A. Absolute Abundance of Lake Cadagno Bacterial Communites (Phylum) Mixolimnion A. Phylum 3 Acidobacteria **Firmicutes** Actinobacteria Kiritimatiellaeota 5 Armatimonadetes Omnitrophicaeota Bacteria_unclassified Patescibacteria **Bacteroidetes** Planctomycetes Chloroflexi Proteobacteria 9 Cyanobacteria Spirochaetes Epsilonbacteraeota Verrucomicrobia 11 Chemocline 13 15 15.5 Monimolimnion 17 19 2e+05 6e+05 8e+05 4e+05 0e+00 Absolute Abundance (>1000 Cells/mL) **B. Absolute Abundance of Proteobacteria (Genus)** C. Absolute Abundance of Bacteroidetes (Genus) C. Genus B. Genus env.OPS_17_ge alfV-A Gammaproteobacteria_unclassified bacl-A 3 bacl-B FTLpost3_ge Bdellovibrio Geobacter KD1-131_ge Betaproteobacteriales_unclassified Lamprocystis bacII-A betI-A Myxococcales_unclassified bacIII-A Lentimicrobiaceae_ge betI-B bacIII-B Paludibacter OM27_clade Peredibacter bacIV-B Runella betIV-A Bacteroidetes_BD2-2_ge SJA-28_ge Burkholderiaceae_unclassified Pnec 9 Bacteroidetes_unclassified ST-12K33_ge Caulobacter Smithella Chromatium Thiocystis Bacteroidetes_vadinHA17_ge unclassified 11 Bacteroidia unclassified Desulfatirhabdium Thiovirga uncultured unclassified WCHB1-32 Desulfobulbaceae ge BSV13 Desulfobulbus uncultured Chlorobium Desulfocapsa Emticicia 13 Desulfomonile 15 15.5 17 19

2e+05

0e+00

4e+05

Absolute Abundance (>1000 Cells/mL)

6e+05

8e+05

Depth (m)

2e+05

0e+00

4e+05

Absolute Abundance (>1000 Cells/mL)

6e+05

8e+05