

# **Greenway, Bicycle and Pedestrian Advisory Committee (GBPAC)**

Tuesday, October 11<sup>th</sup>, 2016 – 7:00PM

GF City Hall, 255 North 4<sup>th</sup> Street, Grand Forks, ND – A102

## **AGENDA**

### **I. Greenway Items**

- i. River Access Master Plan Update – Kim Greendahl (Greenway)
- ii. Disc Golf Survey – Kim Greendahl (Greenway)
- iii. Unpaved Trail System – Kim Greendahl (Greenway)
- iv. Introduction of the New EGF Parks & Recreation Director – Kim Greendahl (Greenway)
- v. Cross-country Ski Grooming – Kim Greendahl (Greenway)

### **II. Bicycle and Pedestrian Items**

- i. Recap on the group rides this summer – Group Discussion
- ii. Bike and Ped Plan Update – Jairo Viafara (MPO)
- iii. Transportation Alternatives Program – David Kuharenko (GF Engineering Dept.)
- iv. Grand Rides Bike Share – Stephanie Erickson (GF Planning & Community Development Department)

### **III. Other**

- i. What other groups/people should we invite to the table?

### **IV. Next Meeting date: 7PM, Tuesday, November 8<sup>th</sup>, 2016, GF City Hall, 255 North 4<sup>th</sup> Street, Grand Forks, ND – Room A102**

**Attachments:** Disc Golf online survey overview, Welcome Students Bike Share Survey, and BCycle Information on Bike Share

## 2016 Disc golf online survey overview

- Survey was available online for four and a half weeks.
- The intent of the survey was to reach out to the local community about disc golf in the area.
- The original strategy was to allow multiple responses from one IP address. This was stopped less than a week into the survey because of apparent misuse of the system. One IP address had at least eight responses on the same day in a relatively short period of time.
- As stated in question #9 below, the majority of the respondents were from Grand Forks and East Grand Forks, with some from the outlying area of Thief River Falls, Gilby and Crookston. Others were further away in Fargo, Williston, Bismarck, Jamestown, Dickinson, Minot and Williston. Responses were also received as far away as Atlanta, GA, Bloomington, MN and Montana.
- The respondents from communities more than 45 miles away from Greater Grand Forks indicated frequency of play daily or several times a week. There is no indication that this play was done in Greater Grand Forks.

### Survey Questions

**#1 Do you play disc golf?** May or may not represent true numbers, as early in the survey unusually high multiple answers were received from at least one IP address. Lower numbers were received from a few other IP addresses.

**#2 If yes, how frequently, on average, do you play?** Again, may or may not be a true representation for the same reasons stated in question #1.

**#3 Which courses have you played?** Seems to correlate with antidotal information regarding use but question does not specify number of times the player played at each course. A player may have visited a course once a year or once a day, and the tally would not change.

**#4 What is your skill level?** The question was self-evaluative as a definition of skill levels was not provided.

**#5 What improvements would you recommend for the following courses?** This was the heart of the survey. The most requested items were concrete tee pads, new baskets and signs in the majority of the courses. Other requests included more mowing, garbage cans, benches and mosquito control.

**#6 Please share any other comments you have about disc golf in Greater Grand Forks.** Comments range from adding more holes, better maintenance, less maintenance, desire for more championship courses and the value of the disc golf community and courses.

**#7 Tell us about yourself.** The survey was completed by 85% males and 15% females, assuming that all responses were authentic.

**#8 Which category best describes your age?** Majority were in the 21 – 29 and 30 – 39 age categories.

**#9 In what ZIP code is your home located? (enter 5-digit ZIP code; for example, 00544 or 94305).** Majority were from Grand Forks and East Grand Forks, with some from the outlying area of Thief River Falls, Gilby and Crookston. Others were further away in Fargo, Williston, Bismarck, Jamestown,

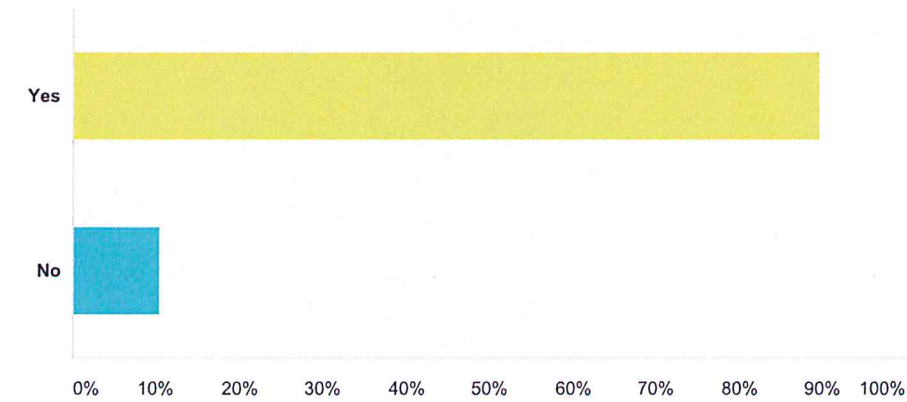
Dickinson, Minot and Williston. Responses were also received as far away as Atlanta, GA, Bloomington, MN and Montana.

**#10 Are you interested in participating in a disc golf advisory group? If so, please leave an email address where you can be reached.** Of the 25 who responded yes to this question, 9 are from out of the area (more than 45 miles from Greater Grand Forks). Skill level was 23 pro or advanced and 2 novices.

**#11 Would you like to receive regular email updates regarding Greenway events and news? If yes, please submit your email address below.** Sixteen people requested to be added to the Greenway updates mailing list.

Q1 Do you play disc golf?

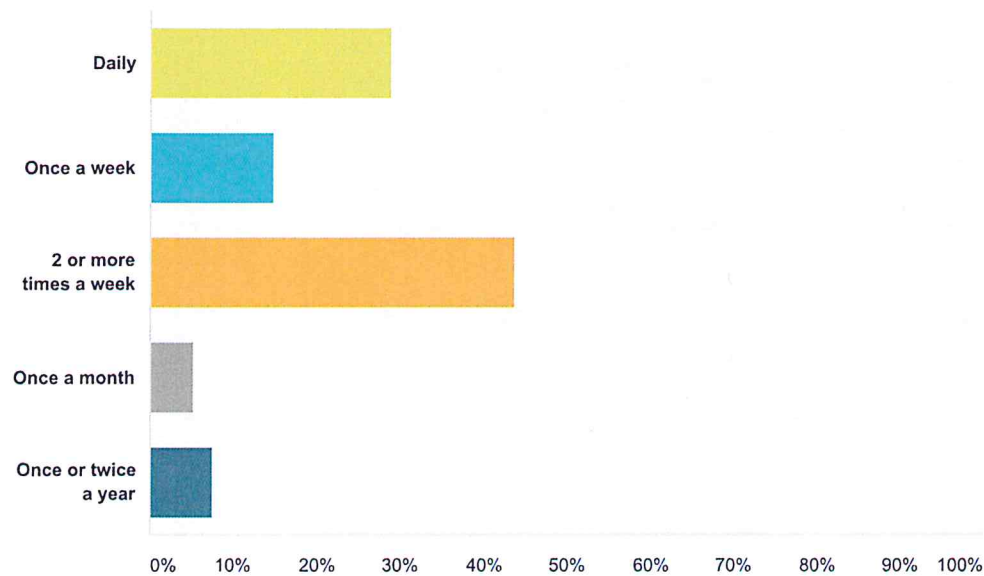
Answered: 106 Skipped: 0



Answer Choices	Responses	
Yes	89.62%	95
No	10.38%	11
Total		106

## Q2 If yes, how frequently, on average, do you play?

Answered: 94 Skipped: 12

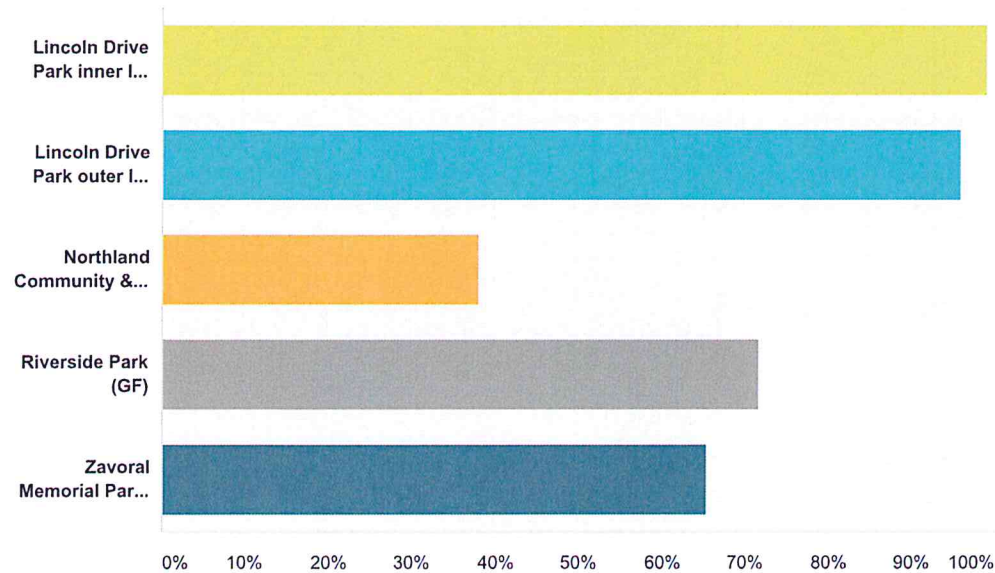


Answer Choices	Responses
Daily	28.72% 27
Once a week	14.89% 14
2 or more times a week	43.62% 41
Once a month	5.32% 5
Once or twice a year	7.45% 7
<b>Total</b>	<b>94</b>

#	Other (please specify)	Date
1	I play as often as i am able	9/12/2016 3:46 PM
2	Once every few years.	8/26/2016 5:20 PM
3	I would play much more often if there was a guide to the park near my house - Riverside.	8/26/2016 3:25 PM
4	I try to play daily, but sometimes I only get out a few times a week.	8/26/2016 2:16 AM
5	Whenever I can!	8/25/2016 10:27 AM
6	Once every couple years - plan to play more as my kids get older and can also play.	8/25/2016 9:11 AM

Q3 Which local courses have you played?

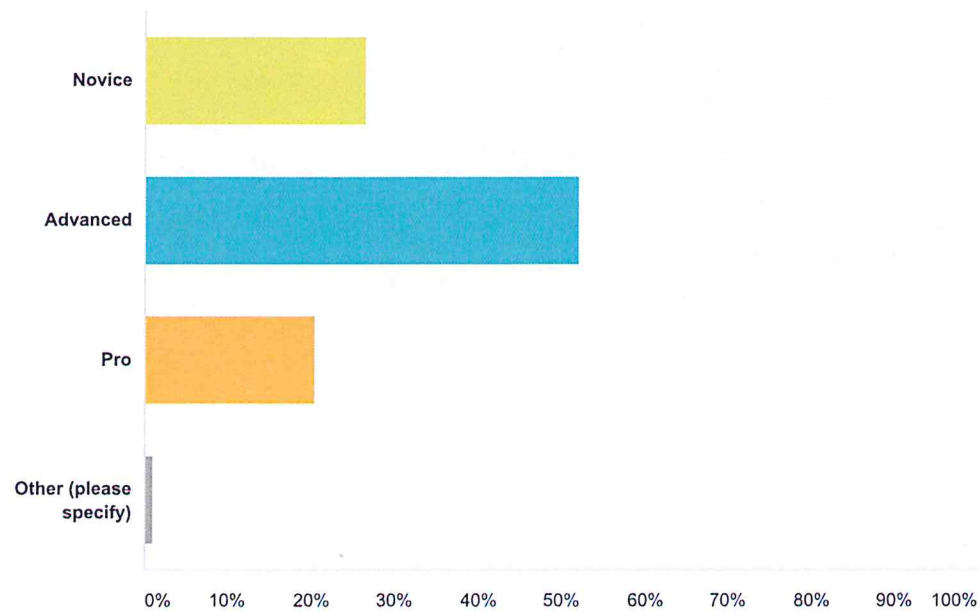
Answered: 95 Skipped: 11



Answer Choices	Responses
Lincoln Drive Park inner loop (GF)	98.95% 94
Lincoln Drive Park outer loop (GF)	95.79% 91
Northland Community & Technical College (EGF)	37.89% 36
Riverside Park (GF)	71.58% 68
Zavoral Memorial Park (EGF)	65.26% 62
Total Respondents: 95	

### Q4 What is your skill level as a disc golf player?

Answered: 98 Skipped: 8



Answer Choices	Responses
Novice	26.53% 26
Advanced	52.04% 51
Pro	20.41% 20
Other (please specify)	1.02% 1
<b>Total</b>	<b>98</b>

#	Other (please specify)	Date
1	Grand master	8/26/2016 3:53 PM

## Q5 What improvements would you recommend for the following courses?

Answered: 80 Skipped: 26

Answer Choices	Responses
Lincoln Drive Park inner loop - GF	61.25% 49
Lincoln Drive Park outer loop - GF	91.25% 73
Riverside Park - GF	72.50% 58
Northland Community & Technical College - EGF	26.25% 21
Zavoral Memorial Park - EGF	36.25% 29
Other comments:	8.75% 7

#	Lincoln Drive Park inner loop - GF	Date
1	Multiple (3) tees for different looks and distances to each of the holes	9/12/2016 3:46 PM
2	None, fun course	9/12/2016 11:52 AM
3	Trimming dead branches	9/7/2016 10:04 AM
4	Fix the signs of the alts	9/4/2016 4:04 PM
5	teepads for alternate teepads	9/2/2016 8:43 AM
6	tee pads, updated correct signs, and baskets	8/31/2016 3:10 PM
7	Alternate tee pads and baskets.	8/30/2016 8:54 PM
8	better lawn care	8/30/2016 8:21 AM
9	Tee pads and signs	8/30/2016 8:18 AM
10	Tee on alts. Signs on alts	8/30/2016 8:03 AM
11	More police patrols to slow drivers down. Some players are rude to park users.	8/29/2016 6:53 AM
12	Updated signage would be awesome	8/27/2016 1:44 AM
13	Better signage.	8/26/2016 9:55 PM
14	Needs to be mowed more often and the mosquitos need to be taken care of as well.	8/26/2016 5:45 PM
15	plant more trees, too wide open	8/26/2016 4:07 PM
16	Cement tees for alternatives	8/26/2016 3:53 PM
17	Map or Guide	8/26/2016 3:25 PM
18	New signs and maps for holes	8/26/2016 12:21 PM
19	It would be nice to see the grass taken care of more frequently. The grass can get pretty long and that makes the bugs worse. Mosquitos can be pretty bad out there, it would be nice if the did a better job spraying for them.	8/26/2016 10:57 AM
20	Labeling direction to green	8/26/2016 9:44 AM
21	Benches on each hole.	8/26/2016 2:16 AM
22	better signs	8/25/2016 11:17 PM
23	Better baskets	8/25/2016 10:10 PM
24	maybe re-plant trees where previous trees have been cut down	8/25/2016 9:15 PM
25	Baskets	8/25/2016 8:59 PM



26	This course is the gem of the city as far as DG goes. Protect it. Erosion control. Plant trees for the ones that are removed. Another good way to improve would be concrete pads for the alternate tees.	8/25/2016 8:34 PM
27	N/A	8/25/2016 8:34 PM
28	New baskets	8/25/2016 5:23 PM
29	Tee pad	8/25/2016 4:30 PM
30	no known improvements to be made	8/25/2016 4:15 PM
31	Concrete tee pads	8/25/2016 4:12 PM
32	New signs as some are fading.	8/25/2016 3:14 PM
33	Few more benches	8/25/2016 3:03 PM
34	Concrete pad for the alternate course	8/25/2016 1:55 PM
35	Trimming dead branches, tee pads for alternates	8/25/2016 1:31 PM
36	More grass cutting, more mosquitospraying	8/25/2016 12:15 PM
37	Woodchips, navigation signs, tee signs, better teepads	8/25/2016 11:52 AM
38	Baskets	8/25/2016 11:48 AM
39	Alternate teeboxes	8/25/2016 11:11 AM
40	Signs benches	8/25/2016 11:07 AM
41	Tee signs	8/25/2016 11:04 AM
42	Baskets are in decent shape for their age but are getting pretty worn out and don't have a lot of life left.	8/25/2016 10:43 AM
43	Needs tee pads and signs	8/25/2016 10:35 AM
44	Update of layout and equipment	8/25/2016 9:58 AM
45	Newer baskets	8/25/2016 9:58 AM
46	Mow more often	8/25/2016 9:56 AM
47	Accurate tee signs	8/25/2016 9:54 AM
48	Baskets would be nice	8/25/2016 9:52 AM
49	Alternate Tee Pads. Signs for alternate inner course.	8/25/2016 9:35 AM
#	<b>Lincoln Drive Park outer loop - GF</b>	<b>Date</b>
1	Some minor tweaks to certain holes, New baskets and tee pads with alternates	9/12/2016 3:46 PM
2	Concrete tee pads	9/7/2016 10:04 AM
3	Tee pads and signs	9/4/2016 4:04 PM
4	We are in need of teepads	9/2/2016 10:04 AM
5	teepads and more difficult pin placements	9/2/2016 8:43 AM
6	tee pads, updated correct signs, and baskets	8/31/2016 3:10 PM
7	Tee pads. You need them.	8/30/2016 8:54 PM
8	Tee pads. Currently it's muddy	8/30/2016 11:36 AM
9	better lawn care	8/30/2016 8:21 AM
10	Tees. Signs. Keep making it harder.	8/30/2016 8:03 AM
11	concrete tee offs	8/29/2016 10:34 PM
12	Cement tee pads	8/28/2016 11:49 PM
13	Concrete tee pads, new baskets, good signage	8/27/2016 1:44 AM
14	Better signage	8/26/2016 9:55 PM

15	Teepads are a must, along with signs. It is dangerous to only have dirt teeboxes when it gets wet out there. They become slippery and can cause injury. Also baskets need to be looked at, on hole 5 it appears a lawn mower hit it and it has a side that is jack upwards. Holes 17-20 have poor baskets that could be replaced too. Lastly hole six should be reinstalled the way that Travis had it. That was an amazing hole, probably the most technical, diverse, and challenging hole to play in Grand Forks. I truly enjoyed that hole and I cannot believe that it has been taken out.	8/26/2016 5:45 PM
16	Concrete. And tee signs.	8/26/2016 5:14 PM
17	tee pads and signs on the holes	8/26/2016 4:07 PM
18	Cement tees new baskets	8/26/2016 3:53 PM
19	Map or Guide	8/26/2016 3:25 PM
20	Tee pads	8/26/2016 12:21 PM
21	Grass and mosquitos need to be taken care of more often on the loop. It can get to a point where it is almost impossible to play. Also teepads and signs would be a great improvement to it. Some of the tee areas can get slippery and get dangerous. Signs would help to make sure people know where they are throwing and what is between them and the basket. Lastly the baskets on holes 17-20 are banged up. It would be nice if those could be replaced.	8/26/2016 10:57 AM
22	Label direction to green	8/26/2016 9:44 AM
23	Tees. Signs.	8/26/2016 6:49 AM
24	Could really use some concrete tee pads as well as some signs	8/26/2016 6:48 AM
25	Garbages on each hole to limit littering. Cement tee pads. Replace damaged baskets. Benches on each hole.	8/26/2016 2:16 AM
26	better signs and tee pads	8/25/2016 11:17 PM
27	Cement pads to drive off of.	8/25/2016 10:10 PM
28	Pads and signage	8/25/2016 10:06 PM
29	Concrete tee pads!!!!!!!!! Actual signs at the tee pads as well	8/25/2016 9:15 PM
30	Concrete pads, better signs.	8/25/2016 9:14 PM
31	Tee pads, baskets tee signs	8/25/2016 8:59 PM
32	This course would greatly benefit from concrete tee pads. It has been a wish list item since it was installed. Planting of new trees is always appreciated when done with thought for the shape it can add to the fairways on the holes.	8/25/2016 8:34 PM
33	Better pads and signs	8/25/2016 8:34 PM
34	Not dirt tee. Maybe signs.	8/25/2016 6:58 PM
35	New baskets and tee pads	8/25/2016 5:23 PM
36	Tee pads	8/25/2016 5:17 PM
37	Championship course if finished.	8/25/2016 4:57 PM
38	Hard concrete tees	8/25/2016 4:41 PM
39	Tee pad	8/25/2016 4:30 PM
40	1Tee pads /New Disc catchers	8/25/2016 4:15 PM
41	Some kind of tee. And sign.	8/25/2016 3:32 PM
42	New signs as some are fading.	8/25/2016 3:14 PM
43	Teepads,benches,and tee signs	8/25/2016 3:03 PM
44	Concrete tee pads. And signs	8/25/2016 2:49 PM
45	Concrete pads and regular mowing	8/25/2016 1:55 PM
46	Tee pads, mow the grass more often, new baskets	8/25/2016 1:31 PM
47	Signage. Concrete	8/25/2016 1:27 PM
48	Not dirt tees. Signage.	8/25/2016 1:24 PM
49	tee pads and signs.	8/25/2016 12:46 PM
50	More grass cutting, more mosquito spraying	8/25/2016 12:15 PM

## GGF Disc Golf Facilities

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51	Tee pads & Signs	8/25/2016 12:00 PM
52	Woodchips, navigation signs, tee signs, better teepads	8/25/2016 11:52 AM
53	Baskets and Tee pads	8/25/2016 11:48 AM
54	Permanant teeboxes	8/25/2016 11:11 AM
55	Signs benches tee pads	8/25/2016 11:07 AM
56	Teepads and teesigns	8/25/2016 11:04 AM
57	Tee boxes, better signage . better baskets	8/25/2016 10:58 AM
58	Concrete tee pads and new baskets, this is the championship level course	8/25/2016 10:43 AM
59	New baskets, cement tee pads. Tee signs	8/25/2016 10:42 AM
60	Tee pads and signs	8/25/2016 10:42 AM
61	Needs tee pads and signs	8/25/2016 10:35 AM
62	concrete tee pads, signs	8/25/2016 10:27 AM
63	Tees. Signs.	8/25/2016 10:01 AM
64	Tee pads and signs	8/25/2016 9:58 AM
65	Mowing	8/25/2016 9:58 AM
66	Concrete and signs.	8/25/2016 9:57 AM
67	New tees	8/25/2016 9:56 AM
68	Cement tee pads for every hole, some holes need new baskets, accurate tee signs	8/25/2016 9:54 AM
69	Tee pads, signs. Maybe baskets	8/25/2016 9:54 AM
70	1.Concrete tee pads 2.Baskets 3.tee signs	8/25/2016 9:52 AM
71	Tee pads and tee signs	8/25/2016 9:51 AM
72	Tee Pads and signs.	8/25/2016 9:35 AM
73	Better or more defined tee boxes	8/25/2016 9:19 AM
#	<b>Riverside Park - GF</b>	<b>Date</b>
1	Complete redesign allowing us to use the entirety of the park definetly new baskets and signage	9/12/2016 3:46 PM
2	Concrete tee pads, better signs.	9/7/2016 10:04 AM
3	Baskets and tee pads	9/4/2016 4:04 PM
4	teepads and signs	9/2/2016 8:43 AM
5	tee pads, updated correct signs, and baskets	8/31/2016 3:10 PM
6	9 more holes and tee pads.	8/30/2016 8:54 PM
7	New baskets, they are really beat up	8/30/2016 11:36 AM
8	better baskets	8/30/2016 8:21 AM
9	Better baskets	8/30/2016 8:18 AM
10	Tees and signs.	8/30/2016 8:03 AM
11	concrete tee offs and better baskets	8/29/2016 10:34 PM
12	Tee pads, better signage	8/27/2016 1:44 AM
13	Concrete. And tee signs	8/26/2016 5:14 PM
14	cut down or trim the multiple trees too close to tees	8/26/2016 4:07 PM
15	More holes cement tees new baskets	8/26/2016 3:53 PM
16	Map or Guide	8/26/2016 3:25 PM
17	Increased grounds maintenance	8/26/2016 12:21 PM

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18	Better baskets. Some of them are in pretty rough shape and it would be great if better ones could be put in.	8/26/2016 10:57 AM
19	Tees. Signs.	8/26/2016 6:49 AM
20	Garbages on each hole to limit littering. Cement tee pads. New baskets or replace badly damaged baskets. Benches on each hole. Closer transition from basket of hole six to tee box of hole seven. 18 holes or possibly more holes. Also maybe redesign so hole 1 is closer to parking lot. I disc golf riverside a lot because it is beautiful, quiet, and close to my home.	8/26/2016 2:16 AM
21	better signs and tee pads	8/25/2016 11:17 PM
22	Pads and signage	8/25/2016 10:06 PM
23	Baskets!	8/25/2016 9:14 PM
24	Tee pads, tee signs	8/25/2016 8:59 PM
25	Never played.	8/25/2016 8:34 PM
26	New holes added	8/25/2016 8:34 PM
27	Not dirt tee. Maybe signs.	8/25/2016 6:58 PM
28	New baskets and tee pads	8/25/2016 5:23 PM
29	signs pointing to hole and next hole location	8/25/2016 5:22 PM
30	Tee pads and cages	8/25/2016 5:17 PM
31	Needs sign and tee off.	8/25/2016 4:57 PM
32	Better signage. Hard to locate where to begin course.	8/25/2016 4:41 PM
33	2New disc catchers/tee pads/ trash recepticals/ 9 more holes	8/25/2016 4:15 PM
34	Some kind of tee. And sign	8/25/2016 3:32 PM
35	Tee signs	8/25/2016 3:03 PM
36	Concrete tee pads. And signs.	8/25/2016 2:49 PM
37	More holes	8/25/2016 1:55 PM
38	Tee pads, better signs (newcomers struggle to find hole 1), new baskets	8/25/2016 1:31 PM
39	Signage. Concrete.	8/25/2016 1:27 PM
40	Not dirt tees. Signage.	8/25/2016 1:24 PM
41	tee pads and signs	8/25/2016 12:46 PM
42	Mosquito spraying	8/25/2016 12:15 PM
43	Tee Signs, Navigation Signs, Teepads, New Baskets, Basic Overhaul	8/25/2016 11:52 AM
44	Baskets and tee pads	8/25/2016 11:48 AM
45	Signs benches tee pads	8/25/2016 11:07 AM
46	Teepads and teesigns	8/25/2016 11:04 AM
47	tee pads, tee signs, BASKETS! more area to have a full 18 around the pond and by the tennis courts	8/25/2016 10:43 AM
48	New baskets, cement Tee pads	8/25/2016 10:42 AM
49	concrete tee pads, basket repair, course signs	8/25/2016 10:27 AM
50	Tees. Signs.	8/25/2016 10:01 AM
51	New baskets and general maintenance	8/25/2016 9:58 AM
52	Signs	8/25/2016 9:57 AM
53	Signs, tees, baskets	8/25/2016 9:56 AM
54	Cement tee pads and new baskets, accurate tee signs	8/25/2016 9:54 AM
55	Baskets, signs.	8/25/2016 9:54 AM
56	Tee pads	8/25/2016 9:52 AM

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57	Tee Pads and signs.	8/25/2016 9:35 AM
58	Better or more defined tee boxes	8/25/2016 9:19 AM
#	<b>Northland Community &amp; Technical College - EGF</b>	<b>Date</b>
1	Nothing it is on a school property	9/12/2016 3:46 PM
2	It's to easy	9/4/2016 4:04 PM
3	dont play	9/2/2016 8:43 AM
4	better signs	8/30/2016 8:21 AM
5	Too easy.	8/30/2016 8:03 AM
6	N/A - haven't played	8/27/2016 1:44 AM
7	put in better location, but leave a couple for students	8/26/2016 4:07 PM
8	Map or Guide	8/26/2016 3:25 PM
9	Better layout, better planning	8/25/2016 9:41 PM
10	I only played this a few times. I remember having a tough time finding my way. Accurate and informational tee signs are a great amenity. As well as a course map near the first tee.	8/25/2016 8:34 PM
11	N/A	8/25/2016 8:34 PM
12	Larger signs for each hole. Can be troublesome to find the holes with all the back and forth. Hard concrete tees	8/25/2016 4:41 PM
13	no known improvements to be made	8/25/2016 4:15 PM
14	Benches tee signs	8/25/2016 3:03 PM
15	Tee pads & signs	8/25/2016 12:00 PM
16	More difficult shots	8/25/2016 11:04 AM
17	The layout is not well thought out and could use an update	8/25/2016 10:43 AM
18	signs, tee pads	8/25/2016 10:27 AM
19	Better signage	8/25/2016 9:58 AM
20	More holes	8/25/2016 9:56 AM
21	N/a	8/25/2016 9:54 AM
#	<b>Zavoral Memorial Park - EGF</b>	<b>Date</b>
1	Add six more holes and re align the course a bit	9/12/2016 3:46 PM
2	Younger trees. You can tell many trees are getting old.	9/7/2016 10:04 AM
3	great park for beginners not much too change	9/2/2016 8:43 AM
4	more holes	8/30/2016 8:21 AM
5	Too easy.	8/30/2016 8:03 AM
6	More parking, upgraded signage	8/27/2016 1:44 AM
7	There are holes along the course that need to be filled in for safety. Mowing the course more often.	8/26/2016 9:55 PM
8	Re design. Not safe. You throw right by people playing another hole.	8/26/2016 5:14 PM
9	make a full course	8/26/2016 4:07 PM
10	More holes	8/26/2016 3:53 PM
11	Map or Guide	8/26/2016 3:25 PM
12	None	8/26/2016 12:21 PM
13	Too easy.	8/26/2016 6:49 AM
14	Longer holes/more holes and garbages on each hole.	8/26/2016 2:16 AM

15	My absolute favorite "short" 9 hole in the area. This course is such a treat to play when the other courses are suffering from flood issues. Not much room to improve in my opinion. Well thought out planting of new trees, and maybe provide a pathway of packed snow for those who dare play in the winter months( Lincoln has a lot of X country ski traffic so I used to play here instead)	8/25/2016 8:34 PM
16	N/A	8/25/2016 8:34 PM
17	More challenging	8/25/2016 5:23 PM
18	no know improvements to be made	8/25/2016 4:15 PM
19	New signs as some are fading.	8/25/2016 3:14 PM
20	Great park no need to update	8/25/2016 3:03 PM
21	Trimming dead branches, plant new trees.	8/25/2016 1:31 PM
22	more baskets	8/25/2016 12:46 PM
23	Design/Safety, Needs general help in almost all areas	8/25/2016 11:52 AM
24	More difficult shots	8/25/2016 11:04 AM
25	None needed, this is a great course for beginners	8/25/2016 10:43 AM
26	General maintenance	8/25/2016 9:58 AM
27	More holes	8/25/2016 9:56 AM
28	N/a	8/25/2016 9:54 AM
29	Add more holes to make it a full 18 hole course	8/25/2016 9:19 AM
#	<b>Other comments:</b>	<b>Date</b>
1	it would be nice to have dual t boxes or baskets so we could have alternative holes.	9/4/2016 5:20 PM
2	there is a huge disc golf scene in the area and is growing more needs to be done. people show up to play inside lincoln and leave because its too busy and wont play outside without teepads	9/2/2016 8:43 AM
3	if the courses were boosted and perfected it would be a prime location for big name tourneys and tourist stops	8/26/2016 4:07 PM
4	mowing the courses at Lincoln Park, the grass should be cut way shorter than it is currently being cut	8/25/2016 9:15 PM
5	these improvements are in order of what I belive should be done i	8/25/2016 4:15 PM
6	Cement tee pads are a must for safety. Not javing the tee pads you start to see the ground wear dkwn and get uneven making it easier to roll a ankle.	8/25/2016 10:42 AM
7	Hole #6 on the lincoln outer loop course is a fun and challenging hole that should not be changed	8/25/2016 9:54 AM

## Q6 Please share any other comments you have about disc golf in Greater Grand Forks.

Answered: 43 Skipped: 63

#	Responses	Date
1	I have played disc golf on one course or another in this city since I moved here at age 8 I miss the course in central park, I would like smaller course or putting greens in all the smaller parks scattered throughout the city. I would love to see a disc golf course in university park, downtown in rotaray park along the greenway.	9/12/2016 3:46 PM
2	The Grand Forks disc golf community is tight knit. We all want these courses to be improved upon so that they will continue to last.	9/7/2016 10:04 AM
3	Great group of people in the league we all enjoy the sport and do what we can to keep the course clean	9/4/2016 4:04 PM
4	This sport has been developing greatly in this area and all of the city's help has been greatly appreciated.	9/2/2016 10:04 AM
5	Great sport for everyone needs more advertising and sponsors to help further this amazing sport in our area	8/30/2016 8:21 AM
6	The loop is getting better every year with our leader making it championship quality.	8/30/2016 8:03 AM
7	Over the years the amount of people I see at the courses have grown significantly	8/28/2016 11:49 PM
8	I am a Fargo resident. Look forward to playing all the grand forks. Dg courses	8/27/2016 1:35 PM
9	I think GGF disc golf is an amazing asset to the community, and needs to be supported. Making the facilities top notch, to attract the idea of being able to play host to official tournaments run through the Professional Disc Golf Association would not only elevate the excitement for disc golf in the GGF region, but would also bring increased economy to the area by bringing in golfers from many locations outside of GF/EGF. Disc golf is growing in popularity at an astonishing rate, and is more and more widely being recognized as not only a legitimate competitive sport, but a great sport that is accessible and fun for anybody!	8/27/2016 1:44 AM
10	Overall it would be nice to see the cities of GF/EGF do more with disc golf. Local tournaments, info about the courses shared. Also, look into night disc golf like Lincoln park GC did for normal golf.	8/26/2016 9:55 PM
11	The disc golf community here is really something special, there are a lot of really great guys who play. I have been fortunate enough to make friends with a number of them. I just want to reiterate a point that I made earlier that hole 6 on the loop should be put back in. It is a beautiful hole that is like nothing else when you have in the Greater Grand Forks area. I understand the concern that there is a risk of injury or that there is a potential for unsafety. But it is ridiculous to think that an injury would be caused to a pedestrian by a disc golfer on that hole. Yes freak accidents occur, but think of hole 8 at the Lincoln golf course near by. I am also a golfer and I know that balls get hit into that road. So if the argument of unsafety is being brought up, the park district has okayed a hole on a golf course that has far more potential for being dangerous and causing damage than hole 6. Yes it crosses a walking path, but we know that we should wait to throw, we know that it is common courtesy to allow a person to walk past and get to a safe distance away before throwing. I am sad that the hole has been removed and I hope that this survey along with others has some influence on how things are allowed to be run. I know Travis has every intent to make the courses we have to be the best that they can be and in order to do that he cannot be hindered by the Grand Forks Park District. Please understand that I am not asking for Rome to be built in a day, I am asking for the park district to make an honest attempt at helping grow the sport of disc golf. It is clear to me that all these changes can't just happen with the snap of a finger but steps can be taken to get closer to our end goal. Most importantly put hole 6 back in.	8/26/2016 5:45 PM
12	Would love to see some maintained singletrack on the Greenway for those who would rather mountain bike than play disc golf.	8/26/2016 5:20 PM
13	The loop needs to keep getting stuff done to it. It is so close to championship level course. Not sure what happened to hole 6 basket just a few days ago it was awesome and now it's gone.	8/26/2016 5:14 PM
14	Some of the players use terrible language in the park and are disrespectful to other users. More patrols would be great.	8/26/2016 4:37 PM
15	There is a great disc golf community in this town! Great courses and friendly people!	8/26/2016 4:07 PM
16	I like it. A lot.	8/26/2016 12:21 PM

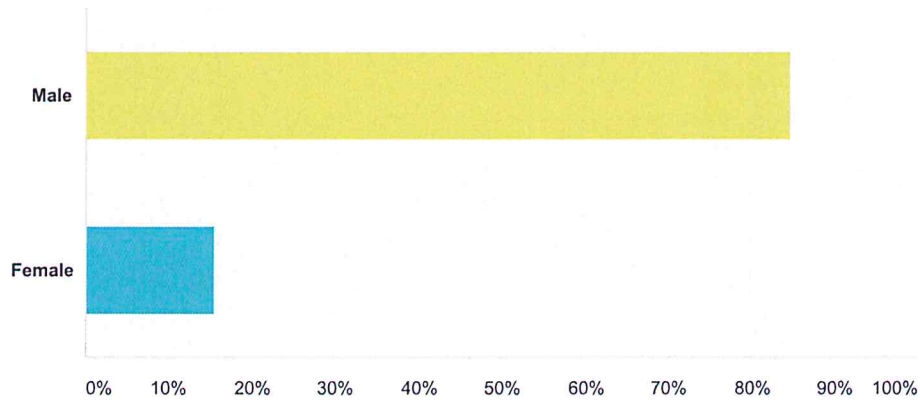
17	I started playing two years ago and I am really glad that I did. We have a great community of disc golfers. I have made quite a few friends while playing disc golf. This is my first year competing in league, which I have had a lot of fun doing. It helped me improve my game and meet more great people.	8/26/2016 10:57 AM
18	Great disc golf club. Good leaders and they do a lot for the community. I moved here two years ago and I see how much they do.	8/26/2016 6:49 AM
19	What a great community!	8/26/2016 6:48 AM
20	We have beautiful disc golf courses here; let's keep it that way and try expand our courses and possibly make more; as the interest is growing every year. This sport is healthy, fun, and a great way to appreciate the beauty of nature we have in our community. Great goal would be to host ND State Disc Golf Tournament in the near future. Thank you for sending out this survey to get input, much appreciated!	8/26/2016 2:16 AM
21	With work and upgrades done to both courses Lincoln Park could become a very nice disc golf park. It could even become a good enough pair of courses to draw bigger tournaments bringing in players from all over the country.	8/25/2016 9:15 PM
22	Thank you for all the options you have provided this community for this sport. I learned the game at Lincoln park while I lived in GF from 2007-2012 and cherish the friends and memories made there. I really appreciate the interest in growing this sport further as so many individuals of all skill levels can play and have fun! I can't wait for my next opportunity to visit the local parks and play again!!!	8/25/2016 8:34 PM
23	This is such an important thing to our community. It provides a great free opportunity for families to get out and have a great time-. Grand Forks would be lost without this sport!	8/25/2016 8:34 PM
24	I enjoy Lincoln and Riverside so much I drive 90 miles one way to play	8/25/2016 5:23 PM
25	Loved the Lincoln courses with plenty of holes to play at varying difficulties.	8/25/2016 4:41 PM
26	Thank you, for doing a great job at providing these courses, the upkeep and will to make improvements to such a great sport/ recreational sport for everyone to enjoy.	8/25/2016 4:15 PM
27	Great sport to play easy to learn. Awesome way to meet new people.	8/25/2016 3:03 PM
28	Great community of ppl	8/25/2016 1:55 PM
29	The outer loop is almost a championship. I know our disc golf leader travels the country and has put endless work into it. It would be nice to see it finished.	8/25/2016 1:27 PM
30	Cement tee pads and updated course and hole signs make for a better experience for all level of players and help prevent money having to be spent in the future for keeping up the course.	8/25/2016 1:04 PM
31	It'd be nice to have mowed fairways, little longer grass on sides. Just more defined. No biggy.	8/25/2016 12:46 PM
32	The Loop, Inner Lincoln and Riverside are the best courses we have. Right now lincolns baskets are pretty out of date. As well as the loop and riversides. Being an everyday player I would definitely enjoy the loop and riverside more if they had teepads and new baskets they are the two most challenging courses we have. The fact that we don't have tee pads or even remotely decent baskets adds to the difficulty. New baskets for the loop along with teepads would be my number one wish. That being said if new baskets happened we could use the old ones to make an 18 hole course at riverside.	8/25/2016 11:48 AM
33	Disc golf is a huge sport in the grand forks area. It is played by all types of people and if we got the courses to be harder and better looking we could have some serious tournaments here	8/25/2016 11:04 AM
34	I'm from Fargo, I come to grand forks at least once a month just to play the courses and play with the city league.	8/25/2016 10:58 AM
35	Disc golf is a growing sport that is open to anyone of any age and skill level. We have the land to make every level player have a great course suited for them with some improvements to be made.	8/25/2016 10:43 AM
36	I really enjoy the more difficult courses. I really like that the loop has water holes. I do wish it had a better flow back up toward the top of the Hill at the end of the loop.	8/25/2016 10:42 AM
37	Great place to play because of diverse courses, but alittle attention to the details would be nice.	8/25/2016 10:27 AM
38	Grand Forks has some very nice courses. I travel to Grand Forks to play disc golf. With some work and updates they could be great.	8/25/2016 9:58 AM
39	The GF disc golf scene is growing rapidly and I would love to see the courses improve as much as possible, and I think most would agree.	8/25/2016 9:54 AM
40	The parks there are very nice! It's a great place to go and hangout.	8/25/2016 9:54 AM
41	Tee pads on the loop dgc is the top priority for me!	8/25/2016 9:52 AM



42	Disc golf has grown dramatically over the last few years. We have hundreds of local players here in GF. I think bettering them is a great idea considering how much they are used.	8/25/2016 9:35 AM
43	Love the courses - can we adverstise these on billboards on 29 to encourage people to come see!	8/25/2016 9:11 AM

**Q7 Tell us a little about yourself.**

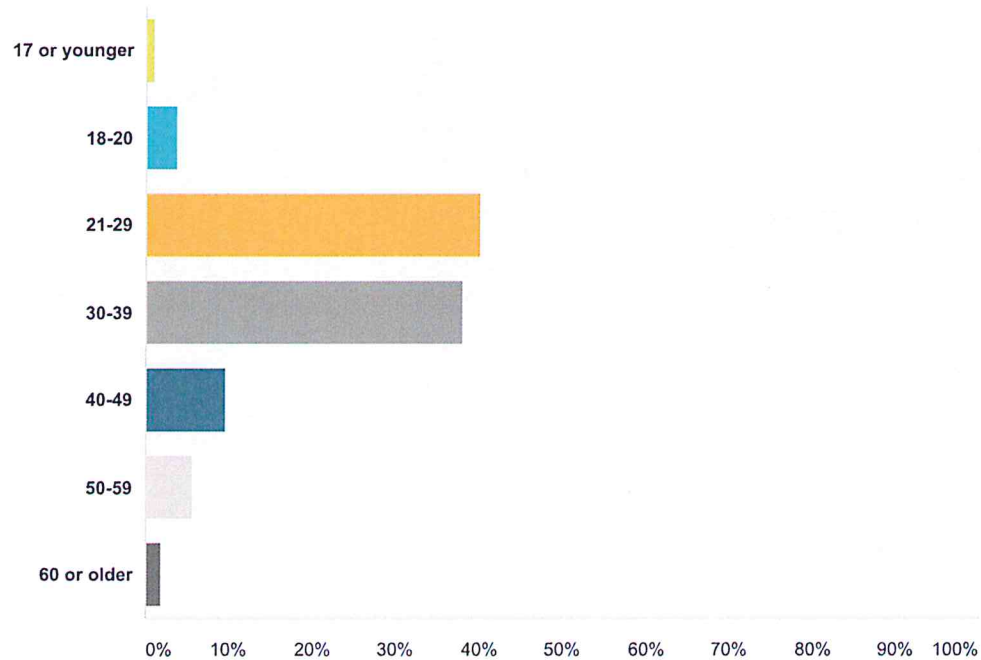
Answered: 104 Skipped: 2



Answer Choices	Responses	
Male	84.62%	88
Female	15.38%	16
Total		104

### Q8 Which category best describes your age?

Answered: 105 Skipped: 1



Answer Choices	Responses	
17 or younger	0.95%	1
18-20	3.81%	4
21-29	40.00%	42
30-39	38.10%	40
40-49	9.52%	10
50-59	5.71%	6
60 or older	1.90%	2
Total		105

## Q9 In what ZIP code is your home located? (enter 5-digit ZIP code; for example, 00544 or 94305)

Answered: 102 Skipped: 4

#	Responses	Date
1	58203	9/12/2016 3:46 PM
2	58203	9/12/2016 1:22 PM
3	58203	9/12/2016 1:07 PM
4	58201	9/12/2016 11:53 AM
5	58278	9/12/2016 11:52 AM
6	58203	9/7/2016 10:04 AM
7	58201	9/4/2016 5:20 PM
8	56701	9/4/2016 4:04 PM
9	58201	9/2/2016 10:04 AM
10	58201	9/2/2016 8:43 AM
11	58104	8/30/2016 8:54 PM
12	58102	8/30/2016 12:29 PM
13	58203	8/30/2016 11:36 AM
14	56701	8/30/2016 8:21 AM
15	58203	8/30/2016 8:18 AM
16	58203	8/30/2016 8:03 AM
17	56701	8/29/2016 10:34 PM
18	58201	8/29/2016 6:53 AM
19	58201	8/28/2016 11:49 PM
20	58501	8/28/2016 9:31 AM
21	58201	8/27/2016 11:57 PM
22	58104	8/27/2016 1:35 PM
23	59230	8/27/2016 1:44 AM
24	56721	8/26/2016 9:55 PM
25	58201	8/26/2016 5:45 PM
26	56721	8/26/2016 5:20 PM
27	58201	8/26/2016 5:14 PM
28	58201	8/26/2016 4:37 PM
29	58203	8/26/2016 4:07 PM
30	58235	8/26/2016 3:53 PM
31	58203	8/26/2016 3:25 PM
32	58203	8/26/2016 3:08 PM
33	58201	8/26/2016 12:21 PM

## GGF Disc Golf Facilities

## SurveyMonkey

34	58201	8/26/2016 10:57 AM
35	58201	8/26/2016 9:44 AM
36	58201	8/26/2016 6:49 AM
37	58801	8/26/2016 6:48 AM
38	58104	8/26/2016 6:04 AM
39	58203	8/26/2016 2:16 AM
40	56716	8/25/2016 11:55 PM
41	58201	8/25/2016 11:17 PM
42	58203	8/25/2016 10:10 PM
43	58201	8/25/2016 10:06 PM
44	56716	8/25/2016 9:44 PM
45	56716	8/25/2016 9:41 PM
46	56716	8/25/2016 9:33 PM
47	58201	8/25/2016 9:15 PM
48	55722	8/25/2016 9:14 PM
49	58201	8/25/2016 8:59 PM
50	55422	8/25/2016 8:34 PM
51	58201	8/25/2016 8:34 PM
52	58203	8/25/2016 6:58 PM
53	56621	8/25/2016 5:23 PM
54	58201	8/25/2016 5:17 PM
55	58201	8/25/2016 4:57 PM
56	55805	8/25/2016 4:41 PM
57	58102	8/25/2016 4:30 PM
58	58201	8/25/2016 4:15 PM
59	58201	8/25/2016 3:32 PM
60	58201	8/25/2016 3:14 PM
61	58201	8/25/2016 3:03 PM
62	58203	8/25/2016 2:49 PM
63	58203	8/25/2016 2:35 PM
64	60139	8/25/2016 1:55 PM
65	56721	8/25/2016 1:44 PM
66	58201	8/25/2016 1:41 PM
67	56721	8/25/2016 1:41 PM
68	58203	8/25/2016 1:31 PM
69	58201	8/25/2016 1:27 PM
70	58201	8/25/2016 1:24 PM
71	58703	8/25/2016 1:04 PM
72	58275	8/25/2016 12:56 PM
73	58201	8/25/2016 12:54 PM
74	58201	8/25/2016 12:46 PM

## GGF Disc Golf Facilities

SurveyMonkey

75	58201	8/25/2016 12:15 PM
76	56701	8/25/2016 12:00 PM
77	58102	8/25/2016 11:52 AM
78	58203	8/25/2016 11:48 AM
79	58102	8/25/2016 11:11 AM
80	58201	8/25/2016 11:07 AM
81	58203	8/25/2016 11:04 AM
82	58102	8/25/2016 10:58 AM
83	58203	8/25/2016 10:43 AM
84	58201	8/25/2016 10:42 AM
85	56511	8/25/2016 10:42 AM
86	58601	8/25/2016 10:35 AM
87	56732	8/25/2016 10:27 AM
88	58501	8/25/2016 10:02 AM
89	50203	8/25/2016 10:01 AM
90	58401	8/25/2016 9:58 AM
91	58301	8/25/2016 9:58 AM
92	58201	8/25/2016 9:57 AM
93	58203	8/25/2016 9:56 AM
94	58203	8/25/2016 9:54 AM
95	57078	8/25/2016 9:54 AM
96	58201	8/25/2016 9:52 AM
97	58504	8/25/2016 9:51 AM
98	58203	8/25/2016 9:35 AM
99	58201	8/25/2016 9:19 AM
100	58203	8/25/2016 9:11 AM
101	58201	8/25/2016 9:11 AM
102	58203	8/25/2016 9:03 AM

**Q10 Are you interested in participating in a disc golf advisory group? If so, please leave an email address where you can be reached.**

Answered: 33 Skipped: 73

#	Responses	Date
1	Jordan.Bert@gmail.com	9/12/2016 3:46 PM
2	No	9/4/2016 4:04 PM
3	mjhensrud@gmail.com	9/2/2016 8:43 AM
4	twiztid9psycho@gmail.com	8/30/2016 8:21 AM
5	subaruguy00@gmail.com	8/29/2016 10:34 PM
6	brendansailer@yahoo.com	8/28/2016 11:49 PM
7	devinhillebrand@hotmail.com	8/26/2016 9:55 PM
8	Frostysno182@gmail.com	8/26/2016 4:07 PM
9	jonord23@yahoo.com	8/26/2016 12:21 PM
10	If I lived closer, but no, sorry.	8/26/2016 6:48 AM
11	jaredshafer08@gmail.com	8/26/2016 2:16 AM
12	Kag3612@gmail.com	8/25/2016 11:55 PM
13	thearcticlion@gmail.com	8/25/2016 9:15 PM
14	heffjam@gmail.com	8/25/2016 8:34 PM
15	No	8/25/2016 4:41 PM
16	byronvilla545@hotmail.com	8/25/2016 4:15 PM
17	Brentwaters680@yahoo.com	8/25/2016 3:03 PM
18	no	8/25/2016 1:41 PM
19	Uncertain	8/25/2016 1:31 PM
20	Adampech1022@gmail.com	8/25/2016 1:04 PM
21	thuransundeen@yahoo.com	8/25/2016 12:46 PM
22	Innate.response@gmail.com	8/25/2016 12:00 PM
23	joey@flightprosnd.com	8/25/2016 11:52 AM
24	Smartin5660@gmail.com	8/25/2016 11:48 AM
25	Dda.addison@gmail.com	8/25/2016 11:07 AM
26	Hockeygf97@yahoo.com	8/25/2016 11:04 AM
27	isgecko@hotmail.com	8/25/2016 10:58 AM
28	no	8/25/2016 10:43 AM
29	mikedefoe@me.com	8/25/2016 9:58 AM
30	Jacob.s.johnson@hotmail.com	8/25/2016 9:54 AM
31	jihoyt62@gmail.com	8/25/2016 9:52 AM
32	Not at this time	8/25/2016 9:19 AM

33	no	8/25/2016 9:11 AM
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**Q11 Would you like to receive regular email updates regarding Greenway events and news? If yes, please submit your email address below.**

Answered: 16 Skipped: 90

#	Responses	Date
1	Jordan.Bert@gmail.com	9/12/2016 3:46 PM
2	No	9/4/2016 4:04 PM
3	golden5boy@gmail.com	8/28/2016 9:31 AM
4	devinhillebrand@hotmail.com	8/26/2016 9:55 PM
5	Frostysno182@gmail.com	8/26/2016 4:07 PM
6	No, thank you.	8/26/2016 6:48 AM
7	Kag3612@gmail.com	8/25/2016 11:55 PM
8	thearctiction@gmail.com	8/25/2016 9:15 PM
9	No	8/25/2016 4:41 PM
10	byronvilla545@hotmail.com	8/25/2016 4:15 PM
11	no	8/25/2016 1:41 PM
12	No thank you	8/25/2016 1:31 PM
13	No	8/25/2016 11:52 AM
14	Dda.addison@gmail.com	8/25/2016 11:07 AM
15	no	8/25/2016 10:43 AM
16	Jacob.s.johnson@hotmail.com	8/25/2016 9:54 AM

The total number of students I spoke to was 262, I was not always able to get past the first question (Would you use Bike Share on Campus?) that is why they have lower numbers on the next two questions. Great feedback yesterday

### **Would you use Bike Share on Campus?**

Total of 262 Students/Faculty were asked this question

Yes – 91% (240)

No – 9% (22)

### **Would use it to get around the city?**

Total of 204 Students/Faculty were asked this question

Yes – 91% (186)

No – 9% (18)

### **What would you pay for a yearly membership?**

Total of 204 Students/Faculty were asked this question

\$ 0.00 – 10.00                      8% (16)

\$ 10.00 – 25.00                      57% (116)

\$ 25.00 – 50.00                      23% (46)

\$ 50.00+                                13% (26)

“Please do it!”

“This would be great for the international students”

“This is a great bike town”

“That would be so cool!”

“I would love this so much”

“Defiantly”

"I can't ride a bike so I am getting a trike"

"It would be great at the Med School"

"I have a bike and live right by a trail"

"I have my own bike but I will spread the word"

"Wonderful"

"That would be so sweet"

"I have my own bike"

"I would use it to work out"

"That would be great to get to one side of campus to the other"

"This is a good idea"

"Really cool"

"This would be great especially on Sunday when the bus is not going"

"Woohooooo"

"Great idea"

"Very supportive"

"I have been wanting this for years"



*cycle*™

leadership and innovation in bike sharing



media inquiry:  
[mmarich@bcycle.com](mailto:mmarich@bcycle.com)  
[btongco@bcycle.com](mailto:btongco@bcycle.com)

updated Feb. 2014

## B-cycle System Overview

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1.5	THE B-CYCLE STATION	9
1.6	THE B-CYCLE SOFTWARE	12
1.7	TESTING, WARRANTIES + SUPPORT	15



B-cycle was named  
one of Fast Company's  
**Top 5 Most Innovative  
Companies in  
Transportation**

## 1.1 B-cycle History

### B-CYCLE HISTORY

B-cycle, LLC grew out of Trek Bicycles, and since launching the first U.S. large-scale public bike sharing system in Denver, CO in 2010, B-cycle has established itself as a proven, world-leading bike share equipment supplier and operator. As of early 2014, B-cycle has 27 systems in more than 30 cities with more than 3,500 bikes on two continents. We understand what it takes to develop and operate a successful system. Every B-cycle system has been installed on time and under budget.

In 2007, the founding partners of B-cycle, Trek and Humana, began their bike sharing venture with the nation's largest ever bike sharing program culminating at the 2008 Democratic National Convention in Denver, Colorado. Called Freewheelin, this program made 1,000 bikes available to the delegates at both the Democratic and Republican National Conventions.

B-cycle, as an organization, brings together a unique combination of talent and experience. B-cycle is a joint venture between Trek Bicycle Corporation, Humana Inc. and Crispin Porter + Bogusky. Trek is the largest manufacturer of high quality bicycles in the United States, Humana is a highly regarded health insurance company, and Crispin, Porter + Bogusky was recently named advertising agency of the decade. As a result of the commitment of these founders, B-cycle was named Number 5 on Fast Company's list of innovative transportation companies.





## 1.2 B-cycle Bike Sharing

### SYSTEM OVERVIEW

The B-cycle system was designed to be flexible so that it can help communities achieve a wide range of goals. But the core design principle of B-cycle is to provide an aesthetically appealing and technologically powerful bike sharing system for communities all over the world. We designed our bike sharing system to enhance personal mobility, which leads to a reduction in the use of private automobiles and an increase in personal health and wellness.

B-cycle is visually and programmatically iconic. The big "B" is intended as a way-finding device to inform users where to find bikes.



Designed from scratch specifically for global bike sharing programs, the B-cycle system is comprised of three main components:

1. The B-cycle itself, which was designed by Trek Bicycle Corporation specifically for bike sharing;
2. The Station, which we believe offers the most efficient footprint in the industry, has several power options, docks that are single or double-sided, with bolted or non-bolted installation, and assembles on-site quickly and easily without the need for a crane truck;
3. The Software, which includes a back-end administration and maintenance system, local consumer web page, individual profiles, and extensive links to social networking sites.



## 1.3 B-cycle Innovations

A few of the features that set the B-cycle system apart from the competition include:

### ONGOING INNOVATION

B-cycle has enjoyed continuous improvement since 2009. Improvements include passive GPS, integrated trikes, new basket configurations, business intelligence upgrades, nationwide reciprocity capabilities, and multi-frequency RFID docks. B-cycle is committed to be the Best-in-Class bike share system, and all product enhancements are designed to be fully backwards compatible with earlier product versions.

### B-CONNECTED

An exciting feature of the B-cycle system allows for system reciprocity which will link your B-cycle program to other B-cycle programs so users of your system can use their membership card in other systems, and vice versa.

### VIRTUAL KIOSK

B-cycle's back-end software allows the system operator to check bikes in and out using only a computer. At large events, where the operator may want to encourage users to ride B-cycles, the rider can check his or her bike in at a temporary "station" set up for the event. There is no need to set up – and then take down – stations for the event.

### MOBILE APPLICATIONS: APPLE AND ANDROID

Included in the software technology, B-cycle provides mobile applications for Apple and Android platforms. With location-based dock and bike locating abilities, users can find bikes and open docks from their smart phone. Users also have the ability to receive system-generated text alerts (overdue bike warnings, etc.) Additionally, the technology is open API for the mobile developer community.

### BASKET OPTIONS

B-cycle provides two basket configurations. The standard B-cycle features a front basket that is designed to carry a laptop computer bag and other gear up to 20 pounds. An alternative basket configuration has a smaller front basket and a rear side pannier.

### GPS CAPABILITY

Each B-cycle can be equipped with optional, proprietary self-charging GPS technology that provides actual rider data including distance and actual route ridden. This allows the user to see his or her actual statistics on B-cycle's website. More importantly, this GPS data can be aggregated to show city and campus planners exactly where these bicycles are being ridden.

### QUICK, EASY, AND PAPERLESS

With a credit card, a customer can sign up for a membership at any kiosk and be on a bike in less than two minutes. The whole process is digital and uses no paper access chits or paper receipts.

### MULTI-FREQUENCY RFID

In addition to the B-card that annual members receive to check out bikes, B-cycle technology allows for operators to incorporate an additional RFID frequency as an option. Whether it is a transit system RFID for the city, or a student RFID card, B-cycle has the capability to incorporate them into the membership and checkout processes.

### WEBSITE AND METRICS

Each local B-cycle installation includes its own website, which is linked to the B-cycle global site. The local website can post local information, promote local events, and engage cyclists in the local marketplace. Each local site shows the aggregate rider metrics and carbon offset values. These values are true ride measurements not estimated ride metrics.

### REDUNDANT LOCKING

B-cycles are locked at each side of the front hub with two, not one, robust locking mechanisms. If one lock fails to engage, the other will keep the bike secure.

### MODULAR AND CONFIGURABLE STATIONS

B-stations have bases and docks that can be manipulated to fit even the most unusual spaces including a curve.





## 1.4 The B-cycle Bicycle

The B-cycle bicycle was designed by Trek specifically for bike sharing. It is fun to ride, easy to adjust, and comfortably fits riders from 5' to 6' 2"+. The B-cycle features an optional onboard self-charging GPS computer that runs off the power generation of the front hub and uses RFID technology for tracking and anti-theft purposes. The bicycle is designed at Trek Bicycle Headquarters in Waterloo, WI.

The B-cycle offers several locations for local advertisements, sponsorships, or other messaging:





## 1.4 The B-cycle Bicycle

### B-CYCLE COMPONENTS AND SPECIFICATIONS

#### CUSTOMIZATION

- Color choices: Red, Blue, Gray (or custom color for an order of 100 or more bikes)
- Branding: Custom graphics  
Can be branded "B-cycle" or custom branded
- Decals: Basket (left & right panels)  
Shroud (triangle & handlebar surfaces)  
Skirt guard (left & right panels)



#### COMPUTER

Each B-cycle can be equipped with proprietary self-charging GPS technology that provides actual ride data including distance and actual route ridden. This allows the user to see his or her actual statistics on B-cycle's website. More importantly, this GPS data can be aggregated to show program operators and city planners exactly where these bicycles are being ridden.

#### BASKET:

The standard B-cycle features a front basket that is designed to carry a lap top computer bag and other gear, and that dovetails perfectly in a double sided B-station.

However an alternative basket configuration is also available. With a smaller front basket and a rear side basket, it offers additional cargo space. Any combination of these baskets can be used as an option.



#### FRAMESET

- Sizes: One size fits most (specifically 5' - 6'2"+)
- Frame: Oversized alpha aluminum  
Weight is designed to be carried directly over bike's center of gravity for superior balance and control for all size of riders
- Fork: Proprietary triple clamp aluminum and centering spring

#### WHEELS

- Front: Shimano Dynamo generator hub with alloy rims
- Rear: Shimano 3-speed (or 7-speed) internal gear hub with alloy rims
- Tires: Puncture resistant Bontrager hard case with reflective sidewalls and sealant filled tubes

#### DRIVETRAIN

- Shifters: Shimano twist shifter
- Rear: Shimano Nexus 3-speed (or 7-speed) internal gear hub
- Crank: 38T alloy
- Chain: KMC Rustproof 1/2x1/8" heavy duty
- Pedals: Platform



## 1.4 The B-cycle Bicycle

### COMPONENTS

Saddle:	Seamless Bontrager all-weather saddle
Seat Post:	Proprietary theft resistant indexed post with easy to use proprietary four-finger clamp
Grips:	All weather grips with reflective bar ends
Headset:	Sealed bearing
Brakeset:	Shimano IM40 all-weather internal brake system
Fenders:	Color matched alloy with stainless steel hardware
Extras:	Fully encased shroud housing, robust kickstand, and bell

### LIGHTING

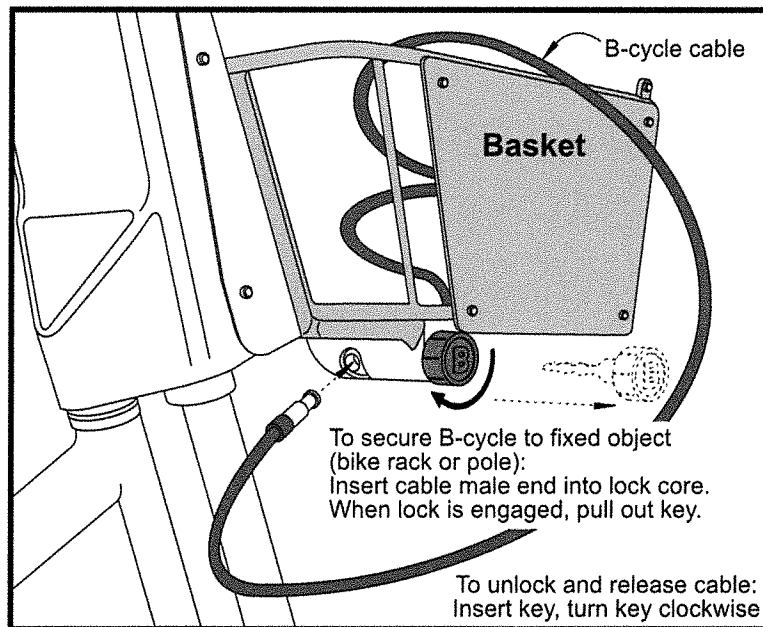
B-cycles are equipped with always-on Spanninga 3W 10 Lux LED front and rear lights that run off the bicycle's hub dynamo. The lights remain illuminated for approximately four minutes after the B-cycle stops, ensuring illumination when the rider stops at a traffic light.

### SECURITY

At B-station:	Proprietary dual front hub locking design, seamless integration with the B-station
While Away:	Built-in Kryptonite cable lock and theft deterrent hardware throughout.

### EXTRAS

Fully encased shroud housing, robust kickstand, and bell  
Spring bar handlebar straightening system  
Bicycle weighs under 50 pounds completely assembled (with on-board lock).  
Front and back reflectors (in addition to pedal powered lights)  
Multiple areas for graphics and signage  
Decal opportunities to communicate safety and customer service messaging





## **B** 1.5 The B-cycle Station



A few important things to note:

1. Stations are highly configurable to meet the needs of each location. This station can be configured as a single or double-sided station. Single-sided offers the least impact on pedestrian traffic, while double-sided maximizes the number of bikes at a station with a limited amount of space. The base can turn corners or be situated completely around urban obstacles such as trees or monuments.
2. Stations can be easily added to, removed and/or relocated due to its modular construction.
3. The station has three base options--a lighter bolted base or one of two heavier non-bolted bases depending on the power source.
4. Highly secure - the station locks the bicycle at the hub, using two robust locking mechanisms to double secure the bicycle. If one lock fails to engage, the other will secure the bike. This proprietary locking mechanism is highly robust and has been proven reliable in all weather conditions. These locks function to secure a bicycle whether or not a station is under power. Further, because they are redundant, should one lock fail to engage, the second lock will secure the bicycle by itself.
5. The stations can be solar, A/C or battery powered, or a combination. Alternate powers sources are available. Wireless cellular technology with encryption is used to connect each station to B-cycle's secure computer server. The system will maintain equipment security in the event of a power failure or wireless data connection disruption.
6. Kiosks at each station allow walk-up users to purchase short-term memberships. Longer-term members are issued B-cards with RFID chips, and can bypass the kiosk completely and use their card to check a bike out directly from any dock.
7. Stations are new and of a uniform model; stations have availability for decal customization on kiosk and ad/map module.
8. The B-cycle stations are made in the USA.

## **B** 1.5 The B-cycle Station

### KIOSK

The kiosk replaces one dock at each station. It can be powered by solar, AC, battery or a combination. A standard B-cycle kiosk covers all basic station functionality (registration with a credit card, check-in/out, provides nearest bike/dock availability, 15 minute extensions for full stations).

- Frame: Zinc-coated Galvanneal
- Paint: Powder Coat
- Power Options:
  - Solar powered (single 135-watt panel with dual battery backup)
  - A/C (110 VAC, 60 Hz, 3 Amps)
  - Battery
- Display: Color Touchscreen
- Language: English and Spanish (with other language availability)
- Magnetic stripe all-weather credit card reader
- Communications to central server via broadband cellular (wireless)

### AD/MAP MODULE

Taking the place of one dock, the ad/map module can display a map of the system and also offers a sponsorship opportunity. Additionally, the ad/map module can be lit for improved nighttime display.

### DOCKS/BASES

Docks can be single or double-sided on the same base. Single-sided docks allow for “walk through” access, while double-sided docks maximize the number of bikes at a station.



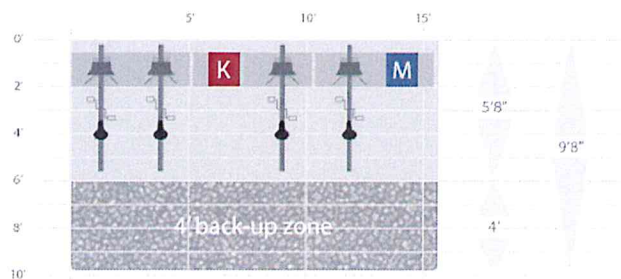
The bases are zinc-dipped powder-coated steel that can be mounted either by “dropping” (no bolting required) or bolting. The bases are configurable to fit many kinds of spaces including a curve.



## B 1.5 The B-cycle Station

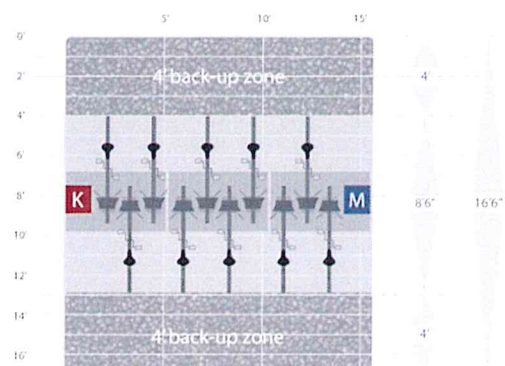
### STATION FOOTPRINTS

SINGLE



Number of bases	Exact length required for bases (Each base is 5'2")	Number of docks if single-sided (Requires 5'8" of depth space, plus a 4' back-up zone or 9'8" total)	Number of docks if double-sided (Requires 8'6" of depth space, plus two 4' back-up zones or 16'6" total)
2	10'4"	3	6
3	15'6"	5	10
4	20'8"	7	14
5	25'10"	9	18
6	31'	11	22
7	36'2"	13	
8	41'4"	15	
9	46'6"	17	
10	51'8"	19	
11	56'10"	21	
12	62'	23	

DOUBLE





## B 1.6 The B-cycle Software

B-cycle has developed a proprietary, best-in-class, web-based enterprise bike sharing software system. The software features both back-end and consumer-facing web pages that enable members to be part of an expansive bike sharing community, maintain a personal profile, and participate in an open source, affinity-based social network. The B-cycle bicycle includes an optional, integrated self-charging GPS computer, which works in unison with the software to show actual rider metrics and ride maps. Furthermore, B-cycle owns all software licenses, thus avoiding any potential future licenses issues.

**MADISON B-cycle**

Home | JOIN NOW | ABOUT | BUZZ | CONTACT US | RATES | OTHER CITIES

Welcome! Log In

**Hello, Madison!**

Madison B-cycle is an urban bike sharing program that is revolutionizing the way Madison moves! There are over 20 active stations throughout the downtown, with more stations being rolled out each week. Enjoy access to 350 bikes at 35 stations throughout the capital city this summer!

Membership includes all trips 30 minutes or less, with an unlimited number of bikes during your membership access period. Please note, usage fees apply for all rides longer than 30 minutes. An annual membership comes out to be only 30 cents per day to sign up today!

**Join Madison B-cycle**

**B-station Locations (click on location to see if station is installed or coming soon)**

Find a B-station | Address or Cross Streets | Go

Map showing Madison, WI, with B-cycle stations marked. Key locations include: Eagle Heights, University, Downtown, Lake Monona, and Lake Kegonsa.

**How It Works** | Learn More | Rates & Plans

**Sign In** | **Select** | **Ride** | **Return**

**Updates**

**B-cycle App**

Check bike and dock availability with our app for smart phones! Search B-cycle in Marketplace or App Store to download.

**Student - Promotion Codes**

To purchase a student membership, type "studentannual" in the promotion code box on the "Join Now" page. Your email

**B-cycle**

Pod's Forward.

**San Antonio B-cycle expanding**

**Kyle Locke**

**San Antonio: B-cycle Expanding Program Aims at Energy Efficiency, Public Health**

**My Summary** | **My Profile** | **My Statements**

**My Trip**

**AUSTIN B-cycle**

How It Works | Rates | Find Locations | Like us on Facebook | Follow us on Twitter

**Join Today!**

Username:  Password:

**AUSTIN B-cycle**

**NOW OPEN IN AUSTIN!**

**How It Works** | **Find Locations** | **Like us on Facebook** | **Follow us on Twitter**

The B-cycle bike sharing software system includes a digital platform comprised of five components.

### 1. Community Website (customizable)

- Static information pages (what is B-cycle, how do you use it, etc.)
- Interactive content and tools
- Local news and events published via live, relevant Twitter feeds
- Online subscription purchases, renewals, and upgrades
- Hooks to established social networking sites (links and live feeds)
- Password-protected member portal with personalized data:
  - Individual profile information
  - Ride and payment history
  - Health and environmental impact
  - Leader board – user population ranking
- Global rider and carbon offset metrics
- “See My Ride” provides the user of with a map of his/her latest rides, and can be shared via Twitter, Facebook, or Email

### 2. Self Service Bike Rental

- Color touchscreen access at kiosk provides:
  - Bike check-out for members
  - Short-term rentals via credit card
  - Real-time status of nearby stations to locate bikes for rental or open docks for returns
  - 15 minute credit requests when station is full
- Dock-based check-out for members with B-cards (bypass Kiosk)

### 3. Virtual Kiosk

- Standard bike check-in and check-out performed by bike sharing staff members from a standard computer.
- This option allows communities to encourage use of the bike sharing system at special events, such as festivals or sporting events, without the need to set up large stations at the event. Using the virtual kiosk, bikes can be checked in and out of the system using only a computer. The user does not need to find an available station to dock his/her bike.

### 4. Mobile Applications: Apple and Android Platforms

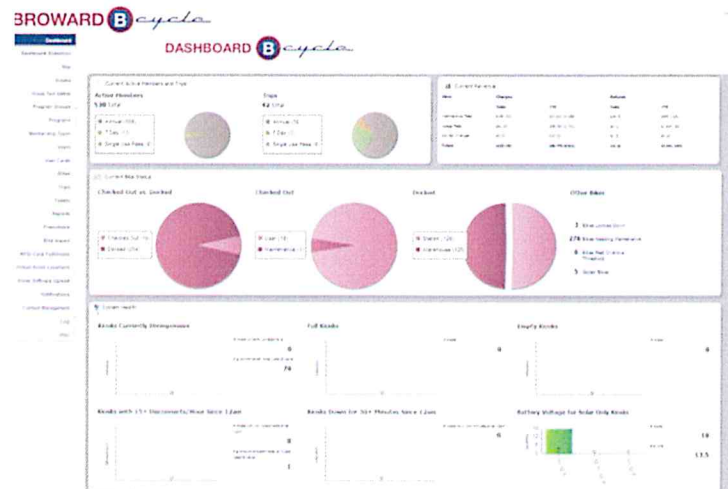
- Location-based Dock and Bike Locator (find bikes and open docks relative to user’s GPS coordinates)
- Open API for mobile developer community
- Outbound system-generated text alerts (overdue bike warnings, etc.)



## B 1.6 The B-cycle Software

### 5. Back-End Operations Management

- Tiered, role-based access
- Manage system and kiosk functions remotely from the office or from your own personal computer with internet access (disable system or just a kiosk, lock down a bike so that a user is not able to rent it, adjust hours of operation of the system or by kiosk)
- Subscriber and member management (including bulk-loading)
- Ability to adjust pricing for check-out and usage
- Track system use and performance in real time
- Inventory management (kiosks, RFID cards, bikes, docks, etc.)
- Configurable notifications (maintenance events, overdue bikes, etc.)
- Fulfillment process support
- Rebalancing, maintenance and issue tracking (including reporting capabilities)
- Program personalization and configuration (notifications, subscription types and pricing)
- Virtual kiosk management – mobile bike check ins/outs, off-site maintenance
- Ability to lock bicycles remotely
- Ability to collect email addresses, telephone numbers, addresses, zip codes and other pertinent information
- Ability to limit the number of membership and walk-up rentals that can be purchased using one credit card
- Generate many different reports with many different metrics for flexible time frames, including:
  - Total users (and types of subscriptions)
  - Trip characteristics
  - Miles traveled
  - Calories burned
  - User demographics
  - Carbon emissions reduced
  - Real time distribution of bikes
  - Maintenance
  - Financial
  - Real time availability
  - Gallons of gas saved



## **B** 1.7 Testing, Warranties + Support

### PRODUCT TESTING

- Trek designed and tested the B-cycle to meet or exceed at U.S. CPSC and CEN standards for bicycles.
- The B-stations, designed and built in the United States by B-cycle's station vendor, were tested to UL standard 60950, including extreme temperatures, excessive vibration or moisture. Additionally they are wind rated to 150 Mph.
- For the last four years, B-cycle systems across the U.S. operated in all seasons and extreme weather – scorching heat, torrential rain, freezing snow, ice and cold. This experience helped B-cycle develop a system that can withstand the elements of the seasons.

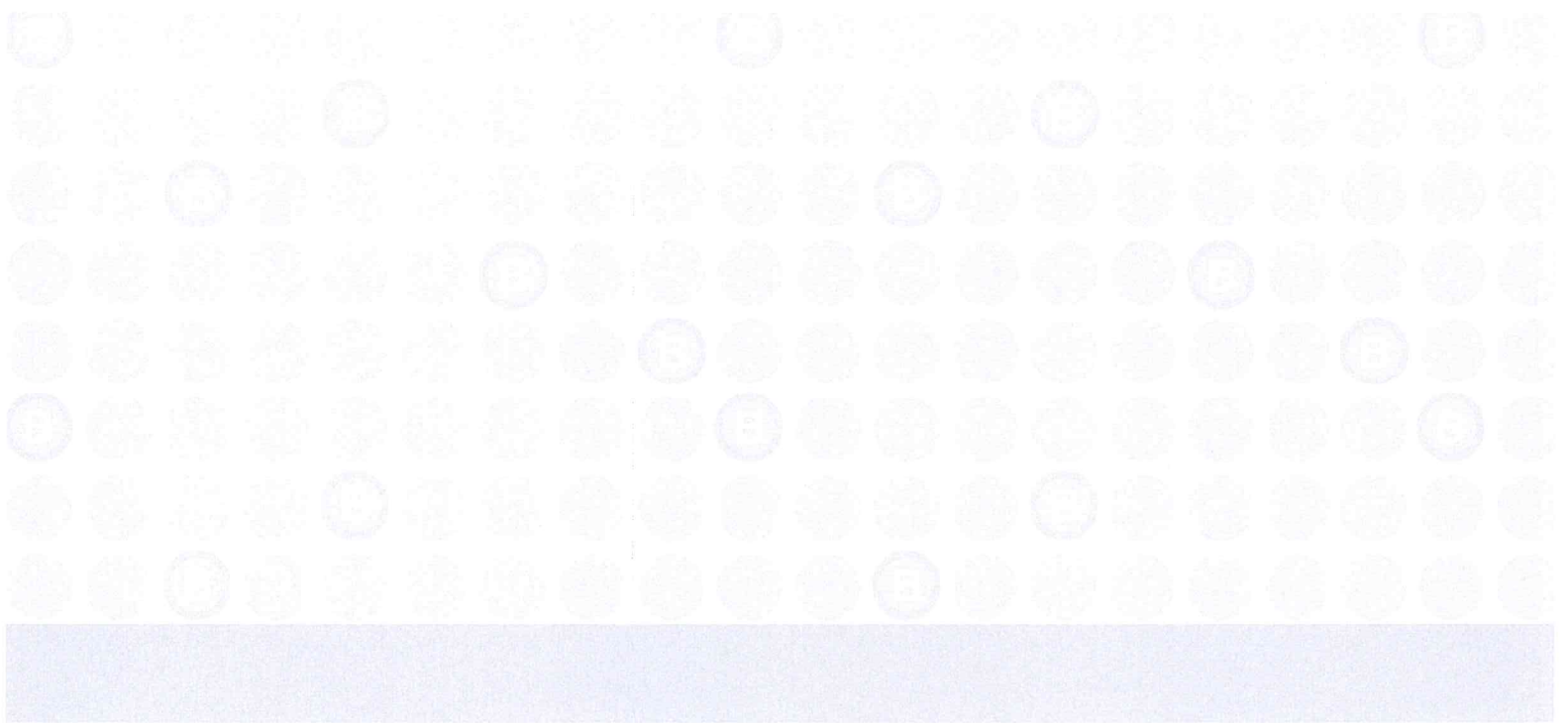
### PRODUCT WARRANTIES

- Bicycles:** The B-cycle bicycles have a five-year frame warranty and one-year parts warranty, excluding theft, vandalism, accident, or misuse.
- Stations:** The B-cycle station comes with a manufacturer's one-year parts warranty, excluding theft, vandalism, accident, or misuse.

### PRODUCT SUPPORT

B-cycle has a full customer support staff which provides 24/7 system monitoring and top notch support for all of our operators. We provide system set-up training before the program launch, in-depth program training just before launch, and support our customers with all of their ongoing needs post-launch.

- Bicycles:** We work with operators on initial bicycle assembly, bicycle maintenance, and provide support for any bicycle warranty needs.
- Stations:** We work with operators on Tier 1 station troubleshooting, elevate service requests and answer any questions a customer may have regarding a B-station.
- Software:** We provide ongoing operator support with regard to any aspect of the B-cycle system software whether it be an issue a user is having, answering questions an operator may have, or providing additional training with respect to improvements made to the software.



B-cycle LLC  
801 West Madison St.  
Waterloo, WI 53594

[info@bcycle.com](mailto:info@bcycle.com)



**"Leaving the university better than when we arrived."**

## THE STORY OF "BIKE SHARE"

- In the 2011-2012 academic year, the concept of Bike Share was explored by Student Government in collaboration with a member of the Fargo City Commission.
  - This year was dedicated to researching the vendor options, potential integration at NDSU and in the City of Fargo, budget/cost, and student feedback from multiple methods.
  - A reserve request to start the program failed in Senate due to the need for additional information.
- In the 2012-2013 academic year, Student Government took this information and developed more detailed program logistics and implementation programming.
  - Members of Student Government that were involved in the previous year and the current year continued with work on this program, and members that finished their terms also remained involved in the program development.
  - Initial explorations involving our weather, budgeting/costs, and the needs of the students were investigated in further detail.
  - A reserve request was discussed at length in the budgeting meeting in which resulted in a passing vote. This was for the amount of \$88,000 to be put toward capital costs in startup that needed to be spent by the end of the fiscal year (June 30, 2013).
  - At this same budgeting meeting, there was legislation to reallocate additional reserve funds. The final bill that was passed which allocated \$65,000 for the 2013-2014 fiscal year to be used toward the operations of the Bike Share program once it was started. This money was paid out to Campus Recreation and Intramurals and was placed in their budget under a line item specific to only the formation of a Bike Share program. This money was transferred in August 2013 (the beginning of the new fiscal year).
  - The planning team consisting of student government past and present that had been working on this project continued through the summer and found that the logistical details for startup required more time than was available given the fiscal year ended June 30, 2013 and reserve request money had to be spent by this date. This \$88,000 was not spent, and was then rolled back into the reserve account (which is where it came from).
  - Additional challenges with this date occurred as a result of a change by the primary sponsor at that time, a large regional company. This company made an internal decision to postpone sponsorship as they had some other priorities at that time. They did not exclude the opportunity to sponsor in the future as they expressed value in the program and saw opportunity in future partnership.
- In the 2013-2014 academic year was one in which the program budget had to be reevaluated and recalculated.
  - Given the withdrawal of the primary sponsor as well as the start of a new fiscal year, this became a process that took the fall semester.
  - The planning team solicited and secured multiple smaller sponsors in lieu of a primary sponsor. Such parties included: Dakota Medical Foundation, Xcel Energy, Sanford Health, Kilbourne Group, Swanson Health, Forum Communications, and Susan Mathison. There were additional station sponsors as well.
  - The planning team also prepared a Powerpoint presentation for the Student Senate as well as other members of Student Government. A series of four open forums were planned and each Student Senator received a call, email, and texts in order to inform them of the meetings. All senators attended meetings as well as had opportunity to contact and converse with the planning team in order to make an informed decision about the program and change in funding.
  - At the budgeting meeting, extensive discussion about the unspent \$65,000 allocation that was for Bike Share operational expenses in the 2013-2014 year. This was decided to be used for capital costs instead of operational costs in light of the sponsorship challenges.
  - Also at the budgeting meeting, the budget for 2014-2015 fiscal year was approved. Within this, there is a line item for \$65,000 for operational expenses for the Bike Share program.
  - At the close of this meeting, the target for startup of the program was understood to be fall 2014. The supplier was determined to be B-Cycle and a local biking non-profit (Great Rides Fargo Inc.) was aiding in the intended summer planning for the program. They solicited two members from Student Government to act as representatives of NDSU students in continued formation of the



program over summer 2014. One position is to be held by the Executive Commissioner of Finance (Preston Gilderhus for the 2014-2015 year) and the other was to be determined by the Student Senate (Chris McEwen for the 2014-2015 year).

- No further decisions on the Bike Share program were made in this academic year.
- In the 2014-2015 academic year, a bulk of the planning logistics commenced in the summer of 2014. Nine in-person meetings as well as numerous conference calls and extensive email communication took place.
  - One provision that NDSU required of B-Cycle was the integration of the Bison card for use of the system. The intention is that all valid students can fill out a liability waiver, much like what is used at the NDSU Wellness Center. At this point the student would be immediately approved to be able to swipe their Bison card for access to checking out a bike for a determined time period. This is called multi-frequency, radio frequency identification or MF-RFID with real-time API approval.
    - This technology requirement of MF-RFID was ahead of B-cycle's current technological capabilities and required extensive research and development in order to get the Bison card to work in addition to the ability of credit cards to work for community members.
    - This dual reading process took additional time and research to get to an implementation date and was in the testing phase in Madison, WI by the end of August 2014.
    - Following testing, B-cycle needed ample time to assimilate data for proactive adjustments prior to launch in Fargo.
    - It should be noted that this system is the FIRST OF THIS KIND in which student cards are integrated which allows for bypass of credit card use by students of a sponsoring school. NDSU is innovating the industry by collaborating with B-cycle on this custom development.
  - The second provision that NDSU required of B-cycle was the custom color of the bikes to be Bison green. This custom order required a lead time of six months of which commenced in April resulting in an arrival target of October in Fargo, ND.
  - In light of the technological research and development stretching into the fall as well as the custom bikes arriving in October, the Board of Directors had to make the decision to ensure that all of these components are in place as intended for a full launch. This resulted in the unanimous vote of the Board to delay launch to Spring 2015. This delay of launch would allow for the following:
    - Completion of the MF-RFID development and testing as well as adjustments for launch
    - The fall semester to have B-cycle send a bike, kiosk, and dock to NDSU for Student Government to use to educate and engage students on the use of the system
    - Save in operational expenses since a portion of this year's expenses will not be needed due to a delayed launch. This money is currently in the discussion/pro-rating process as determined by Student Government and NDSU Administration (Finance and General Counsel).

If you have additional questions, please contact the following in Student Government:

Executive Commissioner of Finance, Preston Gilderhus

Vice-Chair of Senate, Chris McEwen

Executive Commissioner of Public Relations, Amy L. Nash