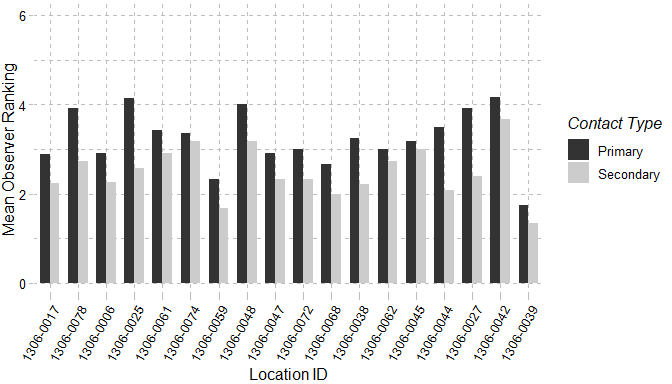
Section 1 d)Observer Ranking of Recreational Ability

ALC

4/16/2020

Perceptions of recreational ability were ranked at all sampling locations during each site visit as per standard site visit protocols (SOP #208-19). The observer ranking of recreational ability is a method of evaluating impacts to recreational use of a stream segment. Impacts to recreational use have been correlated with “impairment of aquatic life use from nutrient enrichment” and rankings below slightly impacted are indicative of significant impacts to recreational ability (Smith et al. 2014). The ranking assesses primary (1°) and secondary (2°) contact recreation, as well as a user’s desire to fish.

The first two questions of the recreational use evaluation describe the observers perceived ability to participate in 1° and 2° contact recreation (Appendix V). Results of this ranking are the primary gauge of whether the Wallkill River is achieving its designated recreational uses. Figure 12 illustrates the average observer ranking for desire to participate in 1° and 2° contact recreation at each sampling location. Results of this survey suggest observers (NYSDEC field staff) considered the desire to participate in 1° and 2° contact recreation to be slightly impacted at PWL segments 1306-0078, 1306-0025, 1306-0061, 1306-0074, 1306-0048, 1306-0072, 1306-0038, 1306-0062, 1306-0045, 1306-0044, 1306-0027, 1306-0042.



Additional questions on a scale of 0-10 (0 – Best/Natural; 10 Worst/Severe) help determine the factors influencing the user’s perception. Those factors are: 1) Water Clarity; 2) Trash; 3) Periphyton; 4) Odor; 5) Discharge Pipes. (@ref(tab:UserP-mean-factor)) shows the mean recorded value for these factors at each sampling location and (@ref(tab:UserP-dominant-factor)) shows the most commonly selected factors reducing an observer’s desire to participate in 1° and 2° contact recreation. Other factors described by observers were: 1) Low Dissolved Oxygen; 2) Proximity to Road; 3) Proximity to a State Superfund Site; 4) Proximity to WWTF effluent discharge.

Table :Mean observer ranked value for factors influencing desire to participate in 1° and 2° contact recreation in the Wallkill River. Factors were ranked on a 10 scale (0 – Best/Natural; 10 Worst/Severe) according to perceived impact on a location. Ranking of recreation ability was performed for all locations during each site visit

| **SH\_PWL\_ID** | **Site   ID** | **Water   Clarity** | **Suspended  Phytoplankton** | **Periphyton** | **Macrophyte** | **Odor** | **Trash** | **Dishcarge   Pipes** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1306-0017 | 13-WALK-60.1 | 5 | 0 | 1 | 1 | 0 | 1 | 0 |
| 1306-0078 | 13-POCH-1.8 | 6 | 1 | 3 | 0 | 2 | 0 | 0 |
| 1306-0006 | 13-RUTG-1.5 | 4 | 0 | 4 | 1 | 1 | 2 | 0 |
| 1306-0025 | 13-QKER-0.9 | 6 | 4 | 4 | 4 | 2 | 1 | 0 |
| 1306-0061 | 13-RIOG-0.7 | 2 | 0 | 3 | 1 | 3 | 2 | 0 |
| 1306-0061 | 13-WCHEE-0.6 | 6 | 1 | 2 | 0 | 1 | 1 | 0 |
| 1306-0017 | 13-WALK-46.6 | 4 | 0 | 3 | 1 | 0 | 1 | 0 |
| 1306-0074 | 13-MONH-4.1 | 3 | 0 | 6 | 2 | 5 | 2 | 2 |
| 1306-0074 | 13-MONH-0.4 | 2 | 0 | 3 | 0 | 5 | 2 | 1 |
| 1306-0059 | 13-LGUN-6.0 | 4 | 2 | 0 | 0 | 1 | 0 | 2 |
| 1306-0048 | 13-GUNK-40.3 | 5 | 1 | 3 | 2 | 3 | 1 | 2 |
| 1306-0047 | 13-GUNK-37.7 | 2 | 0 | 4 | 0 | 4 | 4 | 2 |
| 1306-0047 | 13-GUNK\_T35-0.2 | 5 | 1 | 5 | 1 | 0 | 1 | 1 |
| 1306-0072 | 13-MASO-0.2 | 2 | 0 | 2 | 0 | 4 | 3 | 1 |
| 1306-0038 | 13-WALK-44.4 | 6 | 1 | 3 | 1 | 0 | 1 | 0 |
| 1306-0038 | 13-WALK-35.6 | 6 | 1 | 4 | 0 | 1 | 2 | 1 |
| 1306-0038 | 13-WALK-29.9 | 7 | 0 | 3 | 1 | 0 | 1 | 0 |
| 1306-0068 | 13-TINW-0.5 | 1 | 0 | 2 | 0 | 0 | 2 | 0 |
| 1306-0038 | 13-WALK-26.9 | 6 | 0 | 4 | 1 | 0 | 0 | 0 |
| 1306-0062 | 13-DWAR-2.0 | 4 | 0 | 4 | 2 | 1 | 3 | 2 |
| 1306-0038 | 13-WALK-22.8 | 6 | 0 | 3 | 1 | 0 | 2 | 0 |
| 1306-0038 | 13-WALK-19.0 | 7 | 0 | 4 | 1 | 1 | 3 | 0 |
| 1306-0045 | 13-GUNK-0.4 | 4 | 0 | 1 | 0 | 1 | 2 | 0 |
| 1306-0044 | 13-PKIL-0.4 | 3 | 0 | 4 | 2 | 0 | 1 | 0 |
| 1306-0027 | 13-WALK-9.8 | 7 | 0 | 4 | 1 | 0 | 1 | 0 |
| 1306-0042 | 13-WKLEI-0.6 | 8 | 1 | 3 | 0 | 1 | 0 | 0 |
| 1306-0027 | 13-WALK-2.1 | 6 | 0 | 2 | 2 | 0 | 1 | 0 |
| 1306-0039 | 13-SWAK-1.7 | 2 | 0 | 3 | 1 | 0 | 0 | 0 |

Table :Most frequently ranked factor influencing observer desire to participate in 1° and 2° contact recreation in the Wallkill River. Factors influencing desire to recreate were ranked and a primary factor influencing the desire to participate in 1° and 2° contact recreation was chosen during each site visit. Column values represent the factor selected most frequently at each site.

| **PWL ID** | **SITE** | **Primary** | **Secondary** |
| --- | --- | --- | --- |
| 1306-0017 | 13-WALK-60.1 | Water Clarity | None, Water clarity |
| 1306-0078 | 13-POCH-1.8 | Water Clarity | Water clarity |
| 1306-0006 | 13-RUTG-1.5 | Periphyton | Proximity to development roads |
| 1306-0025 | 13-QKER-0.9 | Water Clarity | Other, Suspended Phytoplankton, Water clarity |
| 1306-0061 | 13-RIOG-0.7 | Odor, Other | None |
| 1306-0061 | 13-WCHEE-0.6 | Water Clarity | None |
| 1306-0017 | 13-WALK-46.6 | Water Clarity | None, Other |
| 1306-0074 | 13-MONH-4.1 | Odor | Periphyton |
| 1306-0074 | 13-MONH-0.4 | Odor | Odor |
| 1306-0059 | 13-LGUN-6.0 | None, Other, Water Clarity | None |
| 1306-0048 | 13-GUNK-40.3 | Water Clarity | Other |
| 1306-0047 | 13-GUNK-37.7 | Odor, Periphyton | Trash |
| 1306-0047 | 13-GUNK\_T35-0.2 | Water Clarity | Other |
| 1306-0072 | 13-MASO-0.2 | Odor | Other |
| 1306-0038 | 13-WALK-44.4 | Water Clarity | None, Water clarity |
| 1306-0038 | 13-WALK-35.6 | Water Clarity | None, Other, Water clarity |
| 1306-0038 | 13-WALK-29.9 | Water Clarity | Water clarity |
| 1306-0068 | 13-TINW-0.5 | None, Other, Water Clarity | None |
| 1306-0038 | 13-WALK-26.9 | Water Clarity | Other |
| 1306-0062 | 13-DWAR-2.0 | None, Water Clarity | None, Water clarity |
| 1306-0038 | 13-WALK-22.8 | Water Clarity | Other |
| 1306-0038 | 13-WALK-19.0 | Water Clarity | Water clarity |
| 1306-0045 | 13-GUNK-0.4 | Other, Water Clarity | None |
| 1306-0044 | 13-PKIL-0.4 | Proximity\_to\_Development\_Roads, Water Clarity | None, Proximity to development roads |
| 1306-0027 | 13-WALK-9.8 | Water Clarity | Water clarity |
| 1306-0042 | 13-WKLEI-0.6 | Water Clarity | Water clarity |
| 1306-0027 | 13-WALK-2.1 | Water Clarity | None |
| 1306-0039 | 13-SWAK-1.7 | None, Proximity\_to\_Development\_Roads | None |