IOWA BUG RULES (5/14/2024) - DRAFT

Level	Metric_Name	Rule_Type	CIP_medlrg_soft	WCBP_medlrg_soft	IowaSrf_medlrg_soft
2	nt_BCG_att1i234b		>=3 (1-5)	>=3 (1-5)	>7 (5-10)
	nord_COET		>3 (3-4)	>3 (3-4)	>3 (3-4)
	nt_Coleo_BCG_att234b4m		>6 (4-9)	>6 (4-9)	>=8 (5-11)
	nt_Ephem_BCG_att234b4m		>=8 (5-11)	>=8 (5-11)	>=9 (6-12)
	nt_Odon_BCG_att234b4m		>=5 (3-7)	>3 (2-5)	>=5 (3-7)
	nt_Trich_BCG_att234b4m		>3 (2-5)	>5 (3-8)	>=8 (6-10)
	pi_OligoChiroHydro		<=65 (60-70)	<=60 (55-65)	<=60 (55-65)
	pi_BCG_att4w5		<=35 (30-40)	<=35 (30-40)	<=25 (20-30)
	pt_BCG_att4w5		<=25 (20-30)	<=25 (20-30)	<23 (20-25)
	pi_dom02		<=55 (50-60)	<=45 (40-50)	<=45 (40-50)
	nt_total	second worst (3 metrics)	>=40 (35-45)	>=46 (42-50)	>=55 (50-60)
	nt_COET		>=30 (25-35)	>=35 (30-40)	>=40 (35-45)
	nt_habit_climbcling		>=25 (20-30)	>=30 (25-35)	>37 (35-40)
3	nt_BCG_att1i234b		>1 (0-3)	>1 (0-3)	>3 (2-5)
	nord_COET		>3 (3-4)	>3 (3-4)	>3 (3-4)
	nt_Coleo_BCG_att234b4m		>2 (1-4)	>2 (1-4)	>5 (3-8)
	nt_Ephem_BCG_att234b4m		>=5 (2-8)	>4 (2-7)	>6 (4-9)
	nt_Odon_BCG_att234b4m		>1 (0-3)	>1 (0-3)	>1 (0-3)
	nt_Trich_BCG_att234b4m		>0 (0-1)	>2 (1-4)	>2 (1-4)
	nt_total	Level 3 group 1, second worst (3 metrics)	>=35 (30-40)	>38 (35-42)	>=45 (40-50)
	nt_COET		>=25 (20-30)	>=26 (22-30)	>=30 (25-35)
	nt_habit_climbcling		>=20 (15-25)	>21 (18-25)	>=30 (25-35)
	pi_BCG_att4w5	Level 3 group 2, second worst (4 metrics)	<=45 (40-50)	<=45 (40-50)	<=35 (30-40)
	pt_BCG_att4w5		<=40 (35-45)	<=35 (30-40)	<29 (25-32)
	pi_OligoChiroHydro		<=70 (65-75)	<=70 (65-75)	<=70 (65-75)
	pi_dom02		<=65 (60-70)	<=55 (50-60)	<=55 (50-60)
4	nord_COET		>3 (3-4)	>3 (3-4)	>3 (3-4)
	nt_total	Level 4 group 1, second worst (3 metrics)	>27 (25-30)	>=30 (25-35)	>37 (35-40)
	nt_COET		>17 (15-20)	>19 (17-22)	>22 (20-25)
	nt_habit_climbcling		>12 (10-15)	>=14 (10-18)	>22 (20-25)
	pi_BCG_att4w5	Level 4 group 2, second worst (4 metrics)	<=60 (55-65)	<=55 (50-60)	<=50 (45-55)
	pt_BCG_att4w5		<=50 (45-55)	<=45 (40-50)	<35 (32-37)
	pi_OligoChiroHydro		<=85 (80-90)	<=80 (75-85)	--
	pi_dom02		<=75 (70-80)	<=70 (65-75)	<=65 (60-70)
5	nord_COET		>1 (0-3)	>1 (0-3)	>1 (0-3)
	ni_total	second worst (4 metrics)	>=200 (150-250)	>=200 (150-250)	>=200 (150-250)
	nt_total		>21 (18-25)	>=15 (10-20)	>=30 (25-35)
	pi_BCG_att4w5		<=70 (65-75)	<=75 (70-80)	<=60 (55-65)
	pi_dom02		<=90 (85-95)	<=80 (75-85)	<=80 (75-85)

NEBRASKA BUG RULES (5/14/2024) - DRAFT

Level	Metric_Name	Rule_Type	CGP_mNRSA	WCBP_mNRSA	RifRocky_mNRSA
2	nt_BCG_att1i234b		>=2 (1-3)	>=2 (1-3)	>=4 (3-5)
	nord_COET		>3 (3-4)	>3 (3-4)	>3 (3-4)
	nt_Coleo_BCG_att234b4m		>4 (3-6)	>=5 (3-7)	>4 (3-6)
	nt_Ephem_BCG_att234b4m		>5 (4-7)	>5 (4-7)	>6 (5-8)
	nt_Odon_BCG_att234b4m		>=1 (0-2)	>=2 (1-3)	>=2 (1-3)
	nt_Trich_BCG_att234b4m		>=2 (1-3)	>=4 (3-5)	>4 (3-6)
	pi_BCG_att4w5		<=35 (30-40)	<=35 (30-40)	<=19 (16-23)
	pi_BCG_att5		<=2 (1-3)	<=2 (1-3)	<=2 (1-3)
	pt_BCG_att4w5		<=25 (20-30)	<28 (25-30)	<23 (20-25)
	x_Shan_2		>=4.2 (4-4.4)	>=4.5 (4.3-4.7)	>4.2 (4-4.5)
	nt_total	second worst (3 metrics)	>=45 (40-50)	>=50 (45-55)	>52 (50-55)
	nt_COET		>17 (15-20)	>17 (15-20)	>22 (20-25)
	nt_habit_climbcling		>22 (20-25)	>=25 (20-30)	>27 (25-30)
3	nt_BCG_att1i234b		>0 (0-1)	>0 (0-1)	>1 (0-3)
	nord_COET		>3 (3-4)	>3 (3-4)	>3 (3-4)
	nt_Coleo_BCG_att234b4m		>1 (0-3)	>1 (0-3)	>1 (0-3)
	nt_Ephem_BCG_att234b4m		>2 (1-4)	>2 (1-4)	>3 (2-5)
	nt_Odon		>0 (0-1)	>0 (0-1)	>0 (0-1)
	nt_Trich_BCG_att234b4m		>0 (0-1)	>1 (0-3)	>1 (0-3)
	pi_BCG_att5		<7 (3-10)	<=8 (3-13)	<=4 (3-5)
	nt_total	Level 3 group 1, second worst (3 metrics)	>=36 (32-40)	>=40 (35-45)	>47 (45-50)
	nt_COET		>=10 (5-15)	>=11 (7-15)	>=17 (14-20)
	nt_habit_climbcling		>=16 (12-20)	>=15 (10-20)	>21 (18-25)
	pi_BCG_att4w5	Level 3 group 2, second worst (3 metrics)	<=45 (40-50)	<=45 (40-50)	<=28 (23-33)
	pt_BCG_att4w5		<=35 (30-40)	<=35 (30-40)	<38 (25-32)
	x_Shan_2		>3.5 (3.1-4.0)	>=3.8 (3.3-4.3)	>=4.2 (4-4.4)
4	nord_COET		>2 (2-3)	>2 (2-3)	>3 (3-4)
	pi_BCG_att5		<=20 (15-25)	<=35 (30-40)	<=20 (15-25)
	nt_total	Level 4 group 1, second worst (3 metrics)	>29 (27-32)	>=30 (25-35)	>42 (40-45)
	nt_COET		>4 (3-6)	>5 (4-7)	>=12 (10-14)
	nt_habit_climbcling		>9 (7-12)	>8 (7-10)	>=15 (12-18)
	pi_BCG_att4w5	Level 4 group 2, second worst (3 metrics)	<=55 (50-60)	<=50 (45-55)	<=40 (35-45)
	pt_BCG_att4w5		<43 (40-45)	<=40 (35-45)	<=36 (32-40)
	x_Shan_2		>=2.9 (2.7-3.1)	>=2.8 (2.3-3.3)	>=3.9 (3.8-4)
5	nord_COET		>1 (0-3)	>1 (0-3)	>1 (0-3)
	ni_total	second worst (4 metrics)	>=150 (100-200)	>=150 (100-200)	>=150 (100-200)
	nt_total		>24 (23-27)	>=20 (15-25)	>37 (35-40)
	pi_BCG_att4w5		<=70 (65-75)	<=75 (70-80)	<=50 (45-55)
	x_Shan_2		>2.5 (2.4-2.7)	>=1.8 (1.3-2.3)	>3.6 (3.5-3.8)

KANSAS BUG RULES (5/14/2024) – CIP MEDIUM - DRAFT

Level	Metric_Name	Rule_Type	CIP_medium
2	nt_BCG_att1i234b		>6 (5-8)
	pi_BCG_att1i234b		>6 (3-10)
	nord_COET		>3 (3-4)
	nt_Coleo_BCG_att234b4m		>=9 (7-11)
	nt_Ephem_BCG_att234b4m		>=7 (5-9)
	nt_Odon_BCG_att234b4m		>=5 (3-7)
	nt_Trich_BCG_att234b4m		>3 (2-5)
	pi_BCG_att5		<2 (1-2)
	pi_BCG_att4w5		<=30 (25-35)
	pt_BCG_att4w5		<=25 (20-30)
	x_Shan_2		>=4.6 (4.2-5)
	nt_total	second worst (3 metrics)	>=50 (45-55)
	nt_COET		>27 (25-30)
	nt_habit_climbcling		>=28 (24-32)
3	nt_BCG_att1i234b		>2 (1-4)
	pi_BCG_att1i234b		>=1.3 (0.8-1.8)
	nord_COET		>3 (3-4)
	nt_Coleo_BCG_att234b4m		>2 (1-4)
	nt_Ephem_BCG_att234b4m		>2 (1-4)
	nt_Odon_BCG_att234b4m		>=1 (0-2)
	nt_Trich_BCG_att234b4m		>0 (0-1)
	pi_BCG_att5		<8 (5-10)
	nt_total	Level 3 group 1, second worst (3 metrics)	>=40 (35-45)
	nt_COET		>=20 (15-25)
	nt_habit_climbcling		>=21 (18-24)
	pi_BCG_att4w5	Level 3 group 2, second worst (3 metrics)	<=40 (35-45)
	pt_BCG_att4w5		<=35 (30-40)
	x_Shan_2		>4.0 (3.9-4.2)
4	nord_COET		>2 (2-3)
	pi_BCG_att5		<=15 (10-20)
	nt_total	Level 4 group 1, second worst (3 metrics)	>32 (30-35)
	nt_COET		>=12 (9-15)
	nt_habit_climbcling		>=16 (14-18)
	pi_BCG_att4w5	Level 4 group 2, second worst (3 metrics)	<=50 (45-55)
	pt_BCG_att4w5		<43 (40-45)
	x_Shan_2		>3.6 (3.4-3.9)
5	nord_COET		>1 (0-3)
	ni_total	second worst (4 metrics)	>=100 (90-110)
	nt_total		>22 (20-25)
	pi_BCG_att4w5		<=60 (55-65)
	x_Shan_2		>=2.5 (2.3-2.7)

MISSOURI BUG RULES (5/14/2024) – DNR GLIDE-POOL FALL SEASON - DRAFT

Level	Metric_Name	Rule_Type	DNR_GlidePool_fall
2	nt_BCG_att1i234b		>6 (4-9)
	pi_BCG_att1i234b		>4 (2-7)
	nord_COET		>3 (3-4)
	nt_Coleo_BCG_att234b4m		>=5 (3-7)
	nt_Ephem_BCG_att234b4m		>=9 (6-12)
	nt_Odon_BCG_att234b4m		>4 (2-7)
	nt_Trich_BCG_att234b4m		>=5 (3-7)
	pi_BCG_att5		<2 (1-2)
	pi_BCG_att4w5		<=20 (15-25)
	pt_BCG_att4w5		<16 (11-20)
	x_Shan_2		>4.5 (4.3-4.8)
	nt_total	second worst (3 metrics)	>=70 (65-75)
	nt_COET		>27 (25-30)
	nt_habit_climbcling		>32 (30-35)
3	nt_BCG_att1i234b		>2 (1-4)
	pi_BCG_att1i234b		>=0.5 (0-1)
	nord_COET		>3 (3-4)
	nt_Coleo_BCG_att234b4m		>2 (1-4)
	nt_Ephem_BCG_att234b4m		>=4 (2-6)
	nt_Odon_BCG_att234b4m		>1 (0-3)
	nt_Trich_BCG_att234b4m		>0 (0-1)
	pi_BCG_att5		<5 (2-7)
	nt_total	Level 3 group 1, second worst (3 metrics)	>=60 (55-65)
	nt_COET		>=20 (15-25)
	nt_habit_climbcling		>=25 (20-30)
	pi_BCG_att4w5	Level 3 group 2, second worst (3 metrics)	<=30 (25-35)
	pt_BCG_att4w5		<24 (20-27)
	x_Shan_2		>4.0 (3.8-4.3)
4	nord_COET		>2 (2-3)
	pi_BCG_att5		<=15 (10-20)
	nt_total	Level 4 group 1, second worst (3 metrics)	>=50 (45-55)
	nt_COET		>11 (8-15)
	nt_habit_climbcling		>=15 (10-20)
	pi_BCG_att4w5	Level 4 group 2, second worst (3 metrics)	<=40 (35-45)
	pt_BCG_att4w5		<=32 (27-37)
	x_Shan_2		>=3.4 (3-3.8)
5	nord_COET		>1 (0-3)
	ni_total	second worst (4 metrics)	>=200 (175-225)
	nt_total		>=40 (35-45)
	pi_BCG_att4w5		<=50 (45-55)
	x_Shan_2		>=2.6 (2.2-3)

CROSS WALK BUG RULES (5/14/2024) – CIP, SOFT BOTTOM GLIDE POOL, MEDIUM/LARGE SIZE STREAMS - DRAFT

Level	Metric_Name	Rule_Type	IOWA CIP_medlrg_soft	KANSAS CIP_medium	MISSOURI DNR_GlidePool_fall
2	nt_BCG_att1i234b		>=3 (1-5)	>6 (5-8)	>6 (4-9)
	pi_BCG_att1i234b		--	>6 (3-10)	>4 (2-7)
	nord_COET		>3 (3-4)	>3 (3-4)	>3 (3-4)
	nt_Coleo_BCG_att234b4m		>6 (4-9)	>=9 (7-11)	>=5 (3-7)
	nt_Ephem_BCG_att234b4m		>=8 (5-11)	>=7 (5-9)	>=9 (6-12)
	nt_Odon_BCG_att234b4m		>=5 (3-7)	>=5 (3-7)	>4 (2-7)
	nt_Trich_BCG_att234b4m		>3 (2-5)	>3 (2-5)	>=5 (3-7)
	pi_OligoChiroHydro		<=65 (60-70)	--	--
	pi_BCG_att5		--	<2 (1-2)	<2 (1-2)
	pi_BCG_att4w5		<=35 (30-40)	<=30 (25-35)	<=20 (15-25)
	pt_BCG_att4w5		<=25 (20-30)	<=25 (20-30)	<16 (11-20)
	x_Shan_2		--	>=4.6 (4.2-5)	>4.5 (4.3-4.8)
	pi_dom02		<=55 (50-60)	--	--
	nt_total	second worst	>=40 (35-45)	>=50 (45-55)	>=70 (65-75)
	nt_COET		>=30 (25-35)	>27 (25-30)	>27 (25-30)
	nt_habit_climbcling		>=25 (20-30)	>=28 (24-32)	>32 (30-35)
3	nt_BCG_att1i234b		>1 (0-3)	>2 (1-4)	>2 (1-4)
	pi_BCG_att1i234b		--	>=1.3 (0.8-1.8)	>=0.5 (0-1)
	nord_COET		>3 (3-4)	>3 (3-4)	>3 (3-4)
	nt_Coleo_BCG_att234b4m		>2 (1-4)	>2 (1-4)	>2 (1-4)
	nt_Ephem_BCG_att234b4m		>=5 (2-8)	>2 (1-4)	>=4 (2-6)
	nt_Odon_BCG_att234b4m		>1 (0-3)	>=1 (0-2)	>1 (0-3)
	nt_Trich_BCG_att234b4m		>0 (0-1)	>0 (0-1)	>0 (0-1)
	pi_BCG_att5		--	<8 (5-10)	<5 (2-7)
	nt_total	Level 3 group 1, second worst	>=35 (30-40)	>=40 (35-45)	>=60 (55-65)
	nt_COET		>=25 (20-30)	>=20 (15-25)	>=20 (15-25)
	nt_habit_climbcling		>=20 (15-25)	>=21 (18-24)	>=25 (20-30)
	pi_BCG_att4w5	Level 3 group 2, second worst	<=45 (40-50)	<=40 (35-45)	<=30 (25-35)
	pt_BCG_att4w5		<=40 (35-45)	<=35 (30-40)	<24 (20-27)
	x_Shan_2		--	>4.0 (3.9-4.2)	>4.0 (3.8-4.3)
	pi_OligoChiroHydro		<=70 (65-75)	--	--
	pi_dom02		<=65 (60-70)	--	--
4	nord_COET		>3 (3-4)	>2 (2-3)	>2 (2-3)
	pi_BCG_att5		--	<=15 (10-20)	<=15 (10-20)
	nt_total	Level 4 group 1, second worst	>27 (25-30)	>32 (30-35)	>=50 (45-55)
	nt_COET		>17 (15-20)	>=12 (9-15)	>11 (8-15)
	nt_habit_climbcling		>12 (10-15)	>=16 (14-18)	>=15 (10-20)
	pi_BCG_att4w5	Level 4 group 2, second worst	<=60 (55-65)	<=50 (45-55)	<=40 (35-45)
	pt_BCG_att4w5		<=50 (45-55)	<43 (40-45)	<=32 (27-37)
	x_Shan_2		--	>3.6 (3.4-3.9)	>=3.4 (3-3.8)
	pi_OligoChiroHydro		<=85 (80-90)	--	--
	pi_dom02		<=75 (70-80)	--	--
5	nord_COET		>1 (0-3)	>1 (0-3)	>1 (0-3)
	ni_total	second worst	>=200 (150-250)	>=100 (90-110)	>=200 (175-225)
	nt_total		>21 (18-25)	>22 (20-25)	>=40 (35-45)
	pi_BCG_att4w5		<=70 (65-75)	<=60 (55-65)	<=50 (45-55)
	x_Shan_2		--	>=2.5 (2.3-2.7)	>=2.6 (2.2-3)
	pi_dom02		<=90 (85-95)	--	--