary consideration of the design concept(s) is increased access to the lake.

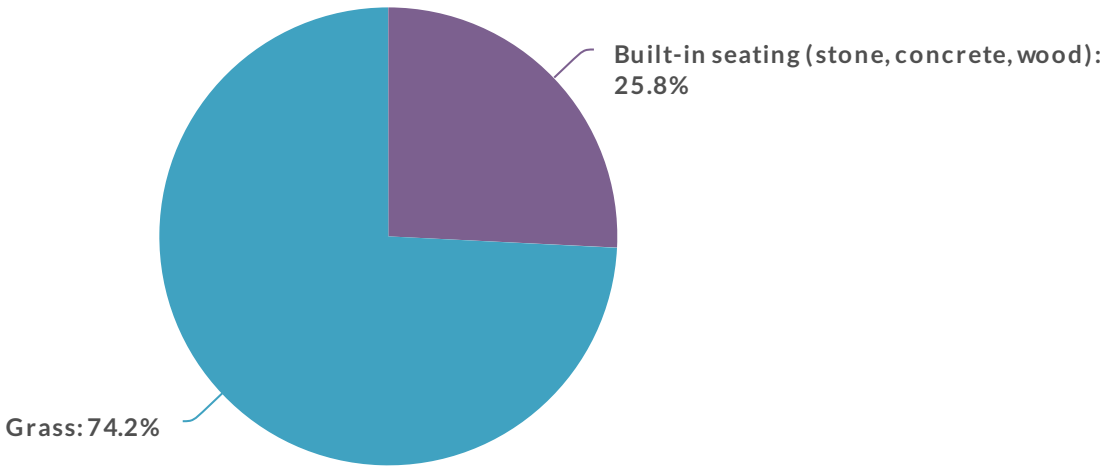
	Yes	No
Have you been out on Lake Boren in a boat?	11 20.4%	43 79.6%
Have you participated in lakeside activities at Lake Boren?	22 40.7%	32 59.3%
Are you interested in seeing/participating in other activities on/around the lake?	43 79.6%	11 20.4%

12. What activities would you like to see or participate in on and around the lake?

Count	Response
2	paddle boat, fishing
2	swim area, boat launch
1	4th of July
1	A beach area for dogs
1	Boating would be fun.
1	Boating, fishing, swimming
1	Boating, fishing, swimming, r/c boating
1	Boating, swimming, fishing
1	Canoeing, kayaking, swimming, etc...
1	Depends on water quality. I like to swim, but the water quality seems iffy. I enjoy non-motorized boating, too.
1	Dog park/swim, paddle board
1	Fishing, boating
1	Fishing, swimming, paddle board race course
1	Inflatable boat races
1	Inner0tube floating, swimming, and fishing.

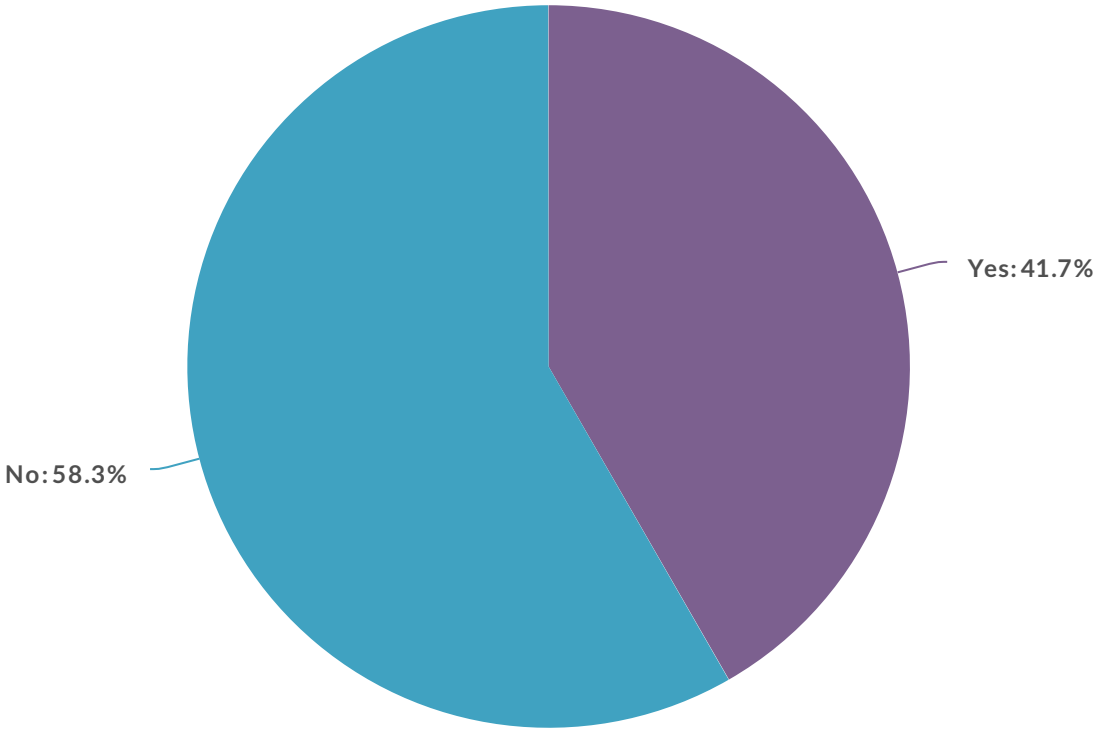
Count	Response
1	Paddleboarding and Canoeing Rentals
1	RC boat show/racing
1	Swimming, canoeing, kayaking
1	Wading/Swimming with or without a lifeguard - opportunity to enroll children in nature class
1	Water access for dogs

13. The design concepts include a new stage and amphitheater bowl. Would you like to see built-in seating (stone, concrete, wood) or grass in the amphitheater bowl?



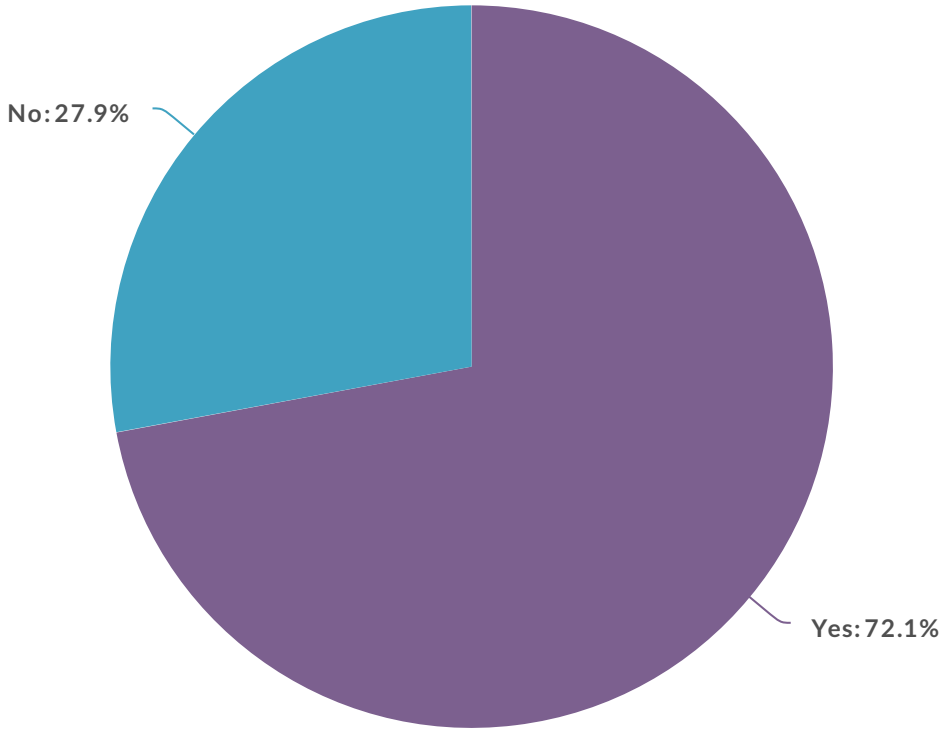
Value	Percent		Count
Built-in seating (stone, concrete, wood)	25.8%		17
Grass	74.2%		49
		Total	66

14. The park has been expanded to include the (mostly) natural space along Boren Creek. Are there activities you would like to see in this area?



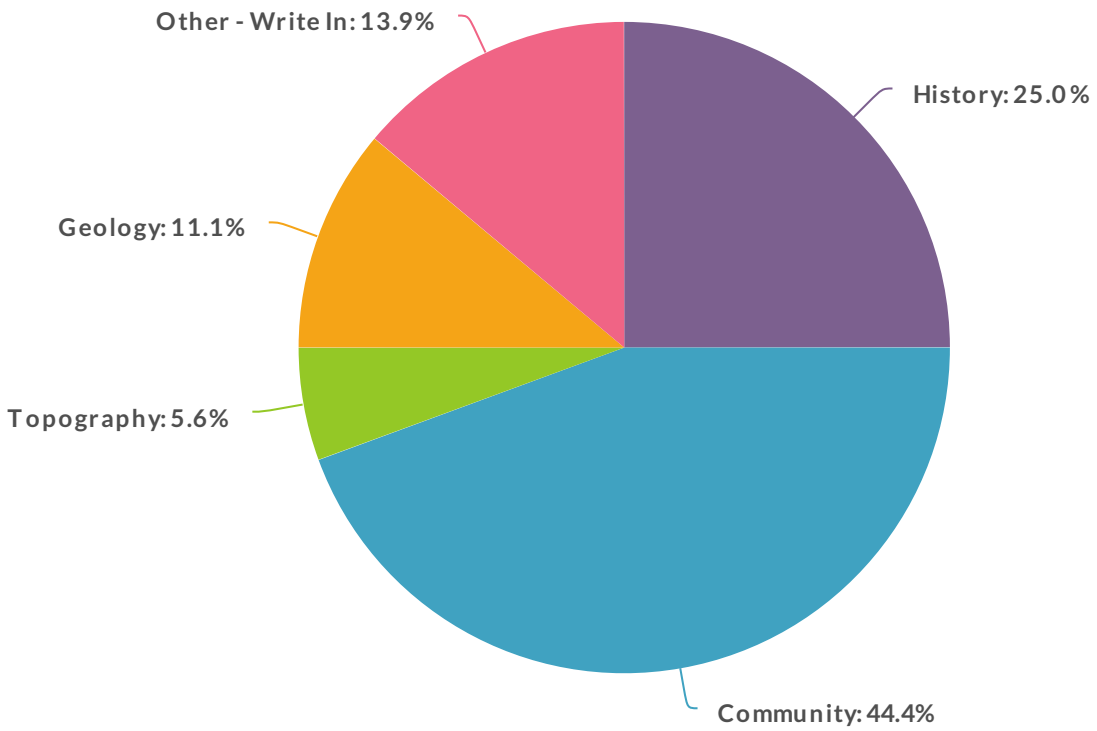
Value	Percent		Count
Yes	41.7%		25
No	58.3%		35
		Total	60

15. Do you think it's important that the Newcastle Community be reflected or represented in the park?



Value	Percent		Count
Yes	72.1%		44
No	27.9%		17
		Total	**61**

16. What are the defining characteristics of Newcastle?



Value	Percent	Count
History	25.0%	9
Community	44.4%	16
Topography	5.6%	2
Geology	11.1%	4
Other - Write In	13.9%	5
	Total	36

Other - Write In	Count
All of the above	2
Forestry	1
flora and fauna - trees and shrubs	1
maintain small community feel	1
Total	5

Lake Boren Park DRAFT Master Plan Concept - 20 June 2016

1. Rank your top three favorite elements from the Draft Concept.

	Score*	Overall Rank
(7 & 8) Amphitheater & Stage	113	1
(15) Beach	86	2
(31) Off-leash Area	72	3
(4) Expanded Parking	51	4
(14) Beach Boardwalk	45	5
(22 & 23) Canopy Walk Trestle & Span	44	6
(21) Trees	41	7
(37) Lake Boren Dock	27	8
(17) Picnic Shelter Improvements	27	9
(33) Lake Boren Promenade	26	10
(5) North Parking	21	11
(13) North Sweep Boardwalk	21	12
(12) Cross Park Promenade	19	13
(18) Additional Tennis Court	18	14
(34) Lake Boren Boardwalk	17	15
(27) Boren Creek Path	14	16
(9) Community Room(s)	14	17
(26) Shelter (learning center)	12	18
(19) Skate Spot	11	19
(25) Boardwalk to Learning Center	10	20
(24) Cattail Walk	9	21
(16) Community Garden	8	22
(6) Newcastle Plaza	8	23
(29) Boren Creek Bridge	8	24
(36) Lake Boren Stairs	7	25
(35) Promenade Deck	7	26

Total Respondents 128

	Score	Overall Rank
(10) Plaza Trellis	5	27
(20) Stone Garden	4	28
(30) Path around Parking	2	29
(28) Boren Creek Stairs	0	30

Total Respondents 128

*Score is a weighted calculation. Items ranked first are valued higher than the following ranks, the score is the sum of all weighted rank counts.

2. Rank your three least favorite elements from the Draft Concept.

	Score*	Overall Rank
(19) Skate Spot	164	1
(31) Off-leash Area	105	2
(18) Additional Tennis Court	64	3
(9) Community Room(s)	48	4
(5) North Parking	43	5
(7 & 8) Amphitheater & Stage	36	6
(4) Expanded Parking	34	7
(16) Community Garden	33	8
(15) Beach	29	9
(26) Shelter (learning center)	28	10
(20) Stone Garden	22	11
(24) Cattail Walk	14	12
(30) Path around Parking	13	13
(10) Plaza Trellis	11	14
(37) Lake Boren Dock	10	15
(28) Boren Creek Stairs	10	16
(36) Lake Boren Stairs	10	17
(35) Promenade Deck	6	18
(22 & 23) Canopy Walk Trestle & Span	6	19
(29) Boren Creek Bridge	4	20
(13) North Sweep Boardwalk	4	21
(6) Newcastle Plaza	4	22
(34) Lake Boren Boardwalk	4	23
(25) Boardwalk to Learning Center	3	24
(17) Picnic Shelter Improvements	3	25
(12) Cross Park Promenade	3	26
(21) Trees	2	27
(27) Boren Creek Path	1	28
(14) Beach Boardwalk	1	29

Total Respondents 126

	Score	Overall Rank
(33) Lake Boren Promenade	0	30

Total Respondents 126

*Score is a weighted calculation. Items ranked first are valued higher than the following ranks, the score is the sum of all weighted rank counts.

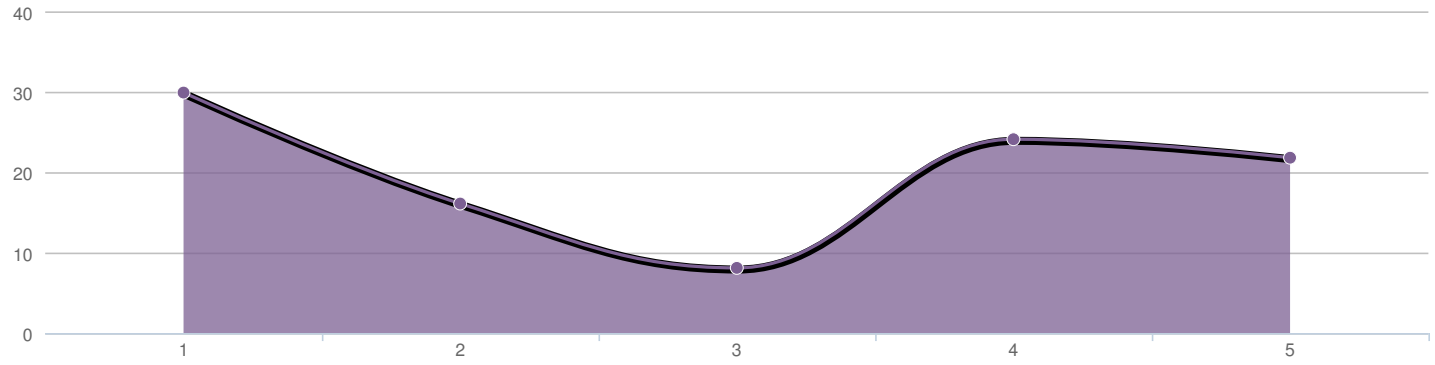
3. List any elements which may be missing from the design(s).

Count	Response
1	0
1	A 9 hole disc golf course could be added to the park. Adds a great amenity at very low cost.
1	A larger community center Rental boats and water activites
1	Dock 37 rebuild please!!!
1	How about a turf field to play soccer?
1	More picnic tables and scattered benches
1	More play structures/areas
1	More threes and paths for walks
1	Please don't start the off leash dog debate again - the area is way too small
1	Solar powered trail lights.
1	Splash pad for kids
1	Splash pad! Doesn't need to be big but this would be great for summer months
1	Training course with 10 stations with different exercises
1	Wanted to make sure the play area for kids is kept and potentially enlarged/enhanced
1	Waterfront cafe or bar to sit on deck over lake boren and have a drink
1	Where is the missing link on the north end of Lake Boren to allow for a waterfront trail?
1	Will the stage have power and lighting? How far in advance could a group reserve the stage?
1	You should preserve or relocate the fuchsia garden.
1	nothing. Please do not waste any more Newcastle citizen's tax dollar money.
1	rowboat, canoe rentals
1	seating at dog off leash?
1	Looks like a lot for our little park--I like it just as is. If we make it too nice--then we get outsiders using instead of residents----we pay for it--they use it! Just like Coal Creek Parkway--"I-405 East"!
1	I hope that the path that has been torn up by tree roots gets fixed. I love walking around the park but the path is quite bad.
1	It's a very small park. What we have now is perfect. I don't know why City is trying to build all things around it. It's totally waste taxpayer's money.
1	The kids park needs to be larger and more functional - kids are quickly bored there. Seattle has done a great job of making the parks unique -- ziplines, larger slides, climbing rock walls -- the playground will be outdated without some of these added elements.
1	Is there a boat or canoe launch? That would be nice. Assuming the water is clean enough for that sort of activity. Shuffleboard court would be fun.
1	A more substantial beach area (bigger than the one shown in the draft plan) would be a solid investment.

Count	Response
1	We need pickleball courts or, at least, mark all of the tennis courts for pickleball. The tennis courts are now used regularly for pickleball in the evenings, especially during concert nights and for a tournament during Newcastle Days.
1	I would like to see funds allocated for someone to police the park in the high-usage times (weekends, holidays, summertime).
1	Saving the gardens. A gazebo for weddings and family special events - a money maker for the city.
1	The idea here is to add new amenities, not just make the park prettier. Near the beach add a location for peddle boats or canoes; add a snack shack; be more aggressive with the wetlands walk making it a running trail with workout stations; do more with the eastside by adding a parking area (right in/right out) off Coal Creek Parkway and have a "carryable" boat launch; move the off leash area to be west of the existing parking; use your current off leash area for small playfield/picnic area; the new location of the stage and amphitheater do not allow for large attendance-July 4th and Newcastle Days are in the 1000's, even the concerts draw over 500. The sound is directed away from large portions of the park and parents like to be able to watch their children in the playground while listening to the music. etc. etc.
1	Now this is being called a skate area, and it was called a skate park on the previous survey. I presume they are one in the same, and I feel that this is a very bad idea for several reasons, such as, a nuisance to the nearby property owners and liability issues for the community.
1	Lake Boren Park is almost perfect the way it is. Where on this survey can we express the wish of most people I talk to, that we mostly just leave well enough alone? Please understand that every time an "element" is "added" on top of open space, that open space is SUBTRACTED. That is, it removes a part of the park's open, flexible, unstructured space, and reserves it for specific people who wish to undertake a specific activity. When a big open field is broken up by massive stone seat-walls and a stage to mildly enhance concert seating on four days of the year, it means that no one can run freely through it to play ball, fly a kite, throw a frisbee, enjoy the open view, or any number of other things. When a giant parking lot is built to support large gatherings at the park on six days of the year, it means that no one can watch the ducks swimming or geese nesting in and around the retention pond that was bulldozed to make way for empty pavement. When the grassy area by the playground is replaced by a huge concrete pit designed exclusively for roller-toys, it means that no one else can play there for any other purpose, like the impressive group of youth I saw just the other day doing acrobatics around the rocks. Since the city has acquired new property near the lake, it makes sense to provide some public access to it, but please tread lightly, and please don't ruin what is already the best park in King County with feature creep. The concept photos I saw at the public meeting looked like something out of the middle of San Francisco. We are not a big city, and we don't need or want a big-city park. The miracle of Lake Boren Park is that, standing at its center and looking out at the fields and trees, you can almost forget you're in a city at all. Please leave that the way it is, for all of us. Less is more.
1	This isn't necessarily missing from the design but I really would like to walk around the lake. I know there are homes and such in the way so some roads will be involved but that's fine. So I think all the boardwalks and such that make the lake trail as nice as possible are valuable; but with the "only pick 3" I didn't want to use my 3 options for just the walking enhancements but I feel all of these are important.
1	Most of the design elements, with the exception of the dog park and particularly the skate park, seem to be okay, although I'm not sure all of it needs to be done. It is an ambitious plan--a nice one, but I'm concerned about the cost to tax payers--especially if we, who border the park, have to pay for a skate and dog park we don't want outside our bedroom windows.
1	A trail around the lake close to the water Roofed shelters on the waterfront for benches and picnic tables
1	A snack shack south of the Beach . Boardwalk with Gazebos along south/southeast shore of the Lake. Public Art in the Park. We paid $900,000 for new property, why do this just for a wetlands interpretation trail. Promote the Lake instead with a nice boardwalk and Gazebos like Coulon Park in Renton. Interfaces with Newcastle trail system & Historic Cemetery should also be promoted. The amphitheater needs to be much bigger than shown. You need to do a better job of communicating differences in Concepts with revisions to the diagrams,maps (configuration control?) and the processing of public comments used or not used. Will the results of this and previous surveys be summarized and published? Newcastle Public Works needs to step up with press releases to educate the community about this project. Don't expect the Community Activities Commissioners to be the Evangelists if they don't even have a Catechism explaining the Master Plan.
1	A font size so that I can read the numbers and the improvements. Size 1 type is not legible, and makes a voter not know what in the world the plan actually shows.

Count	Response
1	Hopefully it provides for a lot more benches and small picnic tables, which can't be seen on your drawing.
1	I think preservation of what currently exists is an element that is missing. I think we also need to consider future fiscal sustainability. Yes, right now we have lots of money to spend, the economy is good. What is the plan for when hard times happen again? Will we be able to appropriately maintain all of these improvements when the next "2007" happens? Many of the options - skate park, amphitheater, dog park - are taking areas that are able to be used by everyone and making them only available to a particular subset of residents. This is net negative. In addition, we should be considering payback on investment with respect to how often the new elements would be used compared to how often the existing elements are used currently. For example, the amphitheater will only be used a few days a year. The field, as it is, is used every day. Personally, I prefer to use a blanket on the ground rather than sit on a concrete bench. Also, I think this survey is poorly designed. There is an implicit assumption in the design of this survey that I think Lake Boren Park needs improvement. I don't, I think that Lake Boren Park exceeds the needs of the Newcastle community. The only improvement I think needs to be made is the electrical from the upper pavilion, near the park, to the parking area. Currently, it's extension cords to lights. The last time I saw it it was propped up with a piece of electrical conduit. This is a safety risk and I don't think this meets electrical code. Why not spend this money on making a new city park as part of the new developments down on 66th?
1	Please make the tennis courts also amenable to pickleball, a great senior sport that is very popular in Newcastle, and is the fastest growing sport in America!
1	The new design is missing a number of elements that currently exist in the current park, namely, uninterrupted wide open spaces with trees, shade, and nature. The proposed amphitheater, for example, adds a bunch of concrete barriers that will only be used a few times a year, and at the same time removes an element from the design.
1	Definitely parking if it isn't already considered. A lot of people have been talking about this and I'm sure anything that will be made on this property will attract a lot of people.
1	A trail should connect the east end of the Boren Creek Bridge (29) with trail 33 along the east side of the lake. That's especially true if the canopy walk gets postponed or rejected. Estimated costs of the various options, as dollar amounts and/or as percentages of the City's income, should be included to make any public input really meaningful.
1	Make sure to maintain the snow sledding path in the Northwest corner of the park. The new promenade may and skate area wipe that out. Also retain the fushia garden, please.
1	USING the actual lake would be great. what about paddle boats or canoes for borrowing/renting? city could even make money renting them out.

4. How supportive are you of a small community room facility in the park?



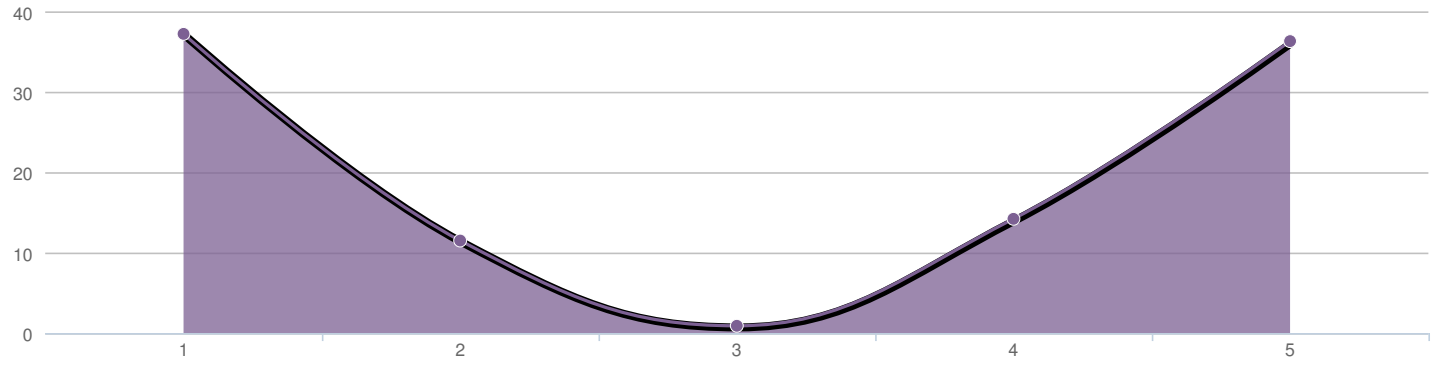
Statistics	
Sum	254.0
Average	2.9
StdDev	1.6
Max	5.0
Total	87

Comments

Count	Response
1	0
1	Don't need it and will be vandalized. Who will maintain and over see it?
1	Having a community room can be a great community-builder.
1	How would it be managed? There are no employees at the park or security.
1	I would prefer a larger community facility
1	I'm nuetral. I have a hard time envision what this room would actually be used for.
1	Library has community rooms. Do we really need more?
1	Meetings can be held at City Hall or in private homes.
1	More facilities to maintain (expense). Why not use City Hall.
1	Not supportive. Do not waste Newcastle citizen's tax dollar money.
1	Other things are more important in the park
1	Small room is a must - a larger facility would be even better!
1	So so
1	Sometimes it would be nice to rent such a facility out for parties during cold weather.
1	The Newcastle Library has a space for this.
1	The community is not utilizing the community rooms available.
1	The one at the fire department in Bellevue is adequate.
1	There are better uses for the limited space in the park than this.
1	We have sufficient community rooms at the library.
1	Will the room be staffed? I would support an expanded bathroom.
1	Yes if Newcastle residents can rent it for private functions at a nominal rate.
1	Yes if the Newcastle residents can rent nominally for private functions
1	good central location for public events
1	high cost, high maintenance, who would use it?
1	I don't think this is necessary at all. There are plenty of spaces to meet at Newcastle Library AND the YMCA.
1	Meh. I'm guessing it will be like others I've seen = not used much by the majority, overused by a few.
1	I don't see why this is needed at the park. Use existing buildings elsewhere in the community for this purpose and keep our outdoor space
1	level of support will depend on cost to build, but assuming within the budget without sacrificing essentials, sure would be nice to have.

Count	Response
1	I don't think it's needed. Like the "learning center" it might be costly to build, maintain, and staff. And there are other community facilities: YMCA, library, and the City-owned former CCUD building.
1	A place to gather, commune, laugh, artistic expressions and break bread out of the elements is essential for a healthy community
1	There is the opportunity for a community building down the street on 129th, so I am not in support of duplicate services and costs.
1	It is somewhat difficult to weigh in on these elements without information about cost. It seems like a community facility would have ongoing costs and need to be staffed. I don't think that is a good idea.
1	Too much for the small space. You a ruining the park circular walk and the quiet peaceful nature of the park!
1	This is not a wholly bad idea, but please don't let it get out of hand. A small extension to the existing bathroom structure seems more reasonable than a whole new building.
1	Doesn't Newcastle City Council already have a meeting room that could be used for community purposes?
1	This would be a good location to hold annual homeowner meetings and other community related activities. It could also be used as an after school place for the neighborhood kids.
1	we have community room with YMCA , Also King county library can use for meeting work shop or other use if city have we own the other expand for up keeping and maintain .
1	Newcastle is one of the most isolated communities I have ever been a part of -- maybe this will be help build some inclusiveness.
1	Town Hall and the Library are close by and I believe they have community space. I'm more interested in green/outdoor space.
1	Depends on the cost and whether it detracts from cost elements to improve south & southeast shore of the Lake. Don't need the Garden area since the previous Fuchsia Garden failed and people/Club quit supporting it.
1	Hopefully, a facility like this will be very attractive in the future for small group get-togethers.
1	I personally have not seen a need for this. I am not sure how it would benefit me in the future. If I saw how it was a benefit, I might view this differently. I don't have knowledge in this area.
1	I don't think that this will be used. The library is close and has a community room. In addition, there are pavilions for gathering. Why not make a room available at city hall for community gathering? (perhaps you already do?)
1	Since the park closes at dark, how much use would there be during the day when the weather is nice? Most community activities take place in the evening.
1	We need a larger community room because, of course, the library has little parking for any scheduled event, in the glass bubble little rooms about to be inundated with overflow parking from the terrible six story apartment buildings.
1	I feel that this is unneeded and a bad use of our tax dollars, and isn't there a room for people to meet at in City Hall?
1	This really depends on costs for use, reservation availability, and other factors. This should really be part of the Library and not the park.

5. How supportive are you of a fenced off-leash dog area?



Statistics	
Sum	340.0
Average	3.0
StdDev	1.8
Max	5.0
Total	113

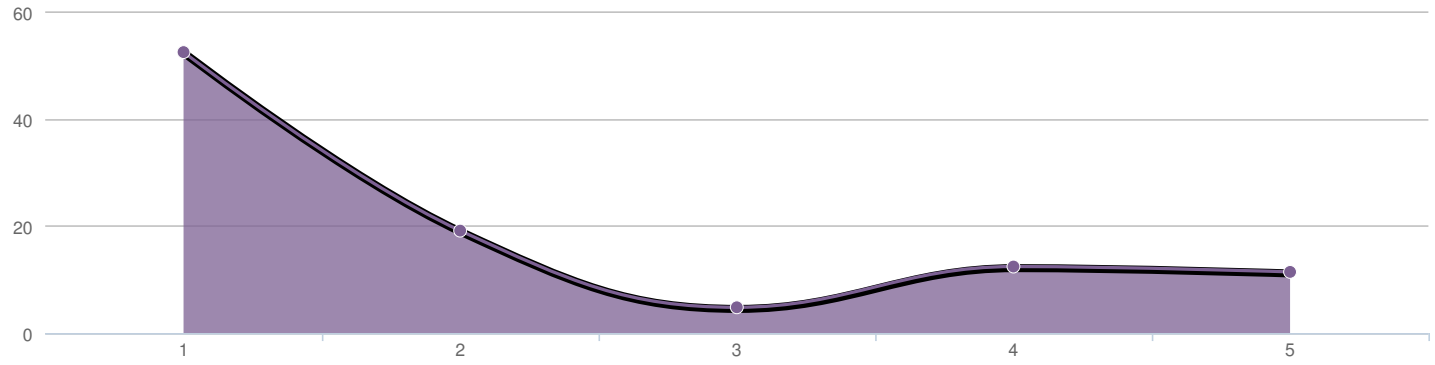
Comments

Count	Response
1	0
1	Concerned about dog owners not cleaning up after their pets.
1	Dogs are off leash in the park area already. Will there be enforcement?
1	I'm not crazy about dogs.
1	If this is done make it open to all breeds
1	Must be big enough to throw a tennis ball with a chuck it ball thrower. 3/4 acre to 1 acre.
1	My dogs are too big for this, but I'm VERY supportive.
1	Not supportive, please DO NOT build any off-leash dog area
1	Not supportive. Do not waste Newcastle citizen's tax dollar money.
1	Off leash dog areas lead t fights an injuries, so not a fan of those.
1	This would be a great addition to the park.
1	Very much needed
1	Very much needed.
1	We are a community that is very dog friendly and an off leash area would be well used.
1	We don't have a dog, but understand the value for those who do.
1	Would like to see a small dog area and off-leash access to the lake.
1	concerned with clean up after dogs and the proximity to Lake Boren drainage
1	encourages on-leash dogs in park
1	just a bad idea - there is a fenced off leash dog area nearby in newport hills.
1	How often you go to the park I at the park almost daily majority the people with dog some use leash walk with the dog some no leash the dog run free and catch the ball I don't think that many dog owner will have the dog in the area fenced some like to walking excise with the animal.
1	We see dogs off-leash with their owners on the Waterline Trail every day. Adding an off-leash area won't stop that. Off leash dog parks are not attractive, especially during the wet season. Dogs make a lot of noise when other dogs are around.
1	This will disrupt neighbors and be a costly area for the city to maintain. No. The park has plenty of dog walkers already. We don't need more dogs in the park.
1	There are MANY persons who already use Lake Boren Park as a dog park -- dogs off leash, in the lake, etc. Whatever the plan includes, I hope it has funds for rule enforcement. It would help a lot if there were a true designated dog area. Right now people abuse the entire park with dogs off-leash.
1	keeps our community dogs healthy; supports/promotes exercise, connection, smiles, conversation and well being

Count	Response
1	The off-leash area is too small. In addition, so many unbelievably inconsiderate people ignore the on-leash rules (my neighbor, who has a dog on leash at all times while she walks in the park, has been bitten by other dogs not on a leash--with not even an apology, nor an attempt by the owner to control the dog afterward. Unbelievable! Also, when some clean up after their pets, if they clean up at all, they dump their full bags of you know what on the power line strip directly behind ours and our neighbors' houses--often on top of the storm water drain located nearby. There needs to be several trash cans along the way thereor something, but actually I doubt they would use it anyway. Full disclosure--I no longer have a dog. Our neighbors on both sides of us--the best neighbors ever--both have dogs. They clean up after them, do not allow them to run off leash, nor have them outside barking at every sound when they aren't home. I would suggest if you want to see a really good example of why I do not want a dog park here, visit the dog park at Woodland Park near the zoo in Seattle--unless they've actually made an effort to clean it up (not in the last 10 years, as far as I know), it's a wonderful example of the pungent mix of dirt, mud, and un-scooped doo-doo--perfect on rainy days and even better on hot days like today--it's not the people who obey the rules that are the problem--it's those who don't--and there are way too many who feel the rules don't apply to them to discount the problem.
1	This has little appeal to me. Furthermore, it is better suited to the proposed park on the DOT property.
1	Dogs leave worms on the ground that can be picked up by people sitting at the concerts. Feces can wash into the lake causing harm.
1	There will be bad smell coming from it, and I see potential for a lot of problems. Dog owners don't always pick up the poop. I know I live on the edge of the park and I see it happening. Some do pick up, but several do not.
1	As a dog owner, I find off-leash parks a little iffy, especially if the area is small and without much interest. Sometimes it also increases the amount of off-least dogs around the park (which is already heavy in Lake Boren Park). They can smell pretty rank, especially during the summer. And with drainage around Newcastle so poor, I wonder if it would be usable at all during wet periods. There are lots of places around Newcastle to hike and explore with a dog. As a daily user of Lake Boren Park, with my on-leash dog, I just don't feel a dog park will be value added.
1	Since everyone uses the trails as off leash areas [including a former council member I ran into], why use valuable space for more.
1	This is not a good idea, again, for the property owners on the edge of the park, and would probably lower property value, and keep a house from selling. Please think of how you would feel if you owned property of the edge of the park.
1	I am sure people with dogs would like this. I am not a dog owner and have no need for this. I know there are off leash parks by Hazelwood, so there are some in the area. It's good for dogs to have a place to be. I wouldn't want to lose something on order to have this.
1	Dogs are already off leash at Lake Boren. If we get this area does that mean that the leash law will be enforced in other areas of the park?
1	the place will become a dog pee concentrate spot, with the smell of it traveling in the park itself. there are quite a few off-leash parks in Bellevue / Mercer Island check them out and make sure you actually want the same in lake Boren park. It smells like dog pee (and poo as not all owners clean after their pets) from a mile away.
1	I am not a dog owner and do not care to be constantly surrounded by dogs in public areas. However, I realize there are many dog owners desiring this feature. Therefore, although I am not supportive of this feature, I can accept the current proposal.
1	While it would be appropriate to prevent too much fecal matter from entering Boren Creek, a little might actually benefit plants downstream. Water-loving dogs should have an opportunity to play in the creek--maybe for a limited amount of time (say 10 or 15 minutes per outing).
1	A lot of people have their dogs off leash anyways, so at least this would allow them someplace to go.
1	Again, why take space usable by everyone and reserve it for an exclusive use? If dogs are friendly, we don't mind them running around anywhere in the park (and if they're unfriendly, other dogs and dog owners may not want them off-leash either). My three-year-old daughter loves to pet the outgoing dogs, and knows to let alone the shy ones. It would be a shame for everyone to fence them away by themselves.

Count	Response
1	We need to direct what few funds the city has, to people activities, amphitheaters, sheltered areas for all kinds of weather, etc. and not dogs.
1	There are plenty of nearby dog parks. There are already too many dogs in the park. Adding a separate dog area will increase dog traffic and associated mess that comes with it.
1	I would like more signage/enforcement of dogs being off-leash in the park. An off-leash area may help with this.
1	Please make sure that any designated dog area is away from the skate park. Most dogs react adversely to the sound of the skate boards. Hopefully there will not be a skate board area. Please do realize that the majority of park users have dogs.
1	There is plenty of room to add this feature. The dog owners in Newcastle would greatly appreciate it.
1	I don't like the proposed location; I'd preserve the woods around Boren Creek as much as possible.
1	I own a dog and an off leash area would be nice but in practice seldom works out. I have used other areas of this size in other parks around the greater Seattle area usually they are a mess (mainly mud); and owners take their very big dogs there which don't play well with my small dog and just let them run free. The only dog park that really seems to work well is the one over at Magnuson. It's gravel, so not muddy and has separated small and large dog areas. Plus for some reason, owners actually pay attention to their dogs in that park.
1	I do not own a dog, but many of our residents do. We need to provide a place for them to socialize their pets and keep them from running off leash throughout the park.
1	It's better than dogs on leash in event areas or trails where they get in fights with other dogs or growl/bark/bite other dogs or people. Dogs are pack oriented not human community oriented.
1	People with dogs have other options and can take the dog on a WALK. It's our kids that need more space to play with each other! Kids first. Dogs second.
1	We have been waiting for one for years--but did not support the former location closer to homes for barking noise. I would not want that in my backyard --but do support an off leash area where it is placed in this drawing.
1	We live within ear shot of the activities that go on in the park and are not excited about the idea of hearing lots of dog barking, especially with a new baby and her nap schedule!
1	This would serve the community well as I often see people waking their dogs in the park. The off-leash park would be a way to build community among dog owners and reduce waste left throughout the rest of the park.

6. How supportive are you of a skate area?



Statistics	
Sum	222.0
Average	2.1
StdDev	1.4
Max	5.0
Total	105

Comments

Count	Response
1	+fresh air and exercise -injuries
1	0
1	Again, not something that our family would enjoy, but a benefit for youth.
1	Concerned about out of Newcastle boarders coming & causing problems.
1	Do not like the element that skating attracts.
1	Give boys something constuctive to do!
1	I don't have children so I am neutral about this.
1	I don't skate, but it sure is fun to watch those who do!
1	It would be nice to have more facilities for teens to play that are near adults.
1	Just leave it alone as a park!
1	Kids need active areas for play.
1	Lake Boren Park already generates lots of noise that affects homes to the West.
1	Need to give older kids something to do at the park.
1	Not a skater, but I can generally support providing this feature in the park.
1	Not supportive, please DO NOT build any Skate area
1	Not supportive. Do not waste Newcastle citizen's tax dollar money.
1	Please keep a skate park out of the plan.
1	Skating is 2010, not 2016.
1	Strongly un-supportive. Skate park only attract trouble and increase crime rate.
1	There is a skate park already in Renton and am not interested in promoting loitering.
1	Think about liability.
1	This only promotes crime activities
1	Too close to the play area for younger kids, who might stray over into that area.
1	Too noisy and hard to police.
1	Vending machines for water and snacks.
1	concerned that the skate area may turn into gaudy graffiti damaged hang out for out of area kids
1	great idea

Count	Response
1	A Skate Park is by far the worst idea on the list, because it will bring many potential problems! Something like this should be monitored by a trained attendant as it is truly dangerous and there could be life changing injuries, such as, a broken neck and paralysis! Therefore, there are liability issues in addition to great sadness if someone is injured! I feel, that a skate park should not be in any neighborhood park, and should be run as a separate business. I live on the edge of the park in this area, and it is just not fair for us, as homeowners, to have the beautiful landscape ruined and listen to the noise, and view possible graffiti associated with this type of activity. My neighbors and I who live on the edge of the park would go to great lengths to stop this skate park. We should have rights as property owners to oppose this proposed skate park. It would affect us all greatly in a negative way, and would ruin the natural beauty, peace, and tranquility of the park! I am asking others to join with us in opposition to the Skate Park. Do we really want this park to become like an amusement park?.... I think not.
1	Concerned about it becoming an unattended hangout and the space not being separate enough to be safe for passers by, kids, runners... To be uninterrupted by skating outside the designated area.
1	Please DO NOT add a skate park area. There are plenty of other areas for teenagers to skate and it's not something we would like to see money spent on in our park.
1	For at least 10 years I yearned for a rollerblading side path around the park. I stated that to many people including Sonny Putter, the Council at the time and the Mayors at the time. Nothing happened. A skate spot will only attract bad elements and graffiti, while roller blading would have been wonderful.
1	I don't really want this in my community park. I'd really feel bad for the neighbors. It's loud and skater boys are loud.
1	I don't think the Olympus neighbors appreciate this at all (noise, etc.). We need more parking area instead. Let the skaters go to Liberty Park in Renton.
1	I think this is a fun activity for kids to participate in. It gives them something to do that's fairly safe.
1	Its fine but can be noisy and may be too close to the houses, move it by the parking lot or tennis courts. They can be noisy like basketball courts
1	Not very. I was more supportive until I saw the influence that this brings to the neighborhood. It seems to bring kids that are hanging around all day and night causing problems.
1	Renton has a skate park that is close by. There isn't enough property to accommodate everything.
1	I don't think the percentage of "skaters" in the community is worth the cost. Nice idea but may be only used by very few. Also injuries and lawsuits. (I'm a lawyer)
1	Young people need a place to go to work off energy in healthy constructive way; this is a fabulous idea!
1	A skate area will not be used. It takes up space, adds liability, will not be used. There are skakeparks in Bellevue and Renton already.

Count	Response
1	This survey is missing the opportunity to vote 3 times against any form of skate park. It's too close to the houses--one of them mine--& as much as I hate to say it, a skate park brings in an element we don't need in our neighborhood--we have enough problems already without adding more. During summer, although the park is supposed to be closed after dark, there is always some noisy partygoer there--sometimes 7 days a week. I have only called the police once in the 28 years we've lived here, bordering the park, but if we get a skate park, you can rest assured I will be on the phone every time someone is there after hours or is too noisy--and no doubt, all of us who border the skate park will be retaliated against by some irate skater in return--when you will hear from us as well. Once again, it's not the ones who follow the rules--it's those who don't--and there are way too many who feel the rules don't apply to them to discount the problem. I don't want a skate park here more than anything on this list. It might be the one thing to make me sell out and move. I just hope it doesn't bring housing values down. While I understand there are some measures that can be taken for sound abatement, that will not work at night when sound carries up (to our houses)--and face it--there will be those who choose to come at night & they won't get caught--because as the article I talk about below says, they just post look-outs and are gone when the police get there. These are the people causing the problems. Check out the article about Dow Park in Houston--Read the whole article at: http://www.yourhoustonnews.com/archives/residents-fed-up-with-skate-park/article_446c2ed1-4d57-5aae-b8c8-f89c0322b0f1.html. There are dozens of examples that show just how difficult life can be for a neighborhood with the bad luck to be located next to a skate park (and just as many saying the problem can be fixed--but do you want to risk alienating a valuable segment of your citizens for this?).
1	While I am not opposed to a skate area, I think it needs to be separated from the walkways by a buffer as people on the trails etc may have collisions with out-of-control skaters.
1	I STRONGLY do no support this. I do not think this will be used enough to warrant the cost. In addition, this seems like a liability risk to the city. There are skate parks in both Renton and Bellevue that should satisfy the skating community.
1	They are noisy and dangerous and a place for pecking orders that generally force the younger children to the sidelines.
1	Haven for drug for kids to get into trouble--exactly why happened to my nephew in Portland! and speaking of that--I'm not sure we don't have a problem in our existing parking lot now at the park. I see many guys parked there of the age not interested in park activities. I saw a very drugged looking fellow just this week wandering on the street outside the park on 84th--I almost called police but didn't. He was very out of place and not well. Police need to cruise that lot more often or sit there often to watch what goes on in the existing parking lot.
1	Not at all you will invite whole bunch teenager hanging out at the park some come from other area, come along with graffiti, drinking, vandalism the park, and don't forget we have a new middle school open close by. I have been a resident 20 years in Newcastle. This park is a nice family park ~ each year there are more new families with kids who use this park because it is open, no hidden spots, and parents can keep track of their kids. I think more picnic shelters would be more beneficial and would generate income. I also do not think a new tennis court is needed because it is hardly used currently.
1	can we have an educational garden for kids, or at least preserve the open nature aspect of the park as opposed to erecting more concrete structures ? we are already losing the rural aspect of the town by having trees cut down to accommodate new homes. Let's keep the park as a small oasis.
1	Once again, you've thoughtlessly managed to site this where it will have the most negative impact to the homes on the west side of the park. Please, if you absolutely must have this kind of activity in Lake Boren park, which I don't believe is needed, put it where it minimizes impact to the surrounding homes. If you don't, I and my neighbors will be noisy foes of this part of the plan
1	Not supportive at all. While I think they are a great outlet for kids there are already a number of them in the area they could use.
1	Again, the skate park was studied and it was determined that Lake Boren Park is not a good location for a skate park. Any location needs to be visible to police driving by for security.
1	Skate area will only invite troubles with safety and bring drugs into the area. LEAVE THE PARK THE WAY IT IS!!!!!
1	This is the worst idea on the list, for it would be a nuisance and a liability issue. Please think of the property owners who live on the park, and the noise which would occur. Along with this, there could be possible injuries, and it would deface a beautiful park. It definitely does not belong in our Newcastle Park.

Count	Response
1	There are already places in the area reserved for roller-toys where those dedicated to these sports can congregate. Please don't take away public space from our best public park for such a niche use, whose facility detracts from the beauty that we all enjoy.

Appendix Vol. 1
C: Kiosk Tag Results/Summary

		Pro-improvement										No change	Neutral	
comments per tag	**Lake Boren Park Comment Tags, 3/07/16**	Enhanced Playground features	Other amenities	skate park	Dog park	Boat-related	Swim-related	Walking-elated	Bathrooms	General beautification	Proposed fxns, activities	Keep as is	Favorite existing parts, activities	Not usable
1	skate park			Y										
1	how about some gravel on the pipeline road. It is very muddy		x											
1	leash law										x			
1	we love to stop here for a smoke break (if you know what I mean!)												x	
2	add lights to the tennis courts and add pickleball court lines		x2											
1	my kids would like a skate park. See "The Dahl" skate park as a good example			Y										
1	make the park off leash for dogs				Y									
1	coming here with my dad when it snows and taking my dog on walks with my mom!												x	
2	I think we need a free snowcone machine where you do it by yourself with many flavors. We also need a ping-pong table. Please!		x								x			
1	dog park				Y									
1	No skateboard park!			N										
3	Covered stage, splash park, coffee vending machine like on the ferries		x				x				x			
1	It would be awesome to have a private (member-driven) community swimming pool						x							
2	No dog park! Keep park the same way as now!				N							x		
1	a free ice cream stand would be nice										x			
1	Docks need repair - leave the rest the way it is!		x									x		
1	The park is calm and peaceful. We like it just the way it is. Thank you.											x		
1	Vending machines - yes, please										x			
1	I would love a large fenced area, perhaps at the back among the trees, where dogs could run off leash and just be dogs! They have to be so constrained these days and it's not fair to them.				Y									
1	I say we open a deli - full of the freshest local sandwiches										x			
1	monkey bars	x												
1	pickleball court (separate)		x											
1	This park is absolutely gorgeous and wonderful for the community. Keep it beautiful!													x
1	Separate dog area and dog free area. It's scary for young children to see big dogs running around them.				Y									
1	Wooden playhouses	x												
1	More parking		x											
1	nicer toilet!								x					
1	I love how the playsets are set up and whenever I go here I have a good time.													x
1	free licorice										x			
1	get another park for play stuff	x												
1	off-leash dog park				Y									
1	this park is nice													x
2	Leave it alone but fix the dock!		x									x		
1	Boren Park is just fine. Additions to the park $$ increases taxes. - Agree											x		
1	The bars!	x												
1	canoe rentals					x								
1	Hi, I go to Newcastle Elementary, I heard they have money donation													x
2	Add a field hockey field! And or a play house	x	x											
1	dog park area				Y									
3	we love the tennis courts and picnic areas. We would like the lake to be accessible for us to use our canoe, and or a kayak. Swimmers would be nice as well. Do not cut down any more trees! Thank you! Love the concerts in the park!					x	x						x	
1	I want a skateboard park at another location			x										
1	Rebuild the swimming dock that got burnt down. - Yes!		x											
1	Off leash area				Y									
1	Really great stuff													x
3	dog park and community garden and soda machine and snack machines, and sprinkler days in summer		x		Y						x			
1	skate park			Y										
1	soccer field		x											
1	I would like to see an indoor movie theater with free popcorn, free soda. Heated. Fuzzy blankets and pillows. Free dogs.		x											
1	Ice skating rink!		x											
1	Climbing wall!		x											
1	More concerts would be great!												x	
1	a carousel		x											
1	Stop PSE from putting in super tall (3x current size) power lines that will overshadow this beautiful park and resource													x

Appendix Vol. 1
C: Kiosk Tag Results/Summary

		Pro-improvement										No change	Neutral	
comments per tag	**Lake Boren Park Comment Tags, 3/07/16**	Enhanced Playground features	Other amenities	skate park	Dog park	Boat-related	Swim-related	Walking-elated	Bathrooms	General beautification	Proposed fxns, activities	Keep as is	Favorite existing parts, activities	Not usable
1	playground	x												
1	skate park			Y										
2	Check Mercer Island off-leash park - noise (bark), poop everywhere. I would suggest a small community garden. Kids can learn something		x		N									
1	dogs love it!													x
1	covered playgrounds (just top/roof) so they could be used year round in our rainy weather.	x												
1	provide seat covers in women's room. A number of people try to do this with strips of toilet paper and it makes a mess on the floor								x					
1	don't change anything. It's perfect the way it is.											x		
1	Can you keep it the way it is? It sure is great. Thanks											x		
1	a boat launch area. - I second this!					x								
1	I'd love to see more lights on the main trails at night during the winter.							x						
1	new hang-out spots		x											
1	Vending machines would be awesome - coffee!										x			
1	we love that the park is so family friendly. We worry expansion or major changes will cause that to change.											x		
1	we played on the wonderful playground and played on the stage and walked on the pavement.													x
1	Swimming pool!!						x							
1	wooden dock on lake should be replaced and improved!		x											
1	have a walking trail around the lake near the shore. - good idea!							x						
1	concrete/covered stage for community/school plays and concerts		x											
1	baby toys	x												
1	better, cleaner bathrooms								x					
1	we love the open green spaces and surrounding trees. Layout is nice. We wouldn't change a thing.											x		
1	Skate park			Y										
2	boat launch and stocked bass and trout. Thanks. Love the park.		x			x								
1	enforce the leash and pickup rules. We quit using the park as often due to off-leash dog behavior. Wenatchee River Park signs read "no dogs allowed unless on leash." sends a different message!										x			
1	more volleyball courts		x											
1	A community pea patch garden with produce donation going to local food bank		x											
1	get rid of the houses down by the water		x											
1	a community garden would be wonderful, especially with all the new apts/condos coming		x											
1	workout obstacle course (i.e., american ninja style)		x											
1	maybe tables or benches by the water. Like the park the way it is.		x											
1	you are beautiful!													x
1	law enforcement or parks services patrol. It's really sad to see those huge tire marks on the beautiful lawn and all the litter. I've found nails and glass and leftover food. I want my dog to be safe here! And people										x			
1	I'd like to see the dog leash and pet scoop rules enforced.										x			
1	beautiful park just the way it is! Lots of green space											x		
1	Park is a jewel just the way it is. There's park area off of 95th. Develop that area.											x		
1	Children's beach						x							
1	running trail around perimeter of park							x						
1	more native plants. Also rocks are cool.		x											
1	community garden		x											
1	more benches please!		x											
1	a free ice cream stand would be nice										x			
2	more trees and wooded hiking trails							x		x				
1	I love this park!													x
1	mini dog park! Then we don't have to worry about off leash				Y									
1	more walking, running trails							x						
1	add a skate park			Y										
1	falling from a tree													x
1	bring back the dock, a nicer dock		x											
1	great community feel to this park. Don't change a thing											x		
1	do not ruin a peaceful park.											x		
1	provide an online blog on city of Newcastle website and transfer these tags to the blog. Continue the tag board here and keep transferring to the blog.													x
5	Covered stage, splash park, please bring back movie nights, please no skate park, community garden		x2	N			x						x	

Appendix Vol. 1
C: Kiosk Tag Results/Summary

		Pro-improvement										No change	Neutral	
comments per tag	**Lake Boren Park Comment Tags, 3/07/16**	Enhanced Playground features	Other amenities	skate park	Dog park	Boat-related	Swim-related	Walking-elated	Bathrooms	General beautification	Proposed fxns, activities	Keep as is	Favorite existing parts, activities	Not usable
1	dog park				Y									
1	yoga station										x			
1	covered tennis courts		x											
1	paper towels in restroom!								x					
1	exercise stations around the park		x											
1	asphalt turning circle at entry from 129th - kids hurt themselves on this!		x											
1	keep it natural but fix the dock		x											
1	add exercise stations as they have them in Europe		x											
1	food or snack bar, vending machines										x			
2	tree houses and big slides	x2												
1	stuffed animals!										x			
1	skate park			Y										
3	get rid of the derelict house and put in a loop trail in the woods perhaps with another picnic shelter		x3											
1	paid pedal boats would be nice					x								
1	be happy and love yourself													x
1	community garden		x											
1	love concerts in the park nights												x	
1	me and my boyfriend walked our dog here for the first time												x	
1	use the 4th of July fences to make a small off-leash dog area				Y									
1	better bathrooms								x					
3	thank you for the seat covers in the women's restroom. And off-leash park along with a small kayak rental place would be great. And get rid of the derelict house.		x		Y	x								
1	please build a high fence around the volleyball court!		x											
1	please consider adding more mutt mitt stations		x											
1	community garden		x											
1	more tennis courts. Have to wait for other people to finish		x											
1	tennis		x											
1	more tennis courts		x											
1	love the swings, bars and playground												x	
1	a higher bar	x												
1	basketball court		x											
1	more toys	x												
2	you should add some tetherballs and more pathways	x						x						
1	playing in this new playground and park													x
3	kiosk and picnic tables. Hot drinks in winter, cold in summer, light snacks. Make money, don't spend it.		x2								x			
1	hello everyone, I'm doing a textile drive for my school. Liberty high school and would love it if any of you would like to donate clothes to help our school raise more money													x
1	great park!													x
1	cleaner bathrooms								x					
1	more doggy bags through the park		x											
2	I like the park because it has a big field. I would like a climbing wall and more trees and flowers.		x							x				
1	great place to run around with friends! Jogging, playing, doing whatever at Lake Boren!												x	
172		13	55	10	14	6	6	6	6	2	17	13	9	16
				7 yes	12 yes		2 Lake related					2 including improve-ments		
				1 ok if another location	2 no		4 pool / splash park related							
				2 No										

Appendix Vol. 1
C: Kiosk Tag Results/Summary

		Pro-improvement										No change	Neutral	
comments per tag	**Lake Boren Park Comment Tags, 3/07/16**	Enhanced Playground features	Other amenities	skate park	Dog park	Boat-related	Swim-related	Walking-elated	Bathrooms	General beautification	Proposed fxns, activities	Keep as is	Favorite existing parts, activities	Not usable

2016-03-07 Summary:
145 tags / 173 comments
13/173 comments (7.5%) "Keep as is" (13/145 tags is 9.0%) though 2 include improvement requests
25/173 (14.5%) Neutral - Noting favorite existing features and activities
135/173 (78.0%) Pro improvement
160/173 (92.5%) Combine Pro-improvement and neutral

Comments	173
Pro	135
Neutral	25
No change	13

Most popular items for this date (Top 10)

13 Playground improvements or features
10 Dog Park (12 yes - 2 no)
8 Community garden
7 Vendor trucks, concessions, or vending machines
6 Fix dock
6 Skate Park (8 includes 1 that's ok if in or not in a particular location - 2 no)
6 Boat-access or launch related, or request for rentals (kayak, canoe, paddle boat)
6 Walking-reltaed: More paths and/or lit paths
6 bathroom improvements
5 More tennis courts or lighting for tennis courts

Ones that were popular on other dates

4 Pool / splash park / wading pool -related
2 Climbing wall or tower
2 Beach / swim dock / clean water-related
2 General beautification (flowers, trees)
0 Frisbee golf
0 Zipline

Appendix Vol. 1
C: Kiosk Tag Results/Summary

		Pro-improvement										No change	Neutral	
comments per tag	**Lake Boren Park Comment Tags, 4/22/16**	Enhanced Playground features	Other amenities	skate park	Dog park	Boat-related	Swim-related	Walking-related	Bath-rooms	General beautification	Proposed fxns, activities	Keep as is	Favorite existing parts, activities	Not usable
1	playground												x	
1	girls-only party area										x			
1	a pool!						x							
1	ziplines	x												
1	make this a girls-only nightclub. Spy school										x			
1	add lots of flowers!									x				
1	a beach!						x							
1	a lodge		x											
1	a kayak house					x								
1	better quality bathrooms								x					
1	pool						x							
1	basketball court		x											
1	there should be a beach						x							
1	spy detective school										x			
1	skate park on 27			Y										
1	I love this place!													x
2	more courts and sailing pond		x			x								
1	I love this													
1	more bars	x												
1	add a zipline somewhere in the park. I'll show you how--I made one in my own backyard!	x												
1	picnic												x	
1	your park is super fun. I like the field you have.												x	
1	I love you - Emma													x
1	soccer field		x											
2	20 and 32 are great! But I wish both were closer to the lake.		x					x						
1	make a private hot tub for kids only						x							
1	Love this park! Expand the performance stage (double), amphitheater on north end		x											
1	how about a pickleball court for us aging old farts!		x											
1	kayaking please!					x								
1	poop on you - no dogs!										x			
1	add a zipline	x												
1	the big slide	x												
1	smooth roads for biking		x											
1	thanks for asking! Please save the trees.												x	
1	bubble tea truck										x			
1	this place is soooo beautiful!													x
1	to have a big park													x
1	ice cream truck										x			
1	bigger playground	x												
1	Love!													x
1	transfer to Disneyland													x
1	ice cream truck										x			
1	leave as is, it's a peaceful place											x		
1	leave it the same! Allow us to enjoy it... not entertained by it!											x		
1	make a poppo aira													
2	more trees. Another parking lot		x							x				
2	ice cream truck and more toys on the playground	x									x			
1	pool						x							
1	the playground												x	
1	free fuzzy blankets, free candy, free popcorn, free soda, indoor movie theater		x											
1	a stage theater room that doesn't close until 9:30 pm		x											
1	make a bath with extra bubbles		x											
1	beautiful park but grass cut									x				
1	more lights! Light up all walking paths so we can enjoy walks even in the winter!							x						
1	a place to hike so a hiking place							x						
1	climbing walls		x											
1	I want more barbeques		x											
1	skate board			Y										
1	free lamborghinis										x			
2	keep the tennis courts and make a see through glass long tube slide	x											x	
1	a place for kids to swim						x							

Appendix Vol. 1
C: Kiosk Tag Results/Summary

		Pro-improvement										No change	Neutral	
comments per tag	**Lake Boren Park Comment Tags, 4/22/16**	Enhanced Playground features	Other amenities	skate park	Dog park	Boat-related	Swim-related	Walking-related	Bath-rooms	General beautification	Proposed fxns, activities	Keep as is	Favorite existing parts, activities	Not usable
1	can you please build a bigger playground? Please?	x												
1	a better parking lot. Abby 6		x											
1	some cotton candy please (maybe?)										x			
1	praising Jesus the Lord for all his Beauty in creation at Lake Boren Park. Love walking the dog and praising god here!												x	
1	ice cream truck										x			
1	cleaner water to swim im						x							
1	love the playground												x	
1	put, please, some catamaran or small boats on the lake during summer					x								
74	total comments	9	15	2	0	4	8	3	1	3	11	2	8	8
		3 zipline					5 pool				(5 are vendors)			
		6 general					3 beach							

Comments	74
Pro	56
Neutral	16
No change	2

2016-04-22 Summary:
69 tags / 74 comments
2/74 comments (2.8%) "Keep as is" (2/69 tags is 2.9%)
16/74 (21.6%) Neutral - Noting favorite existing features and activities, 1 "No dogs" (re:regulations)
55/74 (74.3%) Pro improvement
70/74 (94.6%) Combine Pro-improvement and neutral
Other noteable: No mention of off-leash dog park in these responses, nor any anti-skate park comments.

Most popular items for this date (Top 9)

6 Playground improvements or features
5 Pool / splash park / wading pool -related
5 Vendor trucks or concessions
Boat-access or launch related, or request for rentals (kayak, canoe, paddle boat)
4
3 Beach / swim dock / clean water-related
3 General beautification (flowers, trees, cut grass)
3 Zipline
3 Walking-related: More paths and/or lit paths
2 Skate Park

Ones that were popular on other dates

1 bathroom improvements
1 More tennis courts or lighting for tennis courts
0 Dog Park
0 Community garden
0 Fix dock
0 Climbing wall or tower
0 Frisbee golf

Appendix Vol. 1
C: Kiosk Tag Results/Summary

		Pro-improvement										No change	Neutral	
comments per tag	**Lake Boren Park Comment Tags, 5/18/16**	Enhanced Playground features	Other amenities	skate park	Dog park	Boat-related	Swim-related	Walking-related	Bath-rooms	General beautification	Proposed fxns, activities	Keep as is	Favorite existing parts, activities	Not usable
1	big grass hill		x											
1	boulder city		x											
3	a bigger and new playground and a dog park and zip line	x2			Y									
1	dog park				Y									
1	better concert area		x											
1	lunar new year celebration, lion dance, cultural programs										x			
1	we live this beautiful park, very peaceful												x	
1	football field		x											
1	frisbee golf		x											
1	I went to the park. I went on the swings. I love the park												x	
1	craft stand										x			
3	a trampoline, or zipline, a swimming area	x	x				x							
1	a cleaner bathroom								x					
1	flower garden									x				
1	no dogs										x			
1	I love this parks playground and concert stage to listen to concerts												x	
1	I am grateful to whoever made this place happen. We need more!		x											
1	add a bandshell and old fashioned gazebo		x											
1	beach						x							
1	play baseball all day long and have fun and get some food												x	
1	pickelball courts (2-4) would be a great addition		x											
1	dog park				Y									
1	covered decked parking to preserve space (several levels)		x											
1	merry go round (a real one)		x											
1	beautiful park! Relaxing and peaceful												x	
1	keep the park green forever. Even in the winter. I dare you! I love park.												x	
1	an off leash dog area and have it be opened later				Y									
2	maybe cleaner bathrooms and cleaner water						x		x					
1	kayak/canoe access area to lake with vehicle access nearby					x								
1	keep it the way it is forever											x		
2	explorable mysteries, hiding spots, places of discovery and wonder! Leave it up to the imagination, and for dog's sake save the trees!		x										x	
1	I like this park													x
1	bring food trucks to the park and have an annual festival (bite at boren) similar to Bite of Seattle, on a much smaller scale										x			
1	more tennis courts		x											
1	Keep as is!											x		
1	this park is grassy and nice the way it is. We need to escape our concrete and glass world and see more unhampered space. Don't change it!											x		
1	I love how there are fairs when summer is over here												x	
1	I'm really thankful for this soft grass												x	
1	Please don't change a single thing!											x		
1	Pool with mermaids						x							
2	Swimming dock / or floating dock, no fence, slide with ladder and diving board and paddle board rent house					x	x							
1	it's so perfect as it is, we love all the open green space to play											x		
1	this is a good place for me to play soccer												x	
2	I think there should be a better stage and a theater room		x2											
1	splash pad or fountain to play in. Yes! +10!!						x							
1	cleaner water to swim in						x							
1	bike and scooters ramps		x											
1	an elevator like Luther Burbank. More tennis courts		x											

Appendix Vol. 1
C: Kiosk Tag Results/Summary

		Pro-improvement										No change	Neutral	
comments per tag	**Lake Boren Park Comment Tags, 5/18/16**	Enhanced Playground features	Other amenities	skate park	Dog park	Boat-related	Swim-related	Walking-related	Bath-rooms	General beautification	Proposed fxns, activities	Keep as is	Favorite existing parts, activities	Not usable
1	more concerts										x			
1	love all the dogs												x	
1	add monkey bars	x												
1	keep the same											x		
1	frisbee golf		x											
1	dogs off leash				Y									
1	water park						x							
1	more tennis courts		x											
1	soccer field		x											
1	zip line	x												
3	needs more lights at night (x3 votes)		x3											
3	circuit training stations (x3 votes)		x3											
1	climbing rock walls like the one at Marymoor park		x											
1	dredge lake to its original depth - better for fish and swimming		x											
1	I liked old play structure better	x												
1	bring back outdoor movies												x	
2	this park is amazing and I wouldn't change a thing. Maybe a new tennis court.		x									x		
1	please spare us the dog poop. There is a dog park on mercer island and in Bellevue.				N									
1	more dog areas				Y									
1	better amphitheater		x											
1	dredge the lake - better for fish and us		x											
1	this is best park ever! Don't change it!											x		
3	a merry go round. More pavement. Another bathroom.		x2						x					
1	love it the way it is!											x		
1	more dog areas				Y									
1	I love this place so much! This is pretty much where I grew up.													x
1	dog park				Y									
1	less stone and less concrete and less buildings											x		
1	dog park				Y									
1	kids park	x												
1	I love you park its so fun its so good													x
1	dog park				Y									
2	fire pit for bbq. More benches for sitting. Love this park		x2											
1	skate park please			Y										
1	I would like to keep it just like it is. No change. Great park.											x		
1	I'm thankful for the big field												x	
2	water park and several covered fire pits and bbq amenities		x				x							
1	make this park in a water park						x							
1	nerf gun park		x											
1	less manmade structures, concrete, etc. More like it is with open grassy areas!											x		
1	pooper scooper stations		x											
1	rock climbing wall		x											
1	running playing soccer swimming swinging												x	
1	make the lake safe to swim in, and better beach access. Park is great though!						x							
1	a small boat launch (inflatables, kayaks) would be great					x								
2	leave the trees. Only park with shade. (x2 votes)												x2	
1	I like the park													x
2	please be sure to leave a lot of large open space and conserve the trees (x2 votes)												x2	
1	no dogs										x			
1	climbing wall		x											
1	small water park						x							
1	climbing tower		x											

Appendix Vol. 1
C: Kiosk Tag Results/Summary

		Pro-improvement										No change	Neutral	
comments per tag	**Lake Boren Park Comment Tags, 5/18/16**	Enhanced Playground features	Other amenities	skate park	Dog park	Boat-related	Swim-related	Walking-related	Bath-rooms	General beautification	Proposed fxns, activities	Keep as is	Favorite existing parts, activities	Not usable
1	the park is really neat as is - love it this way. Please not too much change											x		
1	I love this connecting bridge. Great idea!							x						
2	I think that there should be a splash park and a water park (x2 votes)						x2							
2	leave it the same, just refresh and reinforce the docks		x									x		
1	make a zipline	x												
1	more more more of the same		x											
1	splash pad or fountain to play in						x							
1	more playground	x												
1	disc golf		x											
2	we need a splash park (x2 votes)						x2							
1	beach to swim to						x							
1	a unicorn ride	x												
1	dog park				Y									
1	I love concept B and number 19 in the concept							x						
1	concept B is great										x			
1	no skate park unless it is at 33			x										
1	I love all great eco friendly activities										x			
1	it would be amazing to have a playground for adults too	x												
1	skate park			x										
2	off leash dog park (x2 votes)				Y(x2)									
1	get rid of "no swimming" sign						x							
1	great park no change needed											x		
1	please don't try to fix a great big park!											x		
1	park isn't broken! Don't try to fix it!											x		
1	canoe rentals					x								
1	disc golf		x											
1	fix 32 and 37		x											
2	don't change too much! Clear some blackberries for a community garden. Fix the dock and make it safe for kids to swim there again. More community input like this.		x				x							
1	skate park			x										
1	tire swings! Teeter totter!	x												
1	lighted tennis court		x											
1	picnic tables		x											
1	please conserve trees												x	
1	disc golf		x											
1	you should have small events here! So you can show off this space!										x			
1	nerf gun park		x											
1	climbing wall		x											
1	why is the cemetery never open?		x											
1	climbing rock wall for adults		x											
1	climbing tower		x											
2	dog park (33) yes. State park no - leave this type of stuff for auburn, Kent, and places like that. Don't raise the taxes.			N	Y									
1	gentle quiet places in the summer shade												x	
1	build trail and bridge closer to lake							x						
1	my family love this park. Do nothing different. Favorite spot.											x		
1	more picnic tables		x											
1	P-patch!		x											
1	more tables in the sun!		x											
1	skate park would be awesome for the older kids			Y										
1	dog park area				Y									
1	ice cream truck!										x			
1	a wading pool would be great (like the one at green lake)						x							

Appendix Vol. 1
C: Kiosk Tag Results/Summary

		Pro-improvement											No change	Neutral	
comments per tag	**Lake Boren Park Comment Tags, 5/18/16**	Enhanced Playground features	Other amenities	skate park	Dog park	Boat-related	Swim-related	Walking-related	Bath-rooms	General beautification	Proposed fxns, activities	Keep as is	Favorite existing parts, activities	Not usable
1	lighted tennis court		x											
1	lights for the tennis courts		x											
1	more tennis courts		x											
5	I love 18, 19, 31, 32. great walking/exploration area. 33. skate park is great for kids. Would work great in location 4 of concept A		x	Y				x3						
1	I'm thankful for this big park													x
1	really great park													x
1	the white flower tree smells funky													x
1	I like this park													x
1	waterfalls would be amazing		x											
1	love the park													x
1	it was a wonderful day with my family													x
2	if you had living unicorns that would be amazing (x2 votes)													x2
1	we love it here													x
1	love it! Be back every day													x
1	nice place, I love it													x
1	this place is awesome!													x
1	adventures with amazing friends													x
1	the lake is huge													x
1	I like this place													x
1	this park sucks!													x
201		12	63	7	16	4	20	6	3	1	10	18	20	20
		8 general play-ground 5 zipline		6 yes 1 OK if away	15 YES 1 NO		9 lake related (clean h2o, beach, dock) splash, wading related					2 include improve-ments		

Appendix Vol. 1
C: Kiosk Tag Results/Summary

		Pro-improvement										No change	Neutral	
comments per tag	**Lake Boren Park Comment Tags, 5/18/16**	Enhanced Playground features	Other amenities	skate park	Dog park	Boat-related	Swim-related	Walking-related	Bath-rooms	General beautification	Proposed fxns, activities	Keep as is	Favorite existing parts, activities	Not usable

2016-05-18 Summary
171 tags / 200 comments
18/200 comments (9%) "Keep as is" (18/171 tags is 10.5%) though 2 include improvement requests
40/200 (20%) Neutral
142/200 (71%) Pro improvement
182/200 (91%) Combine Pro-improvement and neutral

Comment total	200
Pro	142
Neutral	40
No change	18

Most popular items for this date (top 10)

14 Dog park (15 yes - 1 no)
12 Pool / splash park / wading pool -related
9 Beach / swim dock / clean water-related
8 Playground improvements or features
7 Climbing wall or tower
7 More tennis courts or lighting for tennis courts
7 Skate Park (1 of those is only ok w skate park if it's along coal creek
6 Walking-related: paths, boardwalks, canopy walk
5 Zipline
5 Frisbee Golf

Ones that were popular on other dates

4 Boat-access or launch related, or request for rentals (kayak, canoe, paddle boat)
3 bathroom improvements
2 Community garden
2 Fix dock
2 Vendor trucks, concessions, or vending machines
1 General beautification (flowers, trees)

Appendix Vol. 1
C: Kiosk Tag Results/Summary

		Pro-improvement										No change	Neutral	
comments per tag	**Lake Boren Park Comment Tags, 6/20/16**	Enhanced Playground features	Other amenities	skate park	Dog park	Boat-related	Swim-related	Walking-related	Bath-rooms	General beautification	Proposed fxns, activities	Keep as is	Favorite existing parts, activities	Not usable
1	Skating, running, playing, soccer, the sun												x	
1	Love nature												x	
2	Water Park and Ice Cream truck						x				x			
1	I like trees												x	
1	I love unicorns		x											
1	My favorite element would be planting trees, and tearing down the park! F*** the establishment!									x				
1	I like the grass												x	
1	Belgian Waffle maker on site. Please! You have to swim out to the middle of the lake to get waffles!										x			
1	Add more grass. Leave nature alone!									x				
1	I love parks												x	
1	Nice park, enjoyed it here a lot												x	
1	Closer YMCA		x											
1	I love the park												x	
1	I love this park												x	
1	Love your park!												x	
1	I love what you did												x	
1	I want it to be awesome													x
1	Cleaner restrooms please								x					
1	Keep the dogs at home the park is for families and kids				N									
1	Bigger space		x											
1	Trash		x											
2	Giant ferris wheel / More food please!		x								x			
1	More unicorns!		x											
1	Ice cream truck										x			
1	Please no more pitbulls and fighting bred dog. Breed specific legislation in Newcastle (muzzles, fence, insurance policies for damage if owned.)													x
1	Try to find alternative weed killer than Monsanto's Round Up. Poisonous to kids and dogs.		x											
1	Minimize changes to the park! It's great the way it is!											x		
1	What are the costs for the different options?													x
1	fun field #8 (8 is location of covered stage)		x											
1	More playground space	x												
1	No more buildings! Keep it green!											x		
2	obstacle course or parcour / Dog off leash area		x		Y									
1	Dog park				Y									
1	Do not convert stormwater pond into parking!		x											
1	Ice cream truck										x			
1	Love the idea of a skate park			Y										
1	I love the diversity of the community I see here every visit using the picnic facilities, tennis courts, and playground! Interpretive trails developed around the lake would be amazing!							x						
4	Additional Tennis court, trees, more benches under trees. If dogs are off leash, bag and trash receptacles. Please no soccer field. It is nice to have a small park without that and there are lots of others. Makes it hard for everyone to enjoy the space.		x3							x				
1	A fancy new play structure for 5 year olds!	x												
2	Need more parking for handicap space / More stalls for bathroom		x						x					
1	Price?													x
1	Leave Boren Park alone!											x		
6	Beach area for Lake would be nice. Lighting along waterline. More paths for walking. Some kind of water feature for summer time fun for kids. Not too much more parking. Keep space green! Please NOT huge dog area.		x2		x		x2	x						
4	More events and bathrooms. Food is nice. More stuff to do on lake?					x			x		x2			
1	Keep this board. It's more entertaining than youtube comments		x											
1	Make an indoor tennis court or make a tennis court a covered area		x											
1	Off leash area				Y									
1	May favorite place was playground												x	
1	Best park ever / This is a great place!												x	
1	Zipline	x												
1	Please don't take away any tennis courts!												x	
1	Roller blading pathway please!							x						
1	Hire someone who can design a raingarden the correct way … very disappointed		x											

Appendix Vol. 1
C: Kiosk Tag Results/Summary

		Pro-improvement										No change	Neutral	
comments per tag	**Lake Boren Park Comment Tags, 6/20/16**	Enhanced Playground features	Other amenities	skate park	Dog park	Boat-related	Swim-related	Walking-related	Bath-rooms	General beautification	Proposed fxns, activities	Keep as is	Favorite existing parts, activities	Not usable
1	Leave storm drain alone!		x											
1	One number I don't see is the figures for re-doing all this upgrade. Are these figures available to public. Cost elements for each numbered plan.													x
2	I think this park is perfect except for 2 things: 1) Less bumpy roads. 2) Kids roped off swimming area.		x				x							
1	Get a zipline and a mermaid	x												
1	Very nice park, always green. Beach area would be good, if placed.						x							
1	Off leash dog area should be larger				x									
1	Soccer field		x											
1	Soccer field		x											
1	Indoor swimming pool						x							
1	Where's children's play area?												x	
3	Fishing pole holder on the dock and more fish in the lake. Bathrooms by the dock.		x2						x					
1	Washrooms close too early!								x					
1	This looks cool													x
1	More shade please									x				
3	My fave are skate area, site furnishings, plaza		x2	Y										
1	Clean up and restore the lake		x											
1	No skate park			N										
1	Stone garden		x											
1	This is the best park ever												x	
1	Leave alone											x		
2	Please leave untouched areas untouched - less parking lots!		x							x				
1	This park is fantastic, safe, and new. Why change the elements that work?											x		
1	Less pavement, more grass / natural terrain									x				
1	Like the beach idea.						x							
1	It's a park! Why do we need to "develop" it? Leave it green!											x		
1	We all have dogs! Accommodate with off leash!				Y									
1	Keep the park green. No concrete									x				
2	Off leash area is great idea. Skate park not so much.			N	Y									
3	1) More waterfront acces (beach). 2) More lighted tennis courts. 3) More fish stocking in the lake.		x2				x							
2	Favorite: beach and amphitheater		x				x							
3	Soccer field, spray park, beach to swim		x				x2							
1	No skate park			N										
1	Put some sort of zipline	x												
1	You should add more grass space for dogs. Like add a fenced area specialized for dogs.				Y									
3	My favorite elements are Lk Boren Promenade boardwalk, shelter learning center (23), beach		x				x	x						
2	Paddle boats for rent in the summer / Bigger playground please!	x				x								
1	Good design!													x
2	Dock repairs and a trail to Boren Creek would be nice … otherwise please leave it the way it is! We love coming here every day!		x					x						
2	My fav feature is skate spot, but expand the playground. Everything else looks nice though!	x		Y										
1	Put the beach at the lake						x							
1	Lake Boren Promenade Boardwalk							x						
1	This looks good. I love America													x
127		7	36	6	9	2	13	6	5	7	7	6	15	8
		3 zipline	3 soccer field	3 Y	8 Y		9 beach			(grass & trees)	6 food			
		4 general	3 tennis-related	3 N	1 N		4 spray/pool				1 events			
			4 less parking	net 0	net 7 Y									

Appendix Vol. 1
C: Kiosk Tag Results/Summary

		Pro-improvement										No change	Neutral	
comments per tag	**Lake Boren Park Comment Tags, 6/20/16**	Enhanced Playground features	Other amenities	skate park	Dog park	Boat-related	Swim-related	Walking-related	Bath-rooms	General beautification	Proposed fxns, activities	Keep as is	Favorite existing parts, activities	Not usable
9	Beach / swim dock / clean water-related						9							
7	Dog park (8 yes - 1 no)				7									
7	General beautification (flowers, trees, grass)									7				
6	Walking-related: paths, boardwalks							6						
6	Vendor trucks, concessions, or vending machines		6											
5	bathroom improvements								5					
4	Playground improvements or features	4												
4	Less parking or vote to not put parking over pond												4	
4	Pool / splash park / wading pool -related		4											
3	More tennis courts or lighting for tennis courts		3											
3	Zipline		3											
2	Boat-access or launch related, or request for rentals (kayak, canoe, paddle boat)					2								
1	Fix dock					1								
0	Skate Park (3 yes - 3 no)			0										
0	Climbing wall or tower		0											
0	Frisbee Golf		0											
0	Community garden		0											

2016-06-20 Summary
96 tags / 127 comments
6/127 comments (4.7%) "Keep as is" (6/96 tags is 6.3%)
23/127 (18.1%) Neutral
98/127 (77.2%) Pro improvement
121/127 (95.3%) Combine Pro-improvement and neutral

Comment total	127
Pro	98
Neutral	23
No change	6

Totals / Summary of all tags

See next tab for separate summaries

Top improvements

31	Playground improvements or features
31	Dog Park (4 No's subtracted from 35 Yes's)
25	Pool / splash park / wading pool -related
23	Beach / swim dock / clean water-related
21	Walking-related: More paths and/or lit paths
20	Vendor trucks, concessions, or vending machines
16	Boat-access or launch related, or request for rentals (kayak, canoe, paddle boat)
16	More tennis courts or lighting for tennis courts
15	Skate Park (5 No's subtracted from 20 Yes's)
15	bathroom improvements
13	General beautification (flowers, trees)
11	Zipline
10	Community garden
9	Climbing wall or tower
9	Fix dock
5	Frisbee golf

6.8%	39	"keep as is" comments (4 include an improvement request)
18.2%	104	Neutral
75.0%	430	Pro-improvement
	573	**Total Comments**
93.2%	534	Combined Neutral and Pro-improvement

What does neutral comment mean?

Not anti- or pro-future improvements, includes: Expressing general love for the park, comments that were probably relating to a specific proposed feature but that relationship was lost when taken down / disassociated, comments that don't make sense or aren't applicable

THE WATERSHED COMPANY

SCIENCE & DESIGN

April 13, 2016

Greg Brower
The Berger Partnership
1721 8th Avenue South
Seattle, WA 98109-3015
Via email: gregb@bergerpartnership.com

Re: Lake Boren Park, Permitting Memorandum
The Watershed Company Reference Number: 150906

Dear Greg,

This letter outlines the potential permit efforts associated with the draft Lake Boren Park Master Plan (Master Plan). Included are local, state, and federal permit requirements, expected permit review timelines, and mitigation requirements associated with projects proposed in the Master Plan. It is our understanding that the City is considering Master Plan alternatives that include potential upgrades and improvements to the park. Potential projects considered as part of this summary include: rebuilding docks, installing boardwalks, creating trails, and creating view "windows."

Background

Lake Boren Park is a 20-acre community park in the City of Newcastle located on the southern shore of Lake Boren, a 16-acre lake. The Lake Boren shoreline is comprised of approximately half residential parcels and half City-owned lands. The park provides public access to Lake Boren in the form of docks and fishing areas. The park also includes open fields, picnic shelters, picnic areas, trails, play equipment, and sports facilities.

A wetland and stream reconnaissance report was completed by The Watershed Company in December of 2015. The report identified and delineated four wetlands in the park in addition to the Lake Boren Wetland Complex. The report also describes Boren Creek, a creek that flows south out of Boren Lake and joins with May Creek just north of SE 95th Way before eventually draining to Lake Washington.

Project Description

The City of Newcastle recently acquired some additional parcels that will enable the park to connect to other parcels owned by the City on the eastern shore of the lake. The City commissioned The Berger Partnership to complete a Master Plan Update for the park including a site investigation and analysis, public meetings, master plan

alternatives, permitting and environmental review. The Berger Partnership has developed alternatives that include an array of potential improvements to the park, including new accessible paths, expanded parking, rain gardens, expanded sports facilities, expanded play and learning areas, improved shelter amenities, an underground stormwater vault, a community center, a community garden, a stage, an amphitheater, rebuilding docks, a cabled boat crossing, a swimming beach, a boardwalk, a dog park, a skate park, boardwalks, and trails.

Permitting

Many of the proposed improvements, including rebuilding docks, construction of trails, boardwalks and other structures will result in intrusions into critical areas or critical area buffers. Any impact to these critical areas or critical area buffers will require permits and/or approvals from local, state, and federal regulatory agencies. The section below will address the extent of jurisdiction held by each agency and document the process to obtain required permits and/or approval from each agency.

City of Newcastle

Shorelines

Lake Boren is smaller than 20 acres in size and therefore, it does not qualify as a "Shoreline of the State."

Streams

Boren Creek flows south out of Boren Lake. Under the stream classification system of Newcastle Municipal Code (NMC) Section 18.24.340.A(2), Boren Creek meets the criteria for a Class 2 stream because anadromous fish species are present and because the stream flows year round in years of normal rainfall (ESA 2014). The minimum standard buffer width is 100 feet. Any activities that are proposed in stream or stream buffer areas will need to follow mitigation sequencing (NMC 18.24.125), which requires applicants to avoid critical area impacts, minimize unavoidable impacts, and lastly provide compensatory mitigation.

Wetlands

In the City of Newcastle, the buffer associated with a wetland is dependent upon the wetland rating, the habitat score, and the intensity of the proposed adjacent land use. Lake Boren is classified as a wetland under the *Washington State Wetland Rating System for Western Washington*, (Ecology 2004 and 2014) since it is an area of open water smaller than 20 acres. It is therefore regulated as a wetland. Lake Boren has been regulated as a category III wetland with a low habitat score (under 20 points) based on prior delineation studies completed and approved by the City. The standard buffer for a category III wetland with a low habitat score is 60 feet for high to moderate impact land uses. However, the city is currently revisiting that rating pursuant to a private development along the west shore of the lake. The timeline for resolving this rating

question is currently unknown. Additionally, the wetland rating and/or buffer width are likely to change when the critical areas ordinance is updated and the *Washington State Wetland Rating System for Western Washington : 2014 Update* (Ecology 2014) is adopted. Lake Boren is also surrounded by lake-fringe wetland and four other individual wetlands (referred to as Wetlands B, C, D, and E), identified by The Watershed Company in 2015. Lake Boren Park is considered a moderate intensity land use. Wetland C is a category IV wetland requiring a 40-foot buffer. Wetlands D and E are category III wetlands, requiring a 60-foot buffer. Wetland B is a category II wetland, requiring a 110-foot buffer.

Unpaved trails are considered a low impact land use. The required buffer for a low impact land use is reduced to 25 feet for Wetland C, 40 feet for Wetlands D and E, and 75 feet for Wetland B. Buffer widths are summarized in Table 1.

Table 1. Wetland Buffers

Wetland	Wetland category and characteristics	Required buffer	
		High to moderate impact land uses	Low impact land uses
B	Category II: Habitat score from 20 to 28 points	110 feet	75 feet
D and E	Category III wetlands with a habitat score below 20 points	60 feet	40 feet
C	Category IV	40 feet	25 feet

Mitigation

NMC 18.24.125 requires that proposed development follows mitigation sequencing to avoid impacts to wetlands and buffers through avoidance, minimization and compensation. To compensate for adverse impacts associated with alteration to a wetland or wetland buffer, mitigation measures must achieve equivalent or greater wetland functions (NMC 18.24.325.A).

For alterations to a wetland buffer, a mitigation ratio of 1:1 is required (NMC 18.24.325.B[1]). For alterations to a wetland, the category of wetland and the type of mitigation determine the ratios (NMC 18.24.325.B[2]). Table 2 summarizes mitigation ratios for the wetland categories found in Lake Boren Park. Possible opportunities to improve the buffer within the park include removal of invasive species, such as English holly, yellow flag iris, knotweed and Himalayan blackberry, and also the removal of

existing structures and trash on parcels 3424059073 and 3424059103. The proposed native plant restoration area could also serve as mitigation.

Table 2. Wetland mitigation ratios.

Wetland Category	Wetland Reestablishment or Creation	Wetland Rehabilitation	1:1 Wetland Reestablishment or Wetland Creation (R/C) and Wetland Enhancement (E)	Wetland Enhancement Only
Category IV	1.5:1	3:1	1:1 R/C and 2:1 E	6:1
Category III	2:1	4:1	1:1 R/C and 2:1 E	8:1
All other category II	3:1	8:1	1:1 R/C and 4:1 E	12:1

Certain proposed projects or activities would also require compliance with the State Environmental Policy Act (SEPA). Compliance could be initiated through the submittal of a SEPA Checklist.

Fish and Wildlife Habitat Conservation Areas

NMC 18.24.302 designates areas that are essential for the preservation of habitat and species as fish and wildlife habitat conservation areas (FWHCAs). Lake Boren has modeled presence of fall Chinook and winter steelhead, although presence of these species has not been confirmed. Lake Boren also provides priority habitat for resident cutthroat trout and Coho salmon and is therefore regulated as a FWHCA (NMC 18.24.302.A[3]).

The City requires the establishment of buffer areas for activities in or adjacent to FWHCAs based on the recommendations of a critical area report. The City may condition approval of activities within or adjacent to the lake as necessary to minimize or mitigate potential impacts. In order to achieve this, the City may require: establishment of a buffer zone, preservation of vegetation, limiting access to the habitat, seasonal restrictions, development of a mitigation monitoring plan and performance guarantee. Any alterations to the FWHCA shall achieve equivalent or greater biological function as detailed in a mitigation plan. The proposed rebuilt docks and beach cove area will likely be subject to these requirements. Depending on the buffer recommended by a qualified professional and approved by the City, other proposed actions may also trigger this requirement including development of the opportunity area, the lakeside promenade, and the proposed stairs.

Flood hazard areas

Lake Boren and Boren Creek do not have FEMA-mapped floodplain and are not subject to any of the flooding regulations of the critical areas code (NMC 18.24.220 – NMC 18.24.260).

Geologically hazardous areas

There are no erosion hazard areas, seismic hazard areas, or landslide hazard areas mapped in the subject parcels.

Steep slope areas may exist in Lake Boren Park or the surrounding area. Steep slope areas are defined as areas that have a slope of 40 percent or greater and an elevation change of at least 10 feet. The City will determine the size of the buffer necessary to prevent or minimize risk of property or injury from slope instability. The City will determine the appropriate buffer based on review of the site and the critical area report. The minimum buffer for a steep slope is 10 feet. Any proposed projects that occur on a steep slope or steep slope buffer will require a critical area review and appropriate mitigation.

Clearing and trail building

A clearing and grading permit will be required for any of the proposed trail networks, as well as the level play lawn, community garden, boardwalk and other similar improvements. A clearing and grading permit is not required for routine maintenance of the park and trails.

Structure Construction

The proposed structures would require a building permit. Some of the proposed structures, including docks, the beach cove, the boardwalk, the outdoor living room structure, the stone steps, the forest room, and the opportunity area would likely fall within a critical area or critical area buffer and require a critical area review prior to applying for a building permit. Likewise, demolition of any of the existing structures would require a demolition permit. Wetland, stream and lake areas and buffers should be reviewed prior to applying for a building permit to ensure that impacts to these critical areas are avoided or mitigated for.

To reduce and streamline permitting requirements, a building permit can include structure construction with other proposed elements of the master plan that would separately require a clearing and grading permit, such as trails and boardwalk.

U.S. Army Corps of Engineers (Corps)

Dock rebuilding is proposed, and would thus need to obtain permits from the appropriate regulatory agencies. Lake Boren is not designated as a "navigable" waterbody pursuant to Section 10 of the Rivers and Harbors Appropriation Act of 1899. Therefore, a Section 10 permit would not be required for work within the lake.

However, under Section 404 of the Clean Water Act, the Corps has the authority to regulate the "discharge of dredged or fill material into waters of the U.S." Lake Boren meets the criteria for a "waters of the U.S." and, therefore, any filling (or excavation) within the lake would require a Section 404 permit.

The extent of the Corps' authority and the definition of fill have been the subject of considerable legal activity. However, in general, the placement of wood, steel, or cured concrete in "waters of the U.S." is not considered "fill". Therefore, the installation of sheet piles, wood, or cured concrete are not regulated as fill, and would not require a Section 404 permit from the Corps. However, any placement of other fill materials (sand, gravel, etc.) beyond the lake's OHWM would require a Section 404 permit. The proposed beach cove area would likely trigger this requirement.

If fill is to occur below the OHWM, the Corps could likely permit such an action with Nationwide Permit (NWP) 42, which allows for the creation of recreational facilities, provided the filling does not encompass greater than ½ acre. Proposed dock facilities/improvements could likely be permitted under the same NWP.

Approval of a NWP is a comparatively streamlined process. A Joint Aquatic Resources Permit Application (JARPA) could be submitted to the Corps as a means of seeking verification under NWP 42. Conversely, if the Corps cannot find compliance with a specific NWP, a more cumbersome Individual Permit would be required.

In issuing a permit, the Corps would need to find compliance with the Endangered Species Act and Section 106 of the National Historic Preservation Act. This documentation would take the form of a Biological Evaluation for impacts to listed species (Chinook salmon and steelhead trout) and a Cultural Resource Assessment documenting excavation impacts on historic and/or cultural resources.

Issuance of a NWP can range from three to nine months following initial application. Issuance of an Individual Permit can take up to a year. The Corps may also restrict all in-water activities to occur within a specific timeframe. The narrowest work window feasible would be August 1 – August 31. However, it is expected that the Corps and other agencies may be flexible with the timing of in-water work if it can be shown that sensitive fish species are unlikely to be present in the work area.

Washington Department of Ecology

Similar to the Corps, Ecology, under Section 401 of the Clean Water Act, is charged with reviewing, conditioning, and approving or denying certain federally permitted actions that result in discharges to state waters. Ecology typically issues permits as part of the Corps' NWP process. However, Ecology's concurrence with NWP 42 requires that an Individual 401 review occur if more than ¼ acre of in-water filling was to be proposed. This would necessitate a separate application to and review by Ecology.

Washington Department of Fish and Wildlife (WDFW)

Chapter 77.55 RCW (the Hydraulic Code) gives WDFW the authority to review, condition, and approve or deny "any construction activity that will use, divert, obstruct,

or change the bed or flow of state waters." Therefore, any in-water activities would require approval from WDFW. Note that in order to apply for an HPA, the City must first issue a SEPA Determination. WDFW typically issues a Hydraulic Project Approval (HPA) within 45 days of application.

Washington Department of Natural Resources (DNR)

Part or all of Lake Boren may be considered a state-owned aquatic land. If the project is to occur on state-owned aquatic lands, early coordination with DNR will be needed. An Aquatic Use Authorization from DNR may be required as part of any in-water cleanup activities. As part of the authorization, DNR may require a right-of-entry agreement. Any work on or in the lake should be coordinated with DNR. Typically, DNR requires that all other permits must be placed prior to finalization of the right-of-entry.

Mitigation

In-water fill will disturb the lake's substrate and restoration with appropriate gravels will be necessary. Per Corps regulations, for any impacts that cannot be avoided or minimized, an applicant must provide compensatory mitigation.

Compensatory mitigation is expected to include returning the wetland area to its previous size and condition, as well as the potential requirement to provide additional wetland area to compensate for the temporal loss of wetland functions. These compensatory mitigation activities are expected to be achievable primarily through the installation of emergent plantings in the existing wetland area and adjacent areas. Mitigation can also be achieved by controlling invasive species or installing habitat structures. Buffer mitigation would likely entail enhancement to increase native plant density and diversity and improve buffer functions.

Permit Summary

Table 3 below summarizes the permitting necessary to complete the proposed activities including rebuilding docks, constructing a beach and/or beach cove, and constructing trails and boardwalks.

Table 3. Permitting Summary.

Agency	Required For	Permit/ Approval	Key Submittal Requirements	Timeframe	Notes
City of Newcastle	Critical area and critical area buffer impacts	Critical Area Review and SEPA review	• Application • Applicant Status Form • Critical Areas Study • Wetland delineation report • SEPA Checklist • Mitigation plans • Project plans	• 4-9 months	
	Trail building, non-routine maintenance	Clearing and Grading Permit	• Application • Project Plans	• 1-2 months	
	Building demolition	Demolition permit	• Application • Project plans	• 1-2 months	
	Building construction	Building permit	• Application • Project plans	• 1-2 months	
Corps	In water work	Section 404 - Nationwide Permit 42	• JARPA, including Attachment E • Wetland delineation report • Biological Evaluation • Cultural Resource Assessment • Mitigation plans • Project plans	• 4-9 months	• May be longer if tribal comments are issued, and/or a cultural resource study is required.
Ecology	In water work	Section 401 Water Quality Certification	• JARPA, including Attachment E • Wetland delineation report • Mitigation plans • Project plans	• 3-6 months	• Ecology review would likely occur concurrent with the Corps' review.
WDFW	In water work	Hydraulic Project Approval	• JARPA, including Attachment E • Mitigation plans • Project plans	• 1-2 months	• City must first issue SEPA Determination
DNR	In water work	Aquatic Use Authorization	• JARPA, including Attachment E	• 2-4 months	• Coordination with DNR should occur early in process

Disclaimer

As with any report, there are limitations (inherent or otherwise) that must be acknowledged. This report is limited to the subjects covered, materials reviewed, and data available at the time the report was prepared. The author(s) have made a sincere attempt to provide accurate and thorough information using the most current and complete information available and their own best professional judgment. Any findings expressed in this study are subject to verification and agreement by the appropriate local, State and Federal regulatory authorities. No other warranty, expressed or implied, is made.

Please call if you have any questions or if we can provide you with any additional information.

Sincerely,

Andy Noone
Planner

THE WATERSHED COMPANY

SCIENCE & DESIGN

December 22, 2015
Revised April 13, 2016

Greg Brower
The Berger Partnership
1721 8th Avenue South
Seattle, WA 98109-3015
Via email: gregb@bergerpartnership.com

Re: Lake Boren Park, Wetland/Stream Reconnaissance Report

The Watershed Company Reference Number: 150906

Dear Greg:

In December 2015 ecologists Nell Lund, PWS and Anna Hoenig visited the Lake Boren Park in Newcastle, WA. The purpose of the visit was to conduct a wetland/stream reconnaissance study on the property to be included in the Lake Boren Park Master Plan Update. This letter summarizes the findings of this study and details applicable federal, state, and local regulations. The following attachments are included:

- Wetland/stream Reconnaissance Sketch
- Wetland data forms
- Wetland Rating Forms, 2004

Methods

Public-domain information on the subject properties was reviewed for this reconnaissance study. These sources include USDA Natural Resources Conservation Service Soil maps, U.S. Fish and Wildlife Service National Wetland Inventory maps, Washington Department of Fish and Wildlife interactive mapping programs (PHS on the Web), and King County's GIS mapping website (iMAP).

The study area was evaluated for wetlands using methodology from the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region Version 2.0* (Regional Supplement) (US Army Corps of Engineers [Corps] May 2010). The presence or absence of wetlands was determined on the basis of an examination of vegetation, soils, and hydrology. Areas meeting the criteria set forth in the Regional Supplement were determined to be wetland.

Wetlands were classified using the *Western Washington Wetland Rating System (*Rating System*)* (Ecology, Aug 2004, version 2). The on-site stream was rated according to the City of Newcastle stream classification system in Section 18.24.340 of the NMC.

Project Study Area and History

Lake Boren Park is located in the City of Newcastle (Section 34, Township 24N, Range 5E) within the May Creek Basin of the Cedar-Sammamish Watershed Inventory Area (WRIA 8). Coal Creek Parkway SE borders the park on the east, and residential areas border the park to the west and south. Boren Creek flows south through eastern side of the park from Boren Lake. Figure 1 shows the study area.

Figure 1. Lake Boren Park study area.

Three previous critical areas reports from Environmental Science Associates, Inc. (ESA) and Wetland Resources, Inc. (WRI) were referenced in the current reconnaissance. In 2012, ESA conducted a critical areas study for Lake Boren outlet channel improvements, which focused on the area between Boren Creek and Coal Creek Parkway SE. Within this study area, three wetlands (A, B and C) were delineated. WRI delineated and rated the Lake Boren Wetland Complex in 2013 for a waterfront residential development, which was reviewed by TWC[1]. In 2014, ESA delineated the western edge of Wetland B that extends south of Lake Boren (excluding parcel #342059103) for a high flow bypass project at the outlet of Lake Boren.

Within the current master plan update, additional features such as boardwalks, buffer trails and buffer view "windows" are to be considered.

General Site Conditions

Lake Boren Park consists primarily of maintained lawns with trees scattered throughout the park. The western portion of the park is hilly with terraces that descend to Lake Boren. The park contains recreational facilities, such as a playground, tennis courts, a dock on Lake Boren, a beach volleyball court, and supporting structures, such as a parking lot, bathrooms, and paved paths. The eastern side of the park, which is behind a chain-link fence on both eastern and western sides, is forested and contains both uplands and wetlands (A, B and C). Access was not permitted on parcel #342059103, but a house and a driveway off of Coal Creek Parkway SE were observed. Several structures including a house and two sheds with a considerable amount of trash were observed on the parcel just south of Lake Boren. South of Wetland B, a paved trail bisects the forested area and creek and connects the park to a walking trail next to Coal Creek Parkway SE. Lake Boren Park is heavily used by people and dogs. The area between Lake Boren and Coal Creek Parkway consists of multiple single-family lots now owned by the City of Newcastle. On several of the lots, there are signs of prior residential development, including several docks. On the northeast corner of the lake, just south of the existing residences, the lake is armored with concrete; this area is accessible by a concrete staircase.

[1] The revised report #2 by WRI, submitted after responding to the TWC review, is dated September 5, 2013.

Findings

Critical Areas

A total of 1 stream and 6 wetlands were found, two of which were not previously delineated in the aforementioned studies.

Wetland A

Wetland A was delineated by ESA in 2012 as a riverine wetland located in the middle of Boren Creek with water flowing on both sides (Photo 1). The site of the wetland was found; however, the wetland was not re-evaluated with data points, because it exists entirely under the ordinary high of Boren Creek.

Wetland B

Wetland B boundaries were delineated by ESA in 2012 and 2014. We confirmed these boundaries with spot checks in accessible areas and observations from the trail on the eastern wetland boundary (Photo 2). For the purposes of rating, we felt it was more accurate and appropriate to consider Wetland B as separate from the Lake Boren Wetland Complex (see below) based on the guidance in the Rating System. Per that guidance, features should be separated when there is a demonstrable change in the hydrologic source or type; in this case the constriction by the outlet changes the velocity of the uni-directional, down-gradient flow into Boren Creek. The unit boundary was determined based on the *Western Washington Wetland Rating System* (Ecology, Aug 2004, version 2). Wetland B is a Fish and Wildlife Habitat Conservation Area (FWHCA), as it occurs adjacent to Boren Creek and the Lake Boren Wetland, which both contain priority species (see below)

Wetland B is a depressional and riverine wetland with emergent, scrub/shrub and forested Cowardin vegetation classes. It is extends from the southeastern corner of the park to the north and includes Lake Boren. Dominant hydrophytic vegetation include black cottonwood, red alder, Pacific willow in the canopy with salmonberry, red-osier dogwood, hardhack, creeping buttercup, lady fern, soft rush, tapertip rush and skunk cabbage in the understory. Soils were saturated (hydrology indicator A3) with a high water table (A2) and were gravelly sandy loams at sampling points with low chromas (<2).

Wetland C

Wetland C is a small, depressional, scrub-shrub wetland located south of wetland B and just north of the walking path (Photo 3). Dominant vegetation includes red-osier dogwood and skunk cabbage. The ground was saturated at the time of the visit and a high water table was observed.

Wetland D

Wetland D is a small, depressional, forested wetland located at the north end of the park, just south of the paved path (Photo 4). Dominant hydrophytic vegetation includes black cottonwood, red alder, creeping buttercup and lawn grasses. A small amount of soft rush was also observed in this wetland. At the time of the visit, water was ponding, and saturation (A3) and a high water table (A2) were observed at the data point. Soils are a sandy gravelly loam with prominent redox concentrations in the matrix (hydric soil indicator redox dark surface – F6).

Wetland E

Wetland E is a small, depressional, shrub-shrub and forested wetland located north of Wetland D, between the paved path and Lake Boren (Photo 5). Dominant vegetation include black cottonwood, willow species, and red alder in the canopy with Western red cedar saplings, hardhack, red-osier dogwood, Himalayan blackberry, creeping buttercup and lawn grasses in the understory. Ponding was observed at the time of the visit. It appears wetlands D and E were formerly one wetland that is now separated by the paved path.

Lake Boren Wetland Complex

WRI rated and delineated the Lake Boren Wetland Complex in 2013 for an approved waterfront residential development (Photo 6). The Lake Boren wetland complex includes Lake Boren and the scrub-shrub/emergent wetland on the north shore of the lake. The wetland contains aquatic bed, emergent and scrub-shrub Cowardin vegetation classes with permanent and seasonal flooding and saturated water regimes. Dominant vegetation includes red alder, hardhack, salmonberry, cattail, and soft rush. At the time of the visit soils were saturated (A3) and a high water table (A2) was observed. Soils are a low chroma sandy loam and loamy sand; a hydrogen sulfide odor (A4) was detected. It is an FWHCA due to the presence of salmon (see below – Boren Creek).

Boren Creek

Within the study area, Boren Creek flows south from Lake Boren through Wetland B. South of the park, Boren Creek roughly parallels Coal Creek Parkway SE, and joins with May Creek just north of SE 95th Way. May Creek eventually drains to Lake Washington. PHS data (accessed December 2015) confirms the occurrence of coho salmon (*Oncorhynchus kisutch*) and resident coastal cutthroat salmon (*Oncorhynchus clarki*) within Boren Creek and Lake Boren. Like the Lake Boren Wetland, Boren Creek is an FWHCA.

Upland Areas

With the exception of Wetlands D and E, the lawns in Lake Boren Park are non-wetland areas (Photo 7). Trees such as bigleaf maple, black cottonwood, yellow cedar, red alder and madrone are found throughout this area. At data points, dominant vegetation include red alder, lawn grasses, and weedy herbs such as yarrow. Soils are a gravelly

sandy loam with high chroma (>2). At the time of the visit, soils were dry or moist, and no wetland hydrology was observed.

The southwest corner of the park along SE 84th Way contains a forested area dominated by red alder, bitter cherry, and black cottonwood with primarily Himalayan blackberry and some sword fern and trailing blackberry in the understory. Soils were a gravelly sandy loam with high chroma (>2). Although redox concentrations were observed, the high chroma of the matrix disqualifies it as a hydric soil. Soils were dry and no wetland hydrology was observed.

The forested and scrub shrub area that lies between the lawn and Wetland B is largely dominated by English holly, Douglas-fir, salmonberry, and sword fern. This upland area is also terraced with a boulder wall running north-south and paralleling the chain-link fence. The height of the boulder wall ranges from 3 to 6 feet. A data point (DP-6) was taken at the north end of this upland area as it transitions from upland forest to grassy lawn. Dominant vegetation include bigleaf maple, black cottonwood, Sitka willow, and Pacific ninebark. Soils are a gravelly sandy loam with high chroma (>2) and were dry at the time of the visit.

Other Features

A small tributary and detention pond east of Coal Creek Parkway SE were also investigated due to their connection to Lake Boren, despite being located outside the study area. The small tributary is located east of Coal Creek Parkway SE and just south of SE 79th Place and enters a culvert at the intersection. The tributary was described in the Trails at Newcastle development environmental permitting documentation as a Class 3 intermittent stream channel (Cooke Scientific, 2006). The area below the tributary next to the lake was investigated but no outfall was found. Presumably, the tributary is piped from the east side of the Parkway to Lake Boren. The tributary is not mapped on King County iMAP, Salmonscape or Newcastle Hydrologic Features Map (December 11, 2003). The detention pond north of SE 79ths Place is fenced in with concrete walls. King County iMAP and Salmonscape show a connection from the detention pond to Lake Boren; however, an outfall below the pond was also not found.

Another detention pond is located between Lake Boren and Coal Creek Parkway SE, north of its intersection with SE 79th Place.

Local Regulations

Wetlands and streams outside of Shoreline Jurisdiction in the City of Newcastle are regulated under Chapter 18.24 of the NMC. Lake Boren is smaller than 20 acres and is therefore not a shoreline of the state.

Per NMC 18.24.020, regulated uses and activities within critical areas include, but are not limited to, the following:

1. *Removal, excavation, or grading of soil;*
2. *Dredging, dumping, or discharging of material;*
3. *Filling, draining, or flooding of an area;*
4. *Construction, demolition, or expansion of any structure;*
5. *Clearing or other major alteration of vegetation;*
6. *Activities affecting surface or ground water resources.*

Under NMC 18.24.050, maintenance, operation, repair or replacement of publicly improved roadways and publicly improved recreation areas are completely exempt from the provisions of Chapter 18.24. This provision may apply to existing trails that are used for recreation within the park.

Additionally, structural modification of, addition to or replacement of single detached residences in existence before the date of incorporation which do not meet the building setback or buffer requirements for wetlands, streams or steep slope hazard areas receive partial exemptions (NMC 18.24.060). This may apply to the existing structures within the parcel 3424059073, which is found just south of Lake Boren.

If application of critical area regulations of Chapter 18.24 deny reasonable use of the property, an exception may be applied for, pursuant to NMC 18.24.070.B.

Wetlands – NMC 18.24.310 through -330

Minimum required wetland buffers are based on Category, the score for habitat functions, and the intensity of proposed adjacent land use (high, moderate and low). Lake Boren Park is considered a moderate impact land use as it has a moderate intensity open space (parks) and paved trails.

Per the definition in NMC 18.06.713.1, all wetlands (B, C, D, E and Lake Boren) meet the criteria for a "wetland complex", which is a grouping of two or more wetlands, not including grazed wet meadows, that meet the following:

> *A. Each wetland included in the complex is within 500 feet of the delineated edge of at least one other wetland in the complex;*
>
> *B. The complex includes at least one wetland classified category I or II.*

The buffer width for each individual wetland in the complex is the same width as the buffer width required for the category of wetland (NMC 18.24315.C[3]). As the buffers of each wetland touch and overlap with at least one other wetland in the complex, corridors between the between the wetlands are not required (NMC 18.24315.C.3[b]). Table 1 summarizes the wetland rating scores (Ecology) for wetlands within Lake Boren Park and their associated buffer widths.

Table 1. Wetland rating and buffer widths.

		Ecology Rating (2004)					
Wetland[1]	**HGM Class**	**Water Quality**	**Hydro-logic**	**Habitat**	**Total**	**Category**	**Buffer width[2]**
B	Depressional/riverine	20	16	21	57	II	110 ft
C	Depressional	8	8	12	28	IV	40 ft
D	Depressional	20	8	10	38	III	60 ft
E	Depressional	20	8	12	40	III	60 ft
Lake Boren Wetland[3]	Depressional	4	10	19	33	III	60 ft

1. Wetland A was not included, as it is entirely under the ordinary high of Boren Creek.
2. Buffer width based on high to moderate impact land use under the current City Code.
3. Previously City-accepted wetland rating by Wetland Resources, Inc. Subject to change pending the outcome of an ongoing City-review.

Buffer averaging (NMC 18.24.315.B) is allowed provided that:

1. *The department determines that:*
    a. *The ecological structure and function of the buffer after averaging is greater than the structure and function before averaging;*
    b. *Averaging includes connecting the corridors of a wetland complex; and*
4. *The resulting buffer meets the following standards:*
    a. *The total area of the buffer after averaging is equivalent to or greater than the area of the buffer before averaging; and*
    b. *The additional buffer is contiguous with the standard buffer;*
    c. *No feasible alternative to the site design could be accomplished without buffer averaging;*
    d. *The buffer width may be reduced by no more than 25 percent of the standard width at any point, down to a minimum of 35 feet.*

The footprint of the legally existing structures established on a site prior to December 1, 2005, which encroach into the critical area buffer, shall be exempt from the required critical area buffer (NMC 18.24.315.E). This section may apply to structures within the parcel 3424059073, which is found just south of Lake Boren.

Permitted Alterations:

Per NMC 18.24.320.D, public and private trails within wetlands are permitted, provided that:

1. *The trail surface shall not be made of impervious materials, except that public multi-purpose trails may be made of impervious materials if they meet all other requirements including water quality standards set forth in Chapter 13.05 NMC;*
2. *Buffers shall be expanded, where possible, equal to the width of the trail corridor including disturbed areas;*

Per NMC 18.24.320.F, vegetation removal is allowed:

1. *Where not exempt, the removal of noxious weeds from wetlands and their buffers;*
2. *The removal of the following vegetation from wetlands and their buffers with hand labor and light equipment:*
    e. *White water lily (Nymphea odorata);*
    f. *Himalayan blackberry (Rubus discolor, R. procerus); and*
    g. *Evergreen blackberry (Rubus laciniatus);*
3. *The removal of vegetation from wetland buffers, only as necessary, for surveying purposes; and*
4. *The removal of hazard trees from wetlands and buffers, as determined by the department;*

***Mitigation**:*

NMC 18.24.125 requires that proposed development follows mitigation sequencing to avoid impacts to wetland and buffers through avoidance, minimization and compensation. To compensate for adverse impacts associated with alternation to a wetland or wetland buffer, mitigation measures must achieve equivalent or greater wetland functions (NMC 18.24.325.A).

For alterations to a wetland buffer, a mitigation ratio of 1:1 is required (NMC 18.24.325.B[1]). For alterations to a wetland, the category of wetland and the type of mitigation determine the ratios (NMC 18.24.325.B[2]). Table 2 summarizes mitigation ratios for the wetland categories found in Lake Boren Park. Possible opportunities to improve the buffer within the park include removal of invasive species, such as English holly, yellowflag iris, knotweed and Himalayan blackberry, and also the removal the structure and trash on parcel 3424059073.

Table 2. Wetland mitigation ratios.

Wetland Category	Wetland Reestablishment or Creation	Wetland Rehabilitation	1:1 Wetland Reestablishment or Wetland Creation (R/C) and Wetland Enhancement (E)	Wetland Enhancement Only
Category IV	1.5:1	3:1	1:1 R/C and 2:1 E	6:1
Category III	2:1	4:1	1:1 R/C and 2:1 E	8:1
All other category II	3:1	8:1	1:1 R/C and 4:1 E	12:1

Streams – NMC 18.24.340 through -370

Under the stream classification system of NMC Section 18.24.340.A(2), Boren Creek meets the criteria for a Class 2 stream due to the presence of salmon despite determination that the stream does not flow year round in years of normal rainfall (ESA 2012). The minimum standard buffer width is 100 feet; however, per NMC 18.24.350.A(7), as Boren Creek is contiguous with Wetland B, the larger buffer applies, which in this case is 110 feet. As documented by ESA (2012), the OHWM of the southern reach of Boren Creek is within 25 feet of the toe of a slope 30 percent or greater in which the buffer extends beyond the top of the slope. These areas will include an additional 25 feet of buffer (NMC 18.24.340A[6]). Table 3 outlines the differing buffer widths.

Table 3. Stream type and buffer width.

	Stream Type	Standard buffer width	Buffer width contiguous with Wetland B	Buffer width adjacent to steep slope
Boren Creek	Class 2 with salmonids	100 ft	110 ft	125 ft

Buffer width averaging is also allowed under the following conditions (NMC 18.24.350.C):

1. *It will increase stream or buffer functions;*
2. *It will not adversely affect salmonid habitat;*
3. *It will provide additional natural resource protection; and*
4. *The total area contained in the buffer of each stream on the development proposal site is not decreased.*

Some permitted alterations are allowed under section 18.24.360, but, as with permitted alterations to wetlands, would require review and compliance with the mitigation sequencing provisions of NMC Chapter 18.24. Stream and buffer crossings are permitted following the requirements set in NMC Chapter 18.24.360.E.

Mitigation:

As with wetlands, compensatory mitigation within the same drainage subbasin is required for alterations to stream and their buffers under NMC 18.24.370. Mitigation ratio requirements are divided into permanent and temporary alterations and also on-site or off-site locations.

Fish and Wildlife Habitat Conservation Areas:

As FWHCA regulations apply to Lake Boren Wetland, Wetland B and Boren Creek due to the presence of priority species, coho salmon and cutthroat trout, additional conditions may apply. A critical areas study is required to assess habitats and potential for priority species (NMC 18.24.304). Seasonal restrictions on activities and increased buffers may apply to a FWHCA if a species is more susceptible to adverse impacts during specific periods of the year (NMC 18.24.306), and the City may apply addition conditions activities within and adjacent to habitat conservation areas and their buffers. Equivalent or greater biological functions are required with mitigation for alterations to habitat conservation areas, and should be detailed in an FWHCA mitigation plan (NMC 18.24.306.B[4]).

State and Federal Regulation

Wetlands are also regulated by the U.S. Army Corps of Engineers (Corps) under section 404 of the Clean Water Act. Any filling of Waters of the State, including wetlands (except isolated wetlands), would require notification and permits from the Corps. Construction a boardwalks within wetlands are not considered fill and would not require a Corps permit.

A new Clean Water Rule for wetlands and other Waters of the U.S. went into effect in August 2015; however, the rule was recently "stayed" by the courts due to pending litigation. Therefore, the prior rule is in effect until further notice. Under our understanding of the prior rule, Wetlands B, C, D and E would not be considered isolated, due to surface water connections. A formal isolated status inquiry can be requested from the Corps through the Jurisdictional Determination process. Federally permitted actions that could affect endangered species (i.e. salmon or bull trout) may also require a biological assessment study and consultation with the U.S. Fish and Wildlife Service and/or the National Marine Fisheries Service. Application for Corps permits may also require an individual 401 Water Quality Certification and Coastal Zone Management Consistency determination from Ecology.

In general, neither the Corps nor Ecology regulates wetland buffers, unless direct impacts are proposed. When direct impacts are proposed, mitigated wetlands may be required to employ buffers based on Corps and Ecology joint regulatory guidance.

Finally, Ecology has developed a new rating system which is not in use by the City of Newcastle as of the preparation of this study. The 2014 rating system is now required for all state- and federally-permitted projects.

Disclaimer

The information contained in this letter is based on the application of technical guidelines currently accepted as the best available science and in conjunction with the manuals and criteria outlined in the methods section. All discussions, conclusions and recommendations reflect the best professional judgment of the author(s) and are based upon information available to us at the time the study was conducted. All work was completed within the constraints of budget, scope, and timing. The findings of this report are subject to verification and agreement by the appropriate local, State and Federal regulatory authorities. No other warranty, expressed or implied, is made.

Please call if you have any questions or if we can provide you with any additional information.

Sincerely,

Anna Hoenig
Ecologist

Enclosures

Photo 1. Wetland A is situated in the middle of Boren Creek, below OHWM.

Photo 2. Wetland B, located south of Lake Boren Wetland.

Photo 3. Wetland C, located south of Wetland B.

Photo 4. Wetland D, located at the north of Lake Boren Park.

Photo 5. Wetland E, located at the north of Lake Boren Park.

Photo 6. Lake Boren wetland, facing the south end.

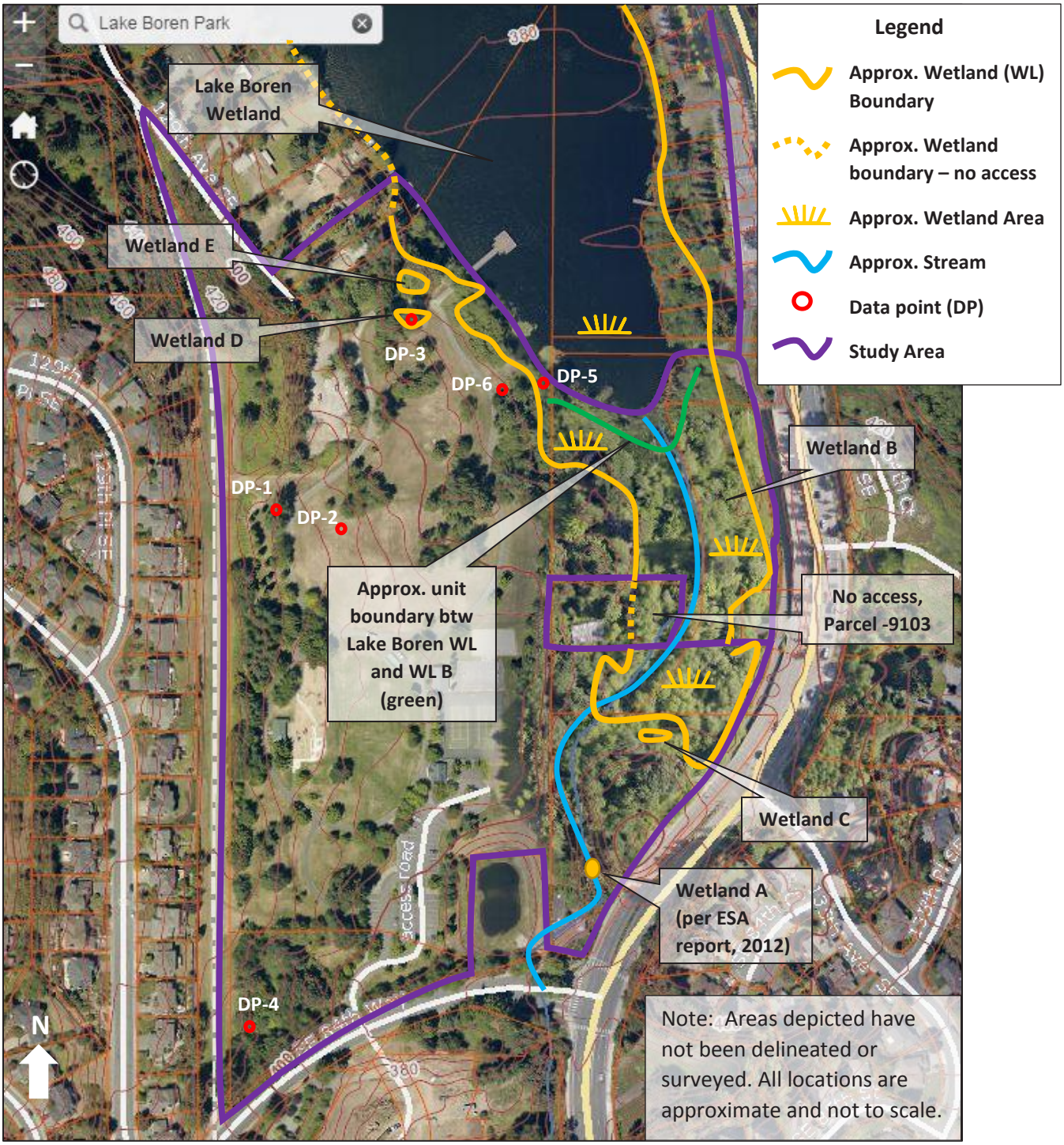
Photo 7. Upland lawn within Lake Boren Park.

THE WATERSHED COMPANY

750 Sixth Street South | Kirkland | WA 98033
p 425.822.5242 f 425.827.8136

Wetland/Stream Reconnaissance Sketch
Lake Boren Park, Newcastle, WA
Prepared for The Berger Partnership

December 2, 2015
TWC Project No. 150906



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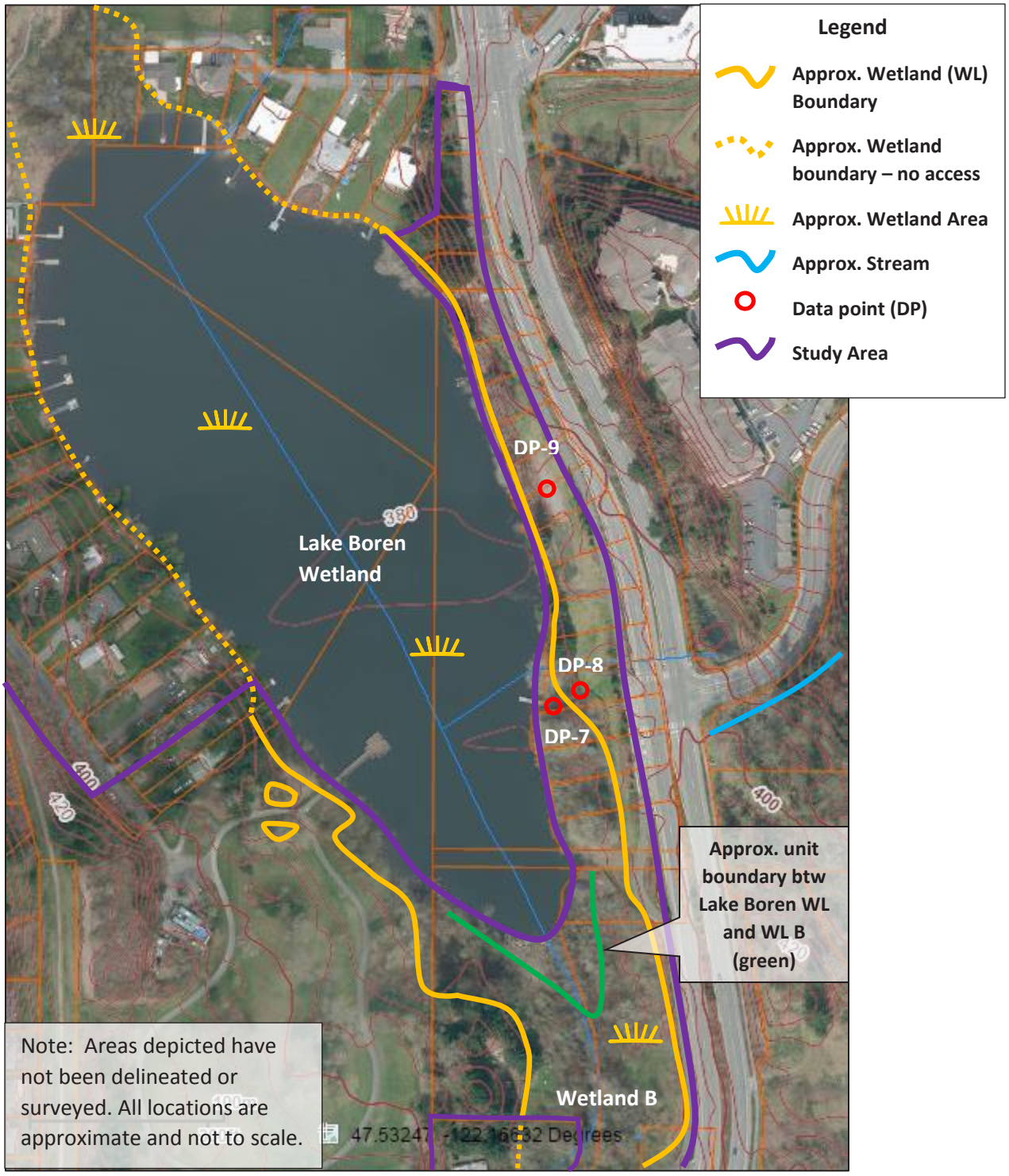
Wetland/Stream Reconnaissance Sketch
Lake Boren Park, Newcastle, WA
Prepared for The Berger Partnership

December 21, 2015
TWC Project No. 150906



THE WATERSHED COMPANY

WETLAND DETERMINATION DATA FORM

Western Mountains, Valleys, and Coast Supplement to the 1987 COE Wetlands Delineation Manual

DP- 1

750 Sixth Street South
Kirkland, Washington 98033
(425) 822-5242
watershedco.com

Project Site:	**Lake Boren Park**	Sampling Date:	**12/2/2015**
Applicant/Owner:	**Berger**	Sampling Point:	DP- **1**
Investigator:	**AH, NL**	City/County:	**Newcastle**
Sect., Township, Range:	S **33** T **24N** R **05E**	State:	
Landform (hillslope, terrace, etc): **depression**	Slope (%): **0**	Local relief (concave, convex, none): **concave**	
Subregion (LRR): **A**	Lat:	Long:	Datum:
Soil Map Unit Name: **AgC-Alderwood gravelly sandy loam, 8-15% slopes**		NWI classification: **none**	

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks.)
Are "Normal Circumstances" present on the site? ☒ Yes ☐ No
Are Vegetation☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation☐, Soil ☐, or Hydrology ☐ naturally problematic (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampling Point within a Wetland?**	Yes ☐ No ☒
Hydric Soils Present?	Yes ☐	No ☒		
Wetland Hydrology Present?	Yes ☐	No ☒		

Remarks: **Lawn area**

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5m diam.)	Absolute % Cover	Dominant Species?	Indicator Status
1. ***Alnus rubra***	**25**	**Y**	**FAC**
2.			
3.			
4.			
	25	= Total Cover	
Sapling/Shrub Stratum (Plot size: 3m diam.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 1m diam.)			
1. ***Lawn grass****	**100**	**Y**	**FAC**
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
		= Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum:

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC:	**2**	(A)
Total Number of Dominant Species Across All Strata:	**2**	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	**100**	(A/B)

Prevalence Index Worksheet

	Total % Cover of	Multiply by
OBL species		x 1 =
FACW species		x 2 =
FAC species		x 3 =
FACU species		x 4 =
UPL species		x 5 =
Column totals	(A)	(B)

Prevalence Index = B / A =

Hydrophytic Vegetation Indicators

☒ Dominance test is > 50%
☐ Prevalence test is ≤ 3.0 *
☐ Morphological Adaptations * (provide supporting data in remarks or on a separate sheet)
☐ Wetland Non-Vascular Plants *
☐ Problematic Hydrophytic Vegetation * (explain)

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks: ***presumed FAC**

SOIL **Sampling Point – DP-1**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-6	**10YR 4/3**						**Gravelly sandy loam**	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2]Loc: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]

- ☐ 2cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)
- ☐

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric soil present? Yes ☐ No ☒

Remarks: **Soil pit contained large roots so that it was difficult to dig deeper**

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required: check all that apply):

- ☐ Surface water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (**except MLRA 1, 2, 4A & 4B**) (B9)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (explain in remarks)

Secondary Indicators (2 or more required):

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A & 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks

Field Observations

Surface Water Present? Yes ☐ No ☒ Depth (in):

Water Table Present? Yes ☐ No ☒ Depth (in):

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (in):

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

THE WATERSHED COMPANY

750 Sixth Street South
Kirkland, Washington 98033
(425) 822-5242
watershedco.com

WETLAND DETERMINATION DATA FORM

Western Mountains, Valleys, and Coast Supplement to the 1987 COE Wetlands Delineation Manual

DP- 2

Project Site:	**Lake Boren Park**	Sampling Date:	**12/2/2015**
Applicant/Owner:	**Berger**	Sampling Point:	DP- **2**
Investigator:	**AH, NL**	City/County:	**Newcastle**
Sect., Township, Range:	S **33** T **24N** R **05E**	State:	
Landform (hillslope, terrace, etc): **hillslope**	Slope (%): **5**	Local relief (concave, convex, none): **none**	
Subregion (LRR): **A**	Lat:	Long:	Datum:
Soil Map Unit Name: **AgC-Alderwood gravelly sandy loam, 8-15% slopes**		NWI classification: **none**	

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks.)
Are "Normal Circumstances" present on the site? ☒ Yes ☐ No
Are Vegetation☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation☐, Soil ☐, or Hydrology ☐ naturally problematic (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒			
Hydric Soils Present?	Yes ☐	No ☒	**Is the Sampling Point within a Wetland?**	Yes ☐	No ☒
Wetland Hydrology Present?	Yes ☐	No ☒			

Remarks: **Lawn area**

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5m diam.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 3m diam.)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 1m diam.)			
1. ***Lawn grass****	**60**	**Y**	**FAC**
2. ***Achillea millefolium***	**40**	**Y**	**FACU**
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		
% Bare Ground in Herb Stratum:			

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC:	**1**	(A)
Total Number of Dominant Species Across All Strata:	**2**	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	**50**	(A/B)

Prevalence Index Worksheet

	Total % Cover of	Multiply by
OBL species		x 1 =
FACW species		x 2 =
FAC species		x 3 =
FACU species		x 4 =
UPL species		x 5 =
Column totals	(A)	(B)

Prevalence Index = B / A =

Hydrophytic Vegetation Indicators

☐ Dominance test is > 50%
☐ Prevalence test is ≤ 3.0 *
☐ Morphological Adaptations * (provide supporting data in remarks or on a separate sheet)
☐ Wetland Non-Vascular Plants *
☐ Problematic Hydrophytic Vegetation * (explain)

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks: ***presumed FAC**

SOIL **Sampling Point – DP-2**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-1	**10YR 2/2**	**100**					**Sandy gravelly loam**	
1-7	**10YR 4/3**	**100**					**Sandy gravelly loam**	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2]Loc: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]

- ☐ 2cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)
- ☐

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric soil present? Yes ☐ No ☒

Remarks: **Soil compaction and gravel so that was difficult to dig deeper.**

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required: check all that apply):

- ☐ Surface water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (**except MLRA 1, 2, 4A & 4B**) (B9)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (explain in remarks)

Secondary Indicators (2 or more required):

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A & 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks

Field Observations

Surface Water Present? Yes ☐ No ☒ Depth (in):

Water Table Present? Yes ☐ No ☒ Depth (in):

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (in):

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: **Top 5 inches slightly moist**

THE WATERSHED COMPANY

WETLAND DETERMINATION DATA FORM

Western Mountains, Valleys, and Coast Supplement to the 1987 COE Wetlands Delineation Manual

DP- 3

750 Sixth Street South
Kirkland, Washington 98033
(425) 822-5242
watershedco.com

Project Site:	**Lake Boren Park**	Sampling Date:	**12/2/2015**
Applicant/Owner:	**Berger**	Sampling Point:	DP- **3**
Investigator:	**AH, NL**	City/County:	**Newcastle**
Sect., Township, Range:	S **33** T **24N** R **05E**	State:	
Landform (hillslope, terrace, etc): **depression**	Slope (%): **0**	Local relief (concave, convex, none): **concave**	
Subregion (LRR): **A**	Lat:	Long:	Datum:
Soil Map Unit Name: **AgC-Alderwood gravelly sandy loam, 8-15% slopes**		NWI classification: **none**	
Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No		(If no, explain in remarks.)	
Are "Normal Circumstances" present on the site? ☒ Yes ☐ No			
Are Vegetation☐, Soil ☐, or Hydrology ☐ significantly disturbed?			
Are Vegetation☐, Soil ☐, or Hydrology ☐ naturally problematic		(If needed, explain any answers in Remarks.)	

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampling Point within a Wetland?**	Yes ☒	No ☐
Hydric Soils Present?	Yes ☒	No ☐			
Wetland Hydrology Present?	Yes ☒	No ☐			

Remarks: **Inpit – wetland D**

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5m diam.)	Absolute % Cover	Dominant Species?	Indicator Status
1. ***Populus balsamifera***	**60**	**Y**	**FAC**
2. ***Alnus rubra***	**30**	**Y**	**FAC**
3.			
4.			
	90	= Total Cover	
Sapling/Shrub Stratum (Plot size: 3m diam.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 1m diam.)			
1. ***Lawn grasses****	**40**	**Y**	**FAC**
2. ***moss***	**20**	**-**	**NI**
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
		= Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
		= Total Cover	
% Bare Ground in Herb Stratum:			

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC:	**3**	(A)
Total Number of Dominant Species Across All Strata:	**3**	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	**100**	(A/B)

Prevalence Index Worksheet

	Total % Cover of	Multiply by
OBL species		x 1 =
FACW species		x 2 =
FAC species		x 3 =
FACU species		x 4 =
UPL species		x 5 =
Column totals	(A)	(B)

Prevalence Index = B / A =

Hydrophytic Vegetation Indicators

- ☒ Dominance test is > 50%
- ☐ Prevalence test is ≤ 3.0 *
- ☐ Morphological Adaptations * (provide supporting data in remarks or on a separate sheet)
- ☐ Wetland Non-Vascular Plants *
- ☐ Problematic Hydrophytic Vegetation * (explain)

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks: ***presumed FAC**

SOIL **Sampling Point – DP-3**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-4	**10YR 2/2**	**100**						
4-8	**10YR 3/2**	**97**	**10YR 3/6**	**3**	**C**	**M**	**Sandy gravelly loam**	
8-10	**10YR 5/2**	**80**	**7.5YR 4/6**	**20**	**C**	**M**	**Sandy gravelly loam**	**cobble**

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2]Loc: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]

- ☐ 2cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)
- ☐

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric soil present? Yes ☒ No ☐

Remarks: **Cobble rich layer – could not dig below 10 inches**

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required: check all that apply):

- ☐ Surface water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (**except MLRA 1, 2, 4A & 4B**) (B9)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (explain in remarks)

Secondary Indicators (2 or more required):

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A & 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks

Field Observations

Surface Water Present?	Yes ☐	No ☒	Depth (in):	
Water Table Present?	Yes ☒	No ☐	Depth (in):	**Surface**
Saturation Present? (includes capillary fringe)	Yes ☒	No ☐	Depth (in):	**Surface**

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

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WETLAND DETERMINATION DATA FORM

Western Mountains, Valleys, and Coast Supplement to the 1987 COE Wetlands Delineation Manual

DP- 4

750 Sixth Street South
Kirkland, Washington 98033
(425) 822-5242
watershedco.com

Project Site:	**Lake Boren Park**	Sampling Date:	**12/2/2015**
Applicant/Owner:	**Berger**	Sampling Point:	DP- **4**
Investigator:	**AH, NL**	City/County:	**Newcastle**
Sect., Township, Range:	S **33** T **24N** R **05E**	State:	**WA**
Landform (hillslope, terrace, etc): **hillslope**	Slope (%): **<5%**	Local relief (concave, convex, none): **concave**	
Subregion (LRR): **A**	Lat:	Long:	Datum:
Soil Map Unit Name: **AgC-Alderwood gravelly sandy loam, 8-15% slopes**		NWI classification: **none**	

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks.)
Are "Normal Circumstances" present on the site? ☒ Yes ☐ No
Are Vegetation☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation☐, Soil ☐, or Hydrology ☐ naturally problematic (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒			
Hydric Soils Present?	Yes ☐	No ☒	**Is the Sampling Point within a Wetland?**	Yes ☐	No ☒
Wetland Hydrology Present?	Yes ☐	No ☒			

Remarks: **SW corner**

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5m diam.)	Absolute % Cover	Dominant Species?	Indicator Status
1. ***Alnus rubra***	**100**	**Y**	**FAC**
2.			
3.			
4.			
	100	= Total Cover	
Sapling/Shrub Stratum (Plot size: 3m diam.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 1m diam.)			
1. ***Polystichum munitum***	**10**	**Y**	**FACU**
2. ***Rubus ursinus***	**30**	**Y**	**FACU**
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	40	= Total Cover	
Woody Vine Stratum (Plot size:)			
1. ***Rubus armeniacus***	**60**	**Y**	**FACU**
2.			
	60	= Total Cover	

% Bare Ground in Herb Stratum:

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC:	**1**	(A)
Total Number of Dominant Species Across All Strata:	**4**	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	**25**	(A/B)

Prevalence Index Worksheet

	Total % Cover of	Multiply by
OBL species		x 1 =
FACW species		x 2 =
FAC species		x 3 =
FACU species		x 4 =
UPL species		x 5 =
Column totals	(A)	(B)

Prevalence Index = B / A =

Hydrophytic Vegetation Indicators

☐ Dominance test is > 50%
☐ Prevalence test is ≤ 3.0 *
☐ Morphological Adaptations * (provide supporting data in remarks or on a separate sheet)
☐ Wetland Non-Vascular Plants *
☐ Problematic Hydrophytic Vegetation * (explain)

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks:

SOIL **Sampling Point – DP-4**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-6	**10YR 3/3**	**100**					**Gravelly sandy loam**	
6-12	**10YR 4/4**	**85**	**7.5YR 4/6**	**15**	**C**	**M**	**Gravelly sandy loam**	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2]Loc: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]

- ☐ 2cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)
- ☐

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric soil present? Yes ☐ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required: check all that apply):

- ☐ Surface water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (**except MLRA 1, 2, 4A & 4B**) (B9)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (explain in remarks)

Secondary Indicators (2 or more required):

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A & 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks

Field Observations

Surface Water Present? Yes ☐ No ☒ Depth (in):

Water Table Present? Yes ☐ No ☒ Depth (in):

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (in):

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

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WETLAND DETERMINATION DATA FORM

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DP- 5

750 Sixth Street South
Kirkland, Washington 98033
(425) 822-5242
watershedco.com

Project Site:	**Lake Boren Park**	Sampling Date:	**12/2/2015**
Applicant/Owner:	**Berger**	Sampling Point:	DP- **5**
Investigator:	**AH, NL**	City/County:	**Newcastle**
Sect., Township, Range:	S **33** T **24N** R **05E**	State:	
Landform (hillslope, terrace, etc): **hillslope**	Slope (%): **<5%**	Local relief (concave, convex, none): **concave**	
Subregion (LRR): **A**	Lat:	Long:	Datum:
Soil Map Unit Name: **Sk – Seattle Muck**		NWI classification: **PSSC**	

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks.)
Are "Normal Circumstances" present on the site? ☒ Yes ☐ No
Are Vegetation☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation☐, Soil ☐, or Hydrology ☐ naturally problematic (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampling Point within a Wetland?**	Yes ☒	No ☐
Hydric Soils Present?	Yes ☒	No ☐			
Wetland Hydrology Present?	Yes ☒	No ☐			

Remarks: **Inpit – Wetland B**

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5m diam.)	Absolute % Cover	Dominant Species?	Indicator Status
1. ***Populus balsamifera***	**70**	**Y**	**FAC**
2. ***Salix lasiandra***	**25**	**Y**	**FACW**
3.			
4.			
	95	= Total Cover	
Sapling/Shrub Stratum (Plot size: 3m diam.)			
1. ***Cornus alba***	**20**	**Y**	**FACW**
2. ***Salix sitchensis sapling***	**20**	**Y**	**FACW**
3.			
4.			
5.			
	40	= Total Cover	
Herb Stratum (Plot size: 1m diam.)			
1. ***Iris pseudacorus***	**30**	**Y**	**OBL**
2. ***Equisetum telmateia***	**5**	**N**	**FACW**
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	35	= Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
		= Total Cover	
% Bare Ground in Herb Stratum:			

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC:	**5**	(A)
Total Number of Dominant Species Across All Strata:	**5**	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	**100**	(A/B)

Prevalence Index Worksheet

	Total % Cover of	Multiply by
OBL species		x 1 =
FACW species		x 2 =
FAC species		x 3 =
FACU species		x 4 =
UPL species		x 5 =
Column totals	(A)	(B)

Prevalence Index = B / A =

Hydrophytic Vegetation Indicators

☒ Dominance test is > 50%
☐ Prevalence test is ≤ 3.0 *
☐ Morphological Adaptations * (provide supporting data in remarks or on a separate sheet)
☐ Wetland Non-Vascular Plants *
☐ Problematic Hydrophytic Vegetation * (explain)

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

SOIL **Sampling Point – DP-5**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-10	**10YR 3/1**	**100**					**Gravelly sandy loam.**	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2]Loc: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]

- ☐ 2cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☒ Other (explain in remarks)
- ☐

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric soil present? Yes ☒ No ☐

Remarks: **Aquic water regime**

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required: check all that apply):

- ☐ Surface water (A1)
- ☒ High Water Table (A2)
- ☒ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (**except MLRA 1, 2, 4A & 4B**) (B9)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (explain in remarks)

Secondary Indicators (2 or more required):

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A & 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks

Field Observations

Surface Water Present?	Yes ☐	No ☒	Depth (in):	
Water Table Present?	Yes ☒	No ☐	Depth (in):	**2**
Saturation Present? (includes capillary fringe)	Yes ☒	No ☐	Depth (in):	**surface**

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

THE WATERSHED COMPANY

WETLAND DETERMINATION DATA FORM

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DP- 6

750 Sixth Street South
Kirkland, Washington 98033
(425) 822-5242
watershedco.com

Project Site:	**Lake Boren Park**	Sampling Date:	**12/2/2015**
Applicant/Owner:	**Berger**	Sampling Point:	DP- **6**
Investigator:	**AH, NL**	City/County:	**Newcastle**
Sect., Township, Range:	S **33** T **24N** R **05E**	State:	
Landform (hillslope, terrace, etc): **hillslope**	Slope (%): >5%	Local relief (concave, convex, none): **convex**	
Subregion (LRR): **A**	Lat:	Long:	Datum:
Soil Map Unit Name: **EvC Beaustie gravelly sandy loam 15-30% slopes**		NWI classification: **none**	
Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No		(If no, explain in remarks.)	
Are "Normal Circumstances" present on the site? ☒ Yes ☐ No			
Are Vegetation☐, Soil ☐, or Hydrology ☐ significantly disturbed?			
Are Vegetation☐, Soil ☐, or Hydrology ☐ naturally problematic		(If needed, explain any answers in Remarks.)	

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	☒	No	☐	
Hydric Soils Present?	Yes	☐	No	☒	**Is the Sampling Point within a Wetland?** Yes ☐ No ☒
Wetland Hydrology Present?	Yes	☐	No	☒	

Remarks: **Shared outpit – Wetland B, D, E**

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5m diam.)	Absolute % Cover	Dominant Species?	Indicator Status
1. ***Acer macrophyllum***	**20**	**Y**	**FACW**
2. ***Populus balsamifera***	**30**	**Y**	**FAC**
3.			
4.			
	50	= Total Cover	
Sapling/Shrub Stratum (Plot size: 3m diam.)			
1. ***Salix sitchensis***	**15**	**Y**	**FACW**
2. ***Mahonia aquifolium***	**7**	**N**	**FACU**
3. ***Holodiscus discolor***	**5**	**N**	**FACU**
4. ***Physocarpus capitatus***	**10**	**Y**	**FACW**
5.			
	37	= Total Cover	
Herb Stratum (Plot size: 1m diam.)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
		= Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
		= Total Cover	
% Bare Ground in Herb Stratum:			

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC:	**4**	(A)
Total Number of Dominant Species Across All Strata:	**4**	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	**100**	(A/B)

Prevalence Index Worksheet

	Total % Cover of	Multiply by
OBL species		x 1 =
FACW species		x 2 =
FAC species		x 3 =
FACU species		x 4 =
UPL species		x 5 =
Column totals	(A)	(B)

Prevalence Index = B / A =

Hydrophytic Vegetation Indicators

- ☒ Dominance test is > 50%
- ☐ Prevalence test is ≤ 3.0 *
- ☐ Morphological Adaptations * (provide supporting data in remarks or on a separate sheet)
- ☐ Wetland Non-Vascular Plants *
- ☐ Problematic Hydrophytic Vegetation * (explain)

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

SOIL **Sampling Point – DP-6**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-6	**10YR 3/3**	**100**					**Gravelly sandy loam**	
6-12	**10YR 3/4**	**100**					**Gravelly sandy loam**	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2]Loc: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]

- ☐ 2cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)
- ☐

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric soil present? Yes ☐ No ☒

Remarks: **cobble**

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required: check all that apply):

- ☐ Surface water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (**except MLRA 1, 2, 4A & 4B**) (B9)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (explain in remarks)

Secondary Indicators (2 or more required):

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A & 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks

Field Observations

Surface Water Present? Yes ☐ No ☒ Depth (in):

Water Table Present? Yes ☐ No ☒ Depth (in):

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (in):

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

THE WATERSHED COMPANY

WETLAND DETERMINATION DATA FORM

Western Mountains, Valleys, and Coast Supplement to the 1987 COE Wetlands Delineation Manual

DP- 7

750 Sixth Street South
Kirkland, Washington 98033
(425) 822-5242
watershedco.com

Project Site:	**Lake Boren Park**	Sampling Date:	**12/21/2015**
Applicant/Owner:	**Berger**	Sampling Point:	DP- **7**
Investigator:	**AH**	City/County:	**Newcastle**
Sect., Township, Range:	S **33** T **24N** R **05E**	State:	
Landform (hillslope, terrace, etc): **flat**	Slope (%): 0	Local relief (concave, convex, none): **none**	
Subregion (LRR): **A**	Lat:	Long:	Datum:
Soil Map Unit Name: **AgC - Alderwood gravelly sandy loam, 8 to 15 percent slopes**		NWI classification: **PUBH**	
Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No		(If no, explain in remarks.)	
Are "Normal Circumstances" present on the site? ☒ Yes ☐ No			
Are Vegetation☐, Soil ☐, or Hydrology ☐ significantly disturbed?			
Are Vegetation☐, Soil ☐, or Hydrology ☐ naturally problematic		(If needed, explain any answers in Remarks.)	

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampling Point within a Wetland?**	Yes ☒	No ☐
Hydric Soils Present?	Yes ☒	No ☐			
Wetland Hydrology Present?	Yes ☒	No ☐			

Remarks: **Inpit – Lake Boren Wetland; the weather was overcast and it was raining during the site visit.**

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5m diam.)	Absolute % Cover	Dominant Species?	Indicator Status
1. ***Alnus rubra***	**100**	**Y**	**FAC**
2.			
3.			
4.			
	100	= Total Cover	
Sapling/Shrub Stratum (Plot size: 3m diam.)			
1. ***Spirea douglasii***	**85**	**Y**	**FACW**
2. ***Cornus alba***	**15**	**Y**	**FACW**
3.			
4.			
5.			
	100	= Total Cover	
Herb Stratum (Plot size: 1m diam.)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
		= Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
		= Total Cover	
% Bare Ground in Herb Stratum:			

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC:	**3**	(A)
Total Number of Dominant Species Across All Strata:	**3**	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	**100**	(A/B)

Prevalence Index Worksheet

	Total % Cover of	Multiply by
OBL species		x 1 =
FACW species		x 2 =
FAC species		x 3 =
FACU species		x 4 =
UPL species		x 5 =
Column totals	(A)	(B)

Prevalence Index = B / A =

Hydrophytic Vegetation Indicators

- ☒ Dominance test is > 50%
- ☐ Prevalence test is ≤ 3.0 *
- ☐ Morphological Adaptations * (provide supporting data in remarks or on a separate sheet)
- ☐ Wetland Non-Vascular Plants *
- ☐ Problematic Hydrophytic Vegetation * (explain)

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

SOIL **Sampling Point – DP-7**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-5	**10YR 2/1**	**100**					**Sandy loam**	
5-14	**7.5YR 3/1**	**100**					**Loamy sand**	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2]Loc: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☒ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]

- ☐ 2cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)
- ☐

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric soil present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required: check all that apply):

- ☐ Surface water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (**except MLRA 1, 2, 4A & 4B**) (B9)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (explain in remarks)

Secondary Indicators (2 or more required):

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A & 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks

Field Observations

Surface Water Present?	Yes ☐	No ☒	Depth (in):
Water Table Present?	Yes ☒	No ☐	Depth (in): 3
Saturation Present? (includes capillary fringe)	Yes ☒	No ☐	Depth (in): **surface**

Wetland Hydrology Present? Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

THE WATERSHED COMPANY

WETLAND DETERMINATION DATA FORM

Western Mountains, Valleys, and Coast Supplement to the 1987 COE Wetlands Delineation Manual

DP- 8

750 Sixth Street South
Kirkland, Washington 98033
(425) 822-5242
watershedco.com

Project Site:	**Lake Boren Park**	Sampling Date:	**12/21/2015**
Applicant/Owner:	**Berger**	Sampling Point:	DP- **8**
Investigator:	**AH, NL**	City/County:	**Newcastle**
Sect., Township, Range:	S **33** T **24N** R **05E**	State:	
Landform (hillslope, terrace, etc): **hillslope**	Slope (%): >5%	Local relief (concave, convex, none): **convex**	
Subregion (LRR): **A**	Lat:	Long:	Datum:
Soil Map Unit Name: **AgC - Alderwood gravelly sandy loam, 8 to 15 percent slopes**		NWI classification: **none**	

Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks.)
Are "Normal Circumstances" present on the site? ☒ Yes ☐ No
Are Vegetation☐, Soil ☐, or Hydrology ☐ significantly disturbed?
Are Vegetation☐, Soil ☐, or Hydrology ☐ naturally problematic (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☐	No ☒			
Hydric Soils Present?	Yes ☐	No ☒	**Is the Sampling Point within a Wetland?**	Yes ☐	No ☒
Wetland Hydrology Present?	Yes ☐	No ☒			

Remarks: **Outpit – Lake Boren Wetland**

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5m diam.)	Absolute % Cover	Dominant Species?	Indicator Status
1. ***Alnus rubra***	**60**	**Y**	**FAC**
2.			
3.			
4.			
	60	= Total Cover	
Sapling/Shrub Stratum (Plot size: 3m diam.)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: 1m diam.)			
1. ***Geranium robertianum***	**3**	**N**	**FACU**
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
		= Total Cover	
Woody Vine Stratum (Plot size:)			
1. ***Rubus armeniacus***	**65**	**Y**	**FACU**
2.			
	65	= Total Cover	

% Bare Ground in Herb Stratum:

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC:	**1**	(A)
Total Number of Dominant Species Across All Strata:	**2**	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	**50**	(A/B)

Prevalence Index Worksheet

Total % Cover of		Multiply by
OBL species		x 1 =
FACW species		x 2 =
FAC species		x 3 =
FACU species		x 4 =
UPL species		x 5 =
Column totals	(A)	(B)

Prevalence Index = B / A =

Hydrophytic Vegetation Indicators

☐ Dominance test is > 50%
☐ Prevalence test is ≤ 3.0 *
☐ Morphological Adaptations * (provide supporting data in remarks or on a separate sheet)
☐ Wetland Non-Vascular Plants *
☐ Problematic Hydrophytic Vegetation * (explain)

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks:

SOIL **Sampling Point – DP-8**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-10	**10YR 2/1**	**100**					**Sandy loam**	
10-14	**10YR 2/1**	**100**					**Loamy sand**	**Charcoal present**

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2]Loc: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]

- ☐ 2cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)
- ☐

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric soil present? Yes ☐ No ☒

Remarks: **cobble**

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required: check all that apply):

- ☐ Surface water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (**except MLRA 1, 2, 4A & 4B**) (B9)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (explain in remarks)

Secondary Indicators (2 or more required):

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A & 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks

Field Observations

Surface Water Present? Yes ☐ No ☒ Depth (in):

Water Table Present? Yes ☐ No ☒ Depth (in):

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (in):

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: **Due to rain, only top 4 inches saturated**

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WETLAND DETERMINATION DATA FORM

Western Mountains, Valleys, and Coast Supplement to the 1987 COE Wetlands Delineation Manual

DP- 9

750 Sixth Street South
Kirkland, Washington 98033
(425) 822-5242
watershedco.com

Project Site:	**Lake Boren Park**	Sampling Date:	**12/2/2015**
Applicant/Owner:	**Berger**	Sampling Point:	DP- **6**
Investigator:	**AH**	City/County:	**Newcastle**
Sect., Township, Range:	S **33** T **24N** R **05E**	State:	
Landform (hillslope, terrace, etc): **depression**	Slope (%): 0	Local relief (concave, convex, none): **concave**	
Subregion (LRR): **A**	Lat:	Long:	Datum:
Soil Map Unit Name: **AgC - Alderwood gravelly sandy loam, 8 to 15 percent slopes**		NWI classification: **none**	
Are climatic/hydrologic conditions on the site typical for this time of year? ☒ Yes ☐ No		(If no, explain in remarks.)	
Are "Normal Circumstances" present on the site? ☒ Yes ☐ No			
Are Vegetation☐, Soil ☐, or Hydrology ☐ significantly disturbed?			
Are Vegetation☐, Soil ☐, or Hydrology ☐ naturally problematic		(If needed, explain any answers in Remarks.)	

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ☒	No ☐	**Is the Sampling Point within a Wetland?**	Yes ☐ No ☒
Hydric Soils Present?	Yes ☐	No ☒		
Wetland Hydrology Present?	Yes ☐	No ☒		

Remarks: **In detention pond**

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 5m diam.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
1.			
2.			
3.			
4.			
5.			
Herb Stratum (Plot size: 1m diam.)			
1. ***Field grass****	**30**	**Y**	**FAC**
2. ***Plantago lanceolate***	**10**	**N**	**FACU**
3. ***Cardamine oligosperma***	**20**	**Y**	**FAC**
4. ***Unknown***	**Trace**	**N**	**n/a**
5. ***Moss***	**5**	**-**	**NI**
6.			
7.			
8.			
9.			
10.			
11.			
	65 = Total Cover		
Woody Vine Stratum (Plot size:)			
1.			
2.			
	= Total Cover		
% Bare Ground in Herb Stratum:			

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC:	**2**	(A)
Total Number of Dominant Species Across All Strata:	**2**	(B)
Percent of Dominant Species that are OBL, FACW, or FAC:	**100**	(A/B)

Prevalence Index Worksheet

Total % Cover of		Multiply by
OBL species		x 1 =
FACW species		x 2 =
FAC species		x 3 =
FACU species		x 4 =
UPL species		x 5 =
Column totals	(A)	(B)

Prevalence Index = B / A =

Hydrophytic Vegetation Indicators

- ☒ Dominance test is > 50%
- ☐ Prevalence test is ≤ 3.0 *
- ☐ Morphological Adaptations * (provide supporting data in remarks or on a separate sheet)
- ☐ Wetland Non-Vascular Plants *
- ☐ Problematic Hydrophytic Vegetation * (explain)

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks: ***Presumed FAC**

SOIL **Sampling Point – DP-9**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-2	**10YR 2/1**	**100**					**Loamy sand**	
2-14	**10YR 2/1**	**100**					**sand**	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains [2]Loc: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]

- ☐ 2cm Muck (A10)
- ☐ Red Parent Material (TF2)
- ☐ Other (explain in remarks)
- ☐

[3] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric soil present? Yes ☐ No ☒

Remarks: **cobble**

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required: check all that apply):

- ☐ Surface water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (**except MLRA 1, 2, 4A & 4B**) (B9)
- ☐ Salt Crust (B11)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Stunted or Stressed Plants (D1) (**LRR A**)
- ☐ Other (explain in remarks)

Secondary Indicators (2 or more required):

- ☐ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A & 4B**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Raised Ant Mounds (D6) (**LRR A**)
- ☐ Frost-Heave Hummocks

Field Observations

Surface Water Present? Yes ☐ No ☒ Depth (in):

Water Table Present? Yes ☐ No ☒ Depth (in):

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (in):

Wetland Hydrology Present? Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: **Soil very damp due to rain**

Wetland name or number: Wetland B

WETLAND RATING FORM – WESTERN WASHINGTON
Version 2 – Updated July 2006 to increase accuracy and reproducibility among users
Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): Lake Boren Park Wetland B Date of site visit: 12/2/2015

Rated by: NL, AH Trained by Ecology? Yes ☒ No ☐ Date of Training 10/2008

SEC: 34 TWNSHP: 24N RNGE: 05E Is S/T/R in Appendix D? Yes ☐ No ☒

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland

I ☐ II ☒ III ☐ IV ☐

Category I = Score ≥70
Category II = Score 51-69
Category III = Score 30-50
Category IV = Score < 30

Score for Water Quality Functions	20
Score for Hydrologic Functions	16
Score for Habitat Functions	21
TOTAL score for functions	**57**

Category based on SPECIAL CHARACTERISTICS of wetland

I ☐ II ☐ Does not Apply ☒

Final Category (choose the "highest" category from above) **II**

Check the appropriate type and class of wetland being rated.

Wetland Type		Wetland Class	
Estuarine	☐	**Depressional**	☒
Natural Heritage Wetland	☐	**Riverine**	☐
Bog	☐	**Lake-fringe**	☐
Mature Forest	☐	**Slope**	☐
Old Growth Forest	☐	**Flats**	☐
Coastal Lagoon	☐	**Freshwater Tidal**	☐
Interdunal	☐		
None of the above	☒	Check if unit has multiple HGM classes present	☒

Wetland name or number: Wetland B

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal** or **plant** species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		X*
SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		X*
SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?*		X*
SP4. *Does the wetland unit have a local significance in addition to its functions*? For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

***The study area was reviewed for the presence of endangered, threatened, and priority species using WDFW online Priority Habitat and Species Data, PHS on the Web (http://wdfw.wa.gov/mapping/phs/).**

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. Classifying the wetland first simplifies the questions needed to answer how it functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Wetland name or number: Wetland B

Classification of Wetland Units in Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in Questions 1-7 apply, and go to Question 8.

1. Are the water levels in the wetland unit usually controlled by tides (i.e. except during floods)?

☒ NO – go to 2 ☐ **YES** – the wetland class is **Tidal Fringe**

If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? **YES – Freshwater Tidal Fringe NO – Saltwater Tidal Fringe (Estuarine)**

*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.).

2. The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit

☒ NO – go to 3 ☐ **YES** – The wetland class is **Flats**

If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland unit **meet both** of the following criteria?

☐ The vegetated part of the wetland is on the shores of a body of open water (without any vegetation on the surface) at least 20 acres (8 ha) in size;

☐ At least 30% of the open water area is deeper than 6.6 ft (2 m)?

☒NO – go to 4 ☐**YES –** The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland unit **meet all** of the following criteria?

☐ The wetland is on a slope (*slope can be very gradual*),

☐ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.

☐ The water leaves the wetland **without being impounded**?

NOTE: *Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than a foot deep).*

☒ NO – go to 5 ☐ **YES –** The wetland class is **Slope**

Wetland name or number: Wetland B

5. Does the entire wetland unit **meet all** of the following criteria?

☒ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river.

☒ The overbank flooding occurs at least once every two years

NOTE: The riverine unit can contain depressions that are filled with water when the river is not flooding.

☐ NO - go to 6 ☒ **YES** – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. *This means that any outlet, if present, is higher than the interior of the wetland.*

☐ NO – go to 7 ☒ **YES –** The wetland class is **Depressional**

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

☐ NO – go to 8 ☐ **YES –** The wetland class is **Depressional**

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit being rated	*HGM Class to Use in Rating*
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

Wetland unit separated at outlet of Lake Boren.

Wetland name or number: Wetland B

D	Depressional and Flats Wetlands	Points
	WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality	
D	**D 1. Does the wetland have the potential to improve water quality?**	*(see p. 38)*
D	D 1.1 Characteristics of surface water flows out of the wetland: Unit is a depression with no surface water leaving it (no outlet) .....points = 3 Unit has an intermittently flowing, or highly constricted permanently flowing outlet .....points = 2 Unit has an unconstricted, or slightly constricted, surface outlet *(permanently flowing)*..points = 1 Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow **and no obvious natural outlet**, and/or outlet is a man-made ditch .....points = 1 (*If ditch is not permanently flowing treat unit as "intermittently flowing")*	1
D	D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (*use NRCS definitions*). YES points = 4 NO points = 0	4
D	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class): Wetland has persistent, ungrazed, vegetation > = 95% of area .....points = 5 Wetland has persistent, ungrazed, vegetation > = 1/2 of area .....points = 3 Wetland has persistent, ungrazed vegetation > = 1/10 of area .....points = 1 Wetland has persistent, ungrazed vegetation <1/10 of area .....points = 0	5
D	D1.4 Characteristics of seasonal ponding or inundation. *This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs.* Area seasonally ponded is > ½ total area of wetland .....points = 4 Area seasonally ponded is > ¼ total area of wetland .....points = 2 Area seasonally ponded is < ¼ total area of wetland .....points = 0 NOTE: *See text for indicators of seasonal and permanent inundation.*	0
D	**Total for D 1** *Add the points in the boxes above*	10
D	**D 2. Does the wetland unit have the opportunity to improve water quality?** Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* ☐ Grazing in the wetland or within 150 ft ☐ Untreated stormwater discharges to wetland ☐ Tilled fields or orchards within 150 ft of wetland ☐ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging ☒ Residential, urban areas, golf courses are within 150 ft of wetland ☐ Wetland is fed by groundwater high in phosphorus or nitrogen ☐ Other_____trails, dogs_____ **YES** multiply score in D 1. **by 2** **NO** multiply score in D 1. **by 1**	*(see p. 44)* multiplier 2
D	**TOTAL - Water Quality Functions** Multiply the score from D1 by D2 ***Add score to table on p. 1***	**20**

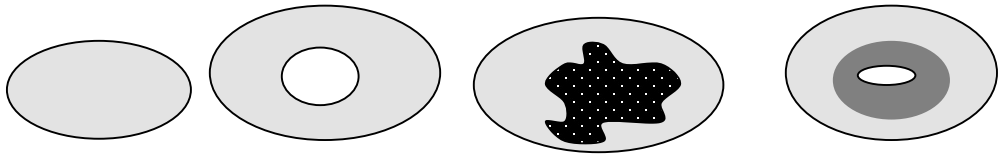
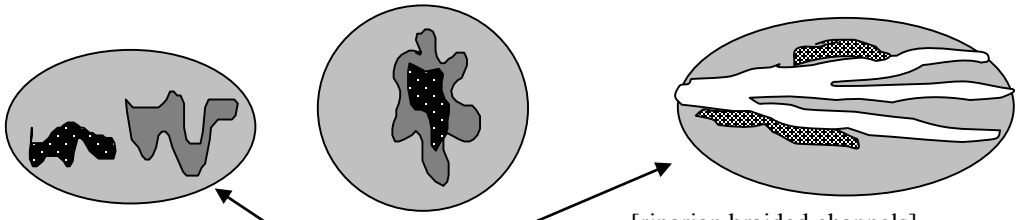
Wetland name or number: Wetland B

D	Depresssional and Flats Wetlands	
	HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream degradation	
	D 3. Does the wetland have the <u>potential</u> to reduce flooding and erosion?	*(see p. 46)*
D	D 3.1 Characteristics of surface water flows out of the wetland unit Unit is a depression with no surface water leaving it (no outlet) .....points = 4 Unit has an intermittently flowing, or highly constricted permanently flowing outlet .....points = 2 Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow **and no obvious natural outlet**, and/or outlet is a man-made ditch .....points = 1 (*If ditch is not permanently flowing treat unit as "intermittently flowing")* Unit has an unconstricted, or slightly constricted, surface outlet (*permanently flowing*)..points = 0	0
D	D 3.2 Depth of storage during wet periods *Estimate the height of ponding above the bottom of the outlet For units with no outlet measure from the surface of permanent water or deepest part (if dry).* Marks of ponding are at least 3 ft or more above the surface or bottom of outlet .....points = 7 The wetland is a "headwater" wetland".....points = 5 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet .....points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet .....points = 3 Unit is flat (yes to Q.2 or Q.7 on key) but has small depressions on the surface that trap water .....points = 1 Marks of ponding less than 0.5 ft .....points = 0	5
D	D 3.3 Contribution of wetland unit to storage in the watershed *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* The area of the basin is less than 10 times the area of the unit .....points = 5 The area of the basin is 10 to 100 times the area of the unit.....points = 3 The area of the basin is more than 100 times the area of the unit .....points = 0 Entire unit is in the FLATS class.....points = 5	3
D	**Total for D 3** *Add the points in the boxes above*	8
D	**D 4. Does the wetland unit have the <u>opportunity</u> to reduce flooding and erosion?** Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. *Note which of the following conditions apply.* ☐ Wetland is in a headwater of a river or stream that has flooding problems ☒ Wetland drains to a river or stream that has flooding problems ☐ Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems ☐ Other _____ ☒ **YES** multiplier is **2** ☐ **NO** multiplier is **1**	*(see p. 49)* multiplier <u>2</u>
D	**TOTAL - Hydrologic Functions** Multiply the score from D 3 by D 4 ***Add score to table on p. 1***	**16**

Wetland name or number: Wetland B

These questions apply to wetlands of all HGM classes. **HABITAT FUNCTIONS - Indicators that wetland functions to provide important habitat**	
H 1. Does the wetland have the <u>potential</u> to provide habitat for many species?	
H 1.1 <u>Vegetation structure</u> ***(see p. 72)*** *Check the types of vegetation classes present (as defined by Cowardin) if the class is ¼ acre or covers more than 10% of the area of the wetland if unit smaller than 2.5 acres.* ☐ Aquatic bed ☒ Emergent plants ☒ Scrub/shrub (areas where shrubs have >30% cover) ☒ Forested (areas where trees have >30% cover) ☒ Forested areas have 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon *Add the number of vegetation types that qualify. If you have:* 4 structures or more.....points = 4 3 structures.....points = 2 2 structures.....points = 1 1 structure.....points = 0	4
H 1.2. <u>Hydroperiods</u> ***(see p. 73)*** *Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ acre to count. (see text for descriptions of hydroperiods)* ☐ Permanently flooded or inundated — 4 or more types present .....points = 3 ☒ Seasonally flooded or inundated — 3 types present.....points = 2 ☐ Occasionally flooded or inundated — 2 types present .....points = 1 ☒ Saturated only — 1 types present…….points = 0 ☒ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland ☐ ***Lake-fringe wetland* = 2 points** ☐ ***Freshwater tidal wetland* = 2 points**	2
H 1.3. <u>Richness of Plant Species</u> ***(see p. 75)*** Count the number of plant species in the wetland that cover at least 10 ft^2. (*different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species.* *Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle* If you counted: > 19 species.....points = 2 *List species below if you want to:* 5 - 19 species.....points = 1 < 5 species.....points = 0 POBA, ALRU, SALU, SASI, THPL, COSE, PHCA, SPDO, RUSP, RARE, LYSAM, JUAC, JUEF, ATFI, HBB, grasses, EQTE, unknown shrub	1

Wetland name or number: Wetland B

H 1.4. Interspersion of habitats ***(see p. 76)*** Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.  None = 0 points Low = 1 point Moderate = 2 points  High = 3 points [riparian braided channels] NOTE: If you have four or more vegetation types or three vegetation types and open water the rating is always "high".	3
H 1.5. Special Habitat Features: ***(see p. 77)*** *Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.* ☒ Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long). ☒ Standing snags (diameter at the bottom > 4 inches) in the wetland ☒ Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream for at least 33 ft (10m) ☐ Stable steep banks of fine material that might be used by beaver or muskrat for denning (>30degree slope) OR signs of recent beaver activity are present ☐ At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated.*(structures for egg-laying by amphibians)* ☐ Invasive plants cover less than 25% of the wetland area in each stratum of plants *Note: The 20% stated in early printings of the manual on page 78 is an error.*	3
H 1. TOTAL Score - potential for providing habitat *Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5*	13

Wetland name or number: Wetland B

H 2. Does the wetland have the opportunity to provide habitat for many species?	
H 2.1 Buffers ***(see p. 80)*** *Choose the description that best represents condition of buffer of wetland. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed."* ☐ 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% of circumference. No developed areas within undisturbed part of buffer. (relatively undisturbed also means no-grazing) ..... Points = 5 ☐ 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference. ..... Points = 4 ☐ 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% circumference. ..... Points = 4 ☐ 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference ..... Points = 3 ☐ 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference. ..... Points = 3 **If buffer does not meet any of the criteria above** ☐ No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland > 95% circumference. Light to moderate grazing, or lawns are OK. ..... Points = 2 ☐ No paved areas or buildings within 50m of wetland for >50% circumference. Light to moderate grazing, or lawns are OK. ..... Points = 2 ☐ Heavy grazing in buffer. ..... Points = 1 ☐ Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland ..... Points = 0 ☒ Buffer does not meet any of the criteria above……..……...Points = 1	1
H 2.2 Corridors and Connections ***(see p. 81)*** H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? (*dams in riparian corridors*, *heavily used gravel roads*, *paved roads, are considered breaks in the corridor*). YES = **4 points** (*go to H 2.3*) **NO** = go to H 2.2.2 H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR** a **Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above? YES = **2 points** (*go to H 2.3*) **NO** = H 2.2.3 H 2.2.3 Is the wetland: within 5 mi (8km) of a brackish or salt water estuary OR within 3 mi of a large field or pasture (>40 acres) OR within 1 mi of a lake greater than 20 acres? YES = **1 point** NO = **0 points**	0

Wetland name or number: Wetland B

H 2.3 Near or adjacent to other priority habitats listed by WDFW ***(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm)*** Which of the following priority habitats are within 330ft (100m) of the wetland? *(NOTE: the connections do not have to be relatively undisturbed)* ☐ **Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acres). ☐ **Biodiversity Areas and Corridors:** Areas of habitat that are relatively important to various species of native fish and wildlife (*full description in WDFW PHS report p. 152*) ☐ **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock. ☐ **Old-growth/Mature forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. (Mature forests.) Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%; crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest. ☐ **Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158.)* ☒ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other. ☐ **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161*) ☒ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources. ☐ **Nearshore:** Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. *(full descriptions of habitats and the definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in Appendix A.)* ☐ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human. ☐ **Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft. ☐ **Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs. ☒ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of >51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30cm (12 in) in diameter at the largest end, and > 6m (20 ft) long. If wetland has **3 or more** priority habitats **= 4 points** If wetland has **2** priority habitats = **3 points** If wetland has **1** priority habitat **= 1 point** No habitats = **0 points** *Note: All vegetated wetland are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H2.4.*	4

Wetland name or number: Wetland B

H 2.4 Wetland Landscape *(choose the **one** description of the landscape around the wetland that best fits*) ***(see p. 84)*** There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. ..... points = 5 The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile ..... points = 5 There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed ..... points = 3 The wetland is Lake-fringe on a lake **with** disturbance and there are 3 other lake-fringe wetland within ½ mile ..... points = 3 There is at least 1 wetland within ½ mile. ..... points = 2 There are no wetlands within ½ mile. ..... points = 0	3
H 2. TOTAL Score - opportunity for providing habitat *Add the scores from H2.1, H2.2, H2.3, H2.4*	8
TOTAL for H1 from page 14	13
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1	21

Wetland name or number: Wetland B

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate Category.

Wetland Type *Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.*	**Category**
SC 1.0 Estuarine wetlands (*see p. 86)* Does the wetland unit meet the following criteria for Estuarine wetlands? ☐ The dominant water regime is tidal, ☐ Vegetated, and ☐ With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO ☒	
SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-151? ☐ YES = Category I ☐ NO = go to SC 1.2	**Cat. I**
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the following three conditions? ☐ YES = Category I ☐ NO = Category II ☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native Spartina spp. are the only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II) The are aof Spartina would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre. ☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed wetland. ☐ The wetland has at least 2 or the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	**Cat. I** **Cat. II** **Dual rating I/II**

Wetland name or number: Wetland B

SC 2.0 Natural Heritage Wetlands ***(see p. 87)*** Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland being rated in a Section/Township/Range that contains a Natural Heritage wetland? *(this question is used to screen out most sites before you need to contact WNHP/DNR)* S/T/R information from Appendix D ☒ or accessed from WNHP/DNR web site ☐ YES ☐ – contact WNHP/DNR (see p. 79) and go to SC 2.2 NO ☒ SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species? YES = Category I NO ☐ Not a Heritage Wetland	**Cat. I**
SC 3.0 Bogs ***(see p. 87)*** Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? *Use the key below to identify if the wetland is a bog. If you answer yes, you will still need to rate the wetland based on its functions.* 1. Does the wetland have organic soils horizons (i.e. layers of organic soil), either peats or mucks, that compose 16" or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils.) Yes - go to Q.3 NO - go to Q.2 2. Does the wetland have organic soils, either peats or mucks, that are less than 16 inches deep over bedrock or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? Yes - go to Q.3 NO ☐ is not a bog for purpose of rating 3. Does the wetland have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists species in Table 3)? Yes – Is a bog for purpose of rating NO - go to Q.4 *NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.* 4. Is the wetland forested (>30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover (*>30% coverage of the total shrub/herbaceous* cover)? YES = Category I NO ☒ is not a bog for purpose of rating	**Cat. I**

Wetland name or number: Wetland B

SC 4.0 Forested Wetlands ***(see p. 90)***	
Does the wetland have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its functions.* ☐ Old growth forests: (west of Cascade crest) Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more. *Note: The criterion for dbh is based on measurements for upland forests. Two hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter.* ☐ Mature forests: (west of the Cascade crest) Stands where the largest trees are 80-200 years old OR have average diameters (dbh) exceeding 21 in (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quanitity of large downed material is generally less than that found in old-growth YES = Category 1 NO ☒ not a forested wetland with special characteristics	**Cat. I**
SC 5.0 Wetlands in Coastal Lagoons (see p. 91) Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? ☐ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks. ☐ The lagoon in which the wetland is located contains surgace water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (*needs to be measured near the bottom*) YES – Go to SC 5.1 NO ☒ not a wetland in a coastal lagoon	**Cat. I**
SC 5.1 Does the wetland meet all of the following three conditions? ☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). ☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. ☐ The wetalnd is larger than 1/10 acre (4350 square feet) YES = Category I NO = Category II	**Cat. II**

Wetland name or number: Wetland B

SC 6.0 Interdunal Wetlands (see p. 93) Is the wetalnd unit west of the 1889 line (also called the Westarn Boundary of Upland Ownership or WBUO)? YES – go to SC 6.1 NO ☐ not an interdunal wetland for rating *If you answer yes you will still need to rate the wetland based on its functions.* In practical terms that means the following geographic areas: – Long Beach Peninsula – lands west of SR 103 – Grayland-Westport – lands west of SR 105 – Ocean Shores-Copalis – lands west of SR 115 and SR 109 SC 6.1 Is the wetland 1 acre or larger, or is it in a mosaic of wetlands that is 1 acre or larger? YES = Category II NO – go to SC 6.2 SC 6.2 Is the unit between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre? YES = Category III	**Cat. II** **Cat. III**
Category of wetland based on Special Characteristics *Choose the "highest" rating if wetland falls into several categorie, and record on p. 1 .* If you answered NO for all types enter "Not Applicable" on p.1.	**NA**

Wetland name or number: Wetland C

WETLAND RATING FORM – WESTERN WASHINGTON
Version 2 – Updated July 2006 to increase accuracy and reproducibility among users
Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): Lake Boren Park Wetland C Date of site visit: 12/2/2015

Rated by: NL, AH Trained by Ecology? Yes ☒ No ☐ Date of Training 10/2008

SEC: 34 TWNSHP: 24N RNGE: 05E Is S/T/R in Appendix D? Yes ☐ No ☒

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland

I ☐ II ☐ III ☐ IV ☒

Category I = Score ≥70
Category II = Score 51-69
Category III = Score 30-50
Category IV = Score < 30

Score for Water Quality Functions	8
Score for Hydrologic Functions	8
Score for Habitat Functions	12
TOTAL score for functions	**28**

Category based on SPECIAL CHARACTERISTICS of wetland

I ☐ II ☐ Does not Apply ☒

Final Category (choose the "highest" category from above) **IV**

Check the appropriate type and class of wetland being rated.

Wetland Type		Wetland Class	
Estuarine	☐	**Depressional**	☒
Natural Heritage Wetland	☐	**Riverine**	☐
Bog	☐	**Lake-fringe**	☐
Mature Forest	☐	**Slope**	☐
Old Growth Forest	☐	**Flats**	☐
Coastal Lagoon	☐	**Freshwater Tidal**	☐
Interdunal	☐		
None of the above	☒	Check if unit has multiple HGM classes present	☐

Wetland name or number: Wetland C

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal** or **plant** species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		X*
SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		X*
SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?*		X*
SP4. *Does the wetland unit have a local significance in addition to its functions*? For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

***The study area was reviewed for the presence of endangered, threatened, and priority species using WDFW online Priority Habitat and Species Data, PHS on the Web (http://wdfw.wa.gov/mapping/phs/).**

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. Classifying the wetland first simplifies the questions needed to answer how it functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Wetland name or number: Wetland C

Classification of Wetland Units in Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in Questions 1-7 apply, and go to Question 8.

1. Are the water levels in the wetland unit usually controlled by tides (i.e. except during floods)?

☒ NO – go to 2 ☐ **YES** – the wetland class is **Tidal Fringe**

If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? **YES – Freshwater Tidal Fringe NO – Saltwater Tidal Fringe (Estuarine)**

*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.).

2. The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit

☒ NO – go to 3 ☐ **YES** – The wetland class is **Flats**

If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland unit **meet both** of the following criteria?

☐ The vegetated part of the wetland is on the shores of a body of open water (without any vegetation on the surface) at least 20 acres (8 ha) in size;

☐ At least 30% of the open water area is deeper than 6.6 ft (2 m)?

☒NO – go to 4 ☐**YES –** The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland unit **meet all** of the following criteria?

☐ The wetland is on a slope (*slope can be very gradual*),

☐ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.

☐ The water leaves the wetland **without being impounded**?

NOTE: *Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than a foot deep).*

☒ NO – go to 5 ☐ **YES –** The wetland class is **Slope**

Wetland name or number: Wetland C

5. Does the entire wetland unit **meet all** of the following criteria?

☐ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river.

☐ The overbank flooding occurs at least once every two years

NOTE: The riverine unit can contain depressions that are filled with water when the river is not flooding.

☒ NO - go to 6 ☐ **YES** – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. *This means that any outlet, if present, is higher than the interior of the wetland.*

☐ NO – go to 7 ☒ **YES –** The wetland class is **Depressional**

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

☐ NO – go to 8 ☐ **YES –** The wetland class is **Depressional**

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit being rated	*HGM Class to Use in Rating*
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

Wetland name or number: Wetland C

D	Depressional and Flats Wetlands	Points
	WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality	
D	**D 1. Does the wetland have the potential to improve water quality?**	*(see p. 38)*
D	D 1.1 Characteristics of surface water flows out of the wetland: Unit is a depression with no surface water leaving it (no outlet) .....points = 3 Unit has an intermittently flowing, or highly constricted permanently flowing outlet .....points = 2 Unit has an unconstricted, or slightly constricted, surface outlet *(permanently flowing)*..points = 1 Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow **and no obvious natural outlet**, and/or outlet is a man-made ditch .....points = 1 (*If ditch is not permanently flowing treat unit as "intermittently flowing")*	3
D	D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (*use NRCS definitions*). YES points = 4 NO points = 0	0
D	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class): Wetland has persistent, ungrazed, vegetation > = 95% of area .....points = 5 Wetland has persistent, ungrazed, vegetation > = 1/2 of area .....points = 3 Wetland has persistent, ungrazed vegetation > = 1/10 of area .....points = 1 Wetland has persistent, ungrazed vegetation <1/10 of area .....points = 0	1
D	D1.4 Characteristics of seasonal ponding or inundation. *This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs.* Area seasonally ponded is > ½ total area of wetland .....points = 4 Area seasonally ponded is > ¼ total area of wetland .....points = 2 Area seasonally ponded is < ¼ total area of wetland .....points = 0 NOTE: *See text for indicators of seasonal and permanent inundation.*	0
D	**Total for D 1** *Add the points in the boxes above*	4
D	**D 2. Does the wetland unit have the opportunity to improve water quality?** Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* ☐ Grazing in the wetland or within 150 ft ☐ Untreated stormwater discharges to wetland ☐ Tilled fields or orchards within 150 ft of wetland ☐ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging ☒ Residential, urban areas, golf courses are within 150 ft of wetland ☐ Wetland is fed by groundwater high in phosphorus or nitrogen ☐ Other_____ **YES** multiply score in D 1. **by 2** **NO** multiply score in D 1. **by 1**	*(see p. 44)* multiplier 2
D	**TOTAL - Water Quality Functions** Multiply the score from D1 by D2 ***Add score to table on p. 1***	**8**

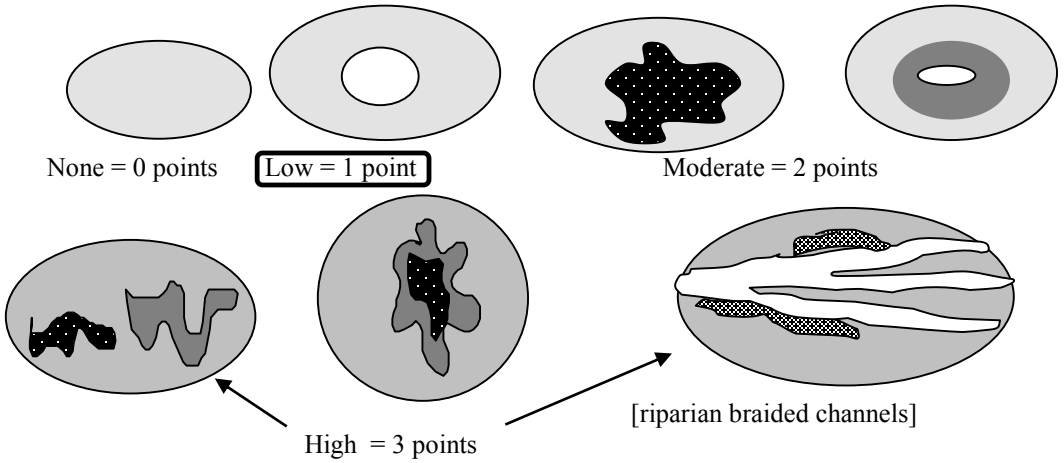
Wetland name or number: Wetland C

D	Depresssional and Flats Wetlands	
	HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream degradation	
	D 3. Does the wetland have the potential to reduce flooding and erosion?	*(see p. 46)*
D	D 3.1 Characteristics of surface water flows out of the wetland unit Unit is a depression with no surface water leaving it (no outlet) .....points = 4 Unit has an intermittently flowing, or highly constricted permanently flowing outlet .....points = 2 Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow **and no obvious natural outlet**, and/or outlet is a man-made ditch .....points = 1 (*If ditch is not permanently flowing treat unit as "intermittently flowing")* Unit has an unconstricted, or slightly constricted, surface outlet (*permanently flowing*)..points = 0	4
D	D 3.2 Depth of storage during wet periods *Estimate the height of ponding above the bottom of the outlet For units with no outlet measure from the surface of permanent water or deepest part (if dry).* Marks of ponding are at least 3 ft or more above the surface or bottom of outlet .....points = 7 The wetland is a "headwater" wetland".....points = 5 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet .....points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet .....points = 3 Unit is flat (yes to Q.2 or Q.7 on key) but has small depressions on the surface that trap water .....points = 1 Marks of ponding less than 0.5 ft .....points = 0	0
D	D 3.3 Contribution of wetland unit to storage in the watershed *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* The area of the basin is less than 10 times the area of the unit.....points = 5 The area of the basin is 10 to 100 times the area of the unit.....points = 3 The area of the basin is more than 100 times the area of the unit.....points = 0 Entire unit is in the FLATS class.....points = 5	0
D	**Total for D 3** *Add the points in the boxes above*	4
D	**D 4. Does the wetland unit have the opportunity to reduce flooding and erosion?** Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. *Note which of the following conditions apply.* ☐ Wetland is in a headwater of a river or stream that has flooding problems ☐ Wetland drains to a river or stream that has flooding problems ☒ Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems ☐ Other _____ ☒ **YES** multiplier is **2** ☐ **NO** multiplier is **1**	*(see p. 49)* multiplier 2
D	**TOTAL - Hydrologic Functions** Multiply the score from D 3 by D 4 ***Add score to table on p. 1***	**8**

Wetland name or number: Wetland C

These questions apply to wetlands of all HGM classes. **HABITAT FUNCTIONS - Indicators that wetland functions to provide important habitat**	
H 1. Does the wetland have the <u>potential</u> to provide habitat for many species?	
H 1.1 <u>Vegetation structure</u> ***(see p. 72)*** *Check the types of vegetation classes present (as defined by Cowardin) if the class is ¼ acre or covers more than 10% of the area of the wetland if unit smaller than 2.5 acres.* ☐ Aquatic bed ☐ Emergent plants ☒ Scrub/shrub (areas where shrubs have >30% cover) ☐ Forested (areas where trees have >30% cover) ☐ Forested areas have 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon *Add the number of vegetation types that qualify. If you have:* 4 structures or more.....points = 4 3 structures.....points = 2 2 structures.....points = 1 1 structure.....points = 0	0
H 1.2. <u>Hydroperiods</u> ***(see p. 73)*** *Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ acre to count. (see text for descriptions of hydroperiods)* ☐ Permanently flooded or inundated — 4 or more types present .....points = 3 ☐ Seasonally flooded or inundated — 3 types present.....points = 2 ☒ Occasionally flooded or inundated — 2 types present .....points = 1 ☒ Saturated only — 1 types present…….points = 0 ☐ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland ☐ ***Lake-fringe wetland* = 2 points** ☐ ***Freshwater tidal wetland* = 2 points**	1
H 1.3. <u>Richness of Plant Species</u> ***(see p. 75)*** Count the number of plant species in the wetland that cover at least 10 ft^2. (*different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species.* *Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle* If you counted: > 19 species.....points = 2 *List species below if you want to:* 5 - 19 species.....points = 1 < 5 species.....points = 0 COSE, LYSAM	0

Wetland name or number: Wetland C

H 1.4. Interspersion of habitats ***(see p. 76)*** Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.  None = 0 points Low = 1 point Moderate = 2 points High = 3 points [riparian braided channels] NOTE: If you have four or more vegetation types or three vegetation types and open water the rating is always "high".	0
H 1.5. Special Habitat Features: ***(see p. 77)*** *Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.* ☐ Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long). ☐ Standing snags (diameter at the bottom > 4 inches) in the wetland ☐ Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream for at least 33 ft (10m) ☐ Stable steep banks of fine material that might be used by beaver or muskrat for denning (>30degree slope) OR signs of recent beaver activity are present ☐ At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated.*(structures for egg-laying by amphibians)* ☒ Invasive plants cover less than 25% of the wetland area in each stratum of plants *Note: The 20% stated in early printings of the manual on page 78 is an error.*	1
H 1. TOTAL Score - potential for providing habitat *Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5*	2

Wetland name or number: Wetland C

H 2. Does the wetland have the opportunity to provide habitat for many species?	
H 2.1 Buffers ***(see p. 80)*** *Choose the description that best represents condition of buffer of wetland. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed."* ☐ 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% of circumference. No developed areas within undisturbed part of buffer. (relatively undisturbed also means no-grazing) ..... Points = 5 ☐ 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference. ..... Points = 4 ☐ 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% circumference. ..... Points = 4 ☐ 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference ..... Points = 3 ☒ 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference. ..... Points = 3 **If buffer does not meet any of the criteria above** ☐ No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland > 95% circumference. Light to moderate grazing, or lawns are OK. ..... Points = 2 ☐ No paved areas or buildings within 50m of wetland for >50% circumference. Light to moderate grazing, or lawns are OK. ..... Points = 2 ☐ Heavy grazing in buffer. ..... Points = 1 ☐ Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland ..... Points = 0 ☐ Buffer does not meet any of the criteria above……..……...Points = 1	3
H 2.2 Corridors and Connections ***(see p. 81)*** H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? (*dams in riparian corridors*, *heavily used gravel roads*, *paved roads, are considered breaks in the corridor*). YES = **4 points** (*go to H 2.3*) **NO** = go to H 2.2.2 H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR** a **Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above? YES = **2 points** (*go to H 2.3*) **NO** = H 2.2.3 H 2.2.3 Is the wetland: within 5 mi (8km) of a brackish or salt water estuary OR within 3 mi of a large field or pasture (>40 acres) OR within 1 mi of a lake greater than 20 acres? YES = **1 point** NO = **0 points**	0

Wetland name or number: Wetland C

H 2.3 Near or adjacent to other priority habitats listed by WDFW ***(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm)*** Which of the following priority habitats are within 330ft (100m) of the wetland? *(NOTE: the connections do not have to be relatively undisturbed)* ☐ **Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acres). ☐ **Biodiversity Areas and Corridors:** Areas of habitat that are relatively important to various species of native fish and wildlife (*full description in WDFW PHS report p. 152*) ☐ **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock. ☐ **Old-growth/Mature forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. (Mature forests.) Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%; crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest. ☐ **Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158.)* ☒ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other. ☐ **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161*) ☒ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources. ☐ **Nearshore:** Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. *(full descriptions of habitats and the definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in Appendix A.)* ☐ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human. ☐ **Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft. ☐ **Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs. ☒ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of >51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30cm (12 in) in diameter at the largest end, and > 6m (20 ft) long. If wetland has **3 or more** priority habitats **= 4 points** If wetland has **2** priority habitats = **3 points** If wetland has **1** priority habitat **= 1 point** No habitats = **0 points** *Note: All vegetated wetland are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H2.4.*	4

Wetland name or number: Wetland C

H 2.4 Wetland Landscape *(choose the **one** description of the landscape around the wetland that best fits*) ***(see p. 84)*** There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. ..... points = 5 The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile ..... points = 5 There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed ..... points = 3 The wetland is Lake-fringe on a lake **with** disturbance and there are 3 other lake-fringe wetland within ½ mile ..... points = 3 There is at least 1 wetland within ½ mile. ..... points = 2 There are no wetlands within ½ mile. ..... points = 0	3
H 2. TOTAL Score - opportunity for providing habitat *Add the scores from H2.1, H2.2, H2.3, H2.4*	10
TOTAL for H1 from page 14	2
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1	12

Wetland name or number: Wetland C

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate Category.

Wetland Type *Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.*	**Category**
SC 1.0 Estuarine wetlands (*see p. 86)* Does the wetland unit meet the following criteria for Estuarine wetlands? ☐ The dominant water regime is tidal, ☐ Vegetated, and ☐ With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO ☒	
SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-151? ☐ YES = Category I ☐ NO = go to SC 1.2	**Cat. I**
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the following three conditions? ☐ YES = Category I ☐ NO = Category II ☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native Spartina spp. are the only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II) The are aof Spartina would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre. ☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed wetland. ☐ The wetland has at least 2 or the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	**Cat. I** **Cat. II** **Dual rating I/II**

Wetland name or number: Wetland C

SC 2.0 Natural Heritage Wetlands ***(see p. 87)*** Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland being rated in a Section/Township/Range that contains a Natural Heritage wetland? *(this question is used to screen out most sites before you need to contact WNHP/DNR)* S/T/R information from Appendix D ☒ or accessed from WNHP/DNR web site ☐ YES ☐ – contact WNHP/DNR (see p. 79) and go to SC 2.2 NO ☒ SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species? YES = Category I NO ☐ Not a Heritage Wetland	**Cat. I**
SC 3.0 Bogs ***(see p. 87)*** Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? *Use the key below to identify if the wetland is a bog. If you answer yes, you will still need to rate the wetland based on its functions.* 1. Does the wetland have organic soils horizons (i.e. layers of organic soil), either peats or mucks, that compose 16" or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils.) Yes - go to Q.3 NO - go to Q.2 2. Does the wetland have organic soils, either peats or mucks, that are less than 16 inches deep over bedrock or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? Yes - go to Q.3 NO ☐ is not a bog for purpose of rating 3. Does the wetland have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists species in Table 3)? Yes – Is a bog for purpose of rating NO - go to Q.4 *NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.* 4. Is the wetland forested (>30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover (*>30% coverage of the total shrub/herbaceous* cover)? YES = Category I NO ☒ is not a bog for purpose of rating	**Cat. I**

Wetland name or number: Wetland C

SC 4.0 Forested Wetlands ***(see p. 90)***	
Does the wetland have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its functions.* ☐ Old growth forests: (west of Cascade crest) Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more. *Note: The criterion for dbh is based on measurements for upland forests. Two hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter.* ☐ Mature forests: (west of the Cascade crest) Stands where the largest trees are 80-200 years old OR have average diameters (dbh) exceeding 21 in (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quanitity of large downed material is generally less than that found in old-growth YES = Category 1 NO ☒ not a forested wetland with special characteristics	**Cat. I**
SC 5.0 Wetlands in Coastal Lagoons (see p. 91) Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? ☐ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks. ☐ The lagoon in which the wetland is located contains surgace water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (*needs to be measured near the bottom*) YES – Go to SC 5.1 NO ☒ not a wetland in a coastal lagoon	**Cat. I**
SC 5.1 Does the wetland meet all of the following three conditions? ☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). ☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. ☐ The wetalnd is larger than 1/10 acre (4350 square feet) YES = Category I NO = Category II	**Cat. II**

Wetland name or number: Wetland C

SC 6.0 Interdunal Wetlands (see p. 93) Is the wetalnd unit west of the 1889 line (also called the Westarn Boundary of Upland Ownership or WBUO)? YES – go to SC 6.1 NO ☒ not an interdunal wetland for rating *If you answer yes you will still need to rate the wetland based on its functions.* In practical terms that means the following geographic areas: – Long Beach Peninsula – lands west of SR 103 – Grayland-Westport – lands west of SR 105 – Ocean Shores-Copalis – lands west of SR 115 and SR 109 SC 6.1 Is the wetland 1 acre or larger, or is it in a mosaic of wetlands that is 1 acre or larger? YES = Category II NO – go to SC 6.2 SC 6.2 Is the unit between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre? YES = Category III	**Cat. II** **Cat. III**
Category of wetland based on Special Characteristics *Choose the "highest" rating if wetland falls into several categorie, and record on p. 1 .* If you answered NO for all types enter "Not Applicable" on p.1.	**NA**

Wetland name or number: Wetland D

WETLAND RATING FORM – WESTERN WASHINGTON
Version 2 – Updated July 2006 to increase accuracy and reproducibility among users
Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): Lake Boren Park Wetland D Date of site visit: 12/2/2015

Rated by: NL, AH Trained by Ecology? Yes ☒ No ☐ Date of Training 10/2008

SEC: 33 TWNSHP: 24N RNGE: 05E Is S/T/R in Appendix D? Yes ☐ No ☒

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland

I ☐ II ☐ III ☒ IV ☐

Category I = Score ≥70
Category II = Score 51-69
Category III = Score 30-50
Category IV = Score < 30

Score for Water Quality Functions	20
Score for Hydrologic Functions	8
Score for Habitat Functions	10
TOTAL score for functions	**38**

Category based on SPECIAL CHARACTERISTICS of wetland

I ☐ II ☐ Does not Apply ☒

Final Category (choose the "highest" category from above) **III**

Check the appropriate type and class of wetland being rated.

Wetland Type		Wetland Class	
Estuarine	☐	**Depressional**	☒
Natural Heritage Wetland	☐	**Riverine**	☐
Bog	☐	**Lake-fringe**	☐
Mature Forest	☐	**Slope**	☐
Old Growth Forest	☐	**Flats**	☐
Coastal Lagoon	☐	**Freshwater Tidal**	☐
Interdunal	☐		
None of the above	☒	Check if unit has multiple HGM classes present	☐

Wetland name or number: Wetland D

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal** or **plant** species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		X*
SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		X*
SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?*		X*
SP4. *Does the wetland unit have a local significance in addition to its functions*? For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

***The study area was reviewed for the presence of endangered, threatened, and priority species using WDFW online Priority Habitat and Species Data, PHS on the Web (http://wdfw.wa.gov/mapping/phs/).**

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. Classifying the wetland first simplifies the questions needed to answer how it functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Wetland name or number: Wetland D

Classification of Wetland Units in Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in Questions 1-7 apply, and go to Question 8.

1. Are the water levels in the wetland unit usually controlled by tides (i.e. except during floods)?

☒ NO – go to 2 ☐ **YES** – the wetland class is **Tidal Fringe**

If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? **YES – Freshwater Tidal Fringe NO – Saltwater Tidal Fringe (Estuarine)**

*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.).

2. The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit

☒ NO – go to 3 ☐ **YES** – The wetland class is **Flats**

If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland unit **meet both** of the following criteria?

☐ The vegetated part of the wetland is on the shores of a body of open water (without any vegetation on the surface) at least 20 acres (8 ha) in size;

☐ At least 30% of the open water area is deeper than 6.6 ft (2 m)?

☒NO – go to 4 ☐**YES –** The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland unit **meet all** of the following criteria?

☐ The wetland is on a slope (*slope can be very gradual*),

☐ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.

☐ The water leaves the wetland **without being impounded**?

NOTE: *Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than a foot deep).*

☒ NO – go to 5 ☐ **YES –** The wetland class is **Slope**

Wetland name or number: Wetland D

5. Does the entire wetland unit **meet all** of the following criteria?

☐ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river.

☐ The overbank flooding occurs at least once every two years

NOTE: The riverine unit can contain depressions that are filled with water when the river is not flooding.

☒ NO - go to 6 ☐ **YES** – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. *This means that any outlet, if present, is higher than the interior of the wetland.*

☐ NO – go to 7 ☒ **YES –** The wetland class is **Depressional**

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

☐ NO – go to 8 ☐ **YES –** The wetland class is **Depressional**

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit being rated	*HGM Class to Use in Rating*
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

Wetland name or number: Wetland D

D	Depressional and Flats Wetlands	Points
	WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality	
D	**D 1. Does the wetland have the potential to improve water quality?**	*(see p. 38)*
D	D 1.1 Characteristics of surface water flows out of the wetland: Unit is a depression with no surface water leaving it (no outlet)..... points = 3 Unit has an intermittently flowing, or highly constricted permanently flowing outlet..... points = 2 Unit has an unconstricted, or slightly constricted, surface outlet *(permanently flowing)*. points = 1 Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow **and no obvious natural outlet**, and/or outlet is a man-made ditch ..... points = 1 (*If ditch is not permanently flowing treat unit as "intermittently flowing")*	3
D	D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (*use NRCS definitions*). YES points = 4 NO points = 0	0
D	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class): Wetland has persistent, ungrazed, vegetation > = 95% of area ..... points = 5 Wetland has persistent, ungrazed, vegetation > = 1/2 of area ..... points = 3 Wetland has persistent, ungrazed vegetation > = 1/10 of area ..... points = 1 Wetland has persistent, ungrazed vegetation <1/10 of area..... points = 0	3
D	D1.4 Characteristics of seasonal ponding or inundation. *This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs.* Area seasonally ponded is > ½ total area of wetland..... points = 4 Area seasonally ponded is > ¼ total area of wetland..... points = 2 Area seasonally ponded is < ¼ total area of wetland..... points = 0 NOTE: *See text for indicators of seasonal and permanent inundation.*	4
D	**Total for D 1** *Add the points in the boxes above*	10
D	**D 2. Does the wetland unit have the opportunity to improve water quality?** Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* ☐ Grazing in the wetland or within 150 ft ☐ Untreated stormwater discharges to wetland ☐ Tilled fields or orchards within 150 ft of wetland ☐ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging ☒ Residential, urban areas, golf courses are within 150 ft of wetland ☐ Wetland is fed by groundwater high in phosphorus or nitrogen ☒ Other__use by dogs, trails____ **YES** multiply score in D 1. **by 2** **NO** multiply score in D 1. **by 1**	*(see p. 44)* multiplier 2
D	**TOTAL - Water Quality Functions** Multiply the score from D1 by D2 ***Add score to table on p. 1***	**20**

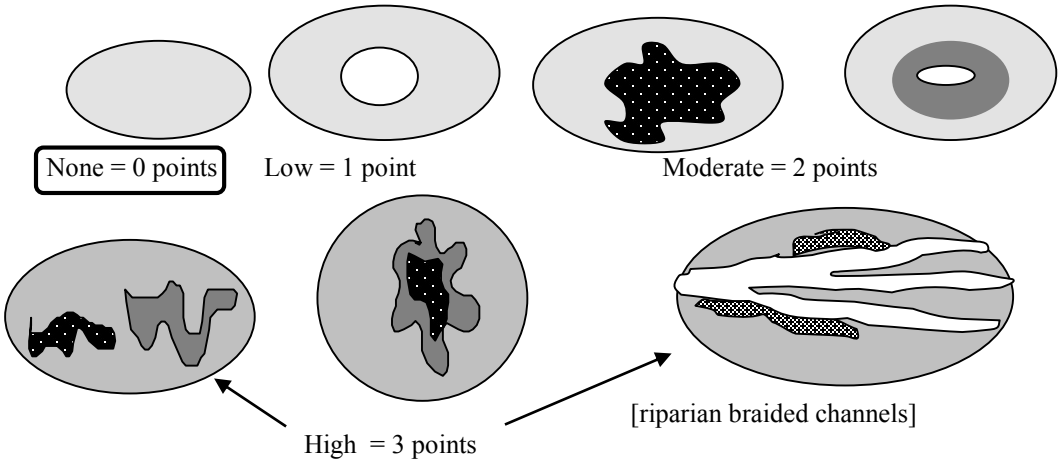
Wetland name or number: Wetland D

D	**Depresssional and Flats Wetlands**	
	HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream degradation	
	D 3. Does the wetland have the <u>potential</u> to reduce flooding and erosion?	*(see p. 46)*
D	D 3.1 Characteristics of surface water flows out of the wetland unit Unit is a depression with no surface water leaving it (no outlet)..... points = 4 Unit has an intermittently flowing, or highly constricted permanently flowing outlet..... points = 2 Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow **and no obvious natural outlet**, and/or outlet is a man-made ditch ..... points = 1 (*If ditch is not permanently flowing treat unit as "intermittently flowing")* Unit has an unconstricted, or slightly constricted, surface outlet (*permanently flowing*). points = 0	4
D	D 3.2 Depth of storage during wet periods *Estimate the height of ponding above the bottom of the outlet For units with no outlet measure from the surface of permanent water or deepest part (if dry).* Marks of ponding are at least 3 ft or more above the surface or bottom of outlet..... points = 7 The wetland is a "headwater" wetland" ..... points = 5 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet..... points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet ..... points = 3 Unit is flat (yes to Q.2 or Q.7 on key) but has small depressions on the surface that trap water ..... points = 1 Marks of ponding less than 0.5 ft..... points = 0	0
D	D 3.3 Contribution of wetland unit to storage in the watershed *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* The area of the basin is less than 10 times the area of the unit ..... points = 5 The area of the basin is 10 to 100 times the area of the unit ..... points = 3 The area of the basin is more than 100 times the area of the unit ..... points = 0 Entire unit is in the FLATS class ..... points = 5	0
D	**Total for D 3** *Add the points in the boxes above*	4
D	**D 4. Does the wetland unit have the <u>opportunity</u> to reduce flooding and erosion?** Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. *Note which of the following conditions apply.* ☐ Wetland is in a headwater of a river or stream that has flooding problems ☐ Wetland drains to a river or stream that has flooding problems ☒ Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems ☐ Other _____ ☒ **YES** multiplier is **2** ☐ **NO** multiplier is **1**	*(see p. 49)* multiplier <u>2</u>
D	**TOTAL - Hydrologic Functions** Multiply the score from D 3 by D 4 ***Add score to table on p. 1***	**8**

Wetland name or number: Wetland D

These questions apply to wetlands of all HGM classes. **HABITAT FUNCTIONS - Indicators that wetland functions to provide important habitat**	
H 1. Does the wetland have the <u>potential</u> to provide habitat for many species?	
H 1.1 <u>Vegetation structure</u> ***(see p. 72)*** *Check the types of vegetation classes present (as defined by Cowardin) if the class is ¼ acre or covers more than 10% of the area of the wetland if unit smaller than 2.5 acres.* ☐ Aquatic bed ☐ Emergent plants ☐ Scrub/shrub (areas where shrubs have >30% cover) ☒ Forested (areas where trees have >30% cover) ☐ Forested areas have 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon *Add the number of vegetation types that qualify. If you have:* 4 structures or more ..... points = 4 3 structures ..... points = 2 2 structures ..... points = 1 1 structure ..... points = 0	0
H 1.2. <u>Hydroperiods</u> ***(see p. 73)*** *Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ acre to count. (see text for descriptions of hydroperiods)* ☐ Permanently flooded or inundated — 4 or more types present ..... points = 3 ☒ Seasonally flooded or inundated — 3 types present ..... points = 2 ☐ Occasionally flooded or inundated — 2 types present ..... points = 1 ☐ Saturated only — 1 types present…….points = 0 ☐ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland ☐ ***Lake-fringe wetland* = 2 points** ☐ ***Freshwater tidal wetland* = 2 points**	0
H 1.3. <u>Richness of Plant Species</u> ***(see p. 75)*** Count the number of plant species in the wetland that cover at least 10 ft^2. (*different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species.* *Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle* If you counted: > 19 species ..... points = 2 *List species below if you want to:* 5 - 19 species ..... points = 1 < 5 species ..... points = 0 Grasses, POBA, JUEF, JUAC, PSME, RARE	1

Wetland name or number: Wetland D

H 1.4. Interspersion of habitats ***(see p. 76)*** Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.  None = 0 points Low = 1 point Moderate = 2 points [riparian braided channels] High = 3 points NOTE: If you have four or more vegetation types or three vegetation types and open water the rating is always "high".	0
H 1.5. Special Habitat Features: ***(see p. 77)*** *Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.* ☐ Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long). ☐ Standing snags (diameter at the bottom > 4 inches) in the wetland ☐ Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream for at least 33 ft (10m) ☐ Stable steep banks of fine material that might be used by beaver or muskrat for denning (>30degree slope) OR signs of recent beaver activity are present ☐ At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated.*(structures for egg-laying by amphibians)* ☒ Invasive plants cover less than 25% of the wetland area in each stratum of plants *Note: The 20% stated in early printings of the manual on page 78 is an error.*	1
H 1. TOTAL Score - potential for providing habitat *Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5*	2

Wetland name or number: Wetland D

H 2. Does the wetland have the opportunity to provide habitat for many species?	
H 2.1 Buffers ***(see p. 80)*** *Choose the description that best represents condition of buffer of wetland. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed."* ☐ 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% of circumference. No developed areas within undisturbed part of buffer. (relatively undisturbed also means no-grazing) ..... Points = 5 ☐ 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference..... Points = 4 ☐ 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% circumference..... Points = 4 ☐ 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference..... Points = 3 ☐ 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference. ..... Points = 3 **If buffer does not meet any of the criteria above** ☐ No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland > 95% circumference. Light to moderate grazing, or lawns are OK. ..... Points = 2 ☒ No paved areas or buildings within 50m of wetland for >50% circumference. Light to moderate grazing, or lawns are OK. ..... Points = 2 ☐ Heavy grazing in buffer. ..... Points = 1 ☐ Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland ..... Points = 0 ☐ Buffer does not meet any of the criteria above……..……...Points = 1	2
H 2.2 Corridors and Connections ***(see p. 81)*** H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? (*dams in riparian corridors*, *heavily used gravel roads*, *paved roads, are considered breaks in the corridor*). YES = **4 points** (*go to H 2.3*) **NO** = go to H 2.2.2 H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR** a **Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above? YES = **2 points** (*go to H 2.3*) **NO** = H 2.2.3 H 2.2.3 Is the wetland: within 5 mi (8km) of a brackish or salt water estuary OR within 3 mi of a large field or pasture (>40 acres) OR within 1 mi of a lake greater than 20 acres? YES = **1 point** NO = **0 points**	0

Wetland name or number: Wetland D

H 2.3 Near or adjacent to other priority habitats listed by WDFW ***(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm)*** Which of the following priority habitats are within 330ft (100m) of the wetland? *(NOTE: the connections do not have to be relatively undisturbed)* ☐ **Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acres). ☐ **Biodiversity Areas and Corridors:** Areas of habitat that are relatively important to various species of native fish and wildlife (*full description in WDFW PHS report p. 152*) ☐ **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock. ☐ **Old-growth/Mature forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. (Mature forests.) Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%; crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest. ☐ **Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158.)* ☒ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other. ☐ **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161*) ☒ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources. ☐ **Nearshore:** Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. *(full descriptions of habitats and the definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in Appendix A.)* ☐ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human. ☐ **Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft. ☐ **Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs. ☐ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of >51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30cm (12 in) in diameter at the largest end, and > 6m (20 ft) long. If wetland has **3 or more** priority habitats **= 4 points** If wetland has **2** priority habitats = **3 points** If wetland has **1** priority habitat **= 1 point** No habitats = **0 points** *Note: All vegetated wetland are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H2.4.*	3

Wetland name or number: Wetland D

H 2.4 Wetland Landscape *(choose the **one** description of the landscape around the wetland that best fits)* ***(see p. 84)*** There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. ..... points = 5 The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile ..... points = 5 There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed ..... points = 3 The wetland is Lake-fringe on a lake **with** disturbance and there are 3 other lake-fringe wetland within ½ mile ..... points = 3 There is at least 1 wetland within ½ mile. ..... points = 2 There are no wetlands within ½ mile. ..... points = 0	3
H 2. TOTAL Score - opportunity for providing habitat *Add the scores from H2.1, H2.2, H2.3, H2.4*	2
TOTAL for H1 from page 14	8
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1	10

Wetland name or number: Wetland D

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate Category.

Wetland Type *Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.*	**Category**
SC 1.0 Estuarine wetlands (*see p. 86)* Does the wetland unit meet the following criteria for Estuarine wetlands? ☐ The dominant water regime is tidal, ☐ Vegetated, and ☐ With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO ☒	
SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-151? ☐ YES = Category I ☐ NO = go to SC 1.2	**Cat. I**
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the following three conditions? ☐ YES = Category I ☐ NO = Category II ☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native Spartina spp. are the only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II) The are aof Spartina would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre. ☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed wetland. ☐ The wetland has at least 2 or the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	**Cat. I** **Cat. II** **Dual rating I/II**

Wetland name or number: Wetland D

SC 2.0 Natural Heritage Wetlands ***(see p. 87)*** Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland being rated in a Section/Township/Range that contains a Natural Heritage wetland? *(this question is used to screen out most sites before you need to contact WNHP/DNR)* S/T/R information from Appendix D ☒ or accessed from WNHP/DNR web site ☐ YES ☐ – contact WNHP/DNR (see p. 79) and go to SC 2.2 NO ☒ SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species? YES = Category I NO ☐ Not a Heritage Wetland	**Cat. I**
SC 3.0 Bogs ***(see p. 87)*** Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? *Use the key below to identify if the wetland is a bog. If you answer yes, you will still need to rate the wetland based on its functions.* 1. Does the wetland have organic soils horizons (i.e. layers of organic soil), either peats or mucks, that compose 16" or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils.) Yes - go to Q.3 NO - go to Q.2 2. Does the wetland have organic soils, either peats or mucks, that are less than 16 inches deep over bedrock or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? Yes - go to Q.3 NO ☐ is not a bog for purpose of rating 3. Does the wetland have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists species in Table 3)? Yes – Is a bog for purpose of rating NO - go to Q.4 *NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.* 4. Is the wetland forested (>30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover (*>30% coverage of the total shrub/herbaceous* cover)? YES = Category I NO ☒ is not a bog for purpose of rating	**Cat. I**

Wetland name or number: Wetland D

SC 4.0 Forested Wetlands ***(see p. 90)***	
Does the wetland have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its functions.* ☐ Old growth forests: (west of Cascade crest) Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more. *Note: The criterion for dbh is based on measurements for upland forests. Two hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter.* ☐ Mature forests: (west of the Cascade crest) Stands where the largest trees are 80-200 years old OR have average diameters (dbh) exceeding 21 in (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quanitity of large downed material is generally less than that found in old-growth YES = Category 1 NO ☒ not a forested wetland with special characteristics	**Cat. I**
SC 5.0 Wetlands in Coastal Lagoons (see p. 91) Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? ☐ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks. ☐ The lagoon in which the wetland is located contains surgace water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (*needs to be measured near the bottom*) YES – Go to SC 5.1 NO ☒ not a wetland in a coastal lagoon	**Cat. I**
SC 5.1 Does the wetland meet all of the following three conditions? ☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). ☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. ☐ The wetalnd is larger than 1/10 acre (4350 square feet) YES = Category I NO = Category II	**Cat. II**

Wetland name or number: Wetland D

SC 6.0 Interdunal Wetlands (see p. 93) Is the wetalnd unit west of the 1889 line (also called the Westarn Boundary of Upland Ownership or WBUO)? YES – go to SC 6.1 NO ☒ not an interdunal wetland for rating *If you answer yes you will still need to rate the wetland based on its functions.* In practical terms that means the following geographic areas: - Long Beach Peninsula – lands west of SR 103 - Grayland-Westport – lands west of SR 105 - Ocean Shores-Copalis – lands west of SR 115 and SR 109 SC 6.1 Is the wetland 1 acre or larger, or is it in a mosaic of wetlands that is 1 acre or larger? YES = Category II NO – go to SC 6.2 SC 6.2 Is the unit between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre? YES = Category III	**Cat. II** **Cat. III**
Category of wetland based on Special Characteristics *Choose the "highest" rating if wetland falls into several categorie, and record on p. 1 .* If you answered NO for all types enter "Not Applicable" on p.1.	**NA**

Wetland name or number: Wetland E

WETLAND RATING FORM – WESTERN WASHINGTON
Version 2 – Updated July 2006 to increase accuracy and reproducibility among users
Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): Lake Boren Park Wetland E Date of site visit: 12/2/2015

Rated by: NL, AH Trained by Ecology? Yes ☒ No ☐ Date of Training 10/2008

SEC: 34 TWNSHP: 24N RNGE: 05E Is S/T/R in Appendix D? Yes ☐ No ☒

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland

I ☐ II ☐ III ☒ IV ☐

Category I = Score ≥70
Category II = Score 51-69
Category III = Score 30-50
Category IV = Score < 30

Score for Water Quality Functions	20
Score for Hydrologic Functions	8
Score for Habitat Functions	12
TOTAL score for functions	**40**

Category based on SPECIAL CHARACTERISTICS of wetland

I ☐ II ☐ Does not Apply ☒

Final Category (choose the "highest" category from above) **III**

Check the appropriate type and class of wetland being rated.

Wetland Type		Wetland Class	
Estuarine	☐	**Depressional**	☒
Natural Heritage Wetland	☐	**Riverine**	☒
Bog	☐	**Lake-fringe**	☐
Mature Forest	☐	**Slope**	☐
Old Growth Forest	☐	**Flats**	☐
Coastal Lagoon	☐	**Freshwater Tidal**	☐
Interdunal	☐		
None of the above	☒	Check if unit has multiple HGM classes present	☒

Wetland name or number: Wetland E

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal** or **plant** species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		X*
SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		X*
SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?*		X*
SP4. *Does the wetland unit have a local significance in addition to its functions*? For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

***The study area was reviewed for the presence of endangered, threatened, and priority species using WDFW online Priority Habitat and Species Data, PHS on the Web (http://wdfw.wa.gov/mapping/phs/).**

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. Classifying the wetland first simplifies the questions needed to answer how it functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Wetland name or number: Wetland E

Classification of Wetland Units in Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in Questions 1-7 apply, and go to Question 8.

1. Are the water levels in the wetland unit usually controlled by tides (i.e. except during floods)?

☒ NO – go to 2 ☐ **YES** – the wetland class is **Tidal Fringe**

If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? **YES – Freshwater Tidal Fringe NO – Saltwater Tidal Fringe (Estuarine)**

*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.).

2. The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit

☒ NO – go to 3 ☐ **YES** – The wetland class is **Flats**

If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland unit **meet both** of the following criteria?

☐ The vegetated part of the wetland is on the shores of a body of open water (without any vegetation on the surface) at least 20 acres (8 ha) in size;

☐ At least 30% of the open water area is deeper than 6.6 ft (2 m)?

☒NO – go to 4 ☐**YES –** The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland unit **meet all** of the following criteria?

☐ The wetland is on a slope (*slope can be very gradual*),

☐ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.

☐ The water leaves the wetland **without being impounded**?

NOTE: *Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than a foot deep).*

☒ NO – go to 5 ☐ **YES –** The wetland class is **Slope**

Wetland name or number: Wetland E

5. Does the entire wetland unit **meet all** of the following criteria?

☒ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river.

☒ The overbank flooding occurs at least once every two years

NOTE: The riverine unit can contain depressions that are filled with water when the river is not flooding.

☐ NO - go to 6 ☒ **YES** – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. *This means that any outlet, if present, is higher than the interior of the wetland.*

☐ NO – go to 7 ☒ **YES –** The wetland class is **Depressional**

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

☐ NO – go to 8 ☐ **YES –** The wetland class is **Depressional**

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.

HGM classes within the wetland unit being rated	*HGM Class to Use in Rating*
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

Wetland name or number: Wetland E

D	Depressional and Flats Wetlands	Points
	WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality	
D	**D 1. Does the wetland have the potential to improve water quality?**	*(see p. 38)*
D	D 1.1 Characteristics of surface water flows out of the wetland: Unit is a depression with no surface water leaving it (no outlet)..... points = 3 Unit has an intermittently flowing, or highly constricted permanently flowing outlet..... points = 2 Unit has an unconstricted, or slightly constricted, surface outlet *(permanently flowing)*. points = 1 Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow **and no obvious natural outlet**, and/or outlet is a man-made ditch ..... points = 1 (*If ditch is not permanently flowing treat unit as "intermittently flowing")*	3
D	D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (*use NRCS definitions*). YES points = 4 NO points = 0	0
D	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class): Wetland has persistent, ungrazed, vegetation > = 95% of area ..... points = 5 Wetland has persistent, ungrazed, vegetation > = 1/2 of area ..... points = 3 Wetland has persistent, ungrazed vegetation > = 1/10 of area ..... points = 1 Wetland has persistent, ungrazed vegetation <1/10 of area..... points = 0	3
D	D1.4 Characteristics of seasonal ponding or inundation. *This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs.* Area seasonally ponded is > ½ total area of wetland..... points = 4 Area seasonally ponded is > ¼ total area of wetland..... points = 2 Area seasonally ponded is < ¼ total area of wetland..... points = 0 NOTE: *See text for indicators of seasonal and permanent inundation.*	4
D	**Total for D 1** *Add the points in the boxes above*	10
D	**D 2. Does the wetland unit have the opportunity to improve water quality?** Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* ☐ Grazing in the wetland or within 150 ft ☐ Untreated stormwater discharges to wetland ☐ Tilled fields or orchards within 150 ft of wetland ☐ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging ☒ Residential, urban areas, golf courses are within 150 ft of wetland ☐ Wetland is fed by groundwater high in phosphorus or nitrogen ☒ Other__dogs, trail_____ **YES** multiply score in D 1. **by 2** **NO** multiply score in D 1. **by 1**	*(see p. 44)* multiplier 2
D	**TOTAL - Water Quality Functions** Multiply the score from D1 by D2 ***Add score to table on p. 1***	**20**

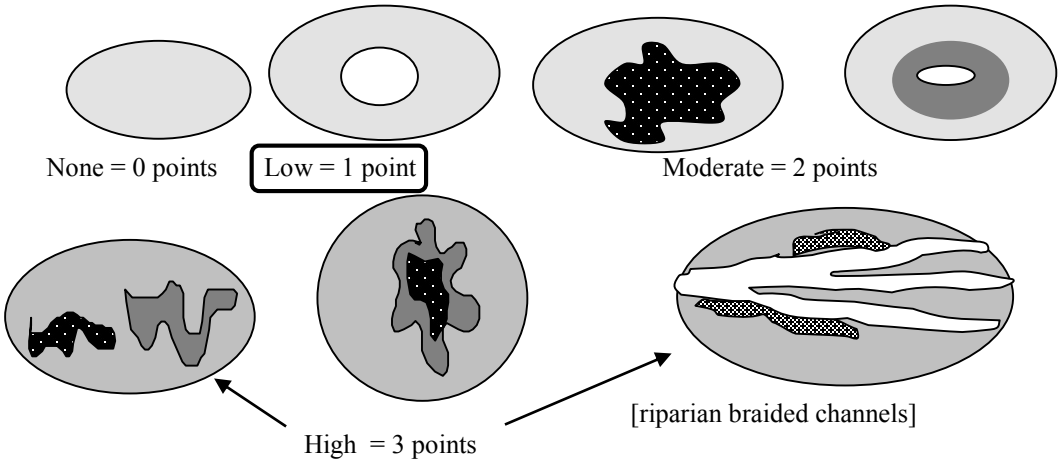
Wetland name or number: Wetland E

D	Depresssional and Flats Wetlands	
	HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream degradation	
	D 3. Does the wetland have the potential to reduce flooding and erosion?	*(see p. 46)*
D	D 3.1 Characteristics of surface water flows out of the wetland unit Unit is a depression with no surface water leaving it (no outlet)..... points = 4 Unit has an intermittently flowing, or highly constricted permanently flowing outlet..... points = 2 Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow **and no obvious natural outlet**, and/or outlet is a man-made ditch ..... points = 1 (*If ditch is not permanently flowing treat unit as "intermittently flowing")* Unit has an unconstricted, or slightly constricted, surface outlet (*permanently flowing*). points = 0	4
D	D 3.2 Depth of storage during wet periods *Estimate the height of ponding above the bottom of the outlet For units with no outlet measure from the surface of permanent water or deepest part (if dry).* Marks of ponding are at least 3 ft or more above the surface or bottom of outlet..... points = 7 The wetland is a "headwater" wetland" ..... points = 5 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet..... points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet ..... points = 3 Unit is flat (yes to Q.2 or Q.7 on key) but has small depressions on the surface that trap water ..... points = 1 Marks of ponding less than 0.5 ft..... points = 0	0
D	D 3.3 Contribution of wetland unit to storage in the watershed *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* The area of the basin is less than 10 times the area of the unit ..... points = 5 The area of the basin is 10 to 100 times the area of the unit ..... points = 3 The area of the basin is more than 100 times the area of the unit ..... points = 0 Entire unit is in the FLATS class ..... points = 5	0
D	**Total for D 3** *Add the points in the boxes above*	4
D	**D 4. Does the wetland unit have the opportunity to reduce flooding and erosion?** Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. *Note which of the following conditions apply.* ☐ Wetland is in a headwater of a river or stream that has flooding problems ☐ Wetland drains to a river or stream that has flooding problems ☒ Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems ☐ Other _____ ☒ **YES** multiplier is **2** ☐ **NO** multiplier is **1**	*(see p. 49)* multiplier 2
D	**TOTAL - Hydrologic Functions** Multiply the score from D 3 by D 4 ***Add score to table on p. 1***	**8**

Wetland name or number: Wetland E

These questions apply to wetlands of all HGM classes. **HABITAT FUNCTIONS - Indicators that wetland functions to provide important habitat**	
H 1. Does the wetland have the <u>potential</u> to provide habitat for many species?	
H 1.1 <u>Vegetation structure</u> ***(see p. 72)*** *Check the types of vegetation classes present (as defined by Cowardin) if the class is ¼ acre or covers more than 10% of the area of the wetland if unit smaller than 2.5 acres.* ☐ Aquatic bed ☐ Emergent plants ☒ Scrub/shrub (areas where shrubs have >30% cover) ☒ Forested (areas where trees have >30% cover) ☐ Forested areas have 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon *Add the number of vegetation types that qualify. If you have:* 4 structures or more ..... points = 4 3 structures ..... points = 2 2 structures ..... points = 1 1 structure ..... points = 0	1
H 1.2. <u>Hydroperiods</u> ***(see p. 73)*** *Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ acre to count. (see text for descriptions of hydroperiods)* ☐ Permanently flooded or inundated — 4 or more types present ..... points = 3 ☒ Seasonally flooded or inundated — 3 types present ..... points = 2 ☐ Occasionally flooded or inundated — 2 types present ..... points = 1 ☐ Saturated only — 1 types present…….points = 0 ☐ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland ☐ ***Lake-fringe wetland* = 2 points** ☐ ***Freshwater tidal wetland* = 2 points**	0
H 1.3. <u>Richness of Plant Species</u> ***(see p. 75)*** Count the number of plant species in the wetland that cover at least 10 ft^2. (*different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species.* *Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle* If you counted: > 19 species ..... points = 2 *List species below if you want to:* 5 - 19 species ..... points = 1 < 5 species ..... points = 0 POBA, Salix sp, ALRU, THPL, SPDO, HBB, RARE, grasses, COSE	1

Wetland name or number: Wetland E

H 1.4. Interspersion of habitats ***(see p. 76)*** Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.  NOTE: If you have four or more vegetation types or three vegetation types and open water the rating is always "high".	1
H 1.5. Special Habitat Features: ***(see p. 77)*** *Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.* ☐ Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long). ☐ Standing snags (diameter at the bottom > 4 inches) in the wetland ☐ Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream for at least 33 ft (10m) ☐ Stable steep banks of fine material that might be used by beaver or muskrat for denning (>30degree slope) OR signs of recent beaver activity are present ☐ At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated.*(structures for egg-laying by amphibians)* ☐ Invasive plants cover less than 25% of the wetland area in each stratum of plants *Note: The 20% stated in early printings of the manual on page 78 is an error.*	0
H 1. TOTAL Score - potential for providing habitat *Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5*	3

Wetland name or number: Wetland E

H 2. Does the wetland have the opportunity to provide habitat for many species?	
H 2.1 Buffers ***(see p. 80)*** *Choose the description that best represents condition of buffer of wetland. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed."* ☐ 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% of circumference. No developed areas within undisturbed part of buffer. (relatively undisturbed also means no-grazing) ..... Points = 5 ☐ 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference..... Points = 4 ☐ 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% circumference..... Points = 4 ☐ 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference..... Points = 3 ☒ 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference. ..... Points = 3 **If buffer does not meet any of the criteria above** ☐ No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland > 95% circumference. Light to moderate grazing, or lawns are OK. ..... Points = 2 ☐ No paved areas or buildings within 50m of wetland for >50% circumference. Light to moderate grazing, or lawns are OK. ..... Points = 2 ☐ Heavy grazing in buffer. ..... Points = 1 ☐ Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland ..... Points = 0 ☐ Buffer does not meet any of the criteria above……..……...Points = 1	3
H 2.2 Corridors and Connections ***(see p. 81)*** H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? (*dams in riparian corridors*, *heavily used gravel roads*, *paved roads, are considered breaks in the corridor*). YES = **4 points** (*go to H 2.3*) **NO** = go to H 2.2.2 H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR** a **Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above? YES = **2 points** (*go to H 2.3*) **NO** = H 2.2.3 H 2.2.3 Is the wetland: within 5 mi (8km) of a brackish or salt water estuary OR within 3 mi of a large field or pasture (>40 acres) OR within 1 mi of a lake greater than 20 acres? YES = **1 point** NO = **0 points**	0

Wetland name or number: Wetland E

H 2.3 Near or adjacent to other priority habitats listed by WDFW ***(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm)*** Which of the following priority habitats are within 330ft (100m) of the wetland? *(NOTE: the connections do not have to be relatively undisturbed)* ☐ **Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acres). ☐ **Biodiversity Areas and Corridors:** Areas of habitat that are relatively important to various species of native fish and wildlife (*full description in WDFW PHS report p. 152*) ☐ **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock. ☐ **Old-growth/Mature forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. (Mature forests.) Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%; crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest. ☐ **Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158.)* ☒ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other. ☐ **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161*) ☒ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources. ☐ **Nearshore:** Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. *(full descriptions of habitats and the definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in Appendix A.)* ☐ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human. ☐ **Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft. ☐ **Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs. ☐ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of >51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30cm (12 in) in diameter at the largest end, and > 6m (20 ft) long. If wetland has **3 or more** priority habitats **= 4 points** If wetland has **2** priority habitats = **3 points** If wetland has **1** priority habitat **= 1 point** No habitats = **0 points** *Note: All vegetated wetland are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H2.4.*	3

Wetland name or number: Wetland E

H 2.4 Wetland Landscape *(choose the **one** description of the landscape around the wetland that best fits)* ***(see p. 84)*** There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. ..... points = 5 The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile ..... points = 5 There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed ..... points = 3 The wetland is Lake-fringe on a lake **with** disturbance and there are 3 other lake-fringe wetland within ½ mile ..... points = 3 There is at least 1 wetland within ½ mile. ..... points = 2 There are no wetlands within ½ mile. ..... points = 0	3
H 2. TOTAL Score - opportunity for providing habitat *Add the scores from H2.1, H2.2, H2.3, H2.4*	9
TOTAL for H1 from page 14	3
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1	12

Wetland name or number: Wetland E

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate Category.

Wetland Type *Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.*	**Category**
SC 1.0 Estuarine wetlands (*see p. 86)* Does the wetland unit meet the following criteria for Estuarine wetlands? ☐ The dominant water regime is tidal, ☐ Vegetated, and ☐ With a salinity greater than 0.5 ppt. YES = Go to SC 1.1 NO ☒	
SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-151? ☐ YES = Category I ☐ NO = go to SC 1.2	**Cat. I**
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the following three conditions? ☐ YES = Category I ☐ NO = Category II ☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native Spartina spp. are the only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II) The are aof Spartina would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre. ☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed wetland. ☐ The wetland has at least 2 or the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	**Cat. I** **Cat. II** **Dual rating I/II**

Wetland name or number: Wetland E

SC 2.0 Natural Heritage Wetlands ***(see p. 87)*** Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species. SC 2.1 Is the wetland being rated in a Section/Township/Range that contains a Natural Heritage wetland? *(this question is used to screen out most sites before you need to contact WNHP/DNR)* S/T/R information from Appendix D ☒ or accessed from WNHP/DNR web site ☐ YES ☐ – contact WNHP/DNR (see p. 79) and go to SC 2.2 NO ☒ SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species? YES = Category I NO ☐ Not a Heritage Wetland	**Cat. I**
SC 3.0 Bogs ***(see p. 87)*** Does the wetland (or any part of the unit) meet both the criteria for soils and vegetation in bogs? *Use the key below to identify if the wetland is a bog. If you answer yes, you will still need to rate the wetland based on its functions.* 1. Does the wetland have organic soils horizons (i.e. layers of organic soil), either peats or mucks, that compose 16" or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils.) Yes - go to Q.3 NO - go to Q.2 2. Does the wetland have organic soils, either peats or mucks, that are less than 16 inches deep over bedrock or an impermeable hardpan such as clay or volcanic ash, or that are floating on top of a lake or pond? Yes - go to Q.3 NO ☐ is not a bog for purpose of rating 3. Does the wetland have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists species in Table 3)? Yes – Is a bog for purpose of rating NO - go to Q.4 *NOTE: If you are uncertain about the extent of mosses in the understory, you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.* 4. Is the wetland forested (>30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover (*>30% coverage of the total shrub/herbaceous* cover)? YES = Category I NO ☒ is not a bog for purpose of rating	**Cat. I**

Wetland name or number: Wetland E

SC 4.0 Forested Wetlands ***(see p. 90)***	
Does the wetland have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its functions.* ☐ Old growth forests: (west of Cascade crest) Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more. *Note: The criterion for dbh is based on measurements for upland forests. Two hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter.* ☐ Mature forests: (west of the Cascade crest) Stands where the largest trees are 80-200 years old OR have average diameters (dbh) exceeding 21 in (53 cm); crown cover may be less than 100%; decay, decadence, numbers of snags, and quanitity of large downed material is generally less than that found in old-growth YES = Category 1 NO ☒ not a forested wetland with special characteristics	**Cat. I**
SC 5.0 Wetlands in Coastal Lagoons (see p. 91) Does the wetland meet all of the following criteria of a wetland in a coastal lagoon? ☐ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks. ☐ The lagoon in which the wetland is located contains surgace water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon (*needs to be measured near the bottom*) YES – Go to SC 5.1 NO ☒ not a wetland in a coastal lagoon	**Cat. I**
SC 5.1 Does the wetland meet all of the following three conditions? ☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of invasive plant species (see list of invasive species on p. 74). ☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. ☐ The wetalnd is larger than 1/10 acre (4350 square feet) YES = Category I NO = Category II	**Cat. II**

Wetland name or number: Wetland E

SC 6.0 Interdunal Wetlands (see p. 93) Is the wetalnd unit west of the 1889 line (also called the Westarn Boundary of Upland Ownership or WBUO)? YES – go to SC 6.1 NO ☒ not an interdunal wetland for rating *If you answer yes you will still need to rate the wetland based on its functions.* In practical terms that means the following geographic areas: – Long Beach Peninsula – lands west of SR 103 – Grayland-Westport – lands west of SR 105 – Ocean Shores-Copalis – lands west of SR 115 and SR 109 SC 6.1 Is the wetland 1 acre or larger, or is it in a mosaic of wetlands that is 1 acre or larger? YES = Category II NO – go to SC 6.2 SC 6.2 Is the unit between 0.1 and 1 acre, or is it in a mosaic of wetlands that is between 0.1 and 1 acre? YES = Category III	**Cat. II** **Cat. III**
Category of wetland based on Special Characteristics *Choose the "highest" rating if wetland falls into several categorie, and record on p. 1 .* If you answered NO for all types enter "Not Applicable" on p.1.	**NA**

Wetland name or number A

WETLAND RATING FORM – WESTERN WASHINGTON
Version 2 - Updated July 2006 to increase accuracy and reproducibility among users
Updated Oct 2008 with the new WDFW definitions for priority habitats

Name of wetland (if known): Lake Boren Wetland Complex Date of site visit: 03/06/2013

Rated by S.Brainard, N. Pedersen Trained by Ecology? Yes ☑ No ☐ Date of training 10/06, 04/13

SEC: 28 TWNSHP: 24N RNGE: 05E Is S/T/R in Appendix D? Yes ☐ No ☑

Map of wetland unit: Figure 1 **Estimated size** ~19ACRES

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland

I___ II___ III✓ IV___

Category I = Score >=70
Category II = Score 51-69
Category III = Score 30-50
Category IV = Score < 30

Score for Water Quality Functions	4
Score for Hydrologic Functions	10
Score for Habitat Functions	19
TOTAL score for Functions	33

Category based on SPECIAL CHARACTERISTICS of wetland

I___ II___ Does not Apply✓

Final Category (choose the "highest" category from above) III

Summary of basic information about the wetland unit

Wetland Unit has Special Characteristics		Wetland HGM Class used for Rating	
Estuarine		**Depressional**	✓
Natural Heritage Wetland		**Riverine**	
Bog		**Lake-fringe**	
Mature Forest		**Slope**	
Old Growth Forest		**Flats**	
Coastal Lagoon		**Freshwater Tidal**	
Interdunal			
None of the above		Check if unit has multiple HGM classes present	

Wetland name or number A

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. *Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered **animal or plant** species (T/E species)?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state or federal database.		✓
SP2. *Has the wetland unit been documented as habitat for any State listed Threatened or Endangered **animal** species?* For the purposes of this rating system, "documented" means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).		✓
SP3. *Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?*		✓
SP4. *Does the wetland unit have a local significance in addition to its functions*? For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		✓

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. This simplifies the questions needed to answer how well the wetland functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Wetland name or number A

Classification of Wetland Units in Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in questions 1-7 apply, and go to Question 8.

1. Are the water levels in the entire unit usually controlled by tides (i.e. except during floods)?
☑ NO – go to 2 ☐ **YES** – the wetland class is **Tidal Fringe**

If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? **YES – Freshwater Tidal Fringe** ☐ **NO – Saltwater Tidal Fringe (Estuarine)** ☐

*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term "Estuarine" wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.).

2. The entire wetland unit is flat and precipitation is the only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit.
☑ NO – go to 3 ☐ **YES** – The wetland class is **Flats**

If your wetland can be classified as a "Flats" wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland unit **meet both** of the following criteria?
___The vegetated part of the wetland is on the shores of a body of permanent open water (without any vegetation on the surface) at least 20 acres (8 ha) in size;
___At least 30% of the open water area is deeper than 6.6 ft (2 m)?
☑ NO – go to 4 ☐ **YES –** The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland unit **meet all** of the following criteria?
____The wetland is on a slope (*slope can be very gradual*),
____The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
____The water leaves the wetland **without being impounded**?
NOTE: *Surface water does not pond in these type of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than 1 foot deep).*
☑ NO - go to 5 ☐ **YES –** The wetland class is **Slope**

Wetland name or number A

5. Does the entire wetland unit **meet all** of the following criteria?

____ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river

____ The overbank flooding occurs at least once every two years.

NOTE: The riverine unit can contain depressions that are filled with water when the river is not flooding.

☑ NO - go to 6 ☐ **YES** – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. *This means that any outlet, if present, is higher than the interior of the wetland.*

☐ NO – go to 7 ☑ **YES –** The wetland class is **Depressional**

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

☐ NO – go to 8 ☐ **YES** – The wetland class is **Depressional**

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM clases. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit; classify the wetland using the class that represents more than 90% of the total area.

HGM Classes within the wetland unit being rated	*HGM Class to Use in Rating*
Slope + Riverine ☐	Riverine ☐
Slope + Depressional ☐	Depressional ☐
Slope + Lake-fringe ☐	Lake-fringe ☐
Depressional + Riverine along stream within boundary ☐	Depressional ☐
Depressional + Lake-fringe ☐	Depressional ☐
Salt Water Tidal Fringe and any other class of freshwater wetland ☐	Treat as ESTUARINE under wetlands with special characteristics ☐

If you are unable still to determine which of the above criteria apply to your wetland, or if you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

Wetland name or number A

D	**Depressional and Flats Wetlands** **WATER QUALITY FUNCTIONS** - Indicators that the wetland unit functions to improve water quality	**Points** (only 1 score per box)
D	**D 1. Does the wetland unit have the potential to improve water quality?**	*(see p.38)*
D	D 1.1 Characteristics of surface water flows out of the wetland: ☐ Unit is a depression with no surface water leaving it (no outlet) points = 3 ☐ Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 ☑ Unit has an unconstricted, or slightly constricted, surface outlet (*permanently flowing*) points = 1 ☐ Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch points = 1 (*If ditch is not permanently flowing treat unit as "intermittently flowing"*) Provide photo or drawing	**Figure** 2 1
D	S 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic *(use NRCS definitions)* ☐ YES points = 4 ☑ NO points = 0	0
D	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class) ☐ Wetland has persistent, ungrazed, vegetation > = 95% of area points = 5 ☐ Wetland has persistent, ungrazed, vegetation > = 1/2 of area points = 3 ☑ Wetland has persistent, ungrazed vegetation > = 1/10 of area points = 1 ☐ Wetland has persistent, ungrazed vegetation <1/10 of area points = 0 Map of Cowardin vegetation classes	**Figure** 3 1
D	D1.4 Characteristics of seasonal ponding or inundation. *This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs.* ☐ Area seasonally ponded is > ½ total area of wetland points = 4 ☐ Area seasonally ponded is > ¼ total area of wetland points = 2 ☑ Area seasonally ponded is < ¼ total area of wetland points = 0 Map of Hydroperiods	**Figure** 4 0
D	**Total for D 1** *Add the points in the boxes above*	2
D	**D 2. Does the wetland unit have the opportunity to improve water quality?** Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland. *Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.* ☐ Grazing in the wetland or within 150 ft ☐ Untreated stormwater discharges to wetland ☐ Tilled fields or orchards within 150 ft of wetland ☐ A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging ☑ Residential, urban areas, golf courses are within 150 ft of wetland ☐ Wetland is fed by groundwater high in phosphorus or nitrogen ☐ Other_____ ☑ **YES** multiplier is **2** ☐ **NO** multiplier is **1**	*(see p. 44)* multiplier 2
D	**TOTAL - Water Quality Functions** Multiply the score from D1 by D2 ***Add score to table on p. 1***	4

Wetland name or number A

D	**Depressional and Flats Wetlands** HYDROLOGIC FUNCTIONS - Indicators that the wetland unit functions to reduce flooding and stream degradation	**Points** (only 1 score per box)
	D 3. Does the wetland unit have the potential to reduce flooding and erosion?	*(see p.46)*
D	D 3.1 Characteristics of surface water flows out of the wetland unit ☐ Unit is a depression with no surface water leaving it (no outlet) points = 4 ☐ Unit has an intermittently flowing, OR highly constricted permanently flowing outlet points = 2 ☐ Unit is a "flat" depression (Q. 7 on key), or in the Flats class, with permanent surface outflow **and no obvious natural outlet** and/or outlet is a man-made ditch points = 1 (*If ditch is not permanently flowing treat unit as "intermittently flowing"*) ☑ Unit has an unconstricted, or slightly constricted, surface outlet (*permanently flowing*) points = 0	0
D	D 3.2 Depth of storage during wet periods *Estimate the height of ponding above the bottom of the outlet. For units with no outlet measure from the surface of permanent water or deepest part (if dry).* ☐ Marks of ponding are 3 ft or more above the surface or bottom of outlet points = 7 ☐ The wetland is a "headwater" wetland" points = 5 ☑ Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet points = 5 ☐ Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3 ☐ Unit is flat (yes to Q. 2 or Q. 7 on key) but has small depressions on the surface that trap water points = 1 ☐ Marks of ponding less than 0.5 ft points = 0	5
D	D 3.3 Contribution of wetland unit to storage in the watershed *Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.* ☐ The area of the basin is less than 10 times the area of unit points = 5 ☐ The area of the basin is 10 to 100 times the area of the unit points = 3 ☑ The area of the basin is more than 100 times the area of the unit points = 0 ☐ Entire unit is in the FLATS class points = 5	0
D	**Total for D 3** *Add the points in the boxes above*	5
D	**D 4. Does the wetland unit have the opportunity to reduce flooding and erosion?** Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. *Note which of the following indicators of opportunity apply.* ☐ Wetland is in a headwater of a river or stream that has flooding problems ☑ Wetland drains to a river or stream that has flooding problems ☐ Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems ☐ Other_____ ☑ **YES** multiplier is **2** ☐ **NO** multiplier is **1**	*(see p. 49)* multiplier 2
D	**TOTAL - Hydrologic Functions** Multiply the score from D 3 by D 4 ***Add score to table on p. 1***	10

Wetland name or number A

These questions apply to wetlands of all HGM classes. HABITAT FUNCTIONS - Indicators that unit functions to provide important habitat	**Points** (only 1 score per box)
H 1. Does the wetland unit have the <u>potential</u> to provide habitat for many species?	
H 1.1 <u>Vegetation structure</u> ***(see p. 72)***	**Figure** 5
Check the types of vegetation classes present (as defined by Cowardin)- Size threshold for each class is ¼ acre or more than 10% of the area if unit is smaller than 2.5 acres. ☑ Aquatic bed ☑ Emergent plants ☑ Scrub/shrub (areas where shrubs have >30% cover) ☐ Forested (areas where trees have >30% cover) *If the unit has a forested class check if:* ☐ The forested class has 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) that each cover 20% within the forested polygon *Add the number of vegetation structures that qualify. If you have:* ☐ 4 structures or more points = 4 ☑ 3 structures points = 2 ☐ 2 structures points = 1 ☐ 1 structure points = 0 Map of Cowardin vegetation classes	2
H 1.2. <u>Hydroperiods</u> ***(see p. 73)***	**Figure** 6
Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ acre to count. (see text for descriptions of hydroperiods) ☑ Permanently flooded or inundated ☑ Seasonally flooded or inundated ☐ Occasionally flooded or inundated ☑ Saturated only ☐ 4 or more types present points = 3 ☑ 3 types present points = 2 ☐ 2 types present point = 1 ☐ 1 type present points = 0 ☐ Permanently flowing stream or river in, or adjacent to, the wetland ☐ Seasonally flowing stream in, or adjacent to, the wetland ☐ ***Lake-fringe wetland* = 2 points** ☐ ***Freshwater tidal wetland* = 2 points** Map of hydroperiods	2
H 1.3. <u>Richness of Plant Species</u> ***(see p. 75)*** Count the number of plant species in the wetland that cover at least 10 ft^2. (*different patches of the same species can be combined to meet the size threshold)* *You do not have to name the species.* *Do not include Eurasian Milfoil, reed canarygrass, purple loosestrife, Canadian Thistle* If you counted: ☐ > 19 species points = 2 ☑ 5 - 19 species points = 1 ☐ < 5 species points = 0 *List species below if you want to:*	1

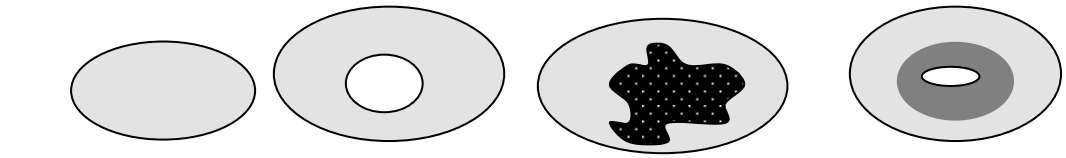
Total for page 5

Wetland name or number A

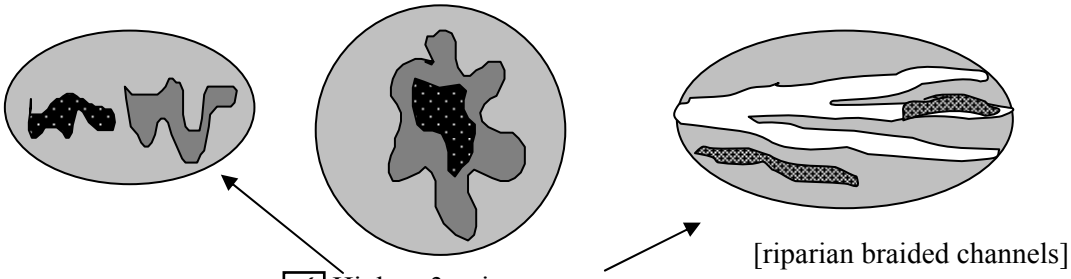
H 1.4. Interspersion of habitats ***(see p. 76)***

Decide from the diagrams below whether interspersion between Cowardin vegetation classes (described in H 1.1), or the classes and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.

Figure 7



☐ None = 0 points ☐ Low = 1 point ☐ Moderate = 2 points



[riparian braided channels]

☑ High = 3 points

NOTE: If you have four or more classes or three vegetation classes and open water the rating is always "high". Use map of Cowardin vegetation classes

3

H 1.5. Special Habitat Features: ***(see p. 77)***

Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.

☑ Large, downed, woody debris within the wetland (>4in. diameter and 6 ft long).

☑ Standing snags (diameter at the bottom > 4 inches) in the wetland

☐ Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream (or ditch) in, or contiguous with the unit, for at least 33 ft (10m)

☐ Stable steep banks of fine material that might be used by beaver or muskrat for denning (>30degree slope) OR signs of recent beaver activity are present *(cut shrubs or trees that have not yet turned grey/brown)*

☑ At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated.*(structures for egg-laying by amphibians)*

☐ Invasive plants cover less than 25% of the wetland area in each stratum of plants

NOTE: The 20*% stated in early printings of the manual on page 78 is an error.*

3

H 1. TOTAL Score - potential for providing habitat
Add the scores from H1.1, H1.2, H1.3, H1.4, H1.5

11

Comments

Wetland name or number A

H 2. Does the wetland unit have the opportunity to provide habitat for many species?	
H 2.1 Buffers ***(see p. 80)*** *Choose the description that best represents condition of buffer of wetland unit. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed."* ☐ 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% of circumference. No structures are within the undisturbed part of buffer**.** (relatively undisturbed also means no-grazing, no landscaping, no daily human use) **Points = 5** ☐ 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 50% circumference. **Points = 4** ☐ 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water >95% circumference. **Points = 4** ☐ 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water > 25% circumference, . **Points = 3** ☐ 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for > 50% circumference. **Points = 3** **If buffer does not meet any of the criteria above** ☐ No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland > 95% circumference. Light to moderate grazing, or lawns are OK. **Points = 2** ☐ No paved areas or buildings within 50m of wetland for >50% circumference. Light to moderate grazing, or lawns are OK. **Points = 2** ☐ Heavy grazing in buffer. **Points = 1** ☐ Vegetated buffers are <2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland **Points = 0**. ☑ Buffer does not meet any of the criteria above. **Points = 1** Aerial photo showing buffers	**Figure** 8 1
H 2.2 Corridors and Connections ***(see p. 81)*** H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? (*dams in riparian corridors*, *heavily used gravel roads*, *paved roads, are considered breaks in the corridor*). ☐ YES = **4 points** (*go to H 2.3*) ☑ NO = go to H 2.2.2 H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR** a **Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above? ☐ YES = **2 points** (*go to H 2.3*) ☑ NO = H 2.2.3 H 2.2.3 Is the wetland: ☐ within 5 mi (8km) of a brackish or salt water estuary OR ☐ within 3 mi of a large field or pasture (>40 acres) OR ☐ within 1 mi of a lake greater than 20 acres? ☐ YES = **1 point** ☑ NO = **0 points**	0

Total for page 1

Wetland name or number A

H 2.3 Near or adjacent to other priority habitats listed by WDFW ***(see new and complete descriptions of WDFW priority habitats, and the counties in which they can be found, in the PHS report http://wdfw.wa.gov/hab/phslist.htm)*** Which of the following priority habitats are within 330ft (100m) of the wetland unit? *NOTE: the connections do not have to be relatively undisturbed.* ☐ **Aspen Stands:** Pure or mixed stands of aspen greater than 0.4 ha (1 acre). ☐ **Biodiversity Areas and Corridors**: Areas of habitat that are relatively important to various species of native fish and wildlife (*full descriptions in WDFW PHS report p. 152*). ☐ **Herbaceous Balds:** Variable size patches of grass and forbs on shallow soils over bedrock. ☐ **Old-growth/Mature forests:** (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age. **(**Mature forests) Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less that 100%; crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest. ☐ **Oregon white Oak:** Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component is important (*full descriptions in WDFW PHS report p. 158*). ✓ **Riparian**: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other. ☐ **Westside Prairies:** Herbaceous, non-forested plant communities that can either take the form of a dry prairie or a wet prairie (*full descriptions in WDFW PHS report p. 161*). ✓ **Instream:** The combination of physical, biological, and chemical processes and conditions that interact to provide functional life history requirements for instream fish and wildlife resources. ☐ **Nearshore**: Relatively undisturbed nearshore habitats. These include Coastal Nearshore, Open Coast Nearshore, and Puget Sound Nearshore. (*full descriptions of habitats and the definition of relatively undisturbed are in WDFW report: pp. 167-169 and glossary in Appendix A).* ☐ **Caves:** A naturally occurring cavity, recess, void, or system of interconnected passages under the earth in soils, rock, ice, or other geological formations and is large enough to contain a human. ☐ **Cliffs:** Greater than 7.6 m (25 ft) high and occurring below 5000 ft. ☐ **Talus:** Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs. ✓ **Snags and Logs:** Trees are considered snags if they are dead or dying and exhibit sufficient decay characteristics to enable cavity excavation/use by wildlife. Priority snags have a diameter at breast height of > 51 cm (20 in) in western Washington and are > 2 m (6.5 ft) in height. Priority logs are > 30 cm (12 in) in diameter at the largest end, and > 6 m (20 ft) long. ✓ If wetland has **3 or more** priority habitats = **4 points** ☐ If wetland has **2** priority habitats = **3 points** ☐ If wetland has **1** priority habitat = **1 point** ☐ No habitats = 0 points *Note: All vegetated wetlands are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H 2.4)*	4

Wetland name or number A

H 2.4 Wetland Landscape *(choose the **one** description of the landscape around the wetland that best fits*) ***(see p. 84)*** ☐ There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. points = 5 ☐ The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile points = 5 ☑ There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed points = 3 ☐ The wetland is Lake-fringe on a lake **with** disturbance and there are 3 other lake-fringe wetland within ½ mile points = 3 ☐ There is at least 1 wetland within ½ mile. points = 2 ☐ There are no wetlands within ½ mile. points = 0	3
H 2. TOTAL Score - opportunity for providing habitat *Add the scores from H2.1,H2.2, H2.3, H2.4*	8
TOTAL for H 1 from page 14	11
Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1	19

Wetland name or number A

CATEGORIZATION BASED ON SPECIAL CHARACTERISTICS

Please determine if the wetland meets the attributes described below and circle the appropriate answers and Category.

Wetland Type *Check off any criteria that apply to the wetland. Circle the Category when the appropriate criteria are met.*	**Category**
SC 1.0 Estuarine wetlands ***(see p. 86)*** Does the wetland unit meet the following criteria for Estuarine wetlands? ☐ The dominant water regime is tidal, ☐ Vegetated, and ☐ With a salinity greater than 0.5 ppt. ☐ YES = Go to SC 1.1 NO ☑ = Go to SC 2.0	
SC 1.1 Is the wetland unit within a National Wildlife Refuge, National Park, National Estuary Reserve, Natural Area Preserve, State Park or Educational, Environmental, or Scientific Reserve designated under WAC 332-30-151? ☐ YES = Category I ☐ NO go to SC 1.2	**Cat. I** ☐
SC 1.2 Is the wetland unit at least 1 acre in size and meets at least two of the following three conditions? ☐ YES = Category I ☐ NO = Category II ☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing, and has less than 10% cover of non-native plant species. If the non-native *Spartina* spp. are the only species that cover more than 10% of the wetland, then the wetland should be given a dual rating (I/II). The area of Spartina would be rated a Category II while the relatively undisturbed upper marsh with native species would be a Category I. Do not, however, exclude the area of Spartina in determining the size threshold of 1 acre. ☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland. ☐ The wetland has at least 2 of the following features: tidal channels, depressions with open water, or contiguous freshwater wetlands.	☐ **Cat. I** ☐ **Cat. II** ☐ **Dual rating I/II**

Wetland name or number A

SC 2.0 Natural Heritage Wetlands ***(see p. 87)***

Natural Heritage wetlands have been identified by the Washington Natural Heritage Program/DNR as either high quality undisturbed wetlands or wetlands that support state Threatened, Endangered, or Sensitive plant species.

SC 2.1 Is the wetland unit being rated in a Section/Township/Range that contains a Natural Heritage wetland? *(this question is used to screen out most sites before you need to contact WNHP/DNR)*

S/T/R information from Appendix D ☑ or accessed from WNHP/DNR web site ☐

YES ☐ – contact WNHP/DNR (see p. 79) and go to SC 2.2 NO ☑

SC 2.2 Has DNR identified the wetland as a high quality undisturbed wetland or as or as a site with state threatened or endangered plant species?

☐ YES = Category I NO ☑ not a Heritage Wetland

☐ **Cat. I**

SC 3.0 Bogs ***(see p. 87)***

Does the wetland unit (**or any part of the unit**) meet both the criteria for soils and vegetation in bogs? *Use the key below to identify if the wetland is a bog.* ***If you answer yes you will still need to rate the wetland based on its functions.***

1. Does the unit have organic soil horizons (i.e. layers of organic soil), either peats or mucks, that compose 16 inches or more of the first 32 inches of the soil profile? (See Appendix B for a field key to identify organic soils)? Yes - go to Q. 3 ☐ ☑ No - go to Q. 2
2. Does the unit have organic soils, either peats or mucks that are less than 16 inches deep over bedrock, or an impermeable hardpan such as clay or volcanic ash, or that are floating on a lake or pond?

   ☐ Yes - go to Q. 3 ☑ No - Is not a bog for purpose of rating
3. Does the unit have more than 70% cover of mosses at ground level, AND other plants, if present, consist of the "bog" species listed in Table 3 as a significant component of the vegetation (more than 30% of the total shrub and herbaceous cover consists of species in Table 3)?

   ☐ Yes – Is a bog for purpose of rating ☐ No - go to Q. 4

   NOTE: If you are uncertain about the extent of mosses in the understory you may substitute that criterion by measuring the pH of the water that seeps into a hole dug at least 16" deep. If the pH is less than 5.0 and the "bog" plant species in Table 3 are present, the wetland is a bog.

1. Is the unit forested (> 30% cover) with sitka spruce, subalpine fir, western red cedar, western hemlock, lodgepole pine, quaking aspen, Englemann's spruce, or western white pine, WITH any of the species (or combination of species) on the bog species plant list in Table 3 as a significant component of the ground cover *(> 30% coverage of the total shrub/herbaceous cover)?*

2. ☐ YES = Category I No ☑ Is not a bog for purpose of rating

☐ **Cat. I**

Wetland name or number A

SC 4.0 Forested Wetlands ***(see p. 90)***

Does the wetland unit have at least 1 acre of forest that meet one of these criteria for the Department of Fish and Wildlife's forests as priority habitats? *If you answer yes you will still need to rate the wetland based on its functions.*

☐ **Old-growth forests**: (west of Cascade crest) Stands of at least two tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees/acre (20 trees/hectare) that are at least 200 years of age OR have a diameter at breast height (dbh) of 32 inches (81 cm) or more.

NOTE: The criterion for dbh is based on measurements for upland forests. Two-hundred year old trees in wetlands will often have a smaller dbh because their growth rates are often slower. The DFW criterion is and "OR" so old-growth forests do not necessarily have to have trees of this diameter.

☐ **Mature forests**: (west of the Cascade Crest) Stands where the largest trees are 80 – 200 years old OR have average diameters (dbh) exceeding 21 inches (53cm); crown cover may be less that 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth.

☐ YES = Category I NO ☑ not a forested wetland with special characteristics

Cat. I ☐

SC 5.0 Wetlands in Coastal Lagoons ***(see p. 91)***

Does the wetland meet all of the following criteria of a wetland in a coastal lagoon?

☐ The wetland lies in a depression adjacent to marine waters that is wholly or partially separated from marine waters by sandbanks, gravel banks, shingle, or, less frequently, rocks

☐ The lagoon in which the wetland is located contains surface water that is saline or brackish (> 0.5 ppt) during most of the year in at least a portion of the lagoon *(needs to be measured near the bottom)*

☐ YES = Go to SC 5.1 NO ☑ not a wetland in a coastal lagoon

SC 5.1 Does the wetland meets all of the following three conditions?

☐ The wetland is relatively undisturbed (has no diking, ditching, filling, cultivation, grazing), and has less than 20% cover of invasive plant species (see list of invasive species on p. 74).

☐ At least ¾ of the landward edge of the wetland has a 100 ft buffer of shrub, forest, or un-grazed or un-mowed grassland.

☐ The wetland is larger than 1/10 acre (4350 square feet)

☐ YES = Category I ☐ NO = Category II

☐ **Cat. I**

☐ **Cat. II**

CITY OF NEWCASTLE
12835 Newcastle Way Suite 200
Newcastle, WA 98056
(425) 649-4444

SEPA DETERMINATION OF NON-SIGNIFICANCE (DNS)

Application File:	Lake Boren Park Master Plan – SEPA Checklist
Application File Number:	SEPA17-002
Applicant:	Julie Cassata Project Planner City of Newcastle 12835 Newcastle Way Suite 200 Newcastle WA 98056
Date of Issuance:	March 9, 2017
Project Location:	The project site is 13058 SE 84th Way. The project is within the NW ¼ of Section 33; Township 24 N; and Range 5 of the Public Land Survey. Parcel #6073000010
Project Description:	The project is a master plan update and includes phased park improvements over time, such as new park amenities and restoration/improvement of existing amenities.
Lead Agency Responsible Official:	Thara Johnson, Interim Community Development Director City of Newcastle 12835 Newcastle Way, Suite 200 Newcastle, WA 98056 (425) 649-4444
City of Newcastle Permits:	SEPA Determination
Zoning:	R-6, LOS
Comprehensive Plan Area:	City Park, City Owned, Single-Family, Lake Boren, Critical Area Tract

Notes:

A. This determination is based on review of the project file including the following documents:

- Project SEPA17-002 Environmental Checklist, the Lake Boren Park Master Plan, and Appendices including the permitting memorandum and wetland/stream reconnaissance report.

Determination of Non-Significance (DNS):

Threshold Determination

The responsible official of the lead agency finds that the above-described proposal does not have a probable adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21C.030.

This finding is made pursuant to RCW 43.21C, NMC 14.05 and WAC 197-11 after reviewing a completed environmental checklist and other information on file with the lead agency. The responsible official finds this information reasonably sufficient to evaluate the environmental impact of this proposal. This information is available to the public on request.

This DNS is issued under WAC 197-11-340(2); the lead agency will not act on this proposal for 14 days from the date of this determination (March 9, 2017).

Comment Period

Agencies, tribes, and the public are encouraged to review and comment on the proposed project and its probable environmental impacts. **Comments must be submitted no later than 5:00 PM on March 23, 2017** to: Caleb Miller, Planning Technician, City of Newcastle, 12835 Newcastle Way Suite 200, Newcastle, WA 98056.

Appeal Period

Appeals must be in writing and received at Newcastle City Hall no later than **5:00 p.m. on April 6, 2017**. You should be prepared to make specific factual objections. Contact the Community Development Department at Newcastle City Hall to read or to ask about the procedures for SEPA appeals.

Signature of Responsible Official

Signature

03/08/2017
Date

SEPA ENVIRONMENTAL CHECKLIST

Purpose of checklist:

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

***Instructions for applicants*:**

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for Lead Agencies:
Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

The help links in this checklist are intended to assist users in accessing guidance on the checklist questions. Links are provided to the specific sections of the guidance applicable to the questions. However, the links may not work correctly on all devices. If the links do not work on your device, open the guidance at www.ecy.wa.gov/programs/sea/sepa/apguide/EnvChecklistGuidance.html and navigate to the appropriate section.

Use of checklist for nonproject proposals: [help]

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

A. Background [help]

1. Name of proposed project, if applicable: [help]

Lake Boren Park Master Plan

2. Name of applicant: [help]

City of Newcastle, Public Works Department

3. Address and phone number of applicant and contact person: [help]

Julie Cassata
Project Planner
12835 Newcastle Way, Suite 200
Newcastle, WA 98056
425.649.4143 ext. 110

4. Date checklist prepared: [help]

11/10/2016

5. Agency requesting checklist: [help]

City of Newcastle

6. Proposed timing or schedule (including phasing, if applicable): [help]

This is a master plan update. Phasing is proposed for the improvements but specific dates have not been established. At the time funding is available and specific projects are selected for implementation schedules will be established.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain. [help]

This is a master plan with phased implementation. Future activity includes the implementation of park improvements and the identification of approval requirements specific to the work within each phase.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal. [help]

Lake Boren Park, Wetland/Stream Reconnaissance Report, dated April 13, 2016
Lake Boren Park, Permitting Memorandum, dated April 13, 2016

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain. [help]

None known at this time.

10. List any government approvals or permits that will be needed for your proposal, if known. [help]

The project is a master plan update and includes phased park improvements. Approvals and permits will be required for the implementation of the improvements. Specific approvals and permits will be identified as each phase is implemented

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.) [help]

The site is an existing city park with the City of Newcastle on approximately 30 acres (1,300,000 SF) located on Lake Boren. The proposal improves access to and through the site with a network of soft and hard surface trails, boardwalks and parking. The proposal features new amenities including an amphitheatre, outdoor shelter, off-leash dog park, restroom expansion, and small picnic areas. The proposal features improvements/modifications to existing amenities including: an expanded tennis court area, a beach, rebuilt docks along the lake shore.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. [help]

The section, township, range is NE 33 24 5.

The project area is bound by the following features:
To the west: City of Seattle SPU-Water Utility corridor (Waterline Trail)
To the north, from west to east: 129th Ave SE, 7840 129th Ave SE, Lake Boren, 13055 SE 76th St, 76th St
To the east: Coal Creek Parkway SE
To the south: SE 84th Way

The proposed project is located at 13058 SE 84th Way, Newcastle, WA 98059.

B. ENVIRONMENTAL ELEMENTS [help]

1. Earth [help]

a. General description of the site: [help]

The site is adjacent to Lake Boren and Boren Creek. The western edge of the park is the high point and it generally slopes to the east towards the lake and the creek. The low point of the site is in the southeast corner where Boren Creek exits the site.

(circle one): Flat, **rolling**, hilly, steep slopes, mountainous, other _____

b. What is the steepest slope on the site (approximate percent slope)? [help]

The steepest slope on the site is approximately 60%.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils. [help]

Soils found on site include sandy loam, loamy sand, and hydric saturated soils. Visible rock outcrops are present throughout the site and bedrock commonly occurs immediately below soil.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe. [help]

No indications of unstable soils are present.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill. [help]

No fill is proposed. Grading is to be balanced between cut and fill with no export of materials. There are three primary areas of grading. The first graded area an approximate 50,000 SF amphitheatre where grading is proposed to create a shallow bowl; the material excavated will be placed around the perimeter of the bowl to accentuate the bowl effect; if bedrock/outcrops are encountered, they are to be left in place and the soil excavated around them in the bowl area. The amphiteatre grading proposed would move approximately 2,000 to 3,000 CY within the amphitheatre area. The second graded area is an 270 LF accessible pathway entrance to the park cut through a rolling hill; approximately 1,000 CY of soil will be excavated and reused on site to make a more level parking area. The third graded area is approximately 30,000 SF and includes installing a vault to replace a stormwater pond using a balance of cut and fill. Approximately 3,500 CY of soil will be moved within the area.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe. [help]

Erosion could occur as a result of clearing and construction. Exposed soil areas could be subject to erosion during construction. Erosion control measures will be used during any construction activities. All soil areas exposed during construction are proposed to be covered with paving or planted so that no exposed soil areas will remain. No slopes are proposed to be steepened greater than is typical for the site. Stormwater is proposed to be managed as close to the source as possible and a number of rain gardens, swales are proposed to accomplish this.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? [help]

Less than 10% of the site will be covered with impervious surfaces.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any: [help]

Potential for erosion will be limited and mitigated through vegetation management, replanting, avoidance of any problem areas identified, and through the use of standard Temporary Erosion Sediment Control measures such as silt curtains, amended soils, and stormwater management.

2. Air [help]

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known. [help]

This is a non-project action. Individual projects will be evaluated on a project by project basis.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe. [help]

The vehicle traffic on Coal Creek Parkway SE, which is an arterial that has moderately heavy traffic, is a known off-site source of emissions.

c. Proposed measures to reduce or control emissions or other impacts to air, if any: [help]

This is a non-project action. Individual projects will be evaluated on a project by project basis.

3. **Water** [help]

a. Surface Water:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. [help]

The project area includes a number of wetlands, Lake Boren which is classified as a wetland, and Boren Creek which is also classified as a wetland. All surface water flows into Boren Creek.

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans. [help]

The project includes trails, boardwalks, picnic areas, an outdoor shelter, parking improvements, and beach improvemens within 200 feet of the described waters. Over water work is limited to dock repair and boardwalk construction.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material. [help]

Approximately 50 CY of aggregate fill material will be placed as part of the beach improvements. The source of this fill will be determined by the contractor.No additional fill material is anticipate. No dredge material is anticipated.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. [help]

No surface water withdrawals or diversions are anticipated.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan. [help]

No.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge. [help]

No discharge of water materials to surface waters is anticipated.

b. Ground Water:

1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known. [help]

No groundwater will be withdrawn.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve. [help]

No waste material will be discharged into the ground.

c. Water runoff (including stormwater):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe. [help]

Runoff from the proposed project is limited to storm water. All stormwater will be collected on site through a combination of existing conventional stormwater collection methods such as pipes and catch

basins and through the use of rain gardens/bioswales and infiltration into pervious surfaces. All surface flow on the site flows to Lake Boren and eventually to Boren Creek.

2) Could waste materials enter ground or surface waters? If so, generally describe. [help]

No waste materials could enter ground or surface waters.

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe. [help]

The proposal maintains existing drainage patterns.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any: [help]

The proposal includes rain gardens, bioswales, and infiltration into planted/lawn areas.

4. **Plants** [help]

a. Check the types of vegetation found on the site: [help]

__x__deciduous tree: alder, maple, aspen, other
__x__evergreen tree: fir, cedar, pine, other
__x__shrubs
__x__grass
_____pasture
_____crop or grain
_____ Orchards, vineyards or other permanent crops.
__x__ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
__x__water plants: water lily, eelgrass, milfoil, other
__x__other types of vegetation
Groundcover / herbaceous layer

b. What kind and amount of vegetation will be removed or altered? [help]

Approximately 50 existing trees will removed. Approximately 52,000 SF of wetland and wetland buffer will be restored. Approximately 25,000 SF of vegetation will be removed to accommodate new trails.
Mitigation plans will be prepared and submitted for individual projects as they occur.

c. List threatened and endangered species known to be on or near the site. [help]

There are no threatened or endangered plant species on or near the site.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any: [help]

Approximately 52,000 SF of wetland and wetland buffer will be restored with native vegetation. Rain gardens and bioswales are to be planted with native vegetation. Approximately 35-50 trees will be planted.
Mitigation plans will be prepared and submitted for individual projects as they occur.

e. List all noxious weeds and invasive species known to be on or near the site. [help]

English Holly, Yellowflag Iris, Knotweed, Himalayan Blackberry and English Ivy are present.

5. **Animals** [help]

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site. [help]

Examples include:

birds: hawk, heron, eagle, songbirds, other:
mammals: deer, bear, elk, beaver, other:
fish: bass, salmon, trout, herring, shellfish, other _____

Salmon, deer, heron, songbirds, beaver, trout

b. List any threatened and endangered species known to be on or near the site. [help]

Salmon are present in Lake Boren and Boren Creek.

c. Is the site part of a migration route? If so, explain. [help]

Yes. The site is within the Pacific Flyway. The Pacific Flyway extends from the tundra of Alaska and Canada to the Gulf of California, and as far west as Hawaii, and as far east as the Rocky Mountain Range.

d. Proposed measures to preserve or enhance wildlife, if any: [help]

Wetland restoration, rain garden and bioswale planting. Mitigation plans will be prepared and submitted for individual projects as they occur.

e. List any invasive animal species known to be on or near the site. [help]
Eastern gray squirrel, rats, and other non-native rodents are likely present in the project area.

6. **Energy and Natural Resources** [help]

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc. [help]

The project includes several outdoor shelters, existing and proposed, which will use electricity from the municipal system. The proposal includes site lighting which would use electricity from the municipal system.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe. [help]

The project would not affect solar energy usage of adjacent properties.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any: [help]

Energy efficient LED technology will be used in all proposed site lighting.

7. **Environmental Health** [help]

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe. [help]

There are no anticipated environmental health hazards.

1) Describe any known or possible contamination at the site from present or past uses. [help]

There is no known or possible contamination.

2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity. [help]

No hazardous chemicals/conditions are present.

3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project. [help]

No hazardous chemicals/conditions are present.

4) Describe special emergency services that might be required. [help]

No special emergency services are required.

5) Proposed measures to reduce or control environmental health hazards, if any: [help]

No measures are proposed.

b. Noise [help]

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)? [help]

The project is adjacent to Coal Creek Parkway which is an arterial and has moderately heavy traffic.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site. [help]

Construction of the proposed project would result in construction noise. The project hosts infrequent community events such as concerts in the park. No consistent long term source of noise is foreseen.

3) Proposed measures to reduce or control noise impacts, if any: [help]

The proposed bowl shape of the amphitheatre is a measure to control noise from the infrequent community events.

8. **Land and Shoreline Use** [help]

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe. [help]

The current use of the site is Park land. The adjacent properties are streets, Lake Boren, and single family residential.

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use? [help]

The project site has not been used as a working farmland or working forest land.

1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how: [help]

Not applicable.

c. Describe any structures on the site. [help]

There are four structures currently on the site including two park shelters, a restroom building, and one park maintenance facility.

d. Will any structures be demolished? If so, what? [help]

No structures will be demolished.

e. What is the current zoning classification of the site? [help]

City of Newcastle zoning classification: Limited Open Space (LOS) and R-6 (Residential, 6 dwelling units per acre)

f. What is the current comprehensive plan designation of the site? [help]

According to Figure LU-2, Existing Land Use, Buildable Land, and Critical Areas, in the comprehensive plan, the site is made up of City Park, City Owned, Single Family, Lake Boren, and Sensitive Area Tract designations.

According to Figure LU-5, Zoning Map, in the comprensive plan, the site is made up of Limited Open Space and R-6 (Residential, 6 dwelling units per acre) designations.

g. If applicable, what is the current shoreline master program designation of the site? [help]

Not applicable, no shoreline designation.

h. Has any part of the site been classified as a critical area by the city or county? If so, specify. [help]

The site contains critical areas defined as the Lake Boren Wetland Complex. This includes Lake Boren (type III wetland) and five wetlands (type II – IV), and Boren Creek.

i. Approximately how many people would reside or work in the completed project? [help]

No people would reside in the completed project. No people will work within the completed project with the exception of park maintenance staff consisting of City employees and contracted maintenance workers.

j. Approximately how many people would the completed project displace? [help]

No people would be displaced by the project.

k. Proposed measures to avoid or reduce displacement impacts, if any: [help]

Not applicable.

L. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any: [help]

The project is a park surrounded by existing residential development and allowed by city code.

m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any: [help]

No agricultural or forest lands exist near the site.

9. **Housing** [help]

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing. [help]

No housing is included with the proposal.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing. [help]

Not applicable.

c. Proposed measures to reduce or control housing impacts, if any: [help]

Not applicable.

10. **Aesthetics** [help]

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed? [help]

The tallest height of any proposed structure is 35 feet.

b. What views in the immediate vicinity would be altered or obstructed? [help]

No views would be obscured or altered.

b. Proposed measures to reduce or control aesthetic impacts, if any: [help]

No measures are proposed.

11. **Light and Glare** [help]

a. What type of light or glare will the proposal produce? What time of day would it mainly occur? [help]

The proposal includes pathway lighting for nighttime use of the site.

b. Could light or glare from the finished project be a safety hazard or interfere with views? [help]

The light will not be a safety hazard or interfere with views.

c. What existing off-site sources of light or glare may affect your proposal? [help]

No off-site sources will affect the proposal.

d. Proposed measures to reduce or control light and glare impacts, if any: [help]

New lighting will be pedestrian level pathway lighting and will direct light downward in order to have minimal impact on adjacent properties.

12. **Recreation** [help]

a. What designated and informal recreational opportunities are in the immediate vicinity? [help]

The proposal is a park site with recreational opportunities including boating, tennis, basketball, playground, volleyball, trails, open lawns, and bicycling.

b. Would the proposed project displace any existing recreational uses? If so, describe. [help]

No recreational opportunities will be displaced by the project.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any: [help]

No measures proposed. The plan will expand or add opportunities including dog off leash play, additional court for tennis / pickleball, landform play, gardening, swimming, fishing, picnicking, and additional pathways for walking and observing natural features.

13. **Historic and cultural preservation** [help]

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers located on or near the site? If so, specifically describe. [help]

The Newcastle Cemetery, located outside the park near the northwest corner of the site is on the King County Landmark Register. There are no historic structures.

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources. [help]

There are no landmarks or evidence of Indian or historic use. It has been established that a railroad line that once carried Newcastle's coal to Seattle ran along the east side of Lake Boren and adjacent to Boren Creek on the east side of the park.

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc. [help]

Not applicable; this is a non-project action. Individual project impacts will be evaluated during specific project reviews.

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required. [help]

Not applicable; this is a non-project action. Individual project impacts will be evaluated during specific project reviews.

14. **Transportation** [help]

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any. [help]

The site is bounded on the East by Coal Creek Parkway SE and on the South by SE 84th Way. 129th Ave SE is to the North. There is vehicular access to the site from SE 84th Way and 129th Ave SE.

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop? [help]

There are two bus stops serving the site along Coal Creek Parkway SE.

c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate? [help]

The site currently has 55 parking spaces. The proposal includes an additional 70 parking spaces for a total of 125 parking spaces.

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private). [help]

No modifications or improvements to existing roads are required as part of the proposal.
The Master Plan proposes changes and additions to pedestrian circulation within the park. All walkways will be public. The CrossTown Trail route will follow along the south end of Lake Boren.

e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe. [help]

No water, rail or air transportation will be used by the proposal.

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates? [help]

Not applicable; this is a non-project action. Individual project impacts will be evaluated during specific project reviews.

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe. [help]

The proposal will not interfere with the movement of agricultural and forest products.

h. Proposed measures to reduce or control transportation impacts, if any: [help]

Not applicable.

15. **Public Services** [help]

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe. [help]

The proposal will not result in an increased need for public services.

b. Proposed measures to reduce or control direct impacts on public services, if any. [help]

Not applicable.

16. **Utilities** [help]

a. Circle utilities currently available at the site: [help]
electricity, natural gas, **water**, **refuse service**, telephone, **sanitary sewer**, septic system, other _____

c. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed. [help]

No new utilities are proposed for the project. Existing systems may need to be expanded or upgrade but that will be determined by the work in each phase.

C. Signature [help]

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: Julie Cassata

Name of signee JULIE CASSATA

Position and Agency/Organization PROJECT PLANNER, CITY OF NEWCASTLE

Date Submitted: 3-8-2017

D. supplemental sheet for nonproject actions [help]

(**IT IS NOT NECESSARY** to use this sheet for project actions)

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?

The project is in the planning stage and individual projects will be identified in the future for implementation. The plan proposes additional impermeable surfacing at the plaza and parking areas and this may lead to additional stormwater discharge. On site controls are proposed. Emissions to the air may temporarily increase during construction and with increased park us and people driving to the site. Toxic or hazardous substances are not associated with the project. Some of the projects identified in the plan may lead to increased noise as people visit the new facilities.

Proposed measures to avoid or reduce such increases are:

Individual projects will be evaluated during individual project reviews.

2. How would the proposal be likely to affect plants, animals, fish, or marine life?

The proposal aims to improve habitat value and water quality around Lake Boren and Boren Creek. Invasive species will be removed and access will be on designated routes of travel.

Proposed measures to protect or conserve plants, animals, fish, or marine life are:

Individual projects will be evaluated during individual project reviews.

3. How would the proposal be likely to deplete energy or natural resources?

The plan proposes opportunities for additional use of the park including gatherings, and recreation. These events are very limited in duration, possibly a few hours to one day and added need for resources is at most minimal.

Proposed measures to protect or conserve energy and natural resources are:

None at this time.

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?

This plan intends to enhance environmentally sensitive areas by improving habitat and stream and wetland buffers. Walking paths will cross wetlands, a stream and their buffers.

Proposed measures to protect such resources or to avoid or reduce impacts are:

Individual projects will be evaluated during individual project reviews.

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

The plan includes opportunities for park users to access the lake or get closer to view the lake. Enhanacements are proposed to the beach to stabilize the area and provide for one controlled access location. Several existing locations from which to view the lake are enhanced to improve the park user experience. These are all structures that are located on land and may extend over water. A boardwalk is proposed over the southeast end of the lake for a connection across the park and the opportunity to view the lake.

Proposed measures to avoid or reduce shoreline and land use impacts are:

Individual projects will be evaluated during individual project reviews.

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

Park visitation may increase and result in additional vehicle trips to the park. No significant changes are proposed that would affect public utitlites and services.

Proposed measures to reduce or respond to such demand(s) are:

Individual projects will be evaluated during individual project reviews.

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

No conflicts known. Further studies to determine impact will be done on an individual project basis.

Public Meeting 1

1.12.16

Lake Boren Park

Notes from post-it sheet 1

1. Habitat – SW corner
2. Boardwalk – elevated walks
3. Question: Existing wildlife – is lake stocked? What lives in park, or did?
4. Lake access – kids and dogs
5. Shelters – more inviting
6. Watercraft rentals
7. Expand kids play – nature play
8. Climbing wall
9. Off leash (3/4 to 1 acre)
10. Rope swing off deck
11. Community space for meetings/classes over detention

Notes from post-it sheet 2

1. Make dock bigger with seating
2. Connect trails/Newcastle is a trail city
3. Connect east to west with arboret(?) style walk
4. More seating
5. More picnic shelters
6. More shade
7. Amphitheater
8. Climbing wall (see Kent Arbor Hill Park)
9. Skate park
10. Better swimming access
11. What is funding potential?
12. What is already funded?
13. Where does Lake Boren creek go? More about system.
14. Keep trails clear (e.g. low hanging trees)
15. Keep costs low.
16. Simple is good – grass, trees, trails
17. More shaded areas
18. Nerf gun arena
19. What are different uses for each dock?

Notes from "Share Your Vision" board

1. Open the cemetery so more people can enjoy the beauty and keep an eye on the property to discourage vandalism
2. Off leash dog area(s)
3. Build a modest, covered, permanent bandstand
4. Amphitheater
5. Lights on the tennis courts

6. Build a small community center that has a meeting room, kitchen, small interpretive center (unmanned). The center at Bellevue's Lewis and Clark Park is a good example.
7. Maintain trail (safe)
8. Existing structures in stream?
9. Rebuild a deck on east side of lake to provide a quiet place to enjoy the lake from the east shore.

Notes from "Existing Conditions" board 1

1. Fix me; trash can here (both referring to bottom photo of wooden structure near tree)

Notes from "Existing Conditions" board 2

1. Modernize picnic shelters
2. New stand with cover
3. Fix docks and wood floorboards so it's safe to walk on
4. Add a swing for developmentally disabled adults
5. Add a kids' zip line – low enough that you can fall off without injury. Capable of supporting the weight of a parent with child on lap.
6. Increase usage for colder weather activities
7. Small beach for swim/paddle board/kayak
8. Notes from "Recreation and History" board
9. P-Patch
10. Provide seasonal business/office activities: skating rink in winter; paddle boats in summer; food trucks for lunch May-Aug with seating tables near lake
11. Tribute board or wall to mining history
12. Notes from "Natural Resources" board
13. Dog park/swimming area (fenced/off leash)
14. Better access for paddleboards/canoes
15. Skate board park to have fun
16. Science area (microscopes with water samples, leaf rubbings, puppet creation station)
17. Open up and expand path from Coal Creek Pkwy to park

Public Meeting 2 3.10.16
Lake Boren Park Page 1 of 1

Notes from post-it sheet 1

1. More interpretive signs
2. Rail history. Did it run through the site? Where?
3. More pickle ball courts/striping.
4. Where is snow sledding?
5. Improve shelter BBQ (maybe w/ masonry/rock)
6. Fire pits out in forest area.
7. Ring/line/allee of trees around amphitheater for shade.
8. Kayak launch at dock
9. Seating/shade near areas vendors use
10. Consistent lighting
11. Cross town trail connection – south side of 79th.

Landscape Architecture
Urban Design

Berger Partnership PS
1721 8th Ave N
Seattle, WA 98109

206 325 6877
bergerpartnership.com

Public Meeting 3 5.3.16
Lake Boren Park Page 1 of 1

Notes from post-it sheet 1

1. Improvements on 129th (sidewalk)
2. Consider how it ties into north end of lake in a unified circuit
3. Make connection to Crosstown trail (east to west, close to lake)
4. Think about trail being closer to the water and maybe crossing the water

Notes from post-it sheet 2

1. How is the skate park buffered in terms of noise? Berming? Planting?
2. OLA location is good and buffered from neighborhood
3. Would like to see more amenity in new properties
4. Luther Burbank OLA is good, working model.
    a. Fence enclosure/clearly defined
    b. Ante chamber entrance
5. Water access: really cool to have a watercraft rental area for people who don't have watercraft. Also, maybe a beach.
6. Not sure if dog park is needed more. How much support is there for it in the community?
7. Dog parks should be away from road and as a part of a park as an integral, family-oriented, community-building element. LBP should be an inclusive park.
8. Amphitheater breaks up open space
9. All the improvements seem fun. Kids can play in.

Notes from post-it sheet 3

1. Amphitheater and park allow room for imagination of other uses.
2. Can amphitheater be where parking expansion is?
3. Green spaces should be left open, but want a picnic shelter. Maybe on big fishing dock. Near water. Moon-viewing pavilion? (Portland/Vancouver)
4. Park design (amphitheater) encourages and supports park use and complements programming
5. Emphasize lake-oriented activities (snack shack, boat vending)
6. Open up visual access to the lake
7. Study/consider if stage has enough viewing/hearing area to accommodate concerts/uses
8. Add rock climbing structure/bouldering wall

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RESOLUTION NO. 2016-670

A RESOLUTION OF THE CITY OF NEWCASTLE, WASHINGTON, ADOPTING THE UPDATED LAKE BOREN PARK MASTER PLAN.

WHEREAS, Lake Boren Park is the crown jewel of the City's park system; and

WHEREAS, the City desires to make improvements to Lake Boren Park; and

WHEREAS, the proposed improvements to Lake Boren Park are to be established through a thorough and thoughtful master planning and public outreach process; and

WHEREAS, The Master Plan effort included an extensive and complete public involvement process consisting of three public meetings, three online surveys, a city-wide mailing, five notice posts located around Lake Boren, and a kiosk prominently located in Lake Boren Park.; and

WHEREAS, the public involvement process input was received from hundreds of interested residents; and

WHEREAS, the updated Master Plan document prepared by the Berger Partnership is the culmination of a committed and thoughtful effort to guide the future enhancement of this significant community resource;

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF NEWCASTLE, WASHINGTON DOES HEREBY adopt the updated Lake Boren Park Master Plan attached hereto as Attachment A and incorporated by reference.

APPROVED BY THE CITY COUNCIL at a regular meeting held Tuesday, October 4, 2016.

Rich Crispo, Mayor

ATTEST

Sara McMillon, City Clerk

EFFECTIVE: 10/04/2016