SOIL Sampling Point: W1-3u

| Profile Desci Depth | ription: (Describe to Matrix | the de | oth need | | ument the ox Feature | | or or co | onfirm the absence of | indicators.) |
|----------------------------|---------------------------------|-----------|------------------|---------------|-------------------------|-------------------|------------------|--------------------------------|---|
| (inches) | Color (moist) | % | Colo | or (moist) | % | Type ¹ | Loc ² | Texture | Remarks |
| 0-8 | 10YR 2/2 | 100 | | T (MOISE) | | Турс | | Silty Clay Loam | Remarks |
| 8-10 | 10YR 3/1 | 98 | 10YR | 3/6 | 2 | | | Silty Clay Loam | |
| 10-16 | 10YR 2/1 | 90 | 10YR | 3/6 | 10 | | | Silty Clay Loam | |
| 16-24 | 10YR 3/1 | 85 | 10YR | 3/6 | 15 | | | Silty Clay Loam | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| ¹ Type: C=Co | oncentration, D=Depl | etion, R | M=Redu | ced Matrix | , MS=Mas | ked San | d Grains | s. ² Location: PL=F | Pore Lining, M=Matrix. |
| Hydric Soil II | ndicators: | | | | | | | Indicators f | for Problematic Hydric Soils ³ : |
| Histosol (A | .1) | | Sa | ndy Gleyed I | Matrix (S4) | | | Coast Pr | rairie Redox (A16) |
| Histic Epip | edon (A2) | | Sa | ndy Redox (| S5) | | | Iron-Man | nganese Masses (F12) |
| Black Histi | c (A3) | | Str | ipped Matrix | (S6) | | | Red Pare | ent Material (F21) |
| Hydrogen | Sulfide (A4) | | Da | rk Surface (S | S7) | | | Very Sha | allow Dark Surface (F22) |
| Stratified L | ayers (A5) | | Loa | amy Mucky N | Mineral (F1) |) | | Other (E | xplain in Remarks) |
| 2 cm Muck | (A10) | | Loa | amy Gleyed | Matrix (F2) | | | | |
| Depleted E | Below Dark Surface (A11 | 1) | De | pleted Matrix | x (F3) | | | | |
| Thick Dark | Surface (A12) | | X Re | dox Dark Su | ırface (F6) | | | | |
| Sandy Mud | cky Mineral (S1) | | De | pleted Dark | Surface (F7 | 7) | | | |
| 5 cm Muck | y Peat or Peat (S3) | | Re | dox Depress | sions (F8) | | | | |
| Restrictive L | ayer (if observed): | | | | | | | | |
| Type: | | | | | | | | | |
| Depth (in | ches): | | | | | | | Hydric Soil Prese | nt? Yes X No |
| Remarks: | | | | | | | | | |
| Wetland deter | mination based on the | lack of h | ıydrophyt | ic vegetatio | n and wetl | and hydro | ology ind | licators. | |
| | | | | | | | | | |
| HYDROLO | | | | | | | | | |
| 1 | Irology Indicators: | | | | | | | Secondary Ind | icators (minimum of two required) |
| | ators (minimum of on | ie is req | <u>uirea; cn</u> | eck all that | <u>(apply)</u> | | | Surface S | Soil Cracks (B6) |
| Surface Wa | * * | | | Water-Staine | , | 19) | | Drainage | Patterns (B10) |
| High Water | | | | Aquatic Faun | | | | Dry-Seas | on Water Table (C2) |
| Saturation (| | | | True Aquatic | • | • | | | Burrows (C8) |
| Water Mark | , | | | Hydrogen Su | | - | . (00) | <u> </u> | n Visible on Aerial Imagery (C9) |
| l | Deposits (B2) | | | Oxidized Rhiz | | - | oots (C3) | | or Stressed Plants (D1) |
| Drift Depos Algal Mat o | | | | Presence of I | | | - (00) | | hic Position (D2) |
| Iron Deposi | | | | Recent Iron F | | Tilled Soll | s (C0) | FAC-Neu | tral Test (D5) |
| l — | Visible on Aerial Imagery (| (B7) | | Thin Muck Su | | | | | |
| l — | egetated Concave Surface | | | Gauge or We | | | | | |
| Field Observ | | - () | | Other (Explai | III III Nemar | (5) | | | |
| Surface Wate | | | No | X D | epth (inch | nes): | | | |
| Water Table | Present Yes | _ | No | X D | epth (inch | nes): | | | |
| Saturation Pr | | | No | | epth (inch | · — | | Wetland Hydrology | Present? Yes No X |
| (includes cap | <u> </u> | | | | | | | | i lesNU |
| Describe Red | corded Data (stream o | gauge, r | nonitorin | g well, aeri | al photos, | previous | s inspec | tions), if available: | |
| Remarks: | | | | | | | | | |
| | | | | | | | | | |

| Project/Site: Castlerock | | City | /County: <u></u> [| Dakota | Sampling | Date: 10/2 | 20/2022 |
|--|-----------------|--------------------|---------------------------|---|---------------------------------------|----------------------------------|-------------|
| Applicant/Owner: Stone Solar | | | _ | State: Mi | — n Sampling | Point: W1- | -3w |
| Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon | | | Section | Township, Range: T | | | |
| Landform (hillside, terrace, etc.): Depression | ĺ | Local relief (| – concave, co | nvex, none): Conca | ve | Slope % | : 1-2 |
| Subregion (LRR or MLRA): LRR_K_MLRA_91 Lat: | 44.617 | | L | ong: -93.105724 | D | — atum: W | 'GS84 |
| Soil Map Unit Name: Klinger silt loam, 1 to 5 percen | | | | NWI classification | n: PSS1/E | EM1Ad | |
| Are climatic / hydrologic conditions on the site typical for | | | Yes | No X (If I | no, explain in F | Remarks.) | |
| Are Vegetation , Soil , or Hydrology | significant | tly disturbed? | - | —— lormal Circumstances" p | | | No |
| Are Vegetation , Soil , or Hydrology | | | 416 | eded, explain any answer | s in Remarks.) |) | |
| SUMMARY OF FINDINGS – Attach site map she | | | | ansects, important featu | ıres, etc. | | |
| | _ No | | | - | <u> </u> | | |
| | _ No | " | the Sample ithin a Wet | | X No | | |
| | _ No | | itiiiii a vveti | . 165 | | _ | |
| Remarks: (Explain alternative procedures here or in a s | | , | | | | | |
| Hardwood swamp community surrounded by a harvested corn t | ield with cente | er pivot irrigatio | on systems. C | lmatic conditions are drier th | an normal. | | |
| VEGETATION – Use scientific names of pla | nts. | | | | | | |
| Coo de de la marine de più | Absolute | Dominant | Indicato | r | | | |
| <u>Tree Stratum</u> (Plot size: <u>30 ft</u>) | % Cover | <u>Species</u> | <u>Status</u> | Dominance Test w | orksheet: | | |
| 1. Acer saccharinum | 50 | Yes | FACW | Number of Dominar | nt Species | | |
| 2 | | | | _ That Are OBL, FAC | W, or FAC: | 3 | (A) |
| 3 | | | | _ | minant | | |
| 4 | | | | Species Across All | | 3 | (B) |
| 5 | | | | Percent of Dominar | nt Species | | |
| Sapling/Shrub Stratum (Plot size: 15 ft) | 50 | = Total Cov | er | That Are OBL, FAC | • | 100 | (A/B) |
| 1 Cornus alba | 15 | Yes | FACW | Prevalence Index | worksheet: | | |
| 2. Lonicera x bella | 5 | No | FACU | Total % Cove | r of: | Multiply b | oy: |
| 3. | | | | OBL species | 0 x | 1 = <u> </u> |) |
| 4 | | | | FACW species | 148 x 2 | 2 = 29 | 96 |
| 5 | | | | _ FAC species | | 3 = 6 | |
| E # | = | = Total Cove | r | FACU species | | 4 = 11 | |
| Herb Stratum (Plot size: 5 ft) | | | | UPL species | 0 x ! | 5 = C | <u> </u> |
| 1. Phalaris arundinacea | 80 | Yes | FACW | Column Totals: | 178 (A | | 14 (B) |
| 2. Bromus inermis | | No | FACU_ | _ l | ndex = B/A = | 2.3 | ` |
| 3. <u>Solidago gigantea</u> | | | FACW_ | Hydrophytic Vege | | | |
| 4. Sonchus oleraceus | | No No | FACU | X1 - Rapid Test | | | on |
| 5. Rumex crispus 6. | | | | - I — · | | • | ווט |
| 7 | | | | X 2 - Dominance | | | |
| 8. | | | | — X 3 - Prevalence | | | |
| 9 | | | | — 4 - Morpholog (Provide supporting) | ical Adaptatior data in Remarks or | nS ¹ on a separate | sheet) |
| 10. | | | | Problematic H | lydrophytic Ved | getation¹ (E | Explain) |
| | 400 | = Total Cove | er | Indicators of hydric soil an | , , , , | ` | . , |
| Woody Vine Stratum (Plot size: 30 ft) | | | • | disturbed or problematic. | | | |
| 1 | | | | _ Hydrophytic | | | |
| 2 | | | | Vegetation | V | | |
| | 0 | = Total Cove | r | Present? | Yes X | No | _ |
| Remarks: (Include photo numbers here or on a separ | rate sheet.) | | | | | | |
| | | | | | | | |

SOIL Sampling Point: W1-3w

| Profile Desc Depth | ription: (Describe to Matrix | the de | pth need | | ument th ox Featur | | tor or co | onfirm the absence of | indicators.) | |
|------------------------------|---------------------------------|----------|---------------|---------------|------------------------------|-------------------|------------------|-----------------------|---------------------|-------------------------------|
| (inches) | Color (moist) | % | Colo | or (moist) | % | Type ¹ | Loc ² | Texture | | Remarks |
| 0-7 | 10YR 2/1 | 98 | 5YR | 3/4 | 2 | C | | Silty Clay Loam | | |
| 7-15 | 10YR 2/1 | 68 | 5YR | 3/4 | 2 | С | М | Silty Clay Loam | | |
| 7-15 | 10YR 3/2 | 30 | | | 0 | | | Silty Clay Loam | | |
| 15-24 | 10YR 2/1 | 92 | 5YR | 3/4 | 8 | С | М | Silty Clay Loam | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | oncentration, D=Depl | etion, R | M=Redu | ced Matrix, | , MS=Mas | sked San | d Grains | | | |
| Hydric Soil I | ndicators: | | | | | | | Indicators f | or Problemati | c Hydric Soils ³ : |
| Histosol (A | .1) | | Sa | ndy Gleyed I | Matrix (S4) | | | Coast Pr | airie Redox (A16 |) |
| Histic Epip | edon (A2) | | Sa | ndy Redox (| S5) | | | Iron-Man | iganese Masses | (F12) |
| Black Histi | c (A3) | | Str | ripped Matrix | (S6) | | | Red Pare | ent Material (F21) |) |
| Hydrogen | Sulfide (A4) | | Da | rk Surface (S | S7) | | | Very Sha | allow Dark Surfac | e (F22) |
| Stratified L | ayers (A5) | | Loa | amy Mucky N | Mineral (F1 |) | | Other (Ex | xplain in Remarks | s) |
| 2 cm Mucl | (A10) | | Loa | amy Gleyed | Matrix (F2) |) | | | | |
| Depleted E | Below Dark Surface (A11 |) | $\overline{}$ | pleted Matrix | | | | | | |
| | Surface (A12) | | | dox Dark Su | | | | | | |
| | cky Mineral (S1) | | | pleted Dark | - | 7) | | | | |
| | y Peat or Peat (S3) | | Re | dox Depress | sions (F8) | | | | | |
| | ayer (if observed): | | | | | | | | | |
| Type: | | | | | | | | | | V |
| Depth (in | ches): | | | | | | | Hydric Soil Prese | nt? Ye | es <u>X</u> No |
| Remarks: | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| HYDROLO | GY | | | | | | | | | |
| Wetland Hyd | Irology Indicators: | | | | | | | Secondary Indi | icators (minimum | of two required) |
| Primary Indic | ators (minimum of on | e is req | uired; ch | eck all that | t apply) | | | - | Soil Cracks (B6) | <u> </u> |
| Surface Wa | ater (A1) | | | Water-Staine | d Leaves (E | 39) | | | Patterns (B10) | |
| High Water | Table (A2) | | | Aquatic Faun | a (B13) | | | Dry-Seaso | on Water Table (C | (2) |
| Saturation | (A3) | | | True Aquatic | Plants (B14 | 1) | | Crayfish E | Burrows (C8) | |
| Water Mark | s (B1) | | | Hydrogen Su | lfide Odor (| C1) | | Saturation | n Visible on Aerial | Imagery (C9) |
| Sediment [| Deposits (B2) | | | Oxidized Rhiz | zospheres c | on Living R | oots (C3) | Stunted o | r Stressed Plants (| (D1) |
| Drift Depos | its (B3) | | | Presence of F | Reduced Iro | on (C4) | | X Geomorpl | hic Position (D2) | |
| Algal Mat o | r Crust (B4) | | | Recent Iron F | Reduction in | Tilled Soil | s (C6) | X FAC-Neut | tral Test (D5) | |
| Iron Depos | | | | Thin Muck Su | urface (C7) | | | | | |
| | Visible on Aerial Imagery (| | | Gauge or We | ell Data (D9) |) | | | | |
| | egetated Concave Surface | e (B8) | | Other (Explai | n in Remarl | ks) | | 1 | | |
| Field Observ | | | No | X D | epth (incl | hes): | | | | |
| Surface Wate | | | No | | epth (incl | | | | | |
| Water Table Saturation Pr | | | No | | epth (incl | · — | | | | |
| (includes cap | | | 140 | <u> </u> | Span (moi | | | Wetland Hydrology | Present? | Yes <u>X</u> No |
| | corded Data (stream o | gauge, i | nonitorin | g well, aeri | al photos | , previou | s inspec | tions), if available: | | |
| | | | | | | | - | | | |
| Remarks: | | | | | | | | | | |
| | | | | | | | | | | |

| Project/Site: Castlerock | | City/Co | unty: <u>Dak</u> | ota | Samp | ling Date: | 10/17/ | 2022 |
|--|--------------------|-----------------|-----------------------|--|---------------------------------------|----------------|----------------|------------------|
| Applicant/Owner: Stone Solar | | | | State: | Min Samp | ling Point | : <u>W2-1u</u> | <u></u> |
| Investigator(s): S. Kinsler, M. Volbrecht, D. Hixor | 1 | | Section, T | ownship, Range: | T113N, R0 | 19W, S0 | 9 | |
| Landform (hillside, terrace, etc.): Terrace | Lo | cal relief (con | cave, conve | ex, none): Line | ar | Slo | эре %: | 1-2 |
| Subregion (LRR or MLRA): LRR_K_MLRA_91 L | at: 44.615281 | | Long | g: -93.104223 | | Datum: | : WGS | S84 |
| Soil Map Unit Name: Maxfield silty clay loam | | | | NWI classifica | tion: | | | |
| Are climatic / hydrologic conditions on the site typical f | | ar? | Yes | <u> </u> | (If no, explain | in Rema | rks.) | |
| Are Vegetation X , Soil , or Hydrology | - | | | — —— mal Circumstances | | | | X |
| Are Vegetation , Soil , or Hydrology | | | | d, explain any ansv | | | _ | |
| SUMMARY OF FINDINGS – Attach site maps | | | ions, trans | ects, important fe | atures, etc. | | | |
| | No X | | | | · · · · · · · · · · · · · · · · · · · | | | |
| | X No | | Sampled n a Wetlan | | No | X | | |
| | No X | Within | i a wetian | u: res | | | | |
| Remarks: (Explain alternative procedures here or in a Upland sample point east of W2 within harvested corn field. | a separate report. |) | | | | | | |
| Сранска запра ранка застана на населения на на населения на на населения на на на населения на | | | | | | | | |
| VEGETATION – Use scientific names of p | lants. | | | | | | | |
| Trac Stratium (Plat size) 30 ft) | | | ndicator | Dominanaa Taa | 4aulrahaat | | | |
| Tree Stratum (Plot size: 30 ft) | % Cover | <u>Species</u> | <u>Status</u> | Dominance Tes | t worksneet | i | | |
| 1. | | | | Number of Domii | | | • | (4) |
| 2 | | | | That Are OBL, F | ACW, or FAC | <i>"</i> — | 0 | _ ^(A) |
| 4. | | | | Total Number of | | | _ | |
| 5 | | | | Species Across A | All Strata: | | 0 | _(B) |
| Sapling/Shrub Stratum (Plot size: 15 ft) | _ | Total Cover | | Percent of Domir That Are OBL, F | | | NaN | (A/B) |
| 1 | | | | Prevalence Inde | x workshee | t: | | |
| 2. | | | | Total % Co | ver of: | Mul | tiply by: | |
| 3. | | | | OBL species | 0 | x 1 = _ | 0 | |
| 4 | | | | FACW species _ | 0 | x 2 = _ | 0 | |
| 5 | | | | FAC species | 0 | x 3 = _ | 0 | |
| 5 ft) | = 7 | otal Cover | | FACU species | 0 | x 4 = | 0 | |
| Herb Stratum (Plot size: 5 ft) | | | | UPL species | 0 | x 5 = | 0 | |
| 1 | | | | Column Totals: | 0 | (A) | 0 | —— (B) |
| 2 | | | | Prevalenc | e Index = B/ | _ | | ` ′ |
| 3 4 | | | | Hydrophytic Ve | getation Indi | cators: | | |
| 5 | | | | 1 - Rapid T | _ | | getation | |
| 6. | | | | - 2 - Domina | - | | J | |
| 7. | | | | 3 - Prevaler | | | | |
| 8. | | | | 4 - Morphol | | | | |
| 9 | | | | (Provide supporti | ing data in Rema | rks or on a se | parate she | eet) |
| 10 | | | | Problemation | Hydrophytic | : Vegetatio | on¹ (Exp | olain) |
| Woody Vine Stratum (Plot size: 30 ft) | = 7 | Total Cover | | ¹ Indicators of hydric soi disturbed or problemation | | frology must l | be present | i, unless |
| 1 | | | | Hydrophytic | | | | |
| 2 | | | | Vegetation | v | | V | |
| | = 7 | Total Cover | | Present? | Yes | _ No | X | |

Remarks: (Include photo numbers here or on a separate sheet.)
Corn debris from a successful harvest. No volunteer vegetation within and no indications of stunted or stressed corn observed. Vegetation assumed to be non-hydrophytic due to the lack of wetland hydrology indicators.

SOIL Sampling Point: W2-1u

| | | the de | oth need | | | | or or co | onfirm the absence of | indicators.) |
|-------------------|---|-----------|------------|---------------|---------------|-------------------|------------------|--------------------------------|--|
| Depth (inches) | Matrix Color (moist) | 0/ | Cal- | | ox Featur | | 1.002 | Toytura | Domarka |
| (inches) | Color (moist) | <u>%</u> | | r (moist) | | Type ¹ | Loc ² | Texture Silty Clay Learn | Remarks |
| 9-15 | 10YR 2/1 10YR 4/2 | 80 | 10YR | 4/6 | 8 | | | Silty Clay Loam Clay Loam | |
| 9-15 | 10YR 2/1 | 12 | 1011 | 4/0 | 0 | | | Clay Loam | |
| 15-24 | 10YR 4/2 | 75 | 10YR | 3/6 | 25 | | | Clay Loam | |
| 15-24 | 10111 4/2 | | 1011 | 3/0 | | | | Ciay Loani | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| ¹Type: C=Co | oncentration, D=Depl | etion, R | M=Redu | ced Matrix, | , MS=Mas | ked San | d Grains | s. ² Location: PL=F | Pore Lining, M=Matrix. |
| Hydric Soil II | ndicators: | | | | | | | Indicators f | or Problematic Hydric Soils ³ : |
| Histosol (A | (1) | | Sar | ndy Gleyed I | Matrix (S4) | | | Coast Pra | airie Redox (A16) |
| Histic Epip | edon (A2) | | | ndy Redox (| | | | Iron-Man | ganese Masses (F12) |
| Black Histi | c (A3) | | Stri | pped Matrix | (S6) | | | Red Pare | ent Material (F21) |
| Hydrogen | Sulfide (A4) | | Daı | k Surface (S | S7) | | | Very Sha | allow Dark Surface (F22) |
| Stratified L | ayers (A5) | | Loa | amy Mucky N | Mineral (F1 |) | | Other (Ex | xplain in Remarks) |
| 2 cm Muck | (A10) | | Loa | my Gleyed | Matrix (F2) | | | | |
| X Depleted E | Below Dark Surface (A11 |) | X Dep | oleted Matrix | (F3) | | | | |
| Thick Dark | Surface (A12) | | Red | dox Dark Su | rface (F6) | | | | |
| Sandy Mud | cky Mineral (S1) | | Der | oleted Dark | Surface (F7 | 7) | | | |
| 5 cm Muck | xy Peat or Peat (S3) | | Red | dox Depress | ions (F8) | | | | |
| | ayer (if observed): | | | | | | | | |
| Type: | | | | | | | | | |
| Depth (in | ches): | | | | | | | Hydric Soil Prese | nt? Yes <u>X</u> No |
| Remarks: | | | | | | | | | |
| Wetland deter | mination based on the | lack of h | ıydrophyti | c vegetatio | n and wetl | and hydro | ology ind | licators. | |
| | | | | | | | | | |
| HYDROLO | GY | | | | | | | | |
| _ | drology Indicators: | | | | | | | Secondary Indi | icators (minimum of two required) |
| Primary Indic | ators (minimum of on | e is req | uired; che | eck all that | t apply) | | | Surface S | oil Cracks (B6) |
| Surface Wa | ater (A1) | | | Water-Staine | d Leaves (B | 9) | | Drainage | Patterns (B10) |
| High Water | Table (A2) | | | Aquatic Faun | a (B13) | | | Dry-Seaso | on Water Table (C2) |
| Saturation | (A3) | | | True Aquatic | Plants (B14 | .) | | Crayfish E | Burrows (C8) |
| Water Mark | (s (B1) | | | Hydrogen Su | lfide Odor (0 | C1) | | Saturation | n Visible on Aerial Imagery (C9) |
| | Deposits (B2) | | | Oxidized Rhiz | zospheres o | n Living Ro | oots (C3) | Stunted or | r Stressed Plants (D1) |
| Drift Depos | | | | Presence of I | | | | Geomorph | hic Position (D2) |
| | r Crust (B4) | | | Recent Iron F | | Tilled Soil | s (C6) | FAC-Neut | tral Test (D5) |
| Iron Deposi | | (DZ) | | Thin Muck Su | | | | | |
| | Visible on Aerial Imagery (egetated Concave Surface | | | Gauge or We | | | | | |
| Field Observ | | (00) | | Other (Explai | n in Remark | (S) | | | |
| Surface Wate | V | | No | X D | epth (inch | nes): | | | |
| Water Table | , 1 1000m | | No | | · | | | | |
| Saturation Pr | | | No | | epth (incl | · — | | Wetland Hudrals | Dropont2 Vac Na V |
| (includes cap | | | | | | | | Wetland Hydrology | Present? YesNo _X |
| Describe Rec | corded Data (stream o | gauge, r | nonitoring | g well, aeri | al photos | previous | sinspec | tions), if available: | |
| Remarks: | | | | | | | | | |
| | | | | | | | | | |

| Project/Site: Castlerock | | City/C | County: [| Dakota Sampling Date: 10/17/2022 |
|--|--------------------|------------------|-----------------------|---|
| Applicant/Owner: Stone Solar | | | | State: Min Sampling Point: W2-1w |
| Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon | | | Section | n, Township, Range: T113N, R019W, S09 |
| Landform (hillside, terrace, etc.): Depression | | Local relief (co | oncave, co | onvex, none): Concave Slope %: 1-2 |
| Subregion (LRR or MLRA): LRR_K_MLRA_91 Lat: | 44.615264 | | L | Long: -93.104409 Datum: WGS84 |
| Soil Map Unit Name: Maxfield silty clay loam | | | | NWI classification: PSS1Ad |
| Are climatic / hydrologic conditions on the site typical for | | | Yes | No X (If no, explain in Remarks.) |
| Are Vegetation , Soil , or Hydrology | significant | tly disturbed? | Are "l | Normal Circumstances" present? Yes X No |
| Are Vegetation , Soil , or Hydrology | _ _ naturally រ | oroblematic? | (If nee | eded, explain any answers in Remarks.) |
| SUMMARY OF FINDINGS – Attach site map she | owing samp | ling point loc | ations, tra | ransects, important features, etc. |
| Hydrophytic Vegetation Present? Yes X | _ No | 1- 4 | ha Camani | lad Auso |
| | No | | he Sampl hin a Wet | |
| Wetland Hydrology Present? Yes X | _ No | _ **** | iiiii a vvet | 163 <u>×</u> 10 |
| Remarks: (Explain alternative procedures here or in a s | | | | |
| Man made ditch between corn fields. Forested wetland commun | nity connected | to a large wetla | nd complex | x. Climatic conditions are drier than normal. |
| VEGETATION – Use scientific names of pla | nts. | | | |
| | Absolute | Dominant | Indicato | or |
| <u>Tree Stratum</u> (Plot size: <u>30 ft</u>) | % Cover | <u>Species</u> | <u>Status</u> | Dominance Test worksheet: |
| 1. Acer saccharinum | 18 | Yes | FACW | Number of Dominant Species |
| 2. Ulmus pumila | 10 | No | UPL | That Are OBL, FACW, or FAC:3(A) |
| 3 | | | | |
| 4 | | | | — Species Across All Strata: 4 (B) |
| 5 | 28 | = Total Cove | r | Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B) |
| Sapling/Shrub Stratum (Plot size: 15 ft) | | | | Providence Index weaksheet: |
| 1. Cornus alba | 20 | Yes | FACW | Total % Cover of: Multiply by: |
| 2 | | | | OBL species 5 x 1 =5 |
| 3 | | | - | FACW species 123 x 2 = 246 |
| 5. | | | | |
| | 20 = | Total Cover | | FAC species 0 x 3 = 0 FACU species 0 |
| Herb Stratum (Plot size: 5 ft) | | . 510 5575. | | x : |
| 1. Phalaris arundinacea | 80 | Yes | FACW | — I |
| 2. Acer saccharinum | 5 | No | FACW | |
| 3. <u>Equisetum fluviatile</u> | 5 | No | OBL | |
| 4 | | | | Hydrophytic Vegetation Indicators: |
| 5 | | | | 1 - Rapid Test for Hydrophytic Vegetation |
| 6 | | | | X 2 - Dominance Test is >50% |
| 7 | | | | X 3 - Prevalence Index is ≤3.0¹ |
| 8 | | | | — 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) |
| 9 | | | | - ' ' ' ' ' |
| 10 | 00 | | | Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless |
| Woody Vine Stratum (Plot size:30 ft) | | = Total Cover | | disturbed or problematic. |
| 1 | | | | — Hydrophytic |
| 2 | | | | Vegetation |
| | 0 : | = Total Cover | | Present? Yes X No |
| Remarks: (Include photo numbers here or on a separ | rate sheet.) | | | |
| | | | | |

SOIL Sampling Point: W2-1w

| Profile Descr | iption: (Describe | to the dep | th need | led to doci | ument th | e indica | tor or co | onfirm the absence o | f indicators.) |
|---|-------------------------|--------------|-------------|----------------|--------------|-------------------|------------------|---------------------------------------|---|
| Depth | Matrix | | | Redo | ox Featur | es | | | |
| (inches) | Color (moist) | % | Colo | r (moist) | % | Type ¹ | Loc ² | Texture | Remarks |
| 0-2 | 10YR 3/2 | 100 | | | | | | Loam | |
| 2-4 | 10YR 4/2 | 50 | 10YR | 4/6 | 20 | С | М | Loam | |
| 2-4 | 10YR 5/2 | 40 | | | 0 | | | Loam | |
| 4-7 | 5YR 3/1 | 75 | 5YR | 5/3 | 25 | С | М | Sandy Loam | |
| 7-24 | 10YR 2/1 | 70 | 10YR | 4/6 | 10 | С | М | Sandy Loam | |
| 7-24 | 10YR 2/1 | | 10YR | 6/1 | 20 | D | М | Sandy Loam | |
| | | _ | | | | | | | |
| | | | | | | | | | |
| | oncentration, D=De | epletion, RI | √=Redu | ced Matrix, | MS=Mas | sked San | d Grains | | Pore Lining, M=Matrix. |
| Hydric Soil Ir | ndicators: | | | | | | | Indicators | for Problematic Hydric Soils ³ : |
| Histosol (A | 1) | | Sa | ndy Gleyed N | Matrix (S4) | | | Coast P | rairie Redox (A16) |
| Histic Epip | edon (A2) | | Sa | ndy Redox (S | S5) | | | Iron-Mai | nganese Masses (F12) |
| Black Histi | c (A3) | | Str | ipped Matrix | (S6) | | | Red Par | rent Material (F21) |
| Hydrogen S | Sulfide (A4) | | <u>—</u> Dа | rk Surface (S | 87) | | | Very Sh | allow Dark Surface (F22) |
| Stratified L | ayers (A5) | | Lo: | amy Mucky N | /lineral (F1 |) | | Other (E | Explain in Remarks) |
| 2 cm Muck | | | | amy Gleyed I | | | | | , |
| I — | elow Dark Surface (A | A11) | | pleted Matrix | ` ' | | | | |
| I — · | Surface (A12) | , | | dox Dark Su | | | | | |
| | cky Mineral (S1) | | | | | 7) | | | |
| Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) 5 cm Mucky Peat or Peat (S3) Redox Depressions (F8) | | | | | | | | | |
| | ayer (if observed) |): | | | (- / | | | 1 | |
| Type: | | | | | | | | | |
| Depth (inc | ches): | | | | | | | Hydric Soil Prese | ent? Yes X No |
| Remarks: | | | | | | | | • | |
| | | | | | | | | | |
| | | | | | | | | | |
| HYDROLOG | GY | | | | | | | | |
| Wetland Hyd | rology Indicators | s: | | | | | | Secondary Inc | dicators (minimum of two required) |
| Primary Indic | ators (minimum of | one is requ | uired; ch | eck all that | apply) | | | · · · · · · · · · · · · · · · · · · · | Soil Cracks (B6) |
| Surface Wa | iter (A1) | | | Water-Staine | d Leaves (E | 39) | | | Patterns (B10) |
| High Water | Table (A2) | | | Aquatic Faun | a (B13) | , | | | son Water Table (C2) |
| Saturation (| A3) | | | True Aquatic | Plants (B14 | 1) | | | Burrows (C8) |
| Water Mark | s (B1) | | | Hydrogen Sul | | • | | | n Visible on Aerial Imagery (C9) |
| Sediment D | eposits (B2) | | | Oxidized Rhiz | ospheres c | on Living R | oots (C3) | | or Stressed Plants (D1) |
| Drift Deposi | its (B3) | | | Presence of F | • | • | , , | | phic Position (D2) |
| Algal Mat o | r Crust (B4) | | | Recent Iron F | | | s (C6) | | utral Test (D5) |
| Iron Deposi | ts (B5) | | | Thin Muck Su | | | ` , | | |
| Inundation | Visible on Aerial Image | ery (B7) | - | Gauge or We | |) | | | |
| Sparsely Ve | egetated Concave Surf | face (B8) | | Other (Explain | | | | | |
| Field Observ | ations: | | | | | , | | | |
| Surface Wate | er Present Y | 'es | No | X D | epth (incl | hes): | | | |
| Water Table I | Present Y | 'es | No | X D | epth (incl | hes): | | | |
| Saturation Pr | | ′es | No | <u>X</u> D | epth (incl | hes): | | Wetland Hydrology | Present? Yes X No |
| (includes cap | | m aa | | امست | al nh -+- : | nro.de. | o inc:: | tions) if overlights: | |
| Describe Red | orueu Data (střeat | ın gauge, m | ionitorin | g weil, aeri | ai priotos | , previou | s mspec | tions), if available: | |
| Remarks: | | | | | | | | | |

| Project/Site: Castlerock | | Ci | ity/Count | ty: Dako | ota | | Sampli | ing Date: | 10/17/2 | 2022 |
|---|------------------|---------------|--|---|-----------------------------------|-------------------------------|--------------------|-------------------------------------|------------|------------|
| Applicant/Owner: Stone Solar | | | | | State | : Min | Sampl | ing Point: | W2-2u | |
| Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon | | | Se | ection, To | —— wnship, Range: | | | | | |
| Landform (hillside, terrace, etc.): Footslope | | Local relief | — f (conca\ | ve, conve | x, none): C | oncave | | Slo | pe %: _ | 2-3 |
| Subregion (LRR or MLRA): LRR_K_MLRA_91 Lat: | | | | | <u>-</u> 93.100717 | | | | WGS | |
| Soil Map Unit Name: Maxfield silty clay loam | | | | | NWI classifi | | | | | |
| Are climatic / hydrologic conditions on the site typical for | | | | Yes | No X | (If no, e | explain | in Remar | ks.) | |
| Are Vegetation X , Soil , or Hydrology | significant | tly disturbe | | | nal Circumstanc | • | | | | X |
| Are Vegetation , Soil , or Hydrology | | | , | (If needed | , explain any ar | nswers in | Remar | ks.) | | |
| SUMMARY OF FINDINGS – Attach site map sho | _ owing samp | ling point | location | ns, transe | ects, important | features | , etc. | | | |
| Hydrophytic Vegetation Present? Yes X | _ No | | le the S | ampled A | roa | | | | | |
| | _ No | | | ampled A Wetland | | es | No | Χ | | |
| Wetland Hydrology Present? Yes | _ No <u>X</u> | | •••••••••••••••••••••••••••••••••••••• | · • • • • • • • • • • • • • • • • • • • | | | | | | |
| Remarks: (Explain alternative procedures here or in a se Successfully harvested corn field north of wetland W2. Climatic | | | normal. | | | | | | | |
| | | | | | | | | | | |
| VEGETATION – Use scientific names of plar | nts. Absolute | Domina | nt Ind | licator | | | | | | |
| <u>Tree Stratum</u> (Plot size: <u>30 ft</u>) | % Cover | Specie: | _ | licator <u>tatus</u> | Dominance T | est work | sheet: | | | |
| 1 | | | | | Number of Do | minant Si | cooloe | | | |
| 2 | | | | | That Are OBL, | | | : | 1 | (A) |
| 3 | | | | | Total Number | of Domin | ont | | | - |
| 4 | | | | | Species Acros | | | | 1 | (B) |
| 5 | | | | | | | | | | - ' |
| Sapling/Shrub Stratum (Plot size: 15 ft) | | _ = Total Co | over | | Percent of Doi That Are OBL, | | | : 1 | 100 | (A/B) |
| 1 | | | | İ | Prevalence In | idex worl | ksheet | | | |
| 2. | | | | | Total % | Cover of: | | Mult | tiply by: | |
| 3. | | | | | OBL species | 0 | _ | x 1 = _ | 0 | |
| 4. | | | | | FACW species | | | | | |
| 5. | | | | | FAC species | | | | | _ |
| 5 ft. | = | = Total Cov | ver | | FACU species | | | x 4 = | 0 | |
| Herb Stratum (Plot size: 5 ft) | | | | | UPL species | 0 | | x 5 = | 0 | _ |
| 1. Panicum dichotomiflorum | 25 | Yes | F | ACW_ | Column Totals | <u> </u> | | (A) | 50 | (B) |
| 2 | | | | | | ence Index | | ` ′ — | 2 | (|
| 3 | | | | | Hydrophytic | | | _ | | |
| 4 | | - | | | | _ | | | estation | |
| 5 | | | | | <u>X</u> 1 - Rapid | | - | - | etation | |
| 6 7. | | | | | X 2 - Domi | | | | | |
| 8. | | | | | <u>X</u> 3 - Preva | alence Ind | lex is ≤ | 3.0¹ | | |
| 9 | - | | | | 4 - Morpl (Provide supp | hological . porting data i | Adapta n Remark | tions ¹ ks or on a se | parate she | et) |
| 10 | | • | | | Problema | • | | | | , |
| 10 | 0.5 | = Total Cov | — — ver | | ¹ Indicators of hydric | soil and wet | | J | ` . | , |
| Woody Vine Stratum (Plot size: 30 ft) | | | • | | disturbed or problem | natic. | | | | |
| 1 | | | | | Hydrophytic | ; | | | | |
| 2 | | | | | Vegetation | ., | ~ | | | |
| | | = Total Cov | ver | | Present? | Yes | X | No . | | |
| Remarks: (Include photo numbers here or on a separ Harvested corn debris with no indications of stunting or stress | | n's crop. Wet | tland dete | rmination n | nade based on lac | ck of hydrol | logy indi | cators. | | |

US Army Corps of Engineers

SOIL Sampling Point: W2-2u

| Profile Desci | ription: (Describe to | the de | oth needed to docu | ment th | e indicat | tor or co | onfirm the absence of indicat | ors.) | | | |
|--------------------------------|---------------------------|-----------|------------------------|-------------|-------------------|------------------|-------------------------------|---|--|--|--|
| Depth | Matrix | | | x Featur | | | <u>-</u> | | | | |
| (inches) | Color (moist) | <u>%</u> | Color (moist) | <u>%</u> | Type ¹ | Loc ² | Texture | Remarks | | | |
| 0-8 | 10YR 2/1 | 100 | | | | | Sandy Loam | | | | |
| 8-16 | 10YR 2/1 | 97 | 10YR 4/6 | 3 | С | М | Silty Clay Loam | | | | |
| 16-24 | 10YR 2/1 | 100 | | | | | Silty Clay Loam | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | - | | | | |
| 'Type: C=Co | oncentration, D=Depl | etion, R | M=Reduced Matrix, | MS=Mas | sked San | d Grains | | ing, M=Matrix. Ilematic Hydric Soils³: | | | |
| - | | | | | | | | - | | | |
| Histosol (A | • | | Sandy Gleyed M | | | | Coast Prairie Red | , | | | |
| — Histic Epip | | | Sandy Redox (S | • | | | Iron-Manganese I | , , | | | |
| Black Histi | | | Stripped Matrix | | | | Red Parent Mater | | | | |
| | Sulfide (A4) | | Dark Surface (S | - | | | Very Shallow Dar | | | | |
| Stratified L | | | Loamy Mucky M | | | | Other (Explain in | Remarks) | | | |
| 2 cm Muck | | | Loamy Gleyed N | |) | | | | | | |
| | Below Dark Surface (A11 |) | Depleted Matrix | | | | | | | | |
| | Surface (A12) | | Redox Dark Sur | | - '\ | | | | | | |
| | cky Mineral (S1) | | Depleted Dark S | - | /) | | | | | | |
| | y Peat or Peat (S3) | | Redox Depressi | ons (F8) | | | | | | | |
| | ayer (if observed): | | | | | | | | | | |
| Type: | | | | | | | | V | | | |
| Depth (in | ches): | | | | | | Hydric Soil Present? | Yes <u>X</u> No | | | |
| Remarks: | | | £ | | | | | | | | |
| vvetiand deter | mination made based | on lack c | nydrology indicators | i. | | | | | | | |
| | | | | | | | | | | | |
| HYDROLO | | | | | | | | | | | |
| _ | Irology Indicators: | | | | | | Secondary Indicators (n | ninimum of two required) | | | |
| Primary Indic | ators (minimum of on | e is req | uired; check all that | apply) | | | Surface Soil Cracks | s (B6) | | | |
| Surface Wa | ater (A1) | | Water-Stained | Leaves (E | 39) | | Drainage Patterns | (B10) | | | |
| High Water | Table (A2) | | Aquatic Fauna | (B13) | | | Dry-Season Water | Table (C2) | | | |
| Saturation | (A3) | | True Aquatic F | Plants (B14 | 1) | | Crayfish Burrows (0 | C8) | | | |
| Water Mark | s (B1) | | Hydrogen Sulf | ide Odor (| C1) | | Saturation Visible of | n Aerial Imagery (C9) | | | |
| Sediment D | Deposits (B2) | | Oxidized Rhiz | ospheres o | on Living R | oots (C3) | Stunted or Stressed | d Plants (D1) | | | |
| Drift Depos | its (B3) | | Presence of R | educed Iro | on (C4) | | Geomorphic Position | on (D2) | | | |
| Algal Mat o | r Crust (B4) | | Recent Iron R | eduction in | Tilled Soil | s (C6) | X FAC-Neutral Test (| D5) | | | |
| Iron Deposi | its (B5) | | Thin Muck Su | face (C7) | | | | | | | |
| | Visible on Aerial Imagery | , | Gauge or Wel | Data (D9) |) | | | | | | |
| | egetated Concave Surface | e (B8) | Other (Explain | in Remarl | ks) | | | | | | |
| Field Observ | | | No X De | anth (incl | hael. | | | | | | |
| Surface Wate | | | | epth (incl | | | | | | | |
| Water Table | | | | epth (incl | · — | | | | | | |
| Saturation Pr (includes cap | | | NO DE | epth (incl | | | Wetland Hydrology Presen | t? YesNo _X_ | | | |
| | corded Data (stream o | gauge, r | nonitoring well, aeria | l photos | , previou | s inspec | tions), if available: | | | | |
| | • | | - | - | • | | • | | | | |
| Remarks: | | | | | | | | | | | |
| | | | | | | | | | | | |

| Project/Site: Castlerock | | City/C | ounty: <u>Dal</u> | kota | Samp | oling Date: | 10/17/2022 |
|--|-------------------------|----------------------------|----------------------------|--|--------------------|-------------------|--------------------|
| Applicant/Owner: Stone Solar | | | | State: | Min Samp | oling Point: | W2-2w |
| Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon | | | Section, T | ownship, Range: | T113N, R0 | 19W, S09 | |
| Landform (hillside, terrace, etc.): Depression | | Local relief (co | ncave, conv | ex, none): Co | ncave | Slope | e %: 1-2 |
| Subregion (LRR or MLRA): LRR_K_MLRA_91 Lat | ± 44.613005 | j | Lon | g: -93.100858 | | Datum: | WGS84 |
| Soil Map Unit Name: Maxfield silty clay loam | | | | NWI classific | ation: | | |
| Are climatic / hydrologic conditions on the site typical for | this time of y | year? | Yes | — No X | (If no, explair | in Remarks | 3.) |
| Are Vegetation , Soil , or Hydrology | significan | tly disturbed? | | — —— mal Circumstance | | | |
| Are Vegetation , Soil , or Hydrology | | | (If neede | ed, explain any ans | wers in Rema | ırks.) | · — |
| SUMMARY OF FINDINGS – Attach site map sh | | | ations, trans | sects, important f | eatures, etc. | | |
| Hydrophytic Vegetation Present? Yes X | No | le th | ne Sampled | Area | | | |
| Hydric Soil Present? Yes X | No | — with | in a Wetlar | | s X No | | |
| Wetland Hydrology Present? Yes X | No | | | | | | |
| Remarks: (Explain alternative procedures here or in a sometimes of the procedures here or in a sometimes are detailed by the procedures here or in a sometimes are detailed by the procedures here or in a sometimes are detailed by the procedures here or in a sometimes are detailed by the procedures here or in a sometimes are detailed by the procedures here or in a sometimes are detailed by the procedures here or in a sometimes are detailed by the procedures here or in a sometimes are detailed by the procedures here or in a sometimes are detailed by the procedures here or in a sometimes are detailed by the procedures here or in a sometimes are detailed by the procedures here or in a sometimes are detailed by the procedures here or in a sometimes are detailed by the procedures here or in a sometimes are detailed by the procedures here or in a sometimes are detailed by the procedure here. | | • | conditions are | e drier than normal. | | | |
| VEGETATION – Use scientific names of pla | ants. | | | | | | |
| Tree Stratum (Plot size: 30 ft) | Absolute <u>% Cover</u> | Dominant <u>Species</u> | Indicator <u>Status</u> | Dominance Te | st worksheet | : | |
| 1 | | | | Number of Dom | ninant Species | | |
| 2 | | | | That Are OBL, I | • | | (A) |
| 3 | | | | Total Number o | f Dominant | | |
| 4 | | | | Species Across | | 1 | (B) |
| 5 | 0 | _= Total Cover | | Percent of Dom | • | | |
| Sapling/Shrub Stratum (Plot size: 15 ft) | | | | That Are OBL, I | | | 00 (A/B) |
| 1 | | | | Total % C | | n. Multip | dy by: |
| 2 | | | | | | • | |
| 3 | | | | OBL species | | | |
| 5. | | | | FACW species | | | 210 |
| 5 | 0 = | Total Cover | | FAC species | | x 3 = | 15 |
| <u>Herb Stratum</u> (Plot size: 5 ft) | | - Total Cover | | FACU species | | x 4 = | 0 |
| 1. Phalaris arundinacea | 90 | Yes | FACW | UPL species | 0 | x 5 = | 0 |
| 2. Typha latifolia | 15 | No | OBL | Column Totals: | 125 | (A) | 240 (B) |
| 3. Salix interior | 10 | No | FACW | Prevalen | ice Index = B/A | <u> </u> | 1.92 |
| 4. Rumex crispus | 5 | No | FAC | Hydrophytic Ve | egetation Indi | icators: | |
| Symphyotrichum lateriflorum | 5 | No | FACW | _X 1 - Rapid ¹ | Test for Hydro | phytic Veget | tation |
| 6 | | | | X 2 - Domina | ance Test is > | 50% | |
| 7 | | | | X 3 - Prevale | ence Index is : | ≤3.0 ¹ | |
| 8 | | | | 4 - Morpho | | | |
| 9 | | | | | rting data in Rema | | , |
| 10 | | | | Problemat | , , , | ŭ | ` ' ' |
| Woody Vine Stratum (Plot size: 30 ft) | 125 | = Total Cover | | ¹ Indicators of hydric s disturbed or problema | | rology must be | present, unless |
| 1 | | | | Hydrophytic | | | |
| 2 | | | | Vegetation | v Y | NI- | |
| | | = Total Cover | | Present? | Yes X | _ No _ | |
| Remarks: (Include photo numbers here or on a sepa | rate sheet.) | | | | | | |

SOIL Sampling Point: W2-2w

| Profile Desc | ription: (Describe to | the de | oth needed to docu | ment th | e indicat | tor or co | onfirm the absence | of indicators.) |
|--------------------------------|---------------------------|----------|------------------------|--------------|-------------------|------------------|------------------------------|--------------------------------------|
| Depth | Matrix | | Redo | x Featur | es | | | |
| (inches) | Color (moist) | <u>%</u> | Color (moist) | <u>%</u> | Type ¹ | Loc ² | Texture | Remarks |
| 0-8 | 10YR 3/2 | 100 | | | | | Loam | |
| 8-24 | 10YR 2/1 | 95 | 10YR 4/6 | 5 | С | М | Loam | |
| | | | | | | | | _ |
| | | | | | | | | _ |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | _ |
| | | | | | | | | _ |
| ¹ Type: C=C | oncentration, D=Depl | etion, R | M=Reduced Matrix, | MS=Mas | ked San | d Grains | s. ² Location: Pl | L=Pore Lining, M=Matrix. |
| Hydric Soil I | | , | , | | | - | | rs for Problematic Hydric Soils³: |
| Histosol (A | A1) | | Sandy Gleyed M | latrix (S4) | | | Coast | t Prairie Redox (A16) |
| Histic Epip | pedon (A2) | | Sandy Redox (S | | | | Iron-N | Manganese Masses (F12) |
| Black Histi | ic (A3) | | Stripped Matrix (| (S6) | | | Red F | Parent Material (F21) |
| Hydrogen | Sulfide (A4) | | Dark Surface (S | 7) | | | Very | Shallow Dark Surface (F22) |
| Stratified L | ayers (A5) | | Loamy Mucky M | lineral (F1 |) | | Other | (Explain in Remarks) |
| 2 cm Mucl | (A10) | | Loamy Gleyed N | /latrix (F2) |) | | | |
| Depleted E | Below Dark Surface (A11 |) | Depleted Matrix | (F3) | | | | |
| Thick Dark | Surface (A12) | | X Redox Dark Sur | face (F6) | | | | |
| Sandy Mu | cky Mineral (S1) | | Depleted Dark S | Surface (F | 7) | | | |
| | ky Peat or Peat (S3) | | Redox Depressi | ons (F8) | | | _ | |
| Restrictive L | .ayer (if observed): | | | | | | | |
| Type: | | | | | | | | |
| Depth (in | ches): | | | | | | Hydric Soil Pre | esent? Yes X No |
| Remarks: | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| HYDROLO | GY | | | | | | | |
| | drology Indicators: | | | | | | Socondany | Indicators (minimum of two required) |
| Primary Indic | ators (minimum of on | e is req | uired; check all that | apply) | | | - | ce Soil Cracks (B6) |
| Surface Wa | ater (A1) | | Water-Stained | Leaves (E | 39) | | | age Patterns (B10) |
| High Water | Table (A2) | | Aquatic Fauna | | , | | | eason Water Table (C2) |
| Saturation | (A3) | | True Aquatic F | Plants (B14 | 1) | | | sh Burrows (C8) |
| Water Mark | ks (B1) | | Hydrogen Sulf | ide Odor (| C1) | | | ation Visible on Aerial Imagery (C9) |
| Sediment [| Deposits (B2) | | Oxidized Rhize | ospheres o | on Living R | oots (C3) | | ed or Stressed Plants (D1) |
| Drift Depos | sits (B3) | | Presence of R | educed Iro | on (C4) | | | orphic Position (D2) |
| Algal Mat o | or Crust (B4) | | Recent Iron Re | eduction in | Tilled Soil | s (C6) | X FAC-N | Neutral Test (D5) |
| Iron Depos | its (B5) | | Thin Muck Sui | face (C7) | | | | |
| Inundation | Visible on Aerial Imagery | (B7) | Gauge or Well | Data (D9) |) | | | |
| Sparsely V | egetated Concave Surface | e (B8) | Other (Explain | in Remarl | ks) | | | |
| Field Observ | | | | | | | | |
| Surface Wate | ., | | | epth (incl | | | | |
| Water Table | | | | epth (incl | · — | | | |
| Saturation Pr (includes cap | | | No X De | epth (incl | nes): | | Wetland Hydrolog | gy Present? Yes X No |
| | corded Data (stream ç | gauge, r | nonitoring well, aeria | l photos | , previou | s inspec | tions), if available: | |
| | (| | J, | | | | ,, | |
| Remarks: | | | | | | | | |
| | | | | | | | | |

| Project/Site: Castlerock | | City/County: | Dakota | Samp | ling Date: | 10/18/2 | 2022 |
|---|------------------------|---------------------------|--|----------------------|----------------|------------|--------|
| Applicant/Owner: Stone Solar | _ | | State: | Min Samp | ling Point: | W2-3u | |
| Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon | | Section | on, Township, Range: | T113N, R0 | 19W, S09 |) | |
| Landform (hillside, terrace, etc.): Footslope | Local | relief (concave, o | convex, none): Co | oncave | Slo | pe %: | 3-4 |
| Subregion (LRR or MLRA): LRR_K_MLRA_91 Lat | : 44.609305 | | Long: -93.101592 | | Datum: | WGS | 384 |
| Soil Map Unit Name: Kanaranzi loam, 2 to 6 percer | | | NWI classific | | | | |
| Are climatic / hydrologic conditions on the site typical for | | | No X | (If no, explain | in Remar | ks.) | |
| Are Vegetation X , Soil , or Hydrology | significantly dist | urbed? Are | "Normal Circumstance | es" present? | Yes | No | _X |
| Are Vegetation , Soil , or Hydrology | | | eeded, explain any an | swers in Rema | rks.) | | |
| SUMMARY OF FINDINGS – Attach site map sh | | | transects, important | features, etc. | | | |
| Hydrophytic Vegetation Present? Yes | NoX | lo the Same | alad Araa | | | | |
| | X | Is the Samp | | sNo | X | | |
| Wetland Hydrology Present? Yes | No _X | | | | | | |
| Remarks: (Explain alternative procedures here or in a | ' ' | 199 | | | | | |
| Hay field west of wetland, approximately 1 foot above wetland | sample point. Climatic | conditions are drie | er than normal. | | | | |
| VEGETATION – Use scientific names of pla | ents | | | | | | |
| | | ninant Indicat | tor | | | | - |
| <u>Tree Stratum</u> (Plot size: <u>30 ft</u>) | % Cover Spe | <u>ecies</u> <u>Statu</u> | S Dominance Te | est worksheet: | : | | |
| 1 | | | — Number of Dor | ninant Species | | | |
| 2 | | | That Are OBL, | • | | 0 | (A) |
| 3 | | | Total Number of | of Dominant | | | |
| 4 | | | — Species Across | s All Strata: | | 1 | (B) |
| 5 | _ | al Cover | — Percent of Don | ninant Species | | | |
| Sapling/Shrub Stratum (Plot size: 15 ft) | | ai Covei | That Are OBL, | FACW, or FAC |): | 0 | _(A/B) |
| 1 | | | | dex workshee | t: | | |
| 2 | | | Total % 0 | Cover of: | Mult | iply by: | |
| 3 | | | OBL species | | | | |
| 4 | | | FACW species | , | x 2 = _ | 0 | |
| 5 | | | FAC species | 0 | x 3 = _ | 0 | |
| Herb Stratum (Plot size: 5 ft) | = Total | Cover | FACU species | 103 | x 4 = | 412 | |
| 1. Dactylis glomerata | 100 Y | es FACL | UPL species | 0 | x 5 = | 0 | |
| Capsella bursa-pastoris | 3 1 | No FACU | Column Totals | : 103 | (A) _ | 412 | (B) |
| 3 | | | Prevale | nce Index = B/A | λ = <u></u> | 4 | |
| 4 | | | Hydrophytic V | egetation Indi | cators: | | |
| 5 | | | | Test for Hydro | phytic Veg | etation | |
| 6 | | | | nance Test is > | 50% | | |
| 7 | | | 3 - Preva | lence Index is ≤ | ≤3.0¹ | | |
| 8 | | | — 4 - Morph | nological Adapta | ations¹ | | |
| 9 | | | | orting data in Remai | | | • |
| 10 | 400 | | | atic Hydrophytic | ŭ | ` . | , |
| Woody Vine Stratum (Plot size: 30 ft) | 103 = Total | Cover | ¹ Indicators of hydric disturbed or problem | | Irology must b | e present, | unless |
| 1 | | | Hydrophytic | | | | |
| 2. | | | Hydrophytic Vegetation | | | | |
| | = Total | Cover | Present? | Yes | _ No | X | |
| Remarks: (Include photo numbers here or on a sepa | rate sheet.) | | • | | | | |
| | | | | | | | |

SOIL Sampling Point: W2-3u

| | ription: (Describe t | o the dept | h needed to docu | ment th | e indica | tor or co | onfirm the absence of | indicators.) | | |
|-------------------|--|-------------|-----------------------|-------------|-------------------|------------------|-----------------------|----------------------|----------------|------|
| Depth | Matrix | | Redo | x Featur | | | | | | |
| (inches) | Color (moist) | | Color (moist) | % | Type ¹ | Loc ² | Texture | F | Remarks | |
| 0-4 | 10YR 3/2 | 100 | | | | | Silt Loam | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
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| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | _ | | | | | | | |
| | oncentration, D=Dep | oletion, RM | =Reduced Matrix, | MS=Mas | sked San | d Grains | | | | 2 |
| Hydric Soil I | ndicators: | | | | | | Indicators for | or Problematic | Hydric Soil | s°: |
| Histosol (A | \1) | | Sandy Gleyed M | latrix (S4) | ١ | | Coast Pra | airie Redox (A16) | | |
| Histic Epip | pedon (A2) | - | Sandy Redox (S | 5) | | | Iron-Man | ganese Masses (F | 12) | |
| Black Hist | | - | Stripped Matrix | | | | | ent Material (F21) | | |
| | Sulfide (A4) | - | Dark Surface (S | • | | | | llow Dark Surface | (F22) | |
| | _ayers (A5) | - | Loamy Mucky M | | | | Other (Ex | rplain in Remarks) | | |
| 2 cm Mucl | | - | Loamy Gleyed N | |) | | | | | |
| | Below Dark Surface (A | 11) - | Depleted Matrix | | | | | | | |
| | Surface (A12) | - | Redox Dark Sur | | 7\ | | | | | |
| | cky Mineral (S1) ky Peat or Peat (S3) | - | Depleted Dark S | | 7) | | | | | |
| | ayer (if observed): | - | Redox Depressi | ons (Fo) | | | 1 | | | |
| Type: | iajoi (ii obooivou). | | | | | | | | | |
| Depth (in | ichos): | | | | | | Undria Cail Brass | -+2 You | No | , x |
| Remarks: | | | | | | | Hydric Soil Prese | nt? Yes | | |
| | nches due to rock. | | | | | | | | | |
| r tordodr dt T ii | | | | | | | | | | |
| | | | | | | | | | | |
| HYDROLO | | | | | | | | | | |
| | drology Indicators: | | | | | | Secondary Indi | cators (minimum o | f two required |) |
| Primary India | cators (minimum of c | ne is requi | red; check all that | apply) | | | Surface S | oil Cracks (B6) | | |
| Surface W | ` , | | Water-Stained | | 39) | | Drainage | Patterns (B10) | | |
| | r Table (A2) | | Aquatic Fauna | | | | Dry-Seaso | on Water Table (C2) | | |
| Saturation | | | True Aquatic F | - | • | | · | surrows (C8) | | |
| Water Mar | RS (B1) Deposits (B2) | | Hydrogen Sult | , | • | (02) | | Visible on Aerial Im | | |
| Drift Depos | | | Oxidized Rhiz | • | • | ools (C3) | | Stressed Plants (D | 1) | |
| | or Crust (B4) | | Presence of R | | | s (C6) | | nic Position (D2) | | |
| Iron Depos | | | Thin Muck Su | | i illica ooli | 3 (00) | FAC-Neut | ral Test (D5) | | |
| | Visible on Aerial Imager | y (B7) | Gauge or Wel | |) | | | | | |
| | egetated Concave Surfa | , , , | Other (Explain | | | | | | | |
| Field Obser | vations: | | Other (Explain | | , | | | | | |
| Surface Wate | er Present Ye | es | No X De | epth (incl | hes): | | | | | |
| Water Table | Present Ye | s | No X De | epth (incl | hes): | | | | | |
| Saturation P | | es | No X | epth (inc | hes): | | Wetland Hydrology | Present? | Yes | No X |
| (includes car | | | | 1 | | | | - | | |
| Describe Re | corded Data (stream | gauge, m | onitoring well, aeria | n pnotos | , previou | s inspec | tions), if available: | | | |
| Remarks: | | | | | | | | | | |
| | | | | | | | | | | |

| Project/Site: Castlerock | | Ci | ty/County: | Dakota | a | | Samplin | g Date: | 10/18/2 | 2022 |
|---|------------------|-------------------|--------------------------|--------------|---------------------------------|-------------|-----------|------------------|------------|--------------|
| Applicant/Owner: Stone Solar | | | | | State: | Min | Samplin | ng Point: | W2-3w | v |
| Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon | l | | Secti | ion, Tow | nship, Range: | T113I | N, R019 | 9W, S09 | | |
| Landform (hillside, terrace, etc.): Depression | | Local relief | f (concave, | convex, | none): Co | ncave | | Slo | pe %: | 1-2 |
| Subregion (LRR or MLRA): LRR_K_MLRA_91 La | at: 44.609319 | 9 | | Long: | -93.1014 | | | Datum: | WGS | S84 |
| Soil Map Unit Name: Kanaranzi loam, 2 to 6 perce | | | | Э. | NWI classific | cation: | | | | |
| Are climatic / hydrologic conditions on the site typical f | | year? | Yes | S | No X | (If no, e | xplain ir | n Remarl | ks.) | |
| Are Vegetation , Soil , or Hydrology | | - | | | Circumstance | | | Yes X | | |
| Are Vegetation, Soil, or Hydrology _ | | | | needed, | explain any an | swers in F | Remark | | _ | |
| SUMMARY OF FINDINGS – Attach site map s | | | | transec | ts, important | features, | etc. | | | |
| Hydrophytic Vegetation Present? Yes | X No | | la tha Cam | mlad A w | | | | | | |
| | X No | | ls the Sam within a W | • | | s X | No | | | |
| Wetland Hydrology Present? Yes | X No | _ | within a v | ctiana: | | <u> </u> | | | | |
| Remarks: (Explain alternative procedures here or in a Small shallow marsh community within a large wetland comp | lex east of an a | , | d. Climatic co | onditions | are drier than no | rmal. | | | | |
| VEGETATION – Use scientific names of p | Absolute | Domina | nt Indiaa | tor | | | | | | |
| Tree Stratum (Plot size: 30 ft) | % Cover | Domina Specie: | _ | | Dominance Te | est works | sheet: | | | |
| 1 | | | | , | Normala an af Dan | i | ! | | | |
| 2 | | | _ | | Number of Dor That Are OBL, | | | | 2 | (A) |
| 3 | | | | l . | T - 4 - 1 N l l | . f D | 4 | | | _ |
| 4 | | | | | Total Number o Species Acros | | | | 2 | (B) |
| 5 | | | | | | | | | | _ ` ′ |
| Conline/Chruh Ctratum (Diet size) 15 ft | 0 | _ = Total Co | over | | Percent of Don That Are OBL, | • | | 1 | 00 | (A/B) |
| Sapling/Shrub Stratum (Plot size: 15 ft) | | | | | Prevalence In | | | | | |
| 1 | | | _ | | Total % (| Cover of: | | Mult | iply by: | |
| 2. 3. | | | _ | _ | OBL species | 100 | , , | x 1 = | | |
| 4 | | | _ | | FACW species | | | | | |
| 5 | | | | | FAC species | | | ^ | | |
| | • | = Total Cov | /er | | FACU species | | | ^ | 0 | |
| Herb Stratum (Plot size: 5 ft) | | | | | JPL species | 0 | | _ | 0 | |
| 1. Typha x glauca | 50 | Yes | OBL | | • | | | x 5 = | 210 | — (D) |
| Glyceria grandis | 50 | Yes | OBL | ' | Column Totals | | | (A) _ | 1.4 | (B) |
| 3. Phalaris arundinacea | 15 | No | FAC\ | | | nce Index | | | 1.7 | |
| 4. Rumex crispus | 10 | No | FAC | <u> </u> | Hydrophytic V | _ | | | | |
| 5. <u>Verbena hastata</u> | | | | <u>~</u> . | X 1 - Rapid | | | , , | etation | |
| 6. <u>Echinochloa crus-galli</u> | 10 | No | FAC\ | 1 ' | X 2 - Domir | | | | | |
| 7. Urtica dioica | | | FAC\ | <u>~</u> . | X 3 - Preva | lence Inde | ex is ≤3 | .0¹ | | |
| 8 | | | _ | — I . | 4 - Morph | nological A | Adaptati | ons ¹ | narate she | et) |
| 9 | | | | | Problema | • | | | | , |
| 10 | 450 | = Total Cov | er | ' | ndicators of hydric | | . , | Ü | ` ' | , |
| Woody Vine Stratum (Plot size: 30 ft) | | . 3.0. | | | isturbed or problem | | • | | | |
| 1 | | | | | Hydrophytic | | | | | |
| 2 | | - | | | Vegetation | | V | | | |
| | 0 | = Total Cov | ver | | Present? | Yes | | No | | |
| Remarks: (Include photo numbers here or on a sep | parate sheet.) | | | | | | | | | |

SOIL Sampling Point: W2-3w

| Depth | cription: (Describe to Matrix | o inc ac | , | Redox Featu | | 01 01 00 | | outo:01, |
|--|---|----------------|----------------------|--|----------------------------|------------------|------------------------|--|
| (inches) | Color (moist) | % | Color (m | | Type ¹ | Loc ² | Texture | Remarks |
| 0-9 | 10YR 2/1 | 95 | 10YR 4/6 | | C | | Silty Clay Loam | |
| | | | | | | | | |
| 9-24 | 10YR 2/1 | 85 | 10YR 4/6 | 15 | <u> </u> | | Silty Clay Loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | Concentration, D=De | pletion, R | M=Reduced | Matrix, MS=Ma | sked Sand | Grains | | |
| Hydric Soil I | Indicators: | | | | | | Indicators for P | roblematic Hydric Soils ³ : |
| Histosol (/ | A1) | | Sandy 0 | Gleyed Matrix (S4 |) | | Coast Prairie | Redox (A16) |
| Histic Epip | pedon (A2) | | | Redox (S5) | | | <u> </u> | se Masses (F12) |
| Black Hist | • • | | | Matrix (S6) | | | Red Parent M | , , |
| | Sulfide (A4) | | | rface (S7) | 1) | | - | Dark Surface (F22) |
| 2 cm Muc | Layers (A5) | | | Mucky Mineral (F Gleyed Matrix (F2 | • | | Other (Explain | in Remarks) |
| | Below Dark Surface (A | 11) | | d Matrix (F3) | , | | | |
| | k Surface (A12) | , | | Dark Surface (F6) | | | | |
| | ucky Mineral (S1) | | | d Dark Surface (F | | | | |
| 5 cm Muc | ky Peat or Peat (S3) | | Redox [| Depressions (F8) | | | | |
| Restrictive L | Layer (if observed): | | | | | | | |
| Type: | | | | | | | | |
| Depth (ir | nches): | | | | | | Hydric Soil Present? | YesX |
| Remarks: | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| HYDROLO | GY | | | | | | | |
| _ | drology Indicators: | | | | | | Secondary Indicator | s (minimum of two required) |
| Primary Indic | cators (minimum of o | one is req | uired; check | all that apply) | | | Surface Soil Cr | acks (B6) |
| Surface W | | | Wate | r-Stained Leaves (| B9) | | Drainage Patte | rns (B10) |
| | er Table (A2) | | | tic Fauna (B13) | | | Dry-Season Wa | ater Table (C2) |
| Saturation Water Mar | ` ′ | | | Aquatic Plants (B1 | • | | Crayfish Burrov | |
| | Deposits (B2) | | | ogen Sulfide Odor zed Rhizospheres | ` ' | note (C3) | | ole on Aerial Imagery (C9) ssed Plants (D1) |
| Drift Depos | | | · <u></u> | ence of Reduced Ir | • | 003 (00) | X Geomorphic Po | ` ' |
| | or Crust (B4) | | | nt Iron Reduction i | | s (C6) | X FAC-Neutral Te | |
| | sits (B5) | | Thin | Muck Surface (C7) | | | | (-/ |
| Iron Depos | V6-11-1 | y (B7) | Gaug | e or Well Data (D9 |) | | | |
| | Nisible on Aerial Imager | | | | | | | |
| Inundation Sparsely V | /egetated Concave Surfa | ce (B8) | Othe | (Explain in Rema | rks) | | - | |
| Inundation Sparsely V Field Obser | /egetated Concave Surfarvations: | , , | | | | | | |
| Inundation Sparsely V Field Obser Surface Wat | /egetated Concave Surfa vations: er Present Ye | es | No X | Depth (inc | :hes): | | | |
| Sparsely V Field Obser Surface Wat Water Table | vations: ver Present Present Yes | es es | No X | Depth (inc | :hes): :hes): | | | |
| Inundation Sparsely V Field Obser Surface Wat | vations: ver Present Present Ver | es es | No X | Depth (inc | :hes): :hes): | | Wetland Hydrology Pres | sent? Yes <u>X</u> No |
| Inundation Sparsely V Field Obser Surface Wat Water Table Saturation P (includes cap | vations: ver Present Present Ver | es es es | No X No X No X | Depth (inc Depth (inc Depth (inc | :hes): :hes): :hes): | inspec | | sent? Yes X No |
| Inundation Sparsely V Field Obser Surface Wat Water Table Saturation P (includes cap | vations: er Present Ye Present Ye resent Ye pillary fringe) | es es es | No X No X No X | Depth (inc Depth (inc Depth (inc | :hes): :hes): :hes): | s inspec | | sent? Yes <u>X</u> No |

| Project/Site: Castlerock | | City/County: _ | Dakota | Sampling Date: _1 | 10/17/2022 |
|--|--------------------------------------|-------------------------------|---|---|-----------------|
| Applicant/Owner: Stone Solar | | | State: | Min Sampling Point: M | |
| Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon | | Section | n, Township, Range: | T113N, R019W, S09 | |
| Landform (hillside, terrace, etc.): Footslope | Local re | elief (concave, co | onvex, none): Con | slope | : %: <u>1-2</u> |
| Subregion (LRR or MLRA): <u>LRR_K_MLRA_91</u> Lat: | 44.614248 | L | ong: -93.100138 | Datum: | WGS84 |
| Soil Map Unit Name: Maxfield silty clay loam | | | NWI classificat | tion: | |
| Are climatic / hydrologic conditions on the site typical for | this time of year? | Yes | No <u>X</u> (| (If no, explain in Remarks | .) |
| Are Vegetation X , Soil , or Hydrology | significantly distu | | Normal Circumstances | · — | No X |
| Are Vegetation , Soil , or Hydrology | _ naturally problem | atic? (If nee | eded, explain any answ | vers in Remarks.) | |
| SUMMARY OF FINDINGS - Attach site map she | owing sampling po | oint locations, tra | ansects, important fea | atures, etc. | |
| Hydrophytic Vegetation Present? Yes | No X | In the Sampl | ad Aroa | | |
| Hydric Soil Present? Yes | | Is the Sample within a Wet | | No X | |
| Wetland Hydrology Present? Yes | NoX | Within & 1.5. | | | |
| Remarks: (Explain alternative procedures here or in a s Upland point taken in a harvested corn field. Climatic conditions | | | | | |
| <u> </u> | | | | | |
| VEGETATION – Use scientific names of pla | nts | | | | |
| Tree Stratum (Plot size:30 ft) | Absolute Domi <u>% Cover Spec</u> | inant Indicato cies Status | | t worksheet: | |
| 1 | | | | | |
| 2. | | | Number of DomirThat Are OBL, FA | • | (A) |
| 3. | | | _ | | |
| 4. | | | Total Number of Species Across A | | (B) |
| 5 | | | _ ` | | |
| Sapling/Shrub Stratum (Plot size: 15 ft) | = Total | l Cover | Percent of Domir That Are OBL, FA | • | N(A/B) |
| 1 | | | Prevalence Inde | ex worksheet: | |
| 2. | | | Total % Co | over of: Multipl | y by: |
| 3 | | | OBL species | 0 x 1 = | 0 |
| 4 | | | _ FACW species _ | 0 x 2 = | 0 |
| 5 | | | _ FAC species _ | 0 x 3 = | 0 |
| Herb Stratum (Plot size: 5 ft) | 0 = Total 0 | Cover | FACU species _ | 0 x 4 = | 0 |
| 1 | | | UPL species | 0 x 5 = | 0 |
| 2. | | | Column Totals: | 0 (A) | 0 <u>(</u> B) |
| 3. | | | Prevalence | ce Index = B/A = | |
| 4. | | | Hydrophytic Ve | getation Indicators: | |
| 5. | | | | est for Hydrophytic Veget | ation |
| 6 | | | | nce Test is >50% | |
| 7 | | | | nce Index is ≤3.01 | |
| 8 | | | | logical Adaptations¹ | |
| 9 | | | — (Provide supporti | ting data in Remarks or on a separ | , |
| 10 | | | - | c Hydrophytic Vegetation ¹ | ` ' ' |
| Woody Vine Stratum (Plot size: 30 ft) | 0 = Total (| Cover | ¹ Indicators of hydric soil disturbed or problemation | il and wetland hydrology must be p ic. | resent, unless |
| 1 | | | Usalas physic | | |
| 2. | | | HydrophyticVegetation | | |
| | 0 = Total 0 | | Present? | Yes No _ | X |
| Remarks: (Include photo numbers here or on a separ | | | | | |
| Harvested corn debris with some bare ground. There was no | | r stress in last seas | on's crop. No volunteer ve | egetation. | |

SOIL Sampling Point: W3-1u

| | | the dep | oth need | | | | tor or co | onfirm the absence of | f indicators.) |
|-------------------|--|------------|-----------|------------------------------|---------------|-------------------|------------------|---|---|
| Depth (inches) | Matrix Color (moist) | % | Colo | | ox Featur | | 1 002 | Texture | Domorko |
| (inches) | Color (moist) | | C010 | r (moist) | | Type ¹ | Loc ² | | Remarks |
| 0-3 | 10YR 2/1 | 100 | | | - — | | | Sandy Loam | |
| 3-5 | 10YR 2/1 | 97 | 10YR | 4/6 | 3 | <u>C</u> | M | | |
| 5-18 | 10YR 2/1 | 100 | | | | | | Clay Loam | |
| 18-24 | 10YR 4/2 | 90 | 7.5YR | 5/8 | 10 | <u>C</u> | M_ | Clay | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| ¹Type: C=Co | oncentration, D=Depl | etion, R | M=Redu | ced Matrix, | MS=Mas | ked San | d Grains | s. ² Location: PL= | Pore Lining, M=Matrix. |
| Hydric Soil II | | | | | | | | | for Problematic Hydric Soils ³ : |
| Histosol (A | .1) | | Saı | ndy Gleyed I | Matrix (S4) | | | Coast Pi | rairie Redox (A16) |
| Histic Epip | edon (A2) | | Sai | ndy Redox (| S5) | | | Iron-Mar | nganese Masses (F12) |
| Black Histi | c (A3) | | Stri | ipped Matrix | (S6) | | | Red Par | ent Material (F21) |
| Hydrogen | Sulfide (A4) | | Dar | rk Surface (S | 67) | | | Very Sha | allow Dark Surface (F22) |
| Stratified L | | | | amy Mucky N | | • | | Other (E | xplain in Remarks) |
| 2 cm Muck | | | | amy Gleyed | | | | | |
| | Below Dark Surface (A11 | 1) | | pleted Matrix | | | | | |
| | Surface (A12) | | | dox Dark Su | | 7\ | | | |
| | cky Mineral (S1) sy Peat or Peat (S3) | | | pleted Dark : dox Depress | | () | | | |
| | ayer (if observed): | | | uox Depress | ions (Fo) | | | 1 | |
| Type: | ayo: (oaco::oa). | | | | | | | | |
| Depth (in | ches): | | | | | | | Hydric Soil Prese | ent? Yes No X |
| Remarks: | , | | | | | | | , | |
| | | | | | | | | | |
| | | | | | | | | | |
| HYDROLO | GY | | | | | | | | |
| Wetland Hyd | Irology Indicators: | | | | | | | Secondary Ind | licators (minimum of two required) |
| Primary Indic | ators (minimum of on | ne is requ | uired; ch | eck all that | apply) | | | - | Soil Cracks (B6) |
| Surface Wa | ater (A1) | | | Water-Staine | d Leaves (B | 39) | | | Patterns (B10) |
| High Water | Table (A2) | | | Aquatic Faun | a (B13) | | | Dry-Seas | on Water Table (C2) |
| Saturation (| (A3) | | | True Aquatic | Plants (B14 | ·) | | Crayfish | Burrows (C8) |
| Water Mark | s (B1) | | | Hydrogen Su | lfide Odor (0 | C1) | | Saturatio | n Visible on Aerial Imagery (C9) |
| | Deposits (B2) | | | Oxidized Rhiz | zospheres o | n Living Ro | oots (C3) | Stunted of | or Stressed Plants (D1) |
| Drift Depos | | | | Presence of F | | | | Geomorp | hic Position (D2) |
| | r Crust (B4) | | | Recent Iron F | | Tilled Soil | s (C6) | FAC-Neu | tral Test (D5) |
| Iron Deposi | | (D7) | | Thin Muck Su | | | | | |
| | Visible on Aerial Imagery of egetated Concave Surface | | | Gauge or We | , , | | | | |
| Field Observ | | 3 (50) | | Other (Explai | n in Remark | (S) | | I | |
| Surface Wate | V | ; | No | X D | epth (inch | nes): | | | |
| Water Table I | | | No | | epth (inch | | | | |
| Saturation Pr | | | No | | epth (incl | · — | | Wetland Hydrology | Present? Yes No X |
| (includes cap | illary fringe) | | | | | | | Tretianu nyurology | Present? YesNo _X |
| Describe Rec | corded Data (stream ç | gauge, n | nonitorin | g well, aeri | al photos | , previous | s inspec | tions), if available: | |
| Remarks: | | | | | | | | | |

| Project/Site: Castlerock | | City/0 | County: D | Dakota | Sampl | ing Date: <u>10/</u> | 17/2022 |
|--|---------------------|---------------------|---------------------|---|----------------------|----------------------|---------------|
| Applicant/Owner: Stone Solar | | | | State: | Min Sampl | ing Point: W3 | -1w |
| Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon | | | Section | , Township, Range: | T113N, R0 | 19W, S09 | |
| Landform (hillside, terrace, etc.): Depression | | Local relief (co | oncave, co | nvex, none): Cor | ncave | Slope % | 6: <u>2-3</u> |
| Subregion (LRR or MLRA): LRR_K_MLRA_91 Lat | : <u>44.614214</u> | | Lo | ong: <u>-93.100108</u> | | Datum: <u>V</u> | /GS84 |
| Soil Map Unit Name: Maxfield silty clay loam | | | | NWI classifica | ation: | | |
| Are climatic / hydrologic conditions on the site typical for | this time of y | /ear? | Yes | No _X_ | (If no, explain | in Remarks.) | |
| Are Vegetation X , Soil , or Hydrology | significant | tly disturbed? | Are "N | Normal Circumstance | s" present? | Yes | No <u>X</u> |
| Are Vegetation , Soil , or Hydrology | naturally p | oroblematic? | (If nee | eded, explain any ans | wers in Remar | ks.) | |
| SUMMARY OF FINDINGS – Attach site map sh | owing samp | ling point loc | ations, tra | ansects, important fo | eatures, etc. | | |
| Hydrophytic Vegetation Present? Yes X | No | le f | he Sample | ad Araa | | | |
| Hydric Soil Present? Yes X | _ No | _ wit | hin a Wetl | | X No | | |
| , 3 | No | _ | | | | | |
| Remarks: (Explain alternative procedures here or in a some pegraded wet meadow community in a mowed drainage swale | | , | han normal. | | | | |
| VEGETATION – Use scientific names of pla | ınts. | | | | | | |
| Tree Stratum (Plot size:30 ft) | Absolute % Cover | Dominant Species | Indicator Status | | st worksheet: | | |
| 1 | | <u> </u> | | | | | |
| 2 | | | | Number of DomThat Are OBL, F | • | : 1 | (A) |
| 3 | | | | _ | | | <u> </u> |
| 4 | | | | Total Number of Species Across | | 1 | (B) |
| 5 | | = Total Cove | | Percent of Dom | | | ` ` |
| Sapling/Shrub Stratum (Plot size: 15 ft) | | _= Total Cove | Γ | That Are OBL, F | • | 100 | (A/B) |
| 1 | | | | Prevalence Ind | | : | |
| 2 | | | | Total % C | over of: | Multiply | by: |
| 3 | | | | _ OBL species | 0 | x 1 = | 0 |
| 4 | | | | _ FACW species | 120 | x 2 =2 | 40 |
| 5 | | | | _ FAC species | 0 | x 3 = |) |
| Herb Stratum (Plot size: 5 ft) | = | = Total Cover | | FACU species | 0 | x 4 = | 0 |
| 1. Phalaris arundinacea | 100 | Yes | FACW | UPL species | 0 | x 5 = | 0 |
| Panicum dichotomiflorum | 15 | No | FACW | Column Totals: | 120 | () | 40 (B) |
| 3. Cornus alba | 5 | No | FACW | Prevalen | ce Index = B/A | 2 | |
| 4 | | | | _ Hydrophytic Ve | egetation Indi | cators: | |
| 5 | | | | | Test for Hydrop | hytic Vegetati | on |
| 6 | | | | X 2 - Domina | ance Test is >5 | 0% | |
| 7 | | | | X 3 - Prevale | ence Index is ≤ | 3.0 ¹ | |
| 8 | | | | 4 - Morpho | | | |
| 9 | | | | - I | rting data in Remarl | · | , |
| 10 | | = Total Cover | | Problemat Indicators of hydric so | , , , | , | . , |
| Woody Vine Stratum (Plot size: 30 ft) | 120 | = Total Cover | | disturbed or problema | | ology must be pre- | sent, unless |
| 1 | | | | Hydrophytic | | | |
| 2. | | | | Vegetation | | | |
| | | = Total Cover | | Present? | Yes X | No | |
| Remarks: (Include photo numbers here or on a sepa Area was rough mowed. | rate sheet.) | | | | | | |

US Army Corps of Engineers

SOIL Sampling Point: W3-1w

| Depth | cription: (Describe Matrix | to the de | om needed (C | Redox Feat | | ioi oi cc | onfirm the absence of i | inaicators.j |
|--------------|-------------------------------|--------------------|-----------------------|-----------------------|-------------------|------------------|---------------------------------|---|
| (inches) | Color (moist) | % | Color (mo | | Type ¹ | Loc ² | Texture | Remarks |
| 0-4 | 10YR 2/1 | 95 | 10YR 4/6 | 5 | C | М | Sandy Loam | |
| 0-4 | 101K 2/1 | | 1011 4/0 | | | | Sandy Loani | |
| | · | | | | | | | |
| | | | | | | | | |
| | - | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | · - | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹Type: C=0 | Concentration, D=De | epletion, R | M=Reduced N | Matrix, MS=Ma | asked San | d Grains | s. ² Location: PL=Po | ore Lining, M=Matrix. |
| Hydric Soil | | | | | | | | r Problematic Hydric Soils ³ : |
| Histosol | (A1) | | Sandy G | eyed Matrix (S4 | 4) | | Coast Prai | rie Redox (A16) |
| | ipedon (A2) | | | edox (S5) | -, | | | anese Masses (F12) |
| Black His | | | | Matrix (S6) | | | | it Material (F21) |
| | n Sulfide (A4) | | Dark Sur | | | | | ow Dark Surface (F22) |
| Stratified | Layers (A5) | | · | ucky Mineral (F | - 1) | | Other (Exp | olain in Remarks) |
| 2 cm Mu | ck (A10) | | Loamy G | leyed Matrix (F | 2) | | | |
| Depleted | Below Dark Surface (A | A11) | Depleted | Matrix (F3) | | | | |
| Thick Da | rk Surface (A12) | | X Redox D | ark Surface (F6 | i) | | | |
| Sandy M | ucky Mineral (S1) | | Depleted | Dark Surface (| (F7) | | | |
| 5 cm Mu | cky Peat or Peat (S3) | | Redox D | epressions (F8) |) | | | |
| Restrictive | Layer (if observed |): | | | | | | |
| Type: | Rock | | | | | | | |
| Depth (i | nches): 4 | | | | | | Hydric Soil Present | t? Yes <u>X</u> No |
| Remarks: | | | | | | | | |
| Refusal at 4 | inches due to rock. | | | | | | | |
| | | | | | | | | |
| IYDROLO | OGY | | | | | | | |
| | drology Indicators | 3: | | | | | 0 | |
| - | icators (minimum of | | uired; check a | Il that apply) | | | | ators (minimum of two required) |
| - | Vater (A1) | | | Stained Leaves | (B9) | | | il Cracks (B6) |
| | er Table (A2) | | | c Fauna (B13) | (50) | | | atterns (B10) n Water Table (C2) |
| Saturation | | | | quatic Plants (B | 14) | | Crayfish Bu | • • |
| Water Ma | arks (B1) | | | , gen Sulfide Odor | | | | Visible on Aerial Imagery (C9) |
| Sediment | Deposits (B2) | | | ed Rhizospheres | ` ' | oots (C3) | | Stressed Plants (D1) |
| Drift Depo | osits (B3) | | Prese | nce of Reduced I | Iron (C4) | , , | | c Position (D2) |
| Algal Mat | or Crust (B4) | | Recen | t Iron Reduction | in Tilled Soil | s (C6) | X FAC-Neutra | |
| Iron Depo | osits (B5) | | Thin M | luck Surface (C7 | 7) | | | . , |
| Inundatio | n Visible on Aerial Image | ery (B7) | Gauge | or Well Data (D | 9) | | | |
| Sparsely | Vegetated Concave Surf | ace (B8) | Other | (Explain in Rema | arks) | | | |
| Field Obse | | | | | | | | |
| Surface Wa | tor i rodorit | 'es | No X | Depth (in | | | | |
| Water Table | | es | No X | Depth (in | · - | | | |
| Saturation F | | 'es | No X | Depth (in | ches): | | Wetland Hydrology P | resent? Yes X No |
| • | ipillary fringe) | | n on itoriu · · · · · | المعادات الماسات | n necessaria | o loca a a | | |
| Describe Re | ecorded Data (strea | ııı gauge, r —— | nonitoring wel | ı, aeriai photo | s, previou | s inspec | uons), ii avaliable: | |
| Remarks: | | | | | | | | |
| | | | | | | | | |

| Project/Site: Castlerock | | City/0 | County: [| Dakota | Sam | npling Date: | 10/18/2 | 2022 |
|--|-------------------|----------------|-------------------------|---|---------------|-----------------------|------------|--------------|
| Applicant/Owner: Stone Solar | | | | State: | Min San | npling Point | : W4-1ı | |
| Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon | | | Section | n, Township, Range: | T113N, F | R019W, S0 | 9 | |
| Landform (hillside, terrace, etc.): Toeslope | Lo | ocal relief (c | oncave, co | onvex, none): Lin | ear | Sk | pe %: | 2-3 |
| Subregion (LRR or MLRA): LRR M, MLRA 104 Lat | : 44.601635 | | L | ong: -93.102663 | | Datum: | : WG | S84 |
| Soil Map Unit Name: Klinger silt loam, 1 to 5 percei | nt slopes | | | NWI classific | | _ | | |
| Are climatic / hydrologic conditions on the site typical for | | | Yes | No X | (If no, expla | ain in Rema | rks.) | |
| Are Vegetation, Soil, or Hydrology | significantly | disturbed? | | —— Normal Circumstance | | | | |
| Are Vegetation , Soil , or Hydrology | | | | eded, explain any ans | wers in Rem | narks.) | | |
| SUMMARY OF FINDINGS – Attach site map sh | | | ations, tr | ansects, important f | eatures, etc | ; . | | |
| Hydrophytic Vegetation Present? Yes | NoX | lo 4 | ha Camal | lad Avaa | | | | |
| | No X | ' ' | the Sampl thin a Wet | | s N | o X | | |
| | NoX | " | iiiii a vvet | ianu: 1 es | , | <u> </u> | | |
| Remarks: (Explain alternative procedures here or in a | | | | | | | | |
| Upland meadow community located north of 240th Street and | east of wetland W | 4. Climatic co | onditions are | e drier than normal. | | | | |
| VECETATION . Has a significan array of all | | | | | | | | |
| VEGETATION – Use scientific names of pla | | Dominant | Indicato | ar I | | | | |
| <u>Tree Stratum</u> (Plot size: <u>30 ft</u>) | % Cover | Species | Status | | st workshee | et: | | |
| 1 | | | | Number of Dom | sinant Snaoi | 00 | | |
| 2 | | | | That Are OBL, I | • | | 1 | (A) |
| 3 | | | | _ Tatal Number | f Dansinant | | | _ |
| 4 | | | | Total Number o Species Across | | | 2 | (B) |
| 5 | | | | _ ` | | | | — ` ′ |
| Continue/Chrish Stratium (Plot circs 15 ft) | = | Total Cove | r | Percent of Dom That Are OBL, I | • | | 50 | (A/B) |
| Sapling/Shrub Stratum (Plot size: 15 ft) | | | | Prevalence Ind | | | | _(, , , |
| 1 | | | | Total % C | | | tiply by: | |
| 3. | | | | OBL species | 0 | | | |
| 4. | | - | | FACW species | | | | |
| 5. | | | | FAC species | <u> </u> | | | |
| | 0 = | Total Cover | | FACU species | 90 | _ ^3 x4 = | 360 | |
| Herb Stratum (Plot size: 5 ft) | | | | UPL species | 0 | _ | 0 | |
| 1. Dactylis glomerata | 60 | Yes | FACU | _ ' | | | 480 | —— (D) |
| 2. Setaria pumila | 40 | Yes | FAC | Column Totals: | | _ (A) _ | 3.69 | (B) |
| 3. <u>Trifolium repens</u> | 15 | No | FACU | | nce Index = E | | | |
| 4. Ambrosia artemisiifolia | | No | FACU | Hydrophytic Vo | _ | | | |
| 5. <u>Taraxacum officinale</u> | | No | FACU_ | _ · | • | . , , | getation | |
| 6 | | | | 2 - Domina | ance Test is | >50% | | |
| 7 | | | | — <u> </u> | ence Index is | s ≤3.0¹ | | |
| 8 | | | | — 4 - Morpho | ological Adap | ptations ¹ | enarate sh | eet) |
| 9 | | | | — I · · · · · · · · · · · · · · · · · · | tic Hydrophy | | | |
| 10 | 400 | Total Cover | | Indicators of hydric s | , , , | ŭ | | , |
| Woody Vine Stratum (Plot size: 30 ft) | | Total Cover | | disturbed or problema | | ry are regy much | 00 p. 000 | , 4.11000 |
| 1 | | | | Hydrophytic | | | | |
| 2. | | | | _ Vegetation | | | | |
| | = - | Total Cover | | Present? | Yes | No | X | |
| Remarks: (Include photo numbers here or on a sepa | rate sheet.) | | | • | | | | |
| | | | | | | | | |

SOIL Sampling Point: W4-1u

| | | to the de | oth needed to docu | | | or or co | onfirm the absence | e of indicators.) |
|--------------------------------|------------------------|-------------|------------------------|----------------------|-------------------|------------------|-----------------------------|--|
| Depth (inches) | Matrix | % | | ox Featur % | | Loc ² | Texture | Remarks |
| (inches) | Color (moist) | | Color (moist) | 70 | Type ¹ | Loc- | | Kemarks |
| 2-12 | 10YR 2/1 10YR 2/1 | 80 | | 0 | | | Loam | |
| | 1 | | 10VP 4/6 | | | | | 10% gravel |
| 2-12 | 10YR 4/2 | 18 | 10YR 4/6 | | <u> </u> | <u>M</u> | Loam | |
| 12-24 | 10YR 2/1 | 50 | | | | | | _ |
| 12-24 | 10YR 4/2 | 50 | | 0 | | | | <u> </u> |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹Type: C=Co | oncentration, D=D | epletion, R | M=Reduced Matrix, | MS=Mas | sked San | d Grains | s. ² Location: P | PL=Pore Lining, M=Matrix. |
| Hydric Soil II | ndicators: | | | | | | Indicato | rs for Problematic Hydric Soils ³ : |
| Histosol (A | .1) | | Sandy Gleyed N | Matrix (S4) | | | Coas | st Prairie Redox (A16) |
| Histic Epip | edon (A2) | | Sandy Redox (S | S5) | | | Iron- | Manganese Masses (F12) |
| Black Histi | c (A3) | | Stripped Matrix | (S6) | | | Red | Parent Material (F21) |
| Hydrogen | Sulfide (A4) | | Dark Surface (S | S7) | | | Very | Shallow Dark Surface (F22) |
| | ayers (A5) | | Loamy Mucky N | /lineral (F1 |) | | Othe | r (Explain in Remarks) |
| 2 cm Muck | | | Loamy Gleyed I | Matrix (F2) | | | | |
| Depleted E | Below Dark Surface (| A11) | Depleted Matrix | | | | | |
| | Surface (A12) | | Redox Dark Sui | | | | | |
| | cky Mineral (S1) | | Depleted Dark S | | 7) | | | |
| | y Peat or Peat (S3) | N. | Redox Depress | ions (F8) | | | 1 | |
| | ayer (if observed | 1): | | | | | | |
| Type: Depth (in | ches). | | | | | | Hydric Soil Pro | esent? Yes No ^X |
| Remarks: | <u></u> | | | | | | Hyunc Son Fit | esent: Tes NO |
| Nomano. | | | | | | | | |
| | | | | | | | | |
| HYDROLO | GY | | | | | | | |
| | Irology Indicators | s· | | | | | | |
| - | | | uired; check all that | apply) | | | - | Indicators (minimum of two required) |
| Surface Wa | · | | Water-Stained | | 39) | | | ce Soil Cracks (B6) |
| High Water | | | Aquatic Faun | , | 50) | | | age Patterns (B10) Season Water Table (C2) |
| Saturation (| | | True Aquatic | | 1) | | | ish Burrows (C8) |
| Water Mark | s (B1) | | Hydrogen Sul | | - | | | ration Visible on Aerial Imagery (C9) |
| Sediment D | Deposits (B2) | | Oxidized Rhiz | zospheres c | on Living Ro | oots (C3) | | ed or Stressed Plants (D1) |
| Drift Depos | its (B3) | | Presence of F | Reduced Iro | on (C4) | | Geon | norphic Position (D2) |
| Algal Mat o | r Crust (B4) | | Recent Iron R | Reduction in | Tilled Soils | s (C6) | FAC- | Neutral Test (D5) |
| Iron Depos | its (B5) | | Thin Muck Su | ırface (C7) | | | | |
| Inundation | Visible on Aerial Imag | ery (B7) | Gauge or We | II Data (D9) |) | | | |
| | egetated Concave Sur | face (B8) | Other (Explain | n in Remarl | ks) | | Т | |
| Field Observ | | /ec | No Y | enth (incl | hac). | | | |
| Surface Water | , , , , , | /es /es | | epth (incl | | | | |
| Water Table | | res res | | epth (inclepth (incl | · — | | | |
| Saturation Pr (includes cap | | | NO <u>/</u> | cpui (iiici | | | Wetland Hydrolo | ogy Present? YesNo _X_ |
| , , | | m gauge, n | nonitoring well, aeria | al photos | , previous | s inspec | tions), if available: | |
| Remarks: | - | | | | | - | | |
| romans. | | | | | | | | |

| Project/Site: Castlerock | | | City/County: | Dako | ota | | ; | Samplii | ng Date: | 10/18 | /2022 |
|--|------------------|---------------|----------------------------|------------|--|------------|-----------------|-----------|-------------------|-----------|-----------|
| Applicant/Owner: Stone Solar | | | | | | State: I | Min : | Sampli | ng Point: | W4-1 | W |
| Investigator(s): SK, MV, DH | | | Sec | tion, To | wnship, Ra | ange: | T113I | N, R01 | 9W, S09 |) —— | |
| Landform (hillside, terrace, etc.): Depression | | Local relie | ef (concave | , conve | x, none): | Cond | cave | | Slo | pe %: | 0-1 |
| Subregion (LRR or MLRA): LRR M, MLRA 104 La | | | | | | | | | Datum: | | |
| Soil Map Unit Name: Klinger silt loam, 1 to 5 perce | | | | _ | NWI cla | | | | | | |
| Are climatic / hydrologic conditions on the site typical f | | | Ye | es | – No | Χ (| If no, e | xplain i | n Remar | ks.) | |
| Are Vegetation , Soil , or Hydrology | significan | tly disturb | | | - nal Circums | | | | Yes_> | |) |
| Are Vegetation , Soil , or Hydrology | | | | needed | l, explain ar | ny answ | ers in F | Remark | (s.) | _ | |
| SUMMARY OF FINDINGS – Attach site map s | | | | , transe | ects, impor | rtant fea | atures, | etc. | | | |
| Hydrophytic Vegetation Present? Yes | X No | | la tha Can | | \ | | | | | | |
| | X No | | Is the San within a V | | | Yes | Χ | No _ | | | |
| Wetland Hydrology Present? Yes | X No | _ | within a v | Totiana | •• | | <u> </u> | | | | |
| Remarks: (Explain alternative procedures here or in a | | | O | | | | | | | | |
| Infrequently mowed degraded wet meadow community in a d | rainage swale of | r a nay tield | . Climatic cor | nditions a | are drier than | i normai. | | | | | |
| VEGETATION – Use scientific names of p | lants | | | | | | | | | | |
| VESTIATION See Scientific Harries of p | Absolute | Domina | ant Indic | ator | | | | | | | |
| <u>Tree Stratum</u> (Plot size: <u>30 ft</u>) | % Cover | Specie | _ | | Dominan | ce Test | works | sheet: | | | |
| 1 | | | | | Number o | of Domir | nant Sp | ecies | | | |
| 2 | | | | | That Are | | | | | 2 | (A) |
| 3 | | | | | Total Nun | nber of I | Domina | ant | | | |
| 4 | | | | | Species A | | | | | 2 | (B) |
| 5 | 0 | - Total C | | | Percent o | f Domin | ant Sp | ecies | | | |
| Sapling/Shrub Stratum (Plot size:15 ft) | | _ = Total C | Jover | | That Are | | | | 1 | 100 | (A/B) |
| 1 | | | | [| Prevalen | ce Inde | x work | sheet: | | | |
| 2 | | | | | Tota | al % Cov | ver of: | | Mult | tiply by: | |
| 3 | | | | | OBL spec | ies _ | | | x 1 = _ | | |
| 4 | | | | | FACW sp | ecies _ | | | x 2 = _ | | |
| 5 | | | | | FAC spec | cies _ | | | x 3 = _ | | |
| Herb Stratum (Plot size:5 ft) | | = Total Co | over | | FACU spe | ecies _ | | | x 4 = | | |
| 4 Olyapria grandia | 80 | Yes | ОВ | . | UPL spec | ies _ | | | x 5 = _ | | |
| Glyceria grandis Phalaris arundinacea | - | | FAC | | Column T | otals: | | | (A) _ | | (B) |
| 3. Taraxacum officinale | | | _ | | Pre | evalence | e Index | = B/A | = _ | | |
| 4. | · · | | | | Hydrophy | ytic Veç | getatio | n Indic | ators: | | |
| 5 | | | | | <u>X</u> 1 - F | Rapid Te | est for I | Hydrop | hytic Veg | jetation | 1 |
| 6 | | | | | X 2-0 | Dominar | nce Tes | st is >50 | 0% | | |
| 7 | | | | | 3 - F | Prevaler | nce Inde | ex is ≤3 | 3.0 ¹ | | |
| 8 | | | | | 4 - N | Morphol | ogical <i>A</i> | Adaptat | ions ¹ | | |
| 9 | <u> </u> | | | | (Provid | e supporti | ng data ir | n Remark | s or on a se | • | , |
| 10 | | | | | | | • | . , | √egetatio | ` ' | , |
| Woody Vine Stratum (Plot size: 30 ft) | 103 | = Total Co | over | | ¹ Indicators of disturbed or p | | | and hydro | ology must b | e presen | t, unless |
| 1 | | | | | | | | | | | |
| 2. | | | | | Hydroph Vegetati | - | | | | | |
| | | = Total Co | over | | Present | | Yes | _X | No | | _ |
| Remarks: (Include photo numbers here or on a seg | | | | | | | | | | | |
| | , | | | | | | | | | | |

SOIL Sampling Point: W4-1w

| Profile Desc Depth | - | cribe to the dep atrix | tn needed | | nent the Featur | | tor or c | onfirm the absence | of indicators.) | |
|-----------------------------------|-------------------|---------------------------|-------------------|-----------------------------|--------------------|-------------------|------------------|-----------------------|--|-------------------------------|
| (inches) | Color (mo | | Color (r | | % | Type ¹ | Loc ² | Texture | | Remarks |
| 0-4 | 10YR 2/1 | 100 | • | <u> </u> | | | | Silty Clay Loam | - | |
| 4-9 | 10YR 2/1 | 95 | 10YR 4/ | 6 | 5 | С | М | Silty Clay Loam | Gravel present 5% | |
| 9-16 | 10YR 2/1 | 60 | 10YR 4/ | 6 | 8 | С | M | Silty Clay Loam | | |
| 9-16 | 10YR 4/2 | 32 | | | 0 | | | Silty Clay Loam | | |
| 16-24 | 10YR 5/2 | 40 | 10YR 5/ | 8 | 10 | С | M | Clay | _ | |
| 16-24 | N 5/ | 50 | | | 0 | | | Clay | _ | |
| | | | | | | | | | | |
| 17 0 0 | | | | | | | | 21 (1 D) | | |
| Hydric Soil I | | D=Depletion, RI | <u>√I=Reduced</u> | Matrix, N | /IS=Mas | sked San | d Grains | | _=Pore Lining, M s for Problemat | =Matrix. ic Hydric Soils³: |
| | | | | | | | | | | _ |
| Histosol (A | • | | | Gleyed Ma | | | | | Prairie Redox (A1 | • |
| — Histic Epip | | | | Redox (S5 | - | | | | langanese Masses | |
| Black Histi | Sulfide (A4) | | | ed Matrix (S Surface (S7 | | | | | 'arent Material (F2´ Shallow Dark Surfa | • |
| | _ayers (A5) | | | Mucky Mir | |) | | | (Explain in Remark | |
| 2 cm Muck | | | | Gleyed Ma | | - | | | (Explain in Romain | , |
| | Below Dark Surf | ace (A11) | | ed Matrix (| | | | | | |
| | Surface (A12) | , | $\overline{}$ | Dark Surfa | | | | | | |
| | cky Mineral (S1) |) | | ed Dark Su | | 7) | | | | |
| 5 cm Mucl | ky Peat or Peat | (S3) | Redox | Depressio | ns (F8) | | | | | |
| Restrictive L | ayer (if obse | rved): | | | | | | | | |
| Type: | | | | | | | | | | |
| Depth (in | ches): | | | | | | | Hydric Soil Pres | sent? Y | es ^X No |
| Remarks: | | | | | | | | • | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| HYDROLO | GY | | | | | | | | | |
| | drology Indic | ators: | | | | | | Casandanil | ndicators (minimum | a of two required) |
| Primary Indic | ators (minimu | ım of one is requ | uired; check | all that a | ipply) | | | - | ndicators (minimur e Soil Cracks (B6) | <u>ir or two required)</u> |
| Surface Wa | ater (A1) | | Wa | ter-Stained I | Leaves (E | 39) | | | ge Patterns (B10) | |
| | r Table (A2) | | | ıatic Fauna (| • | , | | | eason Water Table (| 02) |
| Saturation | (A3) | | | e Aquatic Pl | | 1) | | | sh Burrows (C8) | <i>7</i> – <i>)</i> |
| Water Mark | ks (B1) | | Нус | Irogen Sulfic | de Odor (| C1) | | | tion Visible on Aeria | I Imagery (C9) |
| Sediment [| Deposits (B2) | | Oxi | dized Rhizos | spheres c | n Living Ro | oots (C3) | Stunted | d or Stressed Plants | (D1) |
| Drift Depos | sits (B3) | | Pre | sence of Re | duced Iro | on (C4) | | X Geomo | orphic Position (D2) | |
| Algal Mat o | or Crust (B4) | | Red | ent Iron Re | duction in | Tilled Soil | s (C6) | X FAC-N | leutral Test (D5) | |
| Iron Depos | its (B5) | | Thir | n Muck Surfa | ace (C7) | | | | | |
| Inundation | Visible on Aerial | Imagery (B7) | Gaı | ige or Well I | Data (D9) | | | | | |
| | egetated Concav | e Surface (B8) | Oth | er (Explain i | n Remarl | ks) | | - | | |
| Field Observ | | Vaa | No. N | ′ Do | ath (inal | | | | | |
| Surface Wate | | Yes — | No X | _ | oth (incl | | | | | |
| Water Table | | Yes — | _ | . ' | oth (incl | · — | | | | |
| Saturation Proceed (includes cape | | Yes | No X | _ Del | oth (incl | | | Wetland Hydrolog | yy Present? | YesXNo |
| _ ` . | | stream gauge in | nonitorina v | ell. aerial | photos | . previous | s inspec | tions), if available: | | |
| | / | . 33-, 11 | | , | , | , , | ,000 | ,, | | |
| Remarks: | | | | | | | | | | |
| | | | | | | | | | | |

| Project/Site: Castlerock | | City/0 | County: | Dakota | a | Sa | mpling Date: | 10/18/2022 |
|--|-----------------|-------------------|--------------|----------------|---|-----------------|-------------------|--------------------|
| Applicant/Owner: Stone Solar | | | | | State: | | mpling Point | |
| Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon | | | Sectio | on, Tow | /nship, Range: | T113N, | R019W, S0 | 3 |
| Landform (hillside, terrace, etc.): Footslope | L | ocal relief (co | oncave, c | convex, | none): <u>Cc</u> | oncave | Slo | ope %: <u>2-3</u> |
| Subregion (LRR or MLRA): LRR_K_MLRA_91 Lat: | 44.616076 | | | Long: | -93.089385 | | Datum: | : WGS84 |
| Soil Map Unit Name: Wadena loam, 2 to 6 percent s | slopes | | | | NWI classific | cation: | | |
| Are climatic / hydrologic conditions on the site typical for | this time of ye | ear? | Yes | · | No X | (If no, exp | lain in Rema | rks.) |
| Are Vegetation X , Soil , or Hydrology | significantly | y disturbed? | Are ' | "Norma | al Circumstance | es" present? | Yes_ | No _X |
| Are Vegetation , Soil , or Hydrology | naturally pr | roblematic? | (If ne | eeded, | explain any ans | swers in Re | marks.) | |
| SUMMARY OF FINDINGS – Attach site map sh | owing sampl | ing point loc | ations, t | transec | ts, important | features, et | c. | |
| Hydrophytic Vegetation Present? Yes | NoX | ₋ l _{st} | he Samp | nled Ar | rea | | | |
| Hydric Soil Present? Yes | NoX | - wit | hin a We | • | | es N | No X_ | |
| | No | | | | | | | |
| Remarks: (Explain alternative procedures here or in a s Soybean field with a center pivot irrigation system north of 230t | | | taken aboı | out one fo | oot above wetland | d. Climatic co | nditions are dr | ier than normal. |
| VEGETATION – Use scientific names of pla | ınts | | | | | | | |
| | Absolute | Dominant | Indicate | tor | | | | |
| <u>Tree Stratum</u> (Plot size: <u>30 ft</u>) | % Cover | <u>Species</u> | Status | <u>.s</u> I | Dominance Te | est workshe | et: | |
| 1 | | | | — r | Number of Don | ninant Spec | ies | |
| 2 | | | | $-\mid$ | That Are OBL, | FACW, or F | FAC: | 0 (A) |
| 3 | | | | — - | Total Number o | of Dominant | | |
| 5 | | | | - : | Species Across | s All Strata: | _ | 0 (B) |
| Sapling/Shrub Stratum (Plot size:15 ft) | _ | = Total Cove | r | | Percent of Dom That Are OBL, | | | NaN (A/B) |
| 1 | | | | - | Prevalence Inc | | | · |
| 2 | | | | _ | Total % C | Cover of: | Mui | Itiply by: |
| 3. | | | | _ (| OBL species | 0 | x 1 = _ | 0 |
| 4. | | | | | FACW species | | | |
| 5 | | | | | FAC species | | x3=_ | |
| 5 ft) | = | Total Cover | | | FACU species | | x 4 = | 0 |
| Herb Stratum (Plot size: 5 ft) | | | | | UPL species | 0 | x5=_ | 0 |
| 1 | | | | | Column Totals: | : 0 | (A) | 0 (B) |
| 3. | | | | - | Prevaler | nce Index = | | |
| 4. | | | | - Г | Hydrophytic V | /egetation I | ndicators: | |
| 5 | | | | _ | 1 - Rapid | Test for Hy | drophytic Ve | getation |
| 6. | | | | — I ' | · 2 - Domin | , | . , | • |
| 7. | | | | _ ' | 3 - Preval | | | |
| 8 | | | | | 4 - Morph | | | |
| 9 | | | | ` | | | emarks or on a se | eparate sheet) |
| 10 | | | | . | Problema | atic Hydroph | ytic Vegetati | on¹ (Explain) |
| Woody Vine Stratum (Plot size: 30 ft) | = | Total Cover | | | Indicators of hydric s listurbed or problema | | l hydrology must | be present, unless |
| 1 | | | | _ | Hydrophytic | | | |
| 2 | | | | | Vegetation | | | ., |
| | = | Total Cover | | | Present? | Yes _ | No | <u> </u> |
| Remarks: (Include photo numbers here or on a sepa No volunteer vegetation. Healthy planted soybeans. Vegetation | | oe non-hydroph | nytic due to | o the abs | sence of hydric s | oil indicators. | | |

US Army Corps of Engineers

SOIL Sampling Point: W5-1u

| Profile Descr | iption: (Describe | to the dep | th needed to docu | ment th | e indica | tor or co | onfirm the absence | of indicators.) | | |
|---|---|---------------|-----------------------|-------------|-------------------|------------------|------------------------------|--|---|--|
| Depth | Matrix | | Redo | x Featur | es | | | | | |
| (inches) | Color (moist) | % | Color (moist) | <u>%</u> | Type ¹ | Loc ² | Texture | F | Remarks | |
| 0-5 | 10YR 3/3 | 70 | | 0 | | | Silt Loam | | | |
| 0-5 | 10YR 2/2 | 30 | | 0 | | | Silt Loam | | | |
| 5-12 | 10YR 2/2 | 60 | | 0 | | | Silt Loam | | | |
| 5-12 | 10YR 4/2 | 40 | | 0 | | | Silt Loam | | | |
| 12-18 | 10YR 2/1 | 70 | | 0 | | | Loam | Refusal at 18 inches becaus | e of gravel and rock. | |
| 12-18 | 10YR 5/6 | | | 0 | | | Sandy Loam | Gravelly soil profile with refu | sal at 18 inches because of gravel and rock | |
| 12-18 | 10YR 4/1 | | | | | | Silt Loam | Refusal at 18 inches becaus | e of gravel and rock. | |
| Type: C=Co | oncentration, D=D | epletion, RM | I=Reduced Matrix, | MS=Mas | sked San | nd Grains | s. ² Location: PL | =Pore Lining, M=N | Matrix. | |
| Hydric Soil Ir | | • | | | | | | for Problematic | | |
| Histosol (A | 1) | | Sandy Gleyed M | atrix (S4) | | | Coast | Prairie Redox (A16) | | |
| Histic Epip | • | • | Sandy Redox (S | | | | | anganese Masses (F | 12) | |
| Black Histic | | • | Stripped Matrix (| • | | | | arent Material (F21) | , | |
| I — | Sulfide (A4) | • | Dark Surface (Si | • | | | | hallow Dark Surface | (F22) | |
| Stratified L | - | | Loamy Mucky M | • |) | | | Explain in Remarks) | , | |
| 2 cm Muck | | | Loamy Gleyed M | • | • | | | , | | |
| l — | elow Dark Surface (| A11) | Depleted Matrix | | | | | | | |
| I — · | Surface (A12) | | Redox Dark Surf | | | | | | | |
| I — | Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) | | | | | | | | | |
| 5 cm Mucky Peat or Peat (S3) Redox Depressions (F8) | | | | | | | | | | |
| Restrictive Layer (if observed): | | | | | | | | | | |
| Type:Roc | | | | | | | | | | |
| Depth (in | ches): 18 | | | | | | Hydric Soil Pres | sent? Yes | No _X | |
| Remarks: | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| HYDROLOG | GY | | | | | | | | | |
| | rology Indicators | S: | | | | | | | | |
| _ | | | ired; check all that | (vlage | | | - | ndicators (minimum o | f two required) | |
| Surface Wa | | | | | 20) | | | Soil Cracks (B6) | | |
| High Water | * * | | Water-Stained | , | 59) | | | ge Patterns (B10) | | |
| Saturation (| ` ' | | Aquatic Fauna | | 4) | | | ason Water Table (C2) | | |
| Water Mark | | | True Aquatic P | | • | | | n Burrows (C8) | (00) | |
| I — | eposits (B2) | | Oxidized Rhize | , | • | note (C3) | | ion Visible on Aerial Im | | |
| Drift Deposi | | | Presence of Re | | _ | 0013 (00) | | l or Stressed Plants (D rphic Position (D2) | 1) | |
| Algal Mat o | | | Recent Iron Re | | | ls (C6) | | . , | | |
| Iron Deposi | | | | | i illied Soli | is (CO) | FAC-N | eutral Test (D5) | | |
| I — | √isible on Aerial Image | erv (B7) | Thin Muck Sur | | ` | | | | | |
| I — | egetated Concave Sur | | Gauge or Well | | | | | | | |
| Field Observ | | (= -) | Other (Explain | III Kelliai | K5) | | | | | |
| Surface Water | | 'es | No X De | pth (inc | hes): | | | | | |
| Water Table I | | ′es | | pth (inc | | | | | | |
| Saturation Pr | | /es | | pth (inc | · — | | W-41 | | v V. N. | |
| (includes cap | | | | • | <i>'</i> — | | Wetland Hydrolog | y rresent? | Yes _X_No | |
| Describe Rec | orded Data (strea | m gauge, m | onitoring well, aeria | I photos | , previou | s inspec | tions), if available: | | | |
| Remarks: | | | | | | | | | | |
| | ination based on the | lack of hydro | phytic vegetation and | hydric so | ils. | | | | | |

| Project/Site: Castlerock | | City/C | ounty: Dak | ota | Sam | pling Date: | 10/18/2 | 2022 |
|---|---------------------|---------------------|----------------------------|---|----------------|--------------------|------------|-----------|
| Applicant/Owner: Stone Solar | | | | State: | Min Sam | pling Point: | W5-1w | |
| Investigator(s): S. Kinsler, M. Volbrecht, D. Hixor | n | | Section, T | ownship, Range: | T113N, R | 019W, S03 | 3 | |
| Landform (hillside, terrace, etc.): Depression | | Local relief (co | ncave, conv | ex, none): Con | cave | Slo | pe %: _ | 0 |
| Subregion (LRR or MLRA): LRR_K_MLRA_91 L | .at: 44.61605 | | Lon | g: -93.089349 | | Datum: | WGS | 384 |
| Soil Map Unit Name: Wadena loam, 2 to 6 percer | nt slopes | | | NWI classificat | ion: | | | |
| Are climatic / hydrologic conditions on the site typical | for this time of y | /ear? | Yes | No _X_ (| If no, explai | n in Remar | ks.) | |
| Are Vegetation X , Soil , or Hydrology | significant | tly disturbed? | Are "Nor | mal Circumstances' | ' present? | Yes_ | X No | |
| Are Vegetation , Soil , or Hydrology _ | naturally p | oroblematic? | (If neede | d, explain any answ | ers in Rem | arks.) | X | |
| SUMMARY OF FINDINGS - Attach site map | showing samp | ling point loc | ations, trans | ects, important fe | atures, etc. | | | |
| Hydrophytic Vegetation Present? Yes | X No | | | _ | | | | |
| | X No | "" | ne Sampled nin a Wetlan | | X No | | | |
| | X No | 44161 | iiii a vvetiaii | u: res_ | | | | |
| Remarks: (Explain alternative procedures here or in Mostly bare depression north of the road and at the south ed Climatic conditions are drier than normal. | | | r pivot irrigatio | n system. Farmer avoi | ded cropping | within the w | et depres | sion. |
| VEGETATION – Use scientific names of p | olants. | | | | | | | |
| Tree Stratum (Plot size:30 ft) | Absolute % Cover | Dominant Species | Indicator Status | Dominance Test | t workshoo | t · | | |
| 1 | | | | Dominance res | WOIKSHEE | | | |
| 2. | | | | Number of Domir That Are OBL, FA | • | | 1 | (A) |
| 3. | | | | That Are Obc, 17 | ACVV, OI I A | · | | _(^) |
| 4. | | | | Total Number of Species Across A | | | 1 | (B) |
| 5 | | | | Opecies Across A | ai Otiata. | | | _(D) |
| 15 fts | 0 | = Total Cover | | Percent of Domir That Are OBL, FA | | | 100 | (A/B) |
| Sapling/Shrub Stratum (Plot size: 15 ft) | | | | Prevalence Inde | · · | | | _(/-(///) |
| 1. | | | | Total % Co | | | tiply by: | |
| 2 | | | | OBL species | 0 | | | |
| 4. | | | | FACW species | | _ | | |
| 5 | | | | FAC species | | _ | | _ |
| - | 0 | = Total Cover | | FACU species | 0 | - x 4 = | 0 | _ |
| <u>Herb Stratum</u> (Plot size: 5 ft) | | | | UPL species | 0 | - x5= | 0 | _ |
| Cyperus esculentus | 8 | Yes | FACW | Column Totals: | 8 | (A) | 16 | (B) |
| 2. | | | | _ | e Index = B | - ` ´ - | 2 | (_) |
| 34. | | | | Hydrophytic Veg | | | | |
| | | | | X 1 - Rapid Te | - | | retation | |
| 56. | | | | X 2 - Dominar | • | . , | jotation | |
| 7. | | | | X 3 - Prevaler | | | | |
| 8. | | | | 4 - Morphol | | | | |
| 9 | _ | | | (Provide supporti | ng data in Rem | arks or on a se | parate she | et) |
| 10 | _ | | | Problemation | Hydrophyti | ic Vegetatio | n¹ (Exp | lain) |
| Woody Vine Stratum (Blot circ) 30 ft) | 8 | = Total Cover | | ¹ Indicators of hydric soil disturbed or problemation | | drology must l | e present, | , unless |
| Woody Vine Stratum (Plot size: 30 ft) | | | | | | | | |
| 1 2 | | | | Hydrophytic Vegetation | | | | |
| - | | = Total Cover | | Present? | Yes X | No | | |
| Remarks: (Include photo numbers here or on a se | | 20.01 | | 1 | | _ | | |
| , . | . , | | | | | | | |

SOIL Sampling Point: W5-1w

| Depth | ription: (Describe to Matrix | e ue | 11 66 U | | x Featur | | .5. 01 0 | o are absence | o. maioatoro.j | |
|-----------------------------------|---|-----------|--------------------|--------------------|-------------|-------------------|------------------|-------------------|--|---------------|
| (inches) | Color (moist) | % | Colo | r (moist) | % | Type ¹ | Loc ² | Texture | Rer | marks |
| 0-6 | 10YR 2/1 | 98 | 10YR | 4/4 | 2 | С | М | Silt Loam | <u> </u> | |
| 6-18 | 10YR 2/1 | 95 | 10YR | 4/6 | 5 | С | М | Silt Loam | _ | |
| 18-24 | 10YR 2/1 | 85 | 10YR | 4/1 | 10 | D | М | Silt Loam | 5% 4/6 concentrations | |
| | | | | | | | | | - ———————————————————————————————————— | |
| 1= 0.0 | | | | | | .—. | <u> </u> | 21 11 21 | | |
| | oncentration, D=Depl | etion, R | M=Redu | ced Matrix, | MS=Mas | sked San | d Grains | | _=Pore Lining, M=Mat | |
| Hydric Soil I | naicators: | | | | | | | indicators | s for Problematic Hy | raric Solls": |
| ——Histosol (A | A1) | | Sai | ndy Gleyed M | 1atrix (S4) | | | Coast | Prairie Redox (A16) | |
| Histic Epip | pedon (A2) | | Sai | ndy Redox (S | 55) | | | Iron-M | langanese Masses (F12) |) |
| Black Histi | • | | | pped Matrix | | | | | arent Material (F21) | |
| — ' ' | Sulfide (A4) | | | rk Surface (S | • | | | ' | Shallow Dark Surface (F2 | 22) |
| | ayers (A5) | | | amy Mucky M | - | - | | Other | (Explain in Remarks) | |
| 2 cm Mucl | | 4. | | amy Gleyed N | | | | | | |
| | Below Dark Surface (A11 | 1) | $\overline{}$ | pleted Matrix | | | | | | |
| | Surface (A12) | | | dox Dark Sur | | 7) | | | | |
| | cky Mineral (S1) | | | pleted Dark S | | 7) | | | | |
| | xy Peat or Peat (S3) ayer (if observed): | | | dox Depressi | ons (Fo) | | | | | |
| Type: | ayer (ii observed). | | | | | | | | | |
| | ahaa). | | | | | | | Unadala Onli Barr | 40 V | X No |
| Depth (in | cnes). | | | | | | | Hydric Soil Pres | sent? Yes _ | ^_ No |
| Remarks: | GY | | | | | | | | | |
| | drology Indicators: | | | | | | | | | |
| - | ators (minimum of or | ne is rea | uired: ch | eck all that | apply) | | | Y | Indicators (minimum of t | wo required) |
| Surface Wa | | • | | Water-Stained | | 80) | | | ce Soil Cracks (B6) | |
| | Table (A2) | | | Aquatic Fauna | • | ,,, | | | age Patterns (B10) eason Water Table (C2) | |
| Saturation | | | | True Aquatic f | | 1) | | | ish Burrows (C8) | |
| Water Mark | | | | ' Hydrogen Suli | , | • | | | ation Visible on Aerial Imag | gery (C9) |
| Sediment [| Deposits (B2) | | | Oxidized Rhiz | - | - | oots (C3) | ' | ed or Stressed Plants (D1) | |
| Drift Depos | sits (B3) | | | Presence of R | teduced Iro | on (C4) | | X Geom | norphic Position (D2) | |
| Algal Mat o | or Crust (B4) | | | Recent Iron R | eduction in | Tilled Soil | s (C6) | X FAC-1 | Neutral Test (D5) | |
| Iron Depos | its (B5) | | | Thin Muck Su | rface (C7) | | | | | |
| Inundation | Visible on Aerial Imagery | (B7) | | Gauge or Wel | l Data (D9) | | | | | |
| Sparsely V | egetated Concave Surface | e (B8) | | Other (Explair | in Remark | (s) | | | | |
| Field Observ | | | Nia | V D | | | | | | |
| Surface Wate | | | No | | epth (incl | | | | | |
| Water Table | | | No | | epth (incl | · — | | | | |
| Saturation Proceed (includes cape | | · — | No | <u>X</u> De | epth (incl | nes): | | Wetland Hydrolog | jy Present? Y | resXNo |
| , , | corded Data (stream | gauge r | nonitorin | g well aeria | al photos | previous | s inspec | | | |
| 233011001100 | 23.434 Data (Stream) | gaago, 1 | | J Sii, aciie | p/10103 | , p. 0 v 10 u | opo0 | ,, ii availabio. | | |
| Remarks: | | | | | | | | | | |

| Special Content State Min Sampling Point West Min Sa | Project/Site: Castlerock | | City/County: Dal | kota | Sampling Dat | e: <u>10/18/2022</u> | |
|--|--|----------------------------|-------------------------|---------------------------|-------------------------|----------------------|--|
| Landform (hiliside, terrace, etc.): Shouldor Local relief (concave, convex, none): Linear Slope %: 1-2 | Applicant/Owner: Stone Solar | | | State: Mi | in Sampling Poi | nt: W6-1u | |
| Solf Map Unit Name: Lindstrom sill loam, 1 to 4 percent slopes Mill diaselfication: PEM1Ad Are climatic / hydrologic conditions on the site typical for this time of year? Are Vegetation X , Soil | Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon | | Section, T | ownship, Range:1 | Γ113N, R019W, S | 303 | |
| Soil Map Unit Name: Lindstrom silt loam, 1 to 4 percent slopes | Landform (hillside, terrace, etc.): Shoulder | Local re | elief (concave, conv | ex, none): Linear | | Slope %:1-2 | 2 |
| Are climatic / hydrologic conditions on the site typical for this time of year? Are Vegetation X Sol , or Hydrology significantly disturbed? Are Nomal Circumstances present? Yes No X Are Nomal Circumstances present? Yes No X SubmMARY OF FINDINGS – Attach site map showing sampling point tocations, transacts, important features, etc. Hydrophytic Vegetation Present? Yes No X Is the Sampled Area within a Wetland? Wetland Hydrology Present? Yes No X Wetland Hydrology Present? Yes No X Subminimation of the sample of the sa | Subregion (LRR or MLRA): LRR_K_MLRA_91 La | at: 44.61846 | Lon | g: -93.087808 | Datui | m: WGS84 | |
| Are Vegetation X , Soil , or Hydrology asignificantly disturbed? Are "Normal Circumstances" present? Yes No X (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 X within a Wetland? Yes No X within a Wetland? Yes No X within a Wetland? Yes No X Wetland Hydrology Present? Yes No X within a Wetland? Yes No X Wetland Hydrology Present? Yes No X Wetland Pydrology Pydro | Soil Map Unit Name: Lindstrom silt loam, 1 to 4 pe | | | • | | | _ |
| Are Vegetation Sol 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 X Is the Sampled Area within a Wotland? Yes No X Wetland Hydrology Present? Yes No X Wetland Hydrology Present? Yes No X Dominant Indicator Status Dominant Indicator Species Status Number of Dominant Species That Are OBL, FACW, or FAC: NaN (A/B) Prevented of Dominant Species That Are OBL, FACW, or FAC: NaN (A/B) Prevalence Indox worksheet: Total % Cover of: Multiply by: | Are climatic / hydrologic conditions on the site typical for | or this time of year? | Yes | No X (If | no, explain in Rem | narks.) | |
| SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? | Are Vegetation X , Soil , or Hydrology | significantly distu | rbed? Are "Nor | — mal Circumstances" p | present? Yes | No X | <u>. </u> |
| Hydrophytic Vegetation Present? | Are Vegetation , Soil , or Hydrology | naturally problem | atic? (If neede | ed, explain any answer | rs in Remarks.) | | |
| Hydric Soli Present? Yes No X | SUMMARY OF FINDINGS - Attach site map s | howing sampling po | int locations, trans | sects, important feat | ures, etc. | | |
| Hydric Soil Present? | Hydrophytic Vegetation Present? Yes | No X | is the Sampled | Aroa | | | |
| Wetland Hydrology Present? Yes | Hydric Soil Present? Yes | | - | | No X | | |
| VEGETATION - Use scientific names of plants. Tree Stratum (Plot size:30 ft) | | | William a vvotiam | | | | |
| Number of Dominant Species Species Species Status Species Species Status Species Species Status Species Species Status Species | | , | lriar than narmal | | | | |
| Absolute % Cover Species Status Indicator Species Status | Soybean field with a center pivot imgation system above vvo. | Cilinatic conditions are c | iller tilati floriflat. | | | | |
| Tree Stratum | VEGETATION – Use scientific names of pl | ants. | | | | | |
| Number of Dominant Species That Are OBL, FACW, or FAC: 0 | 20.5 | | | | | | |
| 2. | | | | Dominance Test v | vorksheet: | | |
| Total Number of Dominant Species Across All Strata: 0 (B) | | | | Number of Domina | nt Species | | |
| Total Number of Dominant Species Across All Strata: 0 (B) | | | | That Are OBL, FAC | CW, or FAC: | (A | () |
| Sapling/Shrub Stratum (Plot size:15 ft) 0 | | | | Total Number of Do | ominant | | |
| Percent of Dominant Species | _ | | | Species Across All | Strata: | 0 (B | 3) |
| Prevalence Index worksheet: Total % Cover of: Multiply by: 0 OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FACW species 0 x 3 = 0 FACU species 0 x 4 = 0 UPL species 0 x 5 = 0 Column Totals: 0 (A) 0 9. 4. Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation Hydrophytic Vegetation 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 2 - Jack Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ 4 - Morphological Adaptations¹ Problematic Hydrophytic Vegetation¹ (Explain) 1 - Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | | _ | | | • | NaN (A | √B) |
| 2. Total % Cover of: Multiply by: 3. OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FAC species 0 x 4 = 0 FACU species 0 x 5 = 0 Column Totals: 0 (A) 0 (B) Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 5. 1 - Rapid Test for Hydrophytic Vegetation 6. 2 - Dominance Test is >50% 7. 3 - Prevalence Index is ≤3.0¹ 8. 3 - Prevalence Index is ≤3.0¹ 9. 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 10. Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | | | | Prevalence Index | worksheet: | | |
| 3. OBL species 0 x 1 = 0 5. FACW species 0 x 2 = 0 FACU species 0 x 3 = 0 FACU species 0 x 4 = 0 UPL species 0 x 5 = 0 Column Totals: 0 (A) 0 (B) Prevalence Index = B/A = Hydrophytic Vegetation Indicators: - 1 - Rapid Test for Hydrophytic Vegetation - 2 - Dominance Test is >50% - 3 - Prevalence Index is ≤3.0¹ - 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) - - Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | 1 | | | Total % Cove | r of: M | lultiply by: | |
| 4 | l _ | | | OBL species | 0 x 1 = | 0 | |
| 5. | | | | | | • | _ |
| Herb Stratum (Plot size:5 ft) | _ | | | | | | |
| UPL species | 5.4 | = Total | Cover | | | | - |
| 1. 2 | | | | | | | - |
| Prevalence Index = B/A = | 1 | | | 1 · · — | | | - (B) |
| Hydrophytic Vegetation Indicators: 5 | | | | | | | _(-) |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | — · | , , , | egetation | |
| 8 | | | | I — | | | |
| 9 | | | | | | | |
| 10 Problematic Hydrophytic Vegetation¹ (Explain) Woody Vine Stratum (Plot size:30 ft) — Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | | | | | | ı separate sheet) | |
| Woody Vine Stratum (Plot size: 30 ft) — Total Cover Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. | 1 | | | Problematic H | - Hydrophytic Vegeta | ation¹ (Explain | ı) |
| 1 Hydrophytic | | ^ | | | nd wetland hydrology mu | st be present, unle | ess |
| | | | | Hydrophytic | | | |
| 2 Vegetation | 1 | | | | | | |
| = Total Cover Present? Yes NoX | | = Total | Cover | Present? | Yes No | ъ <u>X</u> | |

Remarks: (Include photo numbers here or on a separate sheet.)

No volunteer vegetation. Healthy soybean crop. Vegetation assumed to be non-hydrophytic due to the presence of healthy soy bean crop and a lack of hydric soil and sufficient wetland hydrology indicators to meet wetland conditions.

SOIL Sampling Point: W6-1u

| Profile Desc | ription: (Describe to | the de | pth need | led to doci | ument th | e indicat | tor or co | onfirm the absence o | of indicators.) | | | | |
|---|---|-----------|-----------|----------------|--------------|-------------------|------------------|----------------------------------|---|--|--|--|--|
| Depth | Matrix | | | Redo | ox Featur | es | | | ŕ | | | | |
| (inches) | Color (moist) | % | Colo | r (moist) | % | Type ¹ | Loc ² | Texture | Remarks | | | | |
| 0-12 | 10YR 2/2 | 97 | 10YR | 3/6 | 3 | С | М | Silt Loam | | | | | |
| 12-18 | 10YR 3/1 | 92 | 10YR | 3/6 | 8 | С | М | Silt Loam | | | | | |
| 18- | 10YR 3/1 | 80 | 10YR | 3/6 | 5 | <u>C</u> | M | Silt Loam 15% 10YR 4/1 depletion | | | | | |
| 18- | | | 10YR | 4/1 | 15 | D | M | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| ¹Type: C=C | oncentration, D=Dep | letion, R | M=Redu | ced Matrix, | MS=Mas | ked San | d Grains | s. ² Location: PL= | Pore Lining, M=Matrix. | | | | |
| Hydric Soil | Indicators: | | | | | | | Indicators | for Problematic Hydric Soils ³ : | | | | |
| Histosol (| A1) | | Sai | ndy Gleyed N | Matrix (S4) | | | Coast F | Prairie Redox (A16) | | | | |
| Histic Epi | pedon (A2) | | Sa | ndy Redox (S | 35) | | | Iron-Ma | anganese Masses (F12) | | | | |
| Black Hist | tic (A3) | | —— Str | ipped Matrix | (S6) | | | Red Pa | rent Material (F21) | | | | |
| | Sulfide (A4) | | — Da | rk Surface (S | 67) | | | | nallow Dark Surface (F22) | | | | |
| Stratified | Layers (A5) | | Loa | amy Mucky N | /lineral (F1 |) | | Other (I | Explain in Remarks) | | | | |
| 2 cm Muc | k (A10) | | Loa | amy Gleyed I | Matrix (F2) | | | | | | | | |
| Depleted | Below Dark Surface (A1 | 1) | De | pleted Matrix | (F3) | | | | | | | | |
| Thick Dar | k Surface (A12) | | Re | dox Dark Su | rface (F6) | | | | | | | | |
| Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) | | | | | | | | | | | | | |
| 5 cm Muc | 5 cm Mucky Peat or Peat (S3) Redox Depressions (F8) | | | | | | | | | | | | |
| Restrictive I | ayer (if observed): | | | | | | | | | | | | |
| Type: | | | | | | | | | | | | | |
| Depth (ir | nches): | | | | | | | Hydric Soil Pres | ent? Yes No _X | | | | |
| Remarks: | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| HYDROLO | GY | | | | | | | | | | | | |
| Wetland Hy | drology Indicators: | | | | | | | Secondary In | dicators (minimum of two required) | | | | |
| Primary Indi | cators (minimum of or | ne is rec | uired; ch | eck all that | apply) | | | - | Soil Cracks (B6) | | | | |
| Surface W | ater (A1) | | | Water-Staine | d Leaves (E | 39) | | Drainage | e Patterns (B10) | | | | |
| High Wate | r Table (A2) | | | Aquatic Faun | a (B13) | | | Dry-Sea | son Water Table (C2) | | | | |
| Saturation | (A3) | | | True Aquatic | Plants (B14 | !) | | Crayfish | Burrows (C8) | | | | |
| Water Mar | ks (B1) | | | Hydrogen Sul | fide Odor (| C1) | | X Saturation | on Visible on Aerial Imagery (C9) | | | | |
| Sediment | Deposits (B2) | | | Oxidized Rhiz | ospheres o | n Living R | oots (C3) | Stunted | or Stressed Plants (D1) | | | | |
| Drift Depo | sits (B3) | | | Presence of F | Reduced Iro | on (C4) | | Geomor | phic Position (D2) | | | | |
| Algal Mat | or Crust (B4) | | | Recent Iron F | Reduction in | Tilled Soil | s (C6) | FAC-Ne | utral Test (D5) | | | | |
| Iron Depos | sits (B5) | | | Thin Muck Su | ırface (C7) | | | | | | | | |
| Inundation | Visible on Aerial Imagery | (B7) | | Gauge or We | II Data (D9) |) | | | | | | | |
| Sparsely \ | egetated Concave Surfac | e (B8) | | Other (Explain | n in Remarl | (s) | | | | | | | |
| Field Obser | | | | v – | | | | | | | | | |
| Surface Wat | | | No | | epth (incl | | | | | | | | |
| Water Table | | | No | | epth (incl | · — | | | | | | | |
| Saturation P | | · | No | <u>X</u> D | epth (incl | nes): | | Wetland Hydrology | y Present? YesNo _X | | | | |
| (includes cap Describe Re | corded Data (stream | naline i | monitorin | a well peri | al photos | previou | s inspec | tions) if available. | | | | | |
| Remarks: | 22.304 Bala (olloani | | | J 11011, GOII | | , p. 01100 | | , ii availabio. | | | | | |
| i Nomaiks. | | | | | | | | | | | | | |

| Project/Site: Castlerock | | City/C | ounty: <u>Dal</u> | cota | Samp | oling Date: | 10/18/2022 |
|--|-------------------------|----------------------------|----------------------------|---|--------------------|-----------------|-------------------|
| Applicant/Owner: Stone Solar | | | | State: | Min Samp | oling Point: | <u>W6-1w</u> |
| Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon | | | Section, T | ownship, Range: | T113N, R0 | 019W, S03 | |
| Landform (hillside, terrace, etc.): Depression | | Local relief (co | ncave, conv | ex, none): Cor | ncave | Slop | oe %: 2-3 |
| Subregion (LRR or MLRA): LRR_K_MLRA_91 Lat: | : 44.618463 | i | Lon | g: -93.087845 | | Datum: | WGS84 |
| Soil Map Unit Name: Lindstrom silt loam, 1 to 4 per | cent slopes | | | NWI classifica | ation: PE | M1Ad | |
| Are climatic / hydrologic conditions on the site typical for | this time of y | /ear? | Yes | No X | (If no, explain | n in Remark | (s.) |
| Are Vegetation , Soil , or Hydrology | significant | tly disturbed? | Are "Nor | mal Circumstance | s" present? | Yes_X | No |
| Are Vegetation , Soil , or Hydrology | _ naturally բ | oroblematic? | (If neede | d, explain any ans | wers in Rema | arks.) | |
| SUMMARY OF FINDINGS – Attach site map sh | owing samp | ling point loca | ations, trans | sects, important fe | eatures, etc. | | |
| Hydrophytic Vegetation Present? Yes X | No | _ Is th | ne Sampled | Area | | | |
| | No | _ with | nin a Wetlan | | X No | | |
| | No | | | | | | |
| Remarks: (Explain alternative procedures here or in a s Degraded wet meadow community between an agricultural field | | | rstem. Climatio | conditions are drier | than normal. | | |
| VEGETATION – Use scientific names of pla | | | | | | | |
| Tree Stratum (Plot size: 30 ft) | Absolute <u>% Cover</u> | Dominant <u>Species</u> | Indicator <u>Status</u> | Dominance Tes | st worksheet | : | |
| 1 | | | | Number of Dom | inant Species | S | |
| 2 | | | | That Are OBL, F | FACW, or FAC | O: | 1 (A) |
| 3 | | | | Total Number of | f Dominant | | |
| 4 | | | | Species Across | All Strata: | | 1 (B) |
| 5 Sapling/Shrub Stratum (Plot size:15 ft) | _ | = Total Cover | | Percent of Domi | • | | 00 (A/B) |
| 1 | | | | Prevalence Ind | | | |
| 2 | | | | Total % Co | over of: | Multi | ply by: |
| 3. | | | | OBL species | 0 | x 1 = | 0 |
| 4 | | | | FACW species | 100 | x 2 = | 200 |
| 5 | | | | FAC species | | x 3 = | 15 |
| 5 ft > | | = Total Cover | | FACU species | 0 | x 4 = | 0 |
| Herb Stratum (Plot size: 5 ft) | 00 | Van | EA C\A/ | UPL species | 0 | x 5 = | 0 |
| Phalaris arundinacea Ambrosia trifida | <u>98</u> 5 | Yes No | FACW FAC | Column Totals: | 105 | (A) | 215 (B) |
| Urtica dioica | | | FACW | Prevalen | ce Index = B/ | A = | 2.05 |
| 4 | | | TACW | Hydrophytic Ve | egetation Ind | icators: | |
| 5 | | | | X 1 - Rapid 3 | Test for Hydro | phytic Vege | etation |
| 6. | | | | X 2 - Domina | ance Test is > | 50% | |
| 7. | | | | X 3 - Prevale | | | |
| 8 | | | | 4 - Morpho | | | |
| 9 | | | | | rting data in Rema | | arate sheet) |
| 10 | | | | Problemat | ic Hydrophyti | c Vegetation | n¹ (Explain) |
| Woody Vine Stratum (Plot size: 30 ft) | 105 : | = Total Cover | | ¹ Indicators of hydric so disturbed or problema | | drology must be | e present, unless |
| 1 | | | | Hydrophytic | | | |
| 2 | | = Total Cover | | Vegetation Present? | Yes X | No | |
| Remarks: (Include photo numbers here or on a sepa | | - Total Covel | | | | _ | |
| Tremaines. (mediate photo numbers here or on a sepa | rate sneet.) | | | | | | |

SOIL Sampling Point: W6-1w

| Profile Desci Depth | ription: (Describe to Matrix | the de | oth need | | ument the ox Featur | | or or co | onfirm the absence of | indicators.) | |
|------------------------|---------------------------------|----------------|-------------|-------------------|------------------------|-------------------|------------------|---------------------------------------|--|--------------------|
| (inches) | Color (moist) | % | Colo | r (moist) | % | Type ¹ | Loc ² | Texture | | Remarks |
| 0-10 | 10YR 3/1 | 98 | 10YR | 5/6 | 2 | C | | Mucky Loam | | |
| 10-20 | 10YR 3/1 | 97 | 10YR | 4/6 | 3 | С | М | Loam | | |
| 20-24 | 10YR 3/1 | 75 | 10YR | 4/6 | 3 | С | М | Silt Loam | | |
| 20-24 | 10YR 4/1 | 22 | | | 0 | | | Loam | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | oncentration, D=Dep | letion, R | M=Redu | ced Matrix, | MS=Mas | ked San | d Grains | | | |
| Hydric Soil I | ndicators: | | | | | | | Indicators t | for Problemati | ic Hydric Soils³: |
| Histosol (A | \1) | | Sai | ndy Gleyed N | Matrix (S4) | | | Coast Pr | rairie Redox (A16 | 5) |
| Histic Epip | edon (A2) | | Sai | ndy Redox (S | S5) | | | Iron-Mar | nganese Masses | (F12) |
| Black Histi | c (A3) | | Stri | pped Matrix | (S6) | | | Red Par | ent Material (F21 |) |
| Hydrogen | Sulfide (A4) | | Da | k Surface (S | 87) | | | Very Sha | allow Dark Surfac | ce (F22) |
| Stratified L | ayers (A5) | | Loa | my Mucky N | /lineral (F1 |) | | Other (E | xplain in Remark | s) |
| 2 cm Muck | (A10) | | Loa | my Gleyed I | Matrix (F2) | | | | | |
| Depleted E | Below Dark Surface (A1 | 1) | | oleted Matrix | (F3) | | | | | |
| Thick Dark | Surface (A12) | | X Re | dox Dark Sui | rface (F6) | | | | | |
| Sandy Mu | cky Mineral (S1) | | De | oleted Dark S | Surface (F | 7) | | | | |
| | xy Peat or Peat (S3) | | Re | dox Depress | ions (F8) | | | _ | | |
| | ayer (if observed): | | | | | | | | | |
| Type: | | | | | | | | | | |
| Depth (in | ches): | | | | | | | Hydric Soil Prese | ent? Ye | es X No |
| Remarks: | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| HYDROLO | GY | | | | | | | | | |
| Wetland Hyd | drology Indicators: | | | | | | | Casandanilad | licatora (minimum | of two required) |
| Primary Indic | ators (minimum of or | ne is req | uired; ch | eck all that | apply) | | | · · · · · · · · · · · · · · · · · · · | <u>licators (minimum</u> Soil Cracks (B6) | r or two required) |
| Surface Wa | | | | Water-Stained | | 39) | | | Patterns (B10) | |
| | Table (A2) | | | Aquatic Faun | , | , | | | son Water Table (C | 22) |
| X Saturation | | | | ' True Aquatic | , , | !) | | · | Burrows (C8) | <i>,</i> |
| Water Mark | | | | Hydrogen Sul | • | | | | n Visible on Aerial | Imagery (C9) |
| Sediment [| Deposits (B2) | | | Oxidized Rhiz | • | - | oots (C3) | | or Stressed Plants | |
| Drift Depos | its (B3) | | | Presence of F | | _ | , , | | hic Position (D2) | (- ') |
| Algal Mat o | r Crust (B4) | | | Recent Iron R | Reduction in | Tilled Soil | s (C6) | <u></u> | itral Test (D5) | |
| Iron Depos | its (B5) | | | Thin Muck Su | ırface (C7) | | | | , | |
| Inundation | Visible on Aerial Imagery | (B7) | | Gauge or We | II Data (D9) | | | | | |
| Sparsely V | egetated Concave Surfac | e (B8) | | Other (Explain | n in Remarl | ks) | | | | |
| Field Observ | vations: | | | | | | | | | |
| Surface Wate | er Present Yes | | No | <u>X</u> D | epth (incl | | | | | |
| Water Table | | | No | D | epth (incl | nes):1 | 18 | | | |
| Saturation Pr | | \overline{X} | No | D | epth (incl | nes): | 0 | Wetland Hydrology | Present? | Yes X No |
| (includes cap | • • • | | | | | | | | | |
| Describe Red | corded Data (stream | gauge, r | nonitorin | g well, aeria | al photos | , previous | s inspec | tions), if available: | | |
| Remarks: | | | | | | | | | | |
| | | | | | | | | | | |

| Project/Site: Castlerock | | City | /County: Da | ıkota | Sampl | ling Date: <u>10/18/2</u> | 1022 |
|--|----------------------------|---------------------|----------------------------|--|-----------------|---------------------------|--------------|
| Applicant/Owner: Stone Solar | | | | State: | Min Sampl | ling Point: W7-1u | |
| Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon | | | Section, | Township, Range: | T113N, R0 | 19W, S03 | |
| Landform (hillside, terrace, etc.): Footslope | | | _ | | | | 2-3 |
| Subregion (LRR or MLRA): LRR_K_MLRA_91 Lat | ± 44.616887 | | Loi | ng: -93.086416 | | Datum: WGS | 384 |
| Soil Map Unit Name: Lindstrom silt loam, 1 to 4 per | cent slopes | | | NWI classific | ation: | | |
| Are climatic / hydrologic conditions on the site typical for | | ear? | Yes | — No X | (If no, explain | in Remarks.) | |
| Are Vegetation X , Soil , or Hydrology | significantly | / disturbed? | | rmal Circumstance | | | X |
| Are Vegetation , Soil , or Hydrology | | | // / | ed, explain any ans | wers in Remar | rks.) | |
| SUMMARY OF FINDINGS – Attach site map sh | | | | sects, important f | eatures, etc. | ^ | |
| Hydrophytic Vegetation Present? Yes | NoX | le | the Sample | d Aroa | | | |
| | No X | | ithin a Wetla | | s No | Х | |
| Wetland Hydrology Present? Yes | No _X | . | | | | | |
| Remarks: (Explain alternative procedures here or in a s Unharvested soybean field with a center pivot irrigation system | | , | than normal. | | | | |
| VEGETATION – Use scientific names of pla | ants. | | | | | | |
| Tree Stratum (Plot size:30 ft) | Absolute <u>% Cover</u> | Dominant Species | Indicator <u>Status</u> | Dominance Te | st worksheet: | | |
| 1 | | | | Number of Dem | ninant Chaoisa | | |
| 2 | | | | Number of Dom That Are OBL, I | • | c: 0 | (A) |
| 3 | | | | Tatal Number | .f Dameirant | _ | _` |
| 4 | | | | Total Number o Species Across | | 1 | (B) |
| 5 | _ | = Total Cov | /er | Percent of Dom | inant Species | | _ ` ´ |
| Sapling/Shrub Stratum (Plot size: 15 ft) | | | | That Are OBL, I | FACW, or FAC | 0 | _(A/B) |
| 1 | | | | Prevalence Ind | | | |
| 2 | | | | Total % C | | Multiply by: | |
| 3 | | | | OBL species | | · | — |
| 4 | | | | FACW species | 0 | x 2 =0 | |
| 5 | 0 - | | | FAC species | 0 | x 3 =0 | |
| Herb Stratum (Plot size: 5 ft) | = | Total Cove | r | FACU species | 5 | x 4 =20 | |
| 1. Cirsium arvense | 5 | Yes | FACU | UPL species | 0 | x 5 =0 | |
| 2. | | | | Column Totals: | 5 | (A) <u>20</u> | (B) |
| 3. | | | | Prevalen | nce Index = B/A | \ = <u>4</u> | |
| 4 | | | | Hydrophytic Ve | egetation Indi | cators: | |
| 5 | | | | 1 - Rapid [·] | Test for Hydror | phytic Vegetation | |
| 6 | | | | 2 - Domina | ance Test is >5 | 50% | |
| 7 | | | | 3 - Prevale | ence Index is ≤ | :3.0 ¹ | |
| 8 | | | | 4 - Morpho | ological Adapta | ations ¹ | |
| 9 | | | | | | ks or on a separate she | et) |
| 10 | | | | · | , , , | Vegetation¹ (Exp | , |
| Woody Vine Stratum (Plot size: 30 ft) | = | Total Cove | er | ¹ Indicators of hydric s disturbed or problema | | rology must be present, | unless |
| 1 | | | | Hydrophytic | | | |
| 2 | | | | Vegetation | | ., | |
| | = | Total Cove | er | Present? | Yes | NoX | |
| Remarks: (Include photo numbers here or on a sepa Unharvested soybeans. | ırate sheet.) | | | | | | |

US Army Corps of Engineers

SOIL Sampling Point: W7-1u

| | | o the de | | | | tor or co | onfirm the absence of | indicators.) |
|-------------------|---|------------|-------------------|----------------------|-------------------|------------------|--------------------------------|-----------------------------------|
| Depth (inches) | Color (moist) | % | | Redox Featu st) % | | Loc ² | Texture | Remarks |
| (inches) 0-9 | 10YR 3/3 | 100 | Color (moi | 51) | Type ¹ | | Silt Loam | Remarks |
| 9-20 | 10YR 3/3 | 40 | | 0 | | | Sandy Loam | |
| 9-20 | 10YR 2/1 | 60 | - | 0 | | | Silty Clay Loam | |
| 20-24 | 10YR 2/1 | 95 | 10YR 4/6 | 5 | С | М | Silty Clay Loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹Type: C=Co | oncentration, D=Dep | oletion, R | M=Reduced M | atrix, MS=Ma | sked San | d Grains | s. ² Location: PL=F | Pore Lining, M=Matrix. |
| Hydric Soil I | | , | | , | | - | | or Problematic Hydric Soils³: |
| Histosol (A | .1) | | Sandy Gle | eyed Matrix (S4 |) | | Coast Pra | airie Redox (A16) |
| Histic Epip | edon (A2) | | Sandy Re | dox (S5) | | | Iron-Man | ganese Masses (F12) |
| Black Histi | c (A3) | | Stripped N | Matrix (S6) | | | Red Pare | ent Material (F21) |
| Hydrogen | Sulfide (A4) | | Dark Surfa | ace (S7) | | | Very Sha | allow Dark Surface (F22) |
| Stratified L | | | Loamy Mu | ucky Mineral (F | 1) | | Other (Ex | xplain in Remarks) |
| 2 cm Muck | | | Loamy Gl | eyed Matrix (F2 | 2) | | | |
| | Below Dark Surface (A1 | 11) | | Matrix (F3) | | | | |
| | Surface (A12) | | | irk Surface (F6) | | | | |
| | cky Mineral (S1) | | | Dark Surface (F | -7) | | | |
| | ay Peat or Peat (S3) ayer (if observed): | | Redox De | pressions (F8) | | | 1 | |
| Type: | ayer (ii observeu). | | | | | | | |
| Depth (in | ches). | | | | | | Hydric Soil Prese | nt? Yes No ^X |
| Remarks: | | | | | | | 1194110 001111000 | 100 110 |
| | | | | | | | | |
| | | | | | | | | |
| HYDROLO | GY | | | | | | | |
| Wetland Hyd | Irology Indicators: | | | | | | Secondary Indi | icators (minimum of two required) |
| Primary Indic | ators (minimum of o | ne is req | uired; check al | I that apply) | | | - | oil Cracks (B6) |
| Surface Wa | ater (A1) | | Water- | Stained Leaves (| B9) | | | Patterns (B10) |
| High Water | Table (A2) | | Aquatic | Fauna (B13) | | | | on Water Table (C2) |
| Saturation | (A3) | | True Ad | quatic Plants (B1 | 4) | | Crayfish E | Burrows (C8) |
| Water Mark | s (B1) | | Hydrog | en Sulfide Odor | (C1) | | Saturation | n Visible on Aerial Imagery (C9) |
| | Deposits (B2) | | Oxidize | d Rhizospheres | on Living R | oots (C3) | Stunted or | r Stressed Plants (D1) |
| Drift Depos | | | | ce of Reduced Ir | | | Geomorph | hic Position (D2) |
| | r Crust (B4) | | | Iron Reduction i | | ls (C6) | FAC-Neut | tral Test (D5) |
| Iron Deposi | | , (D7) | | uck Surface (C7) | | | | |
| | Visible on Aerial Imagery egetated Concave Surfa | | _ | or Well Data (D9 | • | | | |
| Field Observ | | CC (DO) | Other (I | Explain in Rema | rks) | | T | |
| Surface Wate | V- | s | No X | Depth (inc | hes): | | | |
| Water Table | | | No \overline{X} | Depth (inc | | | | |
| Saturation Pr | | es — | No X | Depth (inc | · — | | Wetland Hydrology | Present? Yes No X |
| (includes cap | <u> </u> | | | | | | | 163NO |
| Describe Rec | corded Data (stream | gauge, r | nonitoring well | , aerial photos | s, previou | s inspec | tions), if available: | |
| Remarks: | | | | | | | | |

| Project/Site: Castlerock | | City/C | County: <u>Da</u> | kota | Sam | pling Date: | 10/18/2 | 2022 |
|--|-------------------|------------------|----------------------------|---|-------------------|-------------------|----------------|----------|
| Applicant/Owner: Stone Solar | | | | State: | Min Sam | pling Point | : <u>W7-1v</u> | v |
| Investigator(s): S. Kinsler, M. Volbrecht, D. Hixor | 1 | | Section, | Township, Range: | T113N, R | .019W, S0 | 3 | |
| Landform (hillside, terrace, etc.): Depression | | Local relief (co | oncave, conv | /ex, none): Coi | ncave | Slo | ope %: _ | 0-1 |
| Subregion (LRR or MLRA): LRR_K_MLRA_91 L | at: 44.616858 | 3 | Lor | ng: -93.086184 | | _ Datum: | : WGS | 384 |
| Soil Map Unit Name: Lindstrom silt loam, 1 to 4 pe | ercent slopes | | | NWI classifica | ation: | | | |
| Are climatic / hydrologic conditions on the site typical f | or this time of | year? | Yes | No X | (If no, explai | in in Rema | rks.) | |
| Are Vegetation , Soil , or Hydrology _ | significan | tly disturbed? | Are "No | rmal Circumstance | s" present? | Yes_ | X No | |
| Are Vegetation , Soil , or Hydrology _ | naturally | problematic? | (If need | ed, explain any ans | wers in Rema | arks.) | | |
| SUMMARY OF FINDINGS – Attach site map | showing samp | oling point loc | ations, tran | sects, important fo | eatures, etc. | | | |
| Hydrophytic Vegetation Present? Yes | X_ No | lo f | ha Samplas | I Aroo | | | | |
| | X No | _ | he Sampled hin a Wetlai | | s X No |) | | |
| Wetland Hydrology Present? Yes | X_ No | _ | iiii u weda | 100 | | <u> </u> | | |
| Remarks: (Explain alternative procedures here or in a | | , | | | | | | |
| Degraded wet meadow community. Climatic conditions are d | rier than normal. | | | | | | | |
| VEGETATION – Use scientific names of p | lants | | | | | | | |
| Control of Section Marines of p | Absolute | Dominant | Indicator | | | | | |
| <u>Tree Stratum</u> (Plot size: <u>30 ft</u>) | % Cover | <u>Species</u> | <u>Status</u> | Dominance Tes | st workshee | t: | | |
| 1. Acer saccharinum | 15 | Yes | FACW | Number of Dom | inant Specie | s | | |
| 2. Salix nigra | 5 | Yes | OBL | That Are OBL, F | | | 4 | (A) |
| 3 | | | | Total Number o | f Dominant | | | |
| 4 | | | | Species Across | | | 4 | (B) |
| 5 | 20 | - Total Cover | | Percent of Dom | inant Species | s | | |
| Sapling/Shrub Stratum (Plot size: 15 ft) | | _ = Total Cove | | That Are OBL, F | | | 100 | _(A/B) |
| 1. Rhamnus cathartica | 15 | Yes | FAC | Prevalence Ind | | et: | | |
| 2 | | | | Total % C | over of: | Mul | Itiply by: | |
| 3 | | | | OBL species | 5 | _ x1= _ | 5 | |
| 4 | | | | FACW species | 115 | _ x 2 = _ | 230 | |
| 5 | | | | FAC species | 15 | _ x3= _ | 45 | |
| Herb Stratum (Plot size: 5 ft) | 15 | = Total Cover | | FACU species | 0 | _ x 4 = _ | 0 | |
| Phalaris arundinacea | 100 | Yes | FACW | UPL species | 0 | _ x5=_ | 0 | |
| 2. | - | | | Column Totals: | 135 | (A) _ | 280 | (B) |
| 3. | | | | Prevalen | ce Index = B/ | /A = _ | 2.07 | |
| 4. | | | | Hydrophytic Ve | egetation Inc | dicators: | | |
| 5 | | | | 1 - Rapid ⁻ | Test for Hydro | ophytic Ve | getation | |
| 6 | | | | X 2 - Domina | ance Test is > | >50% | | |
| 7 | | | | X 3 - Prevale | ence Index is | ≤3.0 ¹ | | |
| 8 | | | | 4 - Morpho | ological Adap | tations¹ | | |
| 9 | | | | | rting data in Rem | | • | , |
| 10 | 400 | | | | ic Hydrophyti | J | ` . | , |
| Woody Vine Stratum (Plot size: 30 ft) | 100 | = Total Cover | | ¹ Indicators of hydric so disturbed or problema | | ydrology must | be present, | , unless |
| 1 | | | | Headar wheet | | | | |
| 2. | | | | Hydrophytic Vegetation | | | | |
| | | = Total Cover | | Present? | Yes X | No | | |
| Remarks: (Include photo numbers here or on a se | | | | ı | | | | |
| | , | | | | | | | |

SOIL Sampling Point: W7-1w

| | | the de | oth need | | | | or or co | onfirm the absence of | of indicators.) |
|------------------------------|---------------------------|----------|---------------|---------------------------------|-------------|-------------------|------------------|-----------------------|--|
| Depth (inches) | Color (moist) | % | Colo | r (moist) | x Featur | Type ¹ | Loc ² | Texture | Remarks |
| 0-2 | 10YR 2/2 | 100 | | i (iiioist) | | Туре | | Silt Loam | Nemains |
| 2-12 | 10YR 3/1 | 85 | 10YR | 3/6 | 15 | | | Silt Loam | |
| 2-12 | 10110 3/1 | | 10111 | 3/0 | | | | OIII LOAIII | |
| 12-24 | 10YR 3/1 | 70 | 2.5YR | 4/6 | 30 | C | M_ | Silt Loam | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | oncentration, D=Depl | etion, R | M=Redu | ced Matrix, | MS=Mas | ked San | d Grains | | Pore Lining, M=Matrix. |
| Hydric Soil I | ndicators: | | | | | | | Indicators | for Problematic Hydric Soils ³ : |
| Histosol (A | 1) | | Sa | ndy Gleyed M | atrix (S4) | | | Coast F | Prairie Redox (A16) |
| Histic Epip | • • | | | ndy Redox (S | - | | | | anganese Masses (F12) |
| Black Histi | | | | ipped Matrix (| | | | | rent Material (F21) |
| | Sulfide (A4) | | | rk Surface (S | | ` | | | nallow Dark Surface (F22) |
| Stratified L 2 cm Muck | | | | amy Mucky M amy Gleyed N | | | | Other (| Explain in Remarks) |
| | Relow Dark Surface (A11 |) | | pleted Matrix | | | | | |
| | Surface (A12) | , | $\overline{}$ | dox Dark Sur | | | | | |
| Sandy Mud | cky Mineral (S1) | | | pleted Dark S | | 7) | | | |
| 5 cm Muck | y Peat or Peat (S3) | | Re | dox Depressi | ons (F8) | | | | |
| Restrictive L | ayer (if observed): | | | | | | | | |
| Type: | | | | | | | | | |
| Depth (in | ches): | | | | | | | Hydric Soil Pres | ent? Yes X No |
| Remarks: | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| HYDROLO | | | | | | | | | |
| _ | Irology Indicators: | | | | | | | Secondary In | dicators (minimum of two required) |
| | ators (minimum of or | e is req | | | | | | Surface | Soil Cracks (B6) |
| Surface Wa | | | | Water-Stained | , | 39) | | Drainag | e Patterns (B10) |
| High Water Saturation (| | | | Aquatic Fauna True Aquatic F | ` ' | 1) | | - | son Water Table (C2) |
| Water Mark | , | | | Hydrogen Sulf | • | • | | | Burrows (C8) on Visible on Aerial Imagery (C9) |
| | Deposits (B2) | | | Oxidized Rhize | | - | oots (C3) | | or Stressed Plants (D1) |
| Drift Depos | its (B3) | | | Presence of R | | _ | , , | | phic Position (D2) |
| Algal Mat o | r Crust (B4) | | | Recent Iron Re | eduction in | Tilled Soils | s (C6) | X FAC-Ne | utral Test (D5) |
| Iron Depos | its (B5) | | | Thin Muck Sur | face (C7) | | | | |
| | Visible on Aerial Imagery | | _ | Gauge or Well | Data (D9) | | | | |
| | egetated Concave Surface | e (B8) | | Other (Explain | in Remark | (S) | | | |
| Field Observ Surface Wate | V | | No | X De | epth (inch | nes): | | | |
| Water Table | , 1 1000m | | No | | pth (inch | | | | |
| Saturation Pr | | | No | | epth (inch | · — | 0 | Watland Hudralass | v Procent? Ves Y No |
| (includes cap | illary fringe) | | | | | | | Wetland Hydrolog | y Present? Yes X No |
| Describe Rec | corded Data (stream o | gauge, r | nonitorin | g well, aeria | l photos. | , previous | s inspec | tions), if available: | |
| Remarks: Sa | turation is not checke | d becau | se an as | sociated wa | iter table | was not | found p | resent. | |

| Project/Site: Castlerock | | City/County: | Dakota | Samplin | g Date: 10/19/2022 |
|---|--------------------|-------------------------------------|---|-----------------------------------|------------------------------|
| Applicant/Owner: Stone Solar | | | State: | : Min Samplin | ng Point: W8-1u |
| Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon | | Secti | on, Township, Range: | T113N, R019 | 9W, S09 |
| Landform (hillside, terrace, etc.): Terrace | Local | relief (concave, | convex, none): Lin | near | Slope %: 0-1 |
| Subregion (LRR or MLRA): LRR M, MLRA 104 Lat: | 44.602261 | | Long: -93.115325 | | Datum: WGS84 |
| Soil Map Unit Name: Maxfield silty clay loam | | | NWI classific | cation: PEM | 1Ad |
| Are climatic / hydrologic conditions on the site typical for | this time of year? | Yes | No X | (If no, explain ir | n Remarks.) |
| Are Vegetation X , Soil , or Hydrology | significantly dist | urbed? Are | "Normal Circumstance | es" present? | Yes No _X_ |
| Are Vegetation , Soil , or Hydrology | naturally probler | matic? (If n | eeded, explain any an | nswers in Remarks | s.) |
| SUMMARY OF FINDINGS - Attach site map sh | owing sampling p | oint locations, | transects, important | features, etc. | |
| Hydrophytic Vegetation Present? Yes | _ No _X_ | Is the Sam | nlod Aroa | | |
| Hydric Soil Present? Yes | No X | within a W | | es No | X |
| | No _X | | | | |
| Remarks: (Explain alternative procedures here or in a s Harvested soybean field south of S3 and W8. Climatic condition | | al. | | | |
| VEGETATION – Use scientific names of pla | nts. | | | | |
| Tree Stratum (Plot size: 30 ft) | | ninant Indica ecies <u>Statu</u> | l | est worksheet: | |
| 1 | | | Number of Dor | minant Species | |
| 2 | | | That Are OBL, | , FACW, or FAC: | (A) |
| 3 | | | Total Number | of Dominant | |
| 5. | | | — Species Acros | s All Strata: | (B) |
| Sapling/Shrub Stratum (Plot size:15 ft) | = Tota | al Cover | | minant Species , FACW, or FAC: | NaN (A/B) |
| 1 | | | Prevalence In | ndex worksheet: | |
| 2. | | | Total % 0 | Cover of: | Multiply by: |
| 3. | | | OBL species | 0 | x 1 =0 |
| 4 | | | FACW species | s 0 : | x 2 =0 |
| 5 | | | FAC species | 0 | x 3 =0 |
| Herb Stratum (Plot size: 5 ft) | 0 = Total | Cover | FACU species | . 0 . | x 4 =0 |
| | | | UPL species | 0 | x 5 =0 |
| 1 | | | Column Totals | s: 0 | (A) <u>0</u> (B) |
| 3 | | | — Prevale | ence Index = B/A = | = |
| 4. | | | Hydrophytic V | Vegetation Indica | ators: |
| 5. | | | 1 - Rapid | d Test for Hydroph | ytic Vegetation |
| 6 | | | 2 - Domir | nance Test is >50 | % |
| 7 | | | 3 - Preva | alence Index is ≤3. | .0 ¹ |
| 8 | | | 4 - Morph | hological Adaptati | ons ¹ |
| 9 | | | (Provide supp | oorting data in Remarks | or on a separate sheet) |
| 10 | 0 | | | , , , | egetation¹ (Explain) |
| Woody Vine Stratum (Plot size: 30 ft) | 0 = Total | l Cover | ¹ Indicators of hydric disturbed or problem | | logy must be present, unless |
| 1 | | | Hydrophytic | | |
| 2 | 0 | | Vegetation Present? | Yes | No X |
| | 0 = Total | Cover | Present | | |
| Remarks: (Include photo numbers here or on a sepa Harvested soybean debris. No volunteer vegetation observed | | I to be non-hydrop | hytic due to the lack of hy | ydric soils and wetla | nd hydrology. |

SOIL Sampling Point: W8-1u

| Wetland Hydrology Indicators: Secondary Indicators (minimum of two required) | | Matrix | | | x Featur | | | | |
|--|---|--|------------------------------|---|---|---|------------------|--|--|
| Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. **Location: PL=Pore Lining, M=Matrix, Uprice Soil Indicators: Indicators for Problematic Hydric Soils*: | inches) | Color (moist) | | Color (moist) | | Type ¹ | Loc ² | Texture | Remarks |
| Fype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Private Cost Indicators: Histosol (A1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Black Histo (A2) Sandy Redox (S5) Black Histo (A2) Sandy Redox (S5) Black Histo (A2) Sandy Redox (S5) Loamy Mucky Mineral (F1) Depleted Below Dark Surface (F2) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (F2) Sandy Mucky Mineral (F2) Some Mucky Peat or Peat (S2) Depleted Dark Surface (A12) Some Mucky Peat or Peat (S2) Depleted Sandy Redox (A22) Sandy Mucky Mineral (S1) Depleted Sandy Redox (A22) Sandy Mucky Mineral (S1) Depleted Dark Surface (F2) Sandy Mucky Mineral (S1) Depleted Dark Surface (F2) Sandy Mucky Mineral (S1) Depleted Dark Surface (F2) Hydric Soil Present? Yes No X YDROLOGY Welland Hydrology Indicators: Water Mark (A1) Water Salar Cause (B1) Surface (A12) Aguatic Fault Fault (F2) Surface (A12) Surface (A12) Aguatic Fault Fault (F2) Surface (A12) Su | 0-13 | 10YR 2/1 | 100 | | | | | Silt Loam | 5% gravel. |
| Histosol (A1) Sandy Gleyed Matrix (S4) Coast Prairie Redox (A16) Coast Redox (A16) Coast Matrix (S6) Coast Redox Prairie Redox (A16) Coast Matrix (S6) Coast Matrix (S6) | 13-24 | 10YR 2/1 | 98 | 10YR 4/6 | 2 | <u> </u> | M | Silty Clay Loam | _ |
| Histoca (Art) Soil Indicators: Sandy Gleyed Matrix (S4) Coast Prairie Redox (Art6) Histoc Epipedon (A2) Sandy Redox (S5) Iron-Maries (Art6) Iron-Maries (Art7) Iron | | | | | | | | | |
| Histoca (A1) Sandy Gleyed Matrix (S4) Coast Prairie Redox (A16) Histocapidan (A2) Sandy Redox (S5) Iron-Managese Masses (F12) Black Histoc (A3) Stripped Matrix (S6) Red Parent Material (F21) Very Shallow Dark Surface (F2) Stratified Layers (A5) Loarny Mucky Mineral (F1) Other (Explain in Remarks) Ze m Muck (A10) Loarny Mucky Mineral (F1) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F6) Sandy Mucky Mineral (S1) Present? Yes No X Depth (Inches): Imary Indicators (minimum of one is required: check all that apply) Surface Water (A1) Aquatic Faina (S13) Drainage Faterns (B10) Drainage Fatern | | | | | | | | | - |
| Histic Epipedon (A2) Sandy Gleyed Matrix (S4) Coast Prairie Redox (A16) Histic Epipedon (A2) Sandy Redox (S5) Intro-Matrix (S4) Coast Prairie Redox (A16) Intro-Matrix (S4) In | | | | | | | | | _ |
| Histoca (A11) Sandy Gleyed Matrix (S4) Coast Prairie Redox (A16) Histoc Epipedon (A2) Sandy Redox (S5) Inon-Manganese Masses (F12) Block Histoc (A3) Stripped Matrix (S6) Inon-Manganese Masses (F12) Hydrogen Sulfide (A4) Dark Surface (S7) Very Shallow Dark Surface (F22) Stratified Layers (A5) Loarny Mucky Mineral (F1) Other (Explain in Remarks) Zem Muck (A10) Loarny Gleyed Matrix (F3) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F6) Some Water (A10) Depleted Dark Surface (F6) Some Water (A11) Surface (A110) Depleted Dark Surface (F6) Some Water (A11) Surface (A110) Depleted Dark Surface (F6) Some Water (A11) Surface (A110) Depleted Dark Surface (F6) Some Water (A11) Surface (A110) Depleted Dark Surface (F6) Some Water (A11) Surface (A110) Depleted Dark Surface (F6) Some Water (A110) Depleted Dark Surfac | | ncentration, D=Dep | oletion, R | M=Reduced Matrix, | MS=Mas | ked San | d Grains | 2Location: Pl | _ L=Pore Lining, M=Matrix. |
| Histic Epipedon (A2) Sandy Redox (S5) Iron-Manganese Masses (F12) Black Histic (A3) Stripped Matrix (S6) Red Parent Material (F21) Hydrogen Sulfide (A4) Dark Surface (S7) Very Shallow Dark Surface (F22) Straitfied Layers (A5) Loamy Mucky Mineral (F11) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Below Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) 5 cm Mucky Peat or Peat (S3) Redox Depressions (F8) Strictive Layer (if observed): Type: Depth (inches): Depth (inches): Burface Water (A1) Water-Stained Leaves (B9) Drainage Patterns (B10) Drainage Pat | | | | <u> </u> | | | | | |
| Histic Epipedon (A2) Sandy Redox (S5) Iron-Manganese Masses (F12) Black Histic (A3) Sitripped Matrix (S6) Red Parent Material (F21) Hydrogen Sulfide (A4) Dark Surface (S7) Very Shallow Dark Surface (F22) Stratified Layers (A5) Loamy Muxky Mineral (F1) Other (Explain in Remarks) 2 cm Muxk (A10) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) 5 cm Muxcy Peat or Peat (S3) Redox Dark Surface (F7) 5 cm Muxcy Peat or Peat (S3) Redox Depressions (F8) setrictive Layer (if observed): Type: Depth (inches): Pemarks: **PROLOGY** Vetland Hydrology Indicators: **rimary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) High Water Table (A2) Aquatic Fauna (B13) Surface Soil Cracks (B6) Dariange Patterns (B10) Diriange Patterns (B10) Saturation (A3) True Aquatic Patns (B14) Water Marks (B1) Hydrogen Sulfide Odor (C1) Saturation (A3) True Aquatic Patns (B14) Water Marks (B1) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) Oxidized Rizizspheres on Living Roots (C3) Saturation (Valie) on Aerial Imagery (C9) Schiment Deposits (B3) Presence of Reduced Iron (C4) Geomorphic Position (D2) FAC-Neutral Test (D5) Iron Deposits (B3) Diriange Patterns (B1) Diriange Patterns (B10) Diriange Patterns | Histosol (A1) |) | | Sandy Gleyed M | latrix (S4) | | | Coast | Prairie Redox (A16) |
| Hydrogen Sulfide (A4) Dark Surface (S7) Very Shallow Dark Surface (F22) Stratified Layers (A5) Loamy Mucky Mineral (F1) Other (Explain in Remarks) 2 cm Muck (A10) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Below Dark Surface (A12) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Som Mucky Peat or Peat (S3) Redox Depressions (F8) setrictive Layer (if observed): Type: Depth (inches): Wetland Hydrology Indicators: remarks: **PROLOGY** Wetland Hydrology Indicators: **Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Surface (A12) Surface (B6) Dirange Patterns (B10) High Water Table (A2) Aquatic Fauna (B13) Dirange Patterns (B10) High Water Table (A2) Aquatic Fauna (B13) Dirange Patterns (B10) Sediment Deposits (B3) Presence of Reduced Iron (C4) Sediment Deposits (B3) Presence of Reduced Iron (C4) Geomorphic Position (D2) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Inches (B6) Dirange (B7) Geomorphic Position (D2) Spansely Vegetated Concave Surface (B8) Direngely (B7) Gauge or Well Data (D9) Spansely Vegetated Concave Surface (B8) Direngely (B7) Aversiones: Sufface Water Present Yes No X Depth (inches): Sufface Soil Cracks (B7) Presence of Reduced Soil (B | Histic Epiped | don (A2) | | | | | | Iron-N | Manganese Masses (F12) |
| Stratified Layers (A5) | — Black Histic (| (A3) | | Stripped Matrix | (S6) | | | Red F | Parent Material (F21) |
| Stratified Layers (A5) | | | | Dark Surface (S | 7) | | | | · · |
| Depleted Below Dark Surface (A11) | Stratified Lay | yers (A5) | | Loamy Mucky M | ineral (F1 |) | | Other | (Explain in Remarks) |
| Thick Dark Surface (A12) | 2 cm Muck (A | A10) | | Loamy Gleyed N | /latrix (F2) | | | | |
| Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) 5 cm Mucky Peat or Peat (S3) Redox Depressions (F8) setrictive Layer (if observed): | Depleted Bel | low Dark Surface (A1 | l1) | Depleted Matrix | (F3) | | | | |
| | Thick Dark S | Surface (A12) | | Redox Dark Sur | face (F6) | | | | |
| Secondary Indicators (minimum of two required) Type: | Sandy Mucky | y Mineral (S1) | | Depleted Dark S | Surface (F | 7) | | | |
| Type: | 5 cm Mucky | Chick Dark Surface (A12) Sandy Mucky Mineral (S1) | | Redox Depressi | ons (F8) | | | | |
| Depth (inches): Primary Indicators (minimum of one is required) Primary Indicators (minimum of two required) | | | | | | | | | |
| ### Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) | Restrictive Lay | yer (if observed): | | | | | | | |
| ### Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) | _ | yer (if observed): | | | | | | | |
| Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Aquatic Fauna (B13) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Iron Deposits (B5) Iron Deposits (B5) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Surface Water Present Yes No X Depth (inches): Water Algal And Hydrology Present? Yes No Wetland Hydrology Present? Yes No Metland Hydrology Present? Yes No Metland Hydrology Present? Yes No No Water Algal And Hydrology Present? Yes No No Water Algal And Hydrology Present? Yes No No Wetland Hydrology Present? Yes No No No Wetland Hydrology Present? Yes No No No No Wetland Hydrology Present? Yes No No No No No No No Water Table Present? Yes No No No Wetland Hydrology Present? Yes No No No No No No No No No N | Type: | | | | | | | Hydric Soil Pre | esent? Yes No _X |
| Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) Primary Indicators (Minimum of one is required; check all that apply) Surface Water (A1) Water Advantic Fauna (B13) Pry-Season Water Table (C2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Presence of Reduced Iron (C4) Algal Mat or Crust (B4) Iron Deposits (B5) Iron Deposits (B5) Iron Deposits (B5) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Saturation Visible on Aerial Imagery (C9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Surface Water Present Yes No X Depth (inches): Water Table Present Yes No X Depth (inches): Wetland Hydrology Present? Yes No Includes capillary fringe) | Type: Depth (inch Remarks: | nes): | | | | | | Hydric Soil Pre | esent? Yes No _X |
| Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Surface Water Present Yes No X Depth (inches): Water Marks (B1) Drig Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Saturation Visible on Aerial Imagery (C9) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) FAC-Neutral Test (D5) FINION AND AND AND AND AND AND AND AND AND AN | Type: | nes):Y | | | | | | | |
| High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Surface Water Present Other (Explain in Remarks) Aquatic Fauna (B13) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Saturation Visible on Aerial Imagery (C9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Saturation Present Yes No X Depth (inches): Saturation Present Yes No X Depth (inches): Wetland Hydrology Present? Yes No Includes capillary fringe) | Type: Depth (inch Remarks: YDROLOG Wetland Hydro | nes): Y ology Indicators: | | uired; check all that | apply) | | | Secondary | Indicators (minimum of two required) |
| Saturation (A3) | Type: Depth (inch Remarks: YDROLOG Vetland Hydro Primary Indicat | Y ology Indicators: tors (minimum of o | | | | 39) | | SecondarySurfac | Indicators (minimum of two required) se Soil Cracks (B6) |
| Water Marks (B1) | Type: Depth (inch Remarks: YDROLOG Vetland Hydro Primary Indicat Surface Wate | Y ology Indicators: tors (minimum of o | | Water-Stained | Leaves (E | 39) | | <u>Secondary</u> Surfac Draina | Indicators (minimum of two required) the Soil Cracks (B6) tage Patterns (B10) |
| Sediment Deposits (B2) | Type: Depth (inch Remarks: YDROLOG' Wetland Hydro Primary Indicat Surface Wate High Water Ta | ology Indicators: tors (minimum of o | | Water-Stained | Leaves (E (B13) | • | | Secondary Surfac Draina | Indicators (minimum of two required) the Soil Cracks (B6) tage Patterns (B10) the Bason Water Table (C2) |
| | Type: Depth (inch Remarks: YDROLOG Vetland Hydro Primary Indicat Surface Wate High Water Ta Saturation (A: | ology Indicators: tors (minimum of o er (A1) Table (A2) | | Water-StainedAquatic FaunaTrue Aquatic F | Leaves (E ı (B13) Plants (B14 | , | | Secondary Surface Draina Dry-So | Indicators (minimum of two required) se Soil Cracks (B6) age Patterns (B10) season Water Table (C2) sh Burrows (C8) |
| Algal Mat or Crust (B4) | Type: Depth (inch Remarks: YDROLOG Vetland Hydro Primary Indicat Surface Wate High Water Ta Saturation (AS Water Marks | ology Indicators: tors (minimum of o er (A1) Table (A2) 3) (B1) | | Water-Stained Aquatic Fauna True Aquatic F | Leaves (E (B13) Plants (B14 ide Odor (| () C1) | pots (C3) | Secondary Surface Draina Dry-Sr Crayfice X Satura | Indicators (minimum of two required) se Soil Cracks (B6) age Patterns (B10) season Water Table (C2) sh Burrows (C8) stion Visible on Aerial Imagery (C9) |
| Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Field Observations: Surface Water Present Ves No X Depth (inches): Saturation Present Yes No X Depth (inches): Wetland Hydrology Present? Yes No | Type: Depth (inch Remarks: YDROLOG Wetland Hydro Primary Indicat Surface Wate High Water Ta Saturation (A: Water Marks Sediment Dep | Y ology Indicators: tors (minimum of o er (A1) Table (A2) 3) (B1) posits (B2) | | Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sult | Leaves (E (B13) Plants (B14 ide Odor (| l) C1) on Living Re | pots (C3) | Secondary Surface Draina Dry-Se Crayfit X Satura | Indicators (minimum of two required) the Soil Cracks (B6) the Patterns (B10) the Bason Water Table (C2) the Burrows (C8) thion Visible on Aerial Imagery (C9) the or Stressed Plants (D1) |
| Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Field Observations: Surface Water Present Yes No X Depth (inches): Vater Table Present Yes No X Depth (inches): Saturation Present Yes No X Depth (inches): Saturation Present Yes No X Depth (inches): Wetland Hydrology Present? Yes No | Type: Depth (inch Remarks: YDROLOG Vetland Hydro Primary Indicat Surface Wate High Water Ta Saturation (A: Water Marks Sediment Dep Drift Deposits | ology Indicators: tors (minimum of o er (A1) Table (A2) Table (A2) Toposits (B2) Toposits (B2) Toposits (B3) | | Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sult Oxidized Rhiz | Leaves (E (B13) Plants (B14 (ide Odor (ospheres deduced Iro | C1) on Living Roon (C4) | , , | Secondary Surface Draina Dry-Se Crayfie X Saturae Stunte Geom | Indicators (minimum of two required) the Soil Cracks (B6) tage Patterns (B10) the Burrows (C8) the Burrows (C8) the Or Stressed Plants (D1) to orphic Position (D2) |
| Field Observations: Surface Water Present Yes No X Depth (inches): Nater Table Present Yes No X Depth (inches): Saturation Present Yes No X Depth (inches): Saturation Present Yes No X Depth (inches): Wetland Hydrology Present? Yes No | Type: Depth (inch Remarks: YDROLOG Wetland Hydro Primary Indicat Surface Wate High Water Ta Saturation (AS Water Marks Sediment Dep Drift Deposits Algal Mat or C | ology Indicators: tors (minimum of orer (A1) Table (A2) (B1) posits (B2) (B3) Crust (B4) | | Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sult Oxidized Rhiz Presence of R Recent Iron R | Leaves (B (B13) Plants (B14 ide Odor (ospheres o educed Iro eduction in | C1) on Living Roon (C4) | , , | Secondary Surface Draina Dry-Se Crayfie X Saturae Stunte Geom | Indicators (minimum of two required) the Soil Cracks (B6) tage Patterns (B10) the Burrows (C8) the Burrows (C8) the Or Stressed Plants (D1) to orphic Position (D2) |
| Surface Water Present Yes No X Depth (inches): Nater Table Present Yes No X Depth (inches): Saturation Present Yes Depth (inches): Saturation Present Yes Depth (inches): Wetland Hydrology Present? Yes No | Type: Depth (inch Remarks: YDROLOG Wetland Hydro Primary Indicat Surface Wate High Water Ta Saturation (A: Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits | nes): ology Indicators: tors (minimum of o er (A1) cable (A2) .3) (B1) posits (B2) s (B3) Crust (B4) s (B5) | ne is req | Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sult Oxidized Rhiz Presence of R Recent Iron R | Leaves (B (B13) Plants (B14) ide Odor (ospheres of educed Iron eduction in | (F) C1) on Living Re on (C4) Tilled Soil | , , | Secondary Surface Draina Dry-Se Crayfie X Saturae Stunte Geom | Indicators (minimum of two required) the Soil Cracks (B6) tage Patterns (B10) the Burrows (C8) the Burrows (C8) the Or Stressed Plants (D1) to orphic Position (D2) |
| Nater Table Present Yes No X Depth (inches): Saturation Present Yes No X Depth (inches): Unicludes capillary fringe) Wetland Hydrology Present? Yes No No X Depth (inches): Unicludes Ves No No X Depth (inches): Unicludes Capillary fringe) | Type: Depth (inch Remarks: YDROLOG Netland Hydro Primary Indicat Surface Wate High Water Ta Saturation (AC Water Marks Sediment Deposits Algal Mat or C Iron Deposits Inundation Visit | ology Indicators: tors (minimum of o er (A1) Table (A2) Table (A2) Table (B1) Toposits (B2) Torust (B4) Torust (B4) Torust (B4) Torust (B4) Torust (B5) | ne is requ | Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sult Oxidized Rhiz Presence of R Recent Iron R Thin Muck Su Gauge or Wel | Leaves (E 1 (B13) Plants (B14) ide Odor (cospheres deduced Inceduction in rface (C7) | (F) C1) On Living Roon (C4) Tilled Soil | , , | Secondary Surface Draina Dry-Se Crayfie X Saturae Stunte Geom | Indicators (minimum of two required) the Soil Cracks (B6) tage Patterns (B10) the Burrows (C8) the Burrows (C8) the Or Stressed Plants (D1) to orphic Position (D2) |
| Saturation Present Yes No X Depth (inches): Wetland Hydrology Present? Yes No | Type: Depth (inch Remarks: YDROLOG Netland Hydro Primary Indicat Surface Wate High Water Ta Saturation (Aa Water Marks Sediment Dep Drift Deposits Algal Mat or O Iron Deposits Inundation Vis Sparsely Veg | ology Indicators: tors (minimum of o er (A1) Table (A2) Table (A2) Table (B2) Torsits (B2) Torsits (B3) Crust (B4) Torsits (B5) Torsits (B5) Torsits (B5) Torsits (B5) Torsits (B6) Torsits (B6) Torsits (B6) Torsits (B6) Torsits (B6) | ne is requ | Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhiz Presence of R Recent Iron R Thin Muck Su Gauge or Wel | Leaves (E 1 (B13) Plants (B14) ide Odor (cospheres of educed Iro eduction in face (C7) Data (D9) in Remark | (C1) C1) on Living Ri on (C4) Tilled Soil | , , | Secondary Surface Draina Dry-Se Crayfie X Saturae Stunte Geom | Indicators (minimum of two required) the Soil Cracks (B6) tage Patterns (B10) the Burrows (C8) the Burrows (C8) the Or Stressed Plants (D1) to orphic Position (D2) |
| includes capillary fringe) — Wetland Hydrology Present? YesNo | Type: Depth (inch Remarks: YDROLOG Wetland Hydro Primary Indicat Surface Wate High Water Ta Saturation (A: Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Inundation Vis Sparsely Vegu | ology Indicators: tors (minimum of orer (A1) fable (A2) fable (A2) for (B1) posits (B2) for (B4) for (B5) for (| one is required (B7) ce (B8) | Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sult Oxidized Rhiz Presence of R Recent Iron R Thin Muck Su Gauge or Wel Other (Explain | Leaves (E 1 (B13) Plants (B14) dide Odor (Cospheres Cospheres Cospheres Cospheres Cospheres Cospheres Cospheres Cospheres (C7) Data (D9) Lin Remark | C1) C1) on Living Ro on (C4) Tilled Soil (xs) | , , | Secondary Surface Draina Dry-Se Crayfie X Saturae Stunte Geom | Indicators (minimum of two required) the Soil Cracks (B6) tage Patterns (B10) the Burrows (C8) the Burrows (C8) the Or Stressed Plants (D1) to orphic Position (D2) |
| | Type: Depth (inch Remarks: YDROLOG Wetland Hydro Primary Indicat Surface Wate High Water Ta Saturation (A: Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Inundation Vis Sparsely Vege Field Observa Surface Water | nes): Y ology Indicators: tors (minimum of orer (A1) Table (A2) (B1) posits (B2) s (B3) Crust (B4) s (B5) Sible on Aerial Imagery getated Concave Surfact tions: Present Yes | r (B7) ce (B8) | | Leaves (E 1 (B13) Plants (B14) ide Odor (cospheres of educed Irc eduction in face (C7) Data (D9) in Remarl epth (incl | c) C1) on Living Ro on (C4) Tilled Soil ks) nes): | , , | Secondary Surface Draina Dry-Se Crayfie X Saturae Stunte Geom | Indicators (minimum of two required) the Soil Cracks (B6) tage Patterns (B10) the Burrows (C8) the Burrows (C8) the Or Stressed Plants (D1) to orphic Position (D2) |
| | Type: Depth (inch Remarks: YDROLOG Wetland Hydro Primary Indicat Surface Wate High Water Ta Saturation (A: Water Marks Sediment Deposits Algal Mat or C Iron Deposits Inundation Vis Sparsely Vegr Field Observar Surface Water Water Table Pr Saturation Presincludes capilla | nes): ology Indicators: tors (minimum of orer (A1) rable (A2) a) (B1) posits (B2) s (B3) Crust (B4) s (B5) sible on Aerial Imagery petated Concave Surface titions: Present Yesent sent Yesent ary fringe) | require (B7) ce (B8) cs | | Leaves (E 1 (B13) Plants (B12) ide Odor (cospheres of educed Irc eduction in rface (C7) I Data (D9) in Remark epth (incl epth (incl epth (incl | e) C1) C1) In Living Riving (C4) Tilled Soil (Ks) Thes): Thes): | s (C6) | Secondary Surface Draina Dry-Si Crayfii X Satura Stunte Geom FAC-N | Indicators (minimum of two required) the Soil Cracks (B6) tige Patterns (B10) teason Water Table (C2) tish Burrows (C8) tition Visible on Aerial Imagery (C9) tid or Stressed Plants (D1) torphic Position (D2) the desired the second of the se |

| Project/Site: Castlerock | | Cit | ty/County: | Dakota | | | Sampli | ing Date: | 10/19/2 | 022 |
|--|-------------------|------------------|---------------------------|---------------------|--------------------------------------|----------------|-----------|--------------------|-----------|----------|
| Applicant/Owner: Stone Solar | | | | | State: | Min | Sampli | ing Point: | W8-1w | |
| Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon | | | Section | on, Townsh | ip, Range: | T113I | N, R01 | 19W, S09 |) | |
| Landform (hillside, terrace, etc.): Shoulder | | Local relief | (concave, | convex, no | ne): Co | nvex | | Slo | pe %: | 3-4 |
| Subregion (LRR or MLRA): LRR M, MLRA 104 La | at: 44.602347 | 7 | | Long: -93 | .115345 | | | Datum: | WGS | 384 |
| Soil Map Unit Name: Maxfield silty clay loam | | | | | IWI classific | | PEN | /1Ad | | |
| Are climatic / hydrologic conditions on the site typical for | | | Yes | | No X | (If no, e | xplain | in Remar | ks.) | |
| Are Vegetation , Soil , or Hydrology | significan | tly disturbed | d? Are | "Normal C | rcumstance | es" preser | nt? | Yes_> | (No | |
| Are Vegetation , Soil , or Hydrology | | | | eeded, exp | lain any ans | swers in F | Remarl | ks.) | | |
| SUMMARY OF FINDINGS – Attach site map s | | | | transects, | important f | features, | etc. | | | |
| Hydrophytic Vegetation Present? Yes | X No | | la tha Cami | nlad Avaa | | | | | | |
| | X No | | s the Samı within a We | | Ye | s X | No | | | |
| Wetland Hydrology Present? Yes | X No | _ ' | | | | | | | | |
| Remarks: (Explain alternative procedures here or in a | | • | | | | | | | | |
| Degraded wet meadow fringe along S3. Climatic conditions a | re drier than nor | rmai. | | | | | | | | |
| VEGETATION – Use scientific names of pl | lants | | | | | | | | | |
| VESTIATION OSC SCIONAINO NAMES OF PA | Absolute | Dominar | nt Indicat | tor | | | | | | |
| Tree Stratum (Plot size: 30 ft) | % Cover | Species | | l _ | ninance Te | est works | sheet: | | | |
| 1 | | | | _{Nur} | nber of Don | ninant Sp | ecies | | | |
| 2 | | | _ | 1 | t Are OBL, | | | <u> </u> | 1 | (A) |
| 3 | | - | _ | — _{Tota} | al Number o | of Domina | ant | | | |
| 4 | | | _ | 1 | cies Across | | | | 1 | (B) |
| 5 | 0 | _ = Total Co | | — Per | cent of Dom | ninant Sp | ecies | | | |
| Sapling/Shrub Stratum (Plot size: 15 ft) | | _ = 10ta1 CC |)VEI | I . | t Are OBL, | | | : <u>1</u> | 00 | _(A/B) |
| 1 | | | | Pre | valence Inc | | sheet: | • | | |
| 2 | | | _ | | Total % C | Cover of: | | Mult | iply by: | |
| 3 | | | | ОВІ | species | 0 | | x 1 = | 0 | |
| 4 | | | _ | FAC | CW species | 110 | ! | x 2 = _ | 220 | |
| 5 | | | | FAC | Species | 0 | | x 3 = _ | 0 | |
| Herb Stratum (Plot size: 5 ft) | | = Total Cov | er | FAC | CU species | 5 | | x 4 = | 20 | |
| 1. Phalaris arundinacea | 100 | Yes | FACV | _v UPI | species | 0 | | x 5 = | 0 | |
| 2. Urtica dioica | 10 | No | FACV | — I Cal | umn Totals: | 115 | | (A) _ | 240 | (B) |
| 3. Cirsium arvense | 5 | No | FACL | J | Prevaler | nce Index | = B/A | = _ | 2.09 | |
| 4. | | | _ | Нус | lrophytic V | egetatio | n Indic | cators: | | |
| 5 | | | | <u>x</u> | _ 1 - Rapid | Test for I | -lydrop | hytic Veg | etation | |
| 6 | | | | <u>x</u> | _ 2 - Domin | ance Tes | st is >5 | 0% | | |
| 7 | | | | <u>x</u> | _ 3 - Preval | ence Inde | ex is ≤: | 3.0 ¹ | | |
| 8 | | | | $ $ $_{-}$ | _ 4 - Morph | ological A | \dapta | tions ¹ | | |
| 9 | | | | | (Provide suppo | orting data ir | n Remark | s or on a sep | | |
| 10 | | | _ | _ _ | _ Problema | • | | Ū | ` ' | , |
| Woody Vine Stratum (Plot size: 30 ft) | 115 | = Total Cov | er | | ators of hydric s ped or problema | | and hydro | ology must b | e present | , unless |
| 1 | | | | <u> </u> | | | | | | |
| 2. | | - | _ | 1 - | drophytic getation | | | | | |
| | | = Total Cov | – ——— ⁄er | | esent? | Yes | X | No | | |
| Remarks: (Include photo numbers here or on a seg | | | | | | | | - | | |
| | , | | | | | | | | | |

SOIL Sampling Point: W8-1w

| Profile Desci Depth | ription: (Describe to Matrix | the dep | oth need | | ment the | | or or co | onfirm the absence o | of indicators.) |
|------------------------|--|------------|---------------|-----------------------------|--------------|-------------------|------------------|-----------------------|--|
| (inches) | Color (moist) | % | Colo | r (moist) | % | Type ¹ | Loc ² | Texture | Remarks |
| 0-8 | 10YR 2/1 | 100 | | (| | .,,,, | | Loam | - Tomanic |
| 8-24 | 10YR 2/1 | 95 | 10YR | 4/6 | 5 | | | Loam | |
| 0-24 | 10111 2/1 | | 10110 | 4/0 | | | | Loam | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | oncentration, D=Depl | etion, R | M=Reduc | ced Matrix, | MS=Mas | ked San | d Grains | | =Pore Lining, M=Matrix. |
| Hydric Soil II | | | | | | | | | for Problematic Hydric Soils ³ : |
| Histosol (A | • | | | ndy Gleyed M | | | | | Prairie Redox (A16) |
| Histic Epip | | | | ndy Redox (S pped Matrix | • | | | | anganese Masses (F12) |
| Black Histi | Sulfide (A4) | | | k Surface (S | | | | | rent Material (F21) nallow Dark Surface (F22) |
| Stratified L | | | | my Mucky M | • |) | | | Explain in Remarks) |
| 2 cm Muck | | | | my Gleyed M | | | | | zapiam ma temame, |
| | Below Dark Surface (A1 | 1) | | oleted Matrix | | | | | |
| | : Surface (A12) | , | $\overline{}$ | dox Dark Sur | | | | | |
| Sandy Mud | cky Mineral (S1) | | | oleted Dark S | | 7) | | | |
| | y Peat or Peat (S3) | | Red | dox Depressi | ons (F8) | | | | |
| Restrictive L | ayer (if observed): | | | | | | | | |
| Type: | | | | | | | | | |
| Depth (in | ches): | | | | | | | Hydric Soil Pres | ent? Yes X No |
| Remarks: | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| HYDROLO | GY | | | | | | | | |
| Wetland Hyd | Irology Indicators: | | | | | | | Secondary In | dicators (minimum of two required) |
| Primary Indic | ators (minimum of or | ne is req | uired; che | eck all that | apply) | | | - | Soil Cracks (B6) |
| Surface Wa | ater (A1) | | \ | Nater-Stained | l Leaves (B | 39) | | | e Patterns (B10) |
| High Water | Table (A2) | | / | Aquatic Fauna | a (B13) | | | Dry-Sea | son Water Table (C2) |
| Saturation | (A3) | | | True Aquatic F | Plants (B14 | 4) | | Crayfish | Burrows (C8) |
| Water Mark | s (B1) | | ' | Hydrogen Sulf | fide Odor (0 | C1) | | X Saturati | on Visible on Aerial Imagery (C9) |
| | Deposits (B2) | | | Oxidized Rhiz | ospheres o | n Living Ro | oots (C3) | Stunted | or Stressed Plants (D1) |
| Drift Depos | , , | | | Presence of R | deduced Iro | n (C4) | | X Geomor | phic Position (D2) |
| | r Crust (B4) | | | Recent Iron R | eduction in | Tilled Soils | s (C6) | FAC-Ne | utral Test (D5) |
| Iron Deposi | | (DZ) | · | Thin Muck Su | | | | | |
| | Visible on Aerial Imagery egetated Concave Surfac | | | Gauge or Wel | ` ′ | | | | |
| Field Observ | | e (B0) | | Other (Explain | in Remark | (S) | | 1 | |
| Surface Wate | V | 3 | No | X De | epth (inch | nes): | | | |
| Water Table | | | No | | · | | | | |
| Saturation Pr | | | No | | epth (inch | · — | | Wetland Hydrals | v Procent? Ves V No |
| (includes cap | | | | | · . | | | Wetland Hydrology | y Present? Yes X No |
| Describe Rec | corded Data (stream | gauge, n | nonitoring | g well, aeria | al photos | , previous | s inspec | tions), if available: | |
| Remarks: | approximately 2 feet higl | ner than w | vaterway | | | | | | |
| Janapio taitoi c | | aran v | uy. | | | | | | |

| Project/Site: Castlerock | | City/County: Dal | kota | Sampling Date: 10/19/2022 |
|---|----------------------|---|---|---|
| Applicant/Owner: Stone Solar | | | State: Min | Sampling Point: W8-2u |
| Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon | | Section, T | ownship, Range:T1^ | 13N, R019W, S09 |
| Landform (hillside, terrace, etc.): Toeslope | Local r | elief (concave, conv | ex, none): Linear | Slope %:1_ |
| Subregion (LRR or MLRA): LRR M, MLRA 104 La | ± 44.605634 | Lon | g: -93.112589 | Datum: WGS84 |
| Soil Map Unit Name: Maxfield silty clay loam | | | NWI classification: | |
| Are climatic / hydrologic conditions on the site typical fo | r this time of year? | Yes | No X (If no | , explain in Remarks.) |
| Are Vegetation X , Soil , or Hydrology | significantly distu | ırbed? Are "Noı | rmal Circumstances" pre | sent? Yes No X |
| Are Vegetation , Soil , or Hydrology | naturally problem | natic? (If neede | ed, explain any answers i | in Remarks.) |
| SUMMARY OF FINDINGS - Attach site map sh | nowing sampling po | oint locations, trans | sects, important feature | es, etc. |
| Hydric Soil Present? Yes | No X No X No X | Is the Sampled within a Wetlar | | No _X |
| Toe slope of a hill that slopes up to the southwest. Successfull than normal. | | oken drain tile and a d | rain tile outlet observed with | in W8. Climatic conditions are drier |
| VEGETATION – Use scientific names of pla | ants. | | | |
| <u>Tree Stratum</u> (Plot size: <u>30 ft</u>) | % Cover Spe | ninant Indicator ecies <u>Status</u> | Dominance Test wor | rksheet: |
| 1 2 | | | Number of Dominant That Are OBL, FACW | • |
| 3 4 | | | Total Number of Dom Species Across All St | |
| 5 Sapling/Shrub Stratum (Plot size:15 ft) | = Tota | al Cover | Percent of Dominant S That Are OBL, FACW | • |
| 1 | | | Prevalence Index wo | |
| 2 3 | | | OBL species | 0 x 1 =0 |
| 4. | | | | 0 x 2 = 0 |
| 5 | | | FAC species | |
| 5 ft. | 0 = Total | Cover | | 0 x 4 = 0 |
| Herb Stratum (Plot size: 5 ft) | | | - | 0 x 5 = 0 |
| 1 2. | | | Column Totals: | 0 (A) 0 (B) |
| 3 | | | Prevalence Ind | <u> </u> |
| 4 | | | Hydrophytic Vegetat | tion Indicators: |
| 5. | | | - 1 - Rapid Test fo | or Hydrophytic Vegetation |
| 6. | | | - 2 - Dominance 1 | |
| 7 | | | 3 - Prevalence I | ndex is ≤3.0¹ |
| 8 | | | 4 - Morphologica | |
| 9 | | | | ta in Remarks or on a separate sheet) |
| 10 | _ | | 1 | drophytic Vegetation¹ (Explain) |
| Woody Vine Stratum (Plot size: 30 ft) | 0 = Total | Cover | ¹ Indicators of hydric soil and v disturbed or problematic. | vetland hydrology must be present, unless |
| 1 | | | Hydrophytic | |
| 2 | = Total | Cover | Vegetation Present? Ye | es No _X |

Remarks: (Include photo numbers here or on a separate sheet.)

No volunteer vegetation. Healthy planted corn. Vegetation assumed to be non-hydrophytic due to the absence of hydric soil and sufficient wetland hydrology indicators to meet wetland conditions.

SOIL Sampling Point: W8-2u

| Profile Desc | ription: (Describe to | the dep | th needed to docu | or or co | onfirm the absence of | indicators.) | | | | | |
|---------------|---|------------|-----------------------------------|-------------|-----------------------|------------------|-----------------------|---|----------------|-------------------|----------|
| Depth | Matrix | | | x Featur | | | | | | | |
| (inches) | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | Texture | | Remarks | | |
| 0-16 | 10YR 2/1 | 100 | | | | | Silt Loam | | | | |
| 16-30 | 10YR 3/1 | 100 | | | | | Silty Clay Loam | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
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| | | | | | | | | | | | _ |
| | | | | | | | | | | | |
| | | | | | . — | | 21 (1 D) | | | | |
| Hydric Soil I | oncentration, D=Dep | letion, RI | M=Reduced Matrix, | MS=Mas | sked San | d Grains | | ore Lining, M= for Problemation | | ile ^{3.} | |
| | | | | | | | | | _ | | |
| Histosol (A | • | | Sandy Gleyed M | | | | | airie Redox (A16) | | | |
| | pedon (A2) | | Sandy Redox (S Stripped Matrix | - | | | | ganese Masses (| | | |
| Black Histi | Sulfide (A4) | | Dark Surface (S | ` ' | | | | ent Material (F21) illow Dark Surfac | | | |
| | _ayers (A5) | | Loamy Mucky M | • |) | | | xplain in Remarks | | | |
| 2 cm Muck | * , , | | Loamy Gleyed N | | | | | Kpiairi III Komanc | ·) | | |
| _ | Below Dark Surface (A1 | 1) | Depleted Matrix | | , | | | | | | |
| | s Surface (A12) | , | Redox Dark Sur | | | | | | | | |
| | cky Mineral (S1) | | Depleted Dark S | | 7) | | | | | | |
| | ky Peat or Peat (S3) | | Redox Depressi | | | | | | | | |
| Restrictive L | .ayer (if observed): | | | | | | | | | | |
| Type: | | | | | | | | | | | |
| Depth (in | iches): | | | | | | Hydric Soil Prese | nt? Ye | s 1 | X _ ه | _ |
| Remarks: | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| HYDROLO | GY | | | | | | | | | | |
| Wetland Hyd | drology Indicators: | | | | | | Secondary Indi | cators (minimum | of two require | 2d) | |
| Primary Indic | cators (minimum of o | ne is requ | ired; check all that | apply) | | | · · | ioil Cracks (B6) | or two require | <u>.u,</u> | |
| Surface Wa | ater (A1) | | Water-Stained | l Leaves (E | 39) | | | Patterns (B10) | | | |
| High Water | r Table (A2) | | Aquatic Fauna | a (B13) | | | | on Water Table (C | 2) | | |
| Saturation | (A3) | | True Aquatic I | Plants (B14 | 4) | | Crayfish E | Burrows (C8) | | | |
| Water Mark | ks (B1) | | Hydrogen Sul | ide Odor (| C1) | | X Saturation | n Visible on Aerial I | magery (C9) | | |
| Sediment [| Deposits (B2) | | Oxidized Rhiz | ospheres o | on Living Ro | oots (C3) | Stunted o | r Stressed Plants (| D1) | | |
| Drift Depos | | | Presence of R | educed Iro | on (C4) | | Geomorp | hic Position (D2) | | | |
| | or Crust (B4) | | Recent Iron R | | Tilled Soil | s (C6) | FAC-Neur | tral Test (D5) | | | |
| Iron Depos | | (07) | Thin Muck Su | , , | | | | | | | |
| | Visible on Aerial Imagery egetated Concave Surface | ` ' | Gauge or Wel | | | | | | | | |
| Field Observ | | е (Бо) | Other (Explain | in Remar | ks) | | | | | | |
| Surface Water | | S | No X De | epth (inc | hes): | | | | | | |
| Water Table | 51 1 1000HC | | | epth (inc | | | | | | | |
| Saturation Pr | | s — | No X De | epth (inc | hes): | | Wetland Hydrology | Drocont? | Voc | No | Y |
| (includes cap | oillary fringe) | | <u></u> - | | | | Wetland Hydrology | r resellt | Yes | No | <u>X</u> |
| Describe Red | corded Data (stream | gauge, m | nonitoring well, aeria | al photos | , previous | s inspec | tions), if available: | | | | |
| Remarks: | | | | | | | | | | | |
| | | | | | | | | | | | |

| Project/Site: Castlerock | | City/C | ounty: <u>Dak</u> | ota | Samp | oling Date: | 10/19/2 | 2022 |
|---|-----------------------|---------------------|---------------------|--|----------------|--------------|----------------|------------------|
| Applicant/Owner: Stone Solar | | | | State: | Min Samp | oling Point | : <u>W8-2w</u> | v |
| Investigator(s): S. Kinsler, M. Volbrecht, D. Hi | xon | | Section, T | ownship, Range: | T113N, R0 | 019W, S0 | 9 | |
| Landform (hillside, terrace, etc.): Toeslope | L | ocal relief (co | ncave, conv | ex, none): Con | cave | Slo | ope %: _ | 2 |
| Subregion (LRR or MLRA): LRR M, MLRA 104 | Lat: 44.605686 | | Lon | g: -93.112538 | | Datum: | : WGS | S84 |
| Soil Map Unit Name: Maxfield silty clay loam | - | | | NWI classificat | ion: | | | |
| Are climatic / hydrologic conditions on the site typic | al for this time of y | ear? | Yes | No X (| If no, explair | n in Rema | rks.) | |
| Are Vegetation X , Soil X , or Hydrology | significantl | y disturbed? | Are "Nor | mal Circumstances | present? | Yes_ | No | Χ |
| Are Vegetation , Soil , or Hydrology | naturally p | roblematic? | (If neede | d, explain any answ | ers in Rema | ırks.) | | |
| SUMMARY OF FINDINGS – Attach site ma | | | ations, trans | sects, important fe | atures, etc. | | | |
| | | | | | <u> </u> | | | |
| , , , , | X No | | ne Sampled | | V | | | |
| | No | – WILI | nin a Wetlan | d? Yes | X No | | | |
| Remarks: (Explain alternative procedures here or | | | | | | | | |
| Uncropped area in a cornfield located at the toe slope of this area has been cropped in past years. Broken drain ti | | | | | | | nagery su | ggest |
| uns area nas been cropped in past years. Broken drain d | e and a drain the out | et was observed | within wo. Ci | illianc conditions are c | iner than norm | iai. | | |
| VEGETATION – Use scientific names o | f plants. | | | | | | | |
| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species | Indicator Status | Dominance Tes | t workshoot | | | |
| 1 | | | | Dominance res | WOIKSHEEL | • | | |
| 2 | | | | Number of Domir | | | 1 | (\ \) |
| 3. | | | | That Are OBL, F | ACW, OF FAC | J. <u> </u> | 1 | _ ^(A) |
| 4 | | | | Total Number of | | | | (5) |
| 5. | | | | Species Across A | All Strata: | | 1 | _(B) |
| | _ | = Total Cover | | Percent of Domir | • | | | |
| Sapling/Shrub Stratum (Plot size:15 ft) | | | | That Are OBL, FA | | | 100 | (A/B |
| 1 | | | | Prevalence Inde | | | | |
| 2 | | | | Total % Co | | Mul | tiply by: | |
| 3 | <u> </u> | | | OBL species _ | | x 1 = _ | 0 | |
| 4 | | | | FACW species _ | | | 6 | |
| 5 | • | | | FAC species _ | 0 | x 3 = _ | 0 | |
| <u>Herb Stratum</u> (Plot size:5 ft) | = | Total Cover | | FACU species _ | 0 | x 4 = _ | 0 | |
| 1. Cyperus esculentus | 3 | Yes | FACW | UPL species _ | 0 | x 5 = _ | 0 | |
| 2. | | | | Column Totals: | 3 | (A) _ | 6 | (B |
| 3. | | | | Prevalenc | e Index = B/ | A = _ | 2 | |
| 4 | | | | Hydrophytic Ve | getation Ind | icators: | | |
| 5 | | | | <u>X</u> 1 - Rapid To | est for Hydro | phytic Ve | getation | |
| 6 | | | | X 2 - Dominar | nce Test is > | 50% | | |
| 7 | | | | X 3 - Prevaler | nce Index is: | ≤3.0¹ | | |
| 8 | | | | 4 - Morphol | ogical Adapt | ations¹ | | |
| · | | | | (Provide supporti | | | eparate she | eet) |
| 9 | | | | I 5 | Hydrophytic | c Vegetation | on¹ (Exp | ılain) |
| | | | | Problemation | , i iyaropiiya | • | | |
| 9 | | Total Cover | | Problemation Indicators of hydric soil disturbed or problemation | and wetland hy | drology must | be present, | , unless |
| 9 | | | | ¹ Indicators of hydric soi | and wetland hy | drology must | be present | t, unless |
| 9 | 3 = | Total Cover | | ¹Indicators of hydric soi disturbed or problemation | and wetland hy | drology must | be present, | t, unless |
| 9 | 3 = | Total Cover | | ¹ Indicators of hydric soi disturbed or problemation | and wetland hy | drology must | be present, | t, unless |

SOIL Sampling Point: W8-2w

| Depth | Matrix | | | Redox Featur | | 5. 5. | onfirm the absence of i | | |
|-------------------------------------|---------------------------------------|------------------------------|---|----------------------------------|------------------------|-------------------------|--------------------------------|------------------------------------|---------------------|
| (inches) | Color (moist) | % | Color (mois | t) % | Type ¹ | Loc ² | Texture | | Remarks |
| 0-14 | 10YR 2/1 | 100 | | | | | Silt Loam | | |
| 14-24 | 10YR 3/1 | 98 | 10YR 4/4 | | | | Silty Clay Loam | | |
| | 10111 0/1 | | | <u> </u> | _ | | - City City Louin | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| 1Type: C=C | concentration, D=De | enletion R | M=Reduced Ma | triy MS=Mas | sked San | d Grains | s. ² Location: PL=P | ore Lining N | |
| Hydric Soil | | cpiction, re | IVI-I (Caacca IVIa | trix, IVIO-IVIAS | sked Gan | id Oranic | | | tic Hydric Soils³: |
| Histosol (| A1) | | Sandy Glev | ved Matrix (S4) | 1 | | Coast Pra | irie Redox (A1 | 16) |
| | pedon (A2) | | Sandy Red | | | | | ganese Masse | , |
| Black Hist | | | Stripped Ma | | | | | nt Material (F2 | |
| Hydrogen | Sulfide (A4) | | Dark Surface | ce (S7) | | | Very Shal | low Dark Surfa | ace (F22) |
| Stratified | Layers (A5) | | Loamy Muc | ky Mineral (F1 |) | | X Other (Ex | plain in Rema | rks) |
| 2 cm Muc | k (A10) | | Loamy Gle | yed Matrix (F2) |) | | | | |
| Depleted | Below Dark Surface (A | A11) | Depleted M | latrix (F3) | | | | | |
| Thick Dar | k Surface (A12) | | Redox Dark | Surface (F6) | | | | | |
| | ıcky Mineral (S1) | | | ark Surface (F | 7) | | | | |
| | ky Peat or Peat (S3) | | Redox Dep | ressions (F8) | | | _ | | |
| | _ayer (if observed |): | | | | | | | |
| Type: | | | | | | | | | v |
| Depth (ir | | | | | | | Hydric Soil Presen | | res X No |
| go beyond 24 i drain tile has ch | nches. Assumed to langed the hydrolog | ack hydric s ic condition | soil indicators due s within the farme | e to the preser ed wetland co | nce of dra mmunity, | ain tile wi which no | | igriculturaÌ fie regetation and | |
| HYDROLO | GY | | | | | | | | |
| | drology Indicators | s: | | | | | Socondan/India | otoro (minimu | um of two required) |
| Primary India | cators (minimum of | one is req | uired; check all | that apply) | | | • | oil Cracks (B6) | ım of two required) |
| Surface W | ater (A1) | | Water-St | ained Leaves (E | 39) | | | Patterns (B10) | |
| High Wate | r Table (A2) | | Aquatic F | auna (B13) | , | | | n Water Table | (C2) |
| Saturation | (A3) | | True Aqu | atic Plants (B14 | 4) | | | urrows (C8) | (/ |
| Water Mar | ks (B1) | | Hydroge | n Sulfide Odor (| C1) | | <u></u> | | al Imagery (C9) |
| Sediment | Deposits (B2) | | Oxidized | Rhizospheres o | on Living R | oots (C3) | Stunted or | Stressed Plant | s (D1) |
| Drift Depo | sits (B3) | | Presence | e of Reduced Iro | on (C4) | | Geomorph | ic Position (D2) |) |
| Algal Mat | or Crust (B4) | | Recent Ir | on Reduction in | n Tilled Soil | ls (C6) | X_FAC-Neutr | al Test (D5) | |
| Iron Depos | sits (B5) | | Thin Muc | ck Surface (C7) | | | | | |
| | Visible on Aerial Image | | Gauge o | r Well Data (D9) |) | | | | |
| | /egetated Concave Surf | face (B8) | Other (E | xplain in Remar | ks) | | T | | |
| Field Obser | | 'es | No X | Depth (incl | hes). | | | | |
| Surface Wat | | es —— ′es | No $\frac{X}{X}$ | Depth (incl | | | | | |
| Water Table | | 'es — | No $\frac{X}{X}$ | Depth (incl | · — | | | | |
| Saturation P (includes ca | | ~ <u> </u> | 140 / | Dopur (IIIC | | | Wetland Hydrology F | resent? | Yes <u>X</u> No |
| , | corded Data (strea | m gauge, r | nonitoring well, | aerial photos | , previou | s inspec | tions), if available: | | |
| | | | | • | | • | | | |
| Remarks: | | | | | | | | | |
| | | | | | | | | | |

| Project/Site: Castlerock | | City/County: Dak | cota | Sam | pling Date: | 10/19/20 | ე22 |
|--|-----------------------|---------------------------------------|--|--------------------|-----------------|--------------|--------------|
| Applicant/Owner: Stone Solar | | | State: | Min Sam | pling Point: | <u>W8-3u</u> | |
| Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon | | Section, T | ownship, Range: | T113N, R | 019W, S09 | } | |
| Landform (hillside, terrace, etc.): Footslope | Local re | elief (concave, conv | ex, none): Cor | ncave | Slo | pe %: _ | 1-2 |
| Subregion (LRR or MLRA): LRR M, MLRA 104 La | at: 44.606594 | Long | g: -93.11089 | | _ Datum: | WGS | 84 |
| Soil Map Unit Name: Maxfield silty clay loam | | | NWI classifica | ation: PE | EM1Ad | | |
| Are climatic / hydrologic conditions on the site typical for | | | No X | (If no, explai | n in Remarl | ks.) | |
| Are Vegetation X , Soil , or Hydrology _ | _ significantly distu | rbed? Are "Nor | mal Circumstances | s" present? | Yes | No_ | X |
| Are Vegetation , Soil , or Hydrology | naturally problem | natic? (If neede | ed, explain any ansv | wers in Rema | arks.) | | |
| SUMMARY OF FINDINGS – Attach site map s | | | sects, important fe | eatures, etc. | | | |
| | No X | | | | | | |
| | X No | Is the Sampled within a Wetlan | | s No | . X | | |
| | No X | Within a Wenan | ur 163 | | | | |
| Remarks: (Explain alternative procedures here or in a | | | | | | | |
| Foot slope of a hill that slopes up to the south. Sample point I At the 10/02/2024 TEP meeting the sampled area was determ | | | | | | | |
| <u> </u> | | | , | | | | |
| VEGETATION – Use scientific names of pl | | inant Indicator | | | | | |
| Tree Stratum (Plot size: 30 ft) | | inant Indicator cies <u>Status</u> | Dominance Tes | st workshee | t: | | |
| 1. | | <u> </u> | Number of Dom | ' Cassis | | | |
| 2. | | | Number of Domi | • | | 1 | (A) |
| 3 | | | | | | | - ` ′ |
| 4 | | | Total Number of Species Across | | | 2 | (B) |
| 5 | | | | | | | _(_, |
| | = Tota | | Percent of Domi That Are OBL, F | | | 50 | (A/B) |
| Sapling/Shrub Stratum (Plot size: 15 ft) | | | Prevalence Inde | | | | _(^() |
| 1 | | | Total % Co | | | tiply by: | |
| 2 | | | | | | . , , | |
| 3 | | | OBL species | | _ | | |
| 4 | | | FACW species | | - ' | | — |
| 5 | • | | FAC species | | | | |
| Herb Stratum (Plot size:5 ft) | 0 = Total (| Cover | FACU species | 2 | _ × 4 = _ | 8 | _ |
| 1. Trifolium repens | 2Ye | es FACU | UPL species | 0 | _ x5=_ | 0 | |
| Potentilla norvegica | 1 Ye | es FAC | Column Totals: | 3 | (A) _ | 11 | (B) |
| 3. | | | Prevalend | ce Index = B/ | /A = | 3.67 | |
| 4 | | | Hydrophytic Ve | getation Inc | licators: | | |
| 5 | | | 1 - Rapid T | Γest for Hydro | ophytic Veg | jetation | |
| 6 | | | 2 - Domina | ance Test is > | >50% | | |
| 7 | | | 3 - Prevale | ence Index is | ≤3.0¹ | | |
| 8 | | | | ological Adap | | | |
| 9 | | | | rting data in Rema | | parate shee | et) |
| 10 | | | Problemati | ic Hydrophyti | c Vegetatio | n¹ (Expl | ain) |
| | = Total | Cover | ¹ Indicators of hydric so disturbed or problemat | | /drology must b | e present, | unless |
| | | | disturbed of problemas | uo. | | | |
| Woody Vine Stratum (Plot size: 30 ft) | | | | | | | _ |
| 1 | | | Hydrophytic | | | | |
| | 0 = Total | | Hydrophytic Vegetation Present? | Yes | No | X | |

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determined to have met hydrophyitc veg criteria.

SOIL Sampling Point: W8-3u

| | | the de | oth need | | | | or or co | onfirm the absence of | indicators.) | | | |
|--------------------------------|---------------------------|-----------|-----------|-------------------|--------------|-------------------|------------------|--------------------------------|---------------------------------|---------------|------------|---|
| Depth | Matrix | 0/ | | | ox Featur | | 12 | Tautuma | | Damadra | | |
| (inches) | Color (moist) | <u>%</u> | Colo | r (moist) | | Type ¹ | Loc ² | Texture | | Remarks | | |
| 0-8 | 10YR 2/1 | 100 | | | | | | Silty Clay Loam | | | | |
| 8-18 | 10YR 2/1 | 97 | 10YR | 3/6 | 3 | <u>C</u> | M | Silty Clay Loam | | | | |
| 18-24 | 10YR 2/1 | 95 | 10YR | 3/6 | 5 | <u>C</u> | <u>M</u> | Silty Clay Loam | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Type: C=C | oncentration, D=Dep | letion R | M=Redu | ced Matrix | MS=Mas | ked San | d Grains | s. ² Location: PL=F | Pore Linina M= | Matrix | | |
| Hydric Soil I | | | | | | | <u> </u> | | or Problemation | | oils³: | |
| Histosol (A | A1) | | Sa | ndy Gleyed I | Matrix (S4) | | | Coast Pr | airie Redox (A16) |) | | |
| Histic Epip | • | | | ndy Redox (| | | | | iganese Masses (| | | |
| Black Histi | | | | ipped Matrix | - | | | | ent Material (F21) | . , | | |
| | Sulfide (A4) | | | rk Surface (S | | | | | allow Dark Surface | | | |
| Stratified L | ayers (A5) | | | amy Mucky N | |) | | | xplain in Remarks | | | |
| 2 cm Muck | (A10) | | | amy Gleyed | | | | ` | • | , | | |
| | Below Dark Surface (A1 | 1) | De | pleted Matrix | (F3) | | | | | | | |
| Thick Dark | Surface (A12) | | X Re | dox Dark Su | rface (F6) | | | | | | | |
| Sandy Mu | cky Mineral (S1) | | De | pleted Dark | Surface (F7 | 7) | | | | | | |
| 5 cm Mucl | ky Peat or Peat (S3) | | Re | dox Depress | ions (F8) | | | | | | | |
| Restrictive L | ayer (if observed): | | | | | | | | | | | |
| Type: | | | | | | | | | | | | |
| Depth (in | ches): | | | | | | | Hydric Soil Prese | nt? Ye | s X | No | |
| Remarks: | | | | | | | | <u> </u> | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| HYDROLO | GY | | | | | | | | | | | |
| | drology Indicators: | | | | | | | 0 1 1 1 | . , , | | | |
| _ | ators (minimum of or | ne is req | uired; ch | eck all that | apply) | | | - | icators (minimum | of two requir | <u>aa)</u> | |
| Surface Wa | • | | | Water-Staine | | 39) | | | Soil Cracks (B6) Patterns (B10) | | | |
| | Table (A2) | | | Aquatic Faun | • | , | | | on Water Table (C | 2) | | |
| Saturation | | | | ' True Aquatic | | ·) | | - | Burrows (C8) | <u>~)</u> | | |
| Water Mark | ks (B1) | | - | Hydrogen Su | • | | | - | n Visible on Aerial I | Imagery (C9) | | |
| Sediment [| Deposits (B2) | | | Oxidized Rhiz | zospheres o | n Living Ro | oots (C3) | | r Stressed Plants (| | | |
| Drift Depos | sits (B3) | | | Presence of I | Reduced Iro | n (C4) | | | hic Position (D2) | , | | |
| Algal Mat o | or Crust (B4) | | | Recent Iron F | Reduction in | Tilled Soil: | s (C6) | FAC-Neu | tral Test (D5) | | | |
| Iron Depos | its (B5) | | | Thin Muck Su | urface (C7) | | | | | | | |
| Inundation | Visible on Aerial Imagery | (B7) | | Gauge or We | ll Data (D9) | | | | | | | |
| Sparsely V | egetated Concave Surfac | e (B8) | | Other (Explai | n in Remark | (s) | | | | | | |
| Field Observ | | | | V 5 | | , | | | | | | |
| Surface Wate | | | No | | epth (inch | | | | | | | |
| Water Table | | | No | | epth (inch | · — | | | | | | |
| Saturation Pr (includes cap | | · — | No | <u>X</u> D | epth (inch | nes): | | Wetland Hydrology | Present? | Yes | No | X |
| | corded Data (stream | naline r | nonitorin | a well aeri | al photos | previous | s inspec | tions) if available. | | | | |
| | בב. עסע בענע (סווסמוווי | guugu, 1 | | 5 acm | pilotos, | , p. 0 v 10 u c | opco | , ii avaliabio. | | | | |
| Remarks: | | | | | | | | | a) : - | | , <u> </u> | |
| At the TEP | meeting sampled are | ea was o | determine | ed to have | met seco | ndary inc | licators | Surface Soil Cracks (B | ნ) and Geomor | phic Position | n (D2). | |

| Project/Site: Castlerock | | City/0 | County: D | akota | Sar | mpling Date: | 10/19/: | 2022 |
|---|---------------------|---------------------|--------------------------|---|--------------------------------|---|-------------|----------|
| Applicant/Owner: Stone Solar | | | | State: | | mpling Point | | |
| Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon | | | Section, | Township, Range: | | | | |
| Landform (hillside, terrace, etc.): Hillside | | Local relief (co | | nvex, none): Con | | | | 1-2 |
| Subregion (LRR or MLRA): LRR M, MLRA 104 La | at: 44.606703 | | Lo | ong: -93.110771 | | Datum: | WGS | 384 |
| Soil Map Unit Name: Maxfield silty clay loam | | | | NWI classifica | tion: F | | | |
| Are climatic / hydrologic conditions on the site typical for | or this time of | /ear? | Yes | No X | (If no, expl | ain in Rema | rks.) | |
| Are Vegetation , Soil , or Hydrology | | | _ | —— ormal Circumstances | | | X No | |
| Are Vegetation , Soil , or Hydrology | | | (If need | ded, explain any ansv | vers in Rer | | _ | |
| SUMMARY OF FINDINGS – Attach site map s | | | ations, tra | nsects, important fe | atures, etc | c. | | |
| - | <u> </u> | | | <u>-</u> | | | | |
| | X No | _ | he Sample hin a Wetla | | Y N | lo. | | |
| | X No | | nin a wen | and? res | <u> </u> | lo | | |
| Remarks: (Explain alternative procedures here or in a Hardwood swamp community within a large wetland complex | . Climatic condit | , | an normal. | | | | | |
| VEGETATION – Use scientific names of pl | | Daminant | Indicator | 1 | | | | |
| Tree Stratum (Plot size: 30 ft) | Absolute % Cover | Dominant Species | Indicator Status | Dominance Tes | t workshe | et: | | |
| 1. Ulmus pumila | 40 | Yes | UPL | | | | | |
| 2. Acer negundo | 30 | Yes | FAC | Number of Domi That Are OBL, F. | | | 3 | (A) |
| 3 | | | | _ | • | | | _(' ') |
| 4 | | | | Total Number of Species Across | | | 4 | (B) |
| 5 | | | | - Opecies Across i | All Ottata. | | | _(_) |
| Sapling/Shrub Stratum (Plot size:15 ft) | 70 | _ = Total Cove | r | Percent of Domin | • | | 75 | (A/B) |
| 1. Cornus alba | 20 | Yes | FACW | Prevalence Inde | ex worksh | eet: | | |
| 2 | | | | Total % Co | ver of: | Mul | tiply by: | |
| 3. | | | | OBL species | 0 | x 1 = | 0 | |
| 4. | | | | FACW species | | _ x2= | 250 | |
| 5 | | | | FAC species | | | | |
| | 20 | = Total Cover | | FACU species | 0 | _ x 4 = | 0 | _ |
| Herb Stratum (Plot size: 5 ft) | | | | UPL species | 40 | _ ^ · - x5= | 200 | _ |
| 1. Phalaris arundinacea | 100 | Yes | FACW | Column Totals: | 195 | _ ^3 (A) | 540 | (B) |
| 2. Urtica dioica | 5 | No | FACW | - I - | ce Index = E | | 2.77 | (D) |
| 3 | | | | _ | | _ | | |
| 4 | | | | - Hydrophytic Ve | _ | | | |
| 5 | | | | _ | - | | getation | |
| 6 | | | - | _ X 2 - Domina | | | | |
| 7 | | | | – <u>X</u> 3 - Prevale | nce Index i | s ≤3.0¹ | | |
| 8 | | | | 4 - Morpho (Provide support | logical Ada ting data in Re | i ptations 1 marks or on a se | eparate she | et) |
| 10 | | | | _ Problemati | c Hydrophy | ∕tic Vegetati | on¹ (Exp | lain) |
| Woody Vine Stratum (Plot size:30 ft) | | = Total Cover | | ¹ Indicators of hydric so disturbed or problemati | | hydrology must | be present, | , unless |
| 1 | | | | - Hydrophytic | | | | |
| 2. | | | | Vegetation | | | | |
| | 0 | = Total Cover | | Present? | Yes X | No | | |
| Remarks: (Include photo numbers here or on a sep | parate sheet.) | | | | | | | |
| , | , | | | | | | | |

SOIL Sampling Point: W8-3w

| Profile Desc | ription: (Describe to | the de | oth needed to docu | ment th | e indicat | tor or co | onfirm the absence o | of indicators.) |
|-------------------------------|---|------------|---------------------------------|-------------|-------------------|------------------|-------------------------------|---|
| Depth | Matrix | | | x Featur | | | | |
| (inches) | Color (moist) | <u>%</u> | Color (moist) | <u>%</u> | Type ¹ | Loc ² | Texture | Remarks |
| 0-4 | 10YR 2/1 | 100 | | | | | Loam | |
| 4-24 | 10YR 2/1 | 95 | 10YR 4/6 | 5 | С | М | Silt Loam | |
| | | | | | | | | |
| | | | | | | | - | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹Type: C=C | oncentration, D=Depl | etion, R | M=Reduced Matrix, | MS=Mas | ked San | d Grains | s. ² Location: PL= | Pore Lining, M=Matrix. |
| Hydric Soil I | | , | , | | | | | for Problematic Hydric Soils ³ : |
| Histosol (A | N1) | | Sandy Gleyed M | atrix (S4) | | | Coast F | Prairie Redox (A16) |
| Histic Epip | edon (A2) | | Sandy Redox (S | 5) | | | Iron-Ma | nganese Masses (F12) |
| Black Histi | c (A3) | | Stripped Matrix (| S6) | | | Red Pa | rent Material (F21) |
| Hydrogen | Sulfide (A4) | | Dark Surface (S | 7) | | | Very Sh | nallow Dark Surface (F22) |
| Stratified L | ayers (A5) | | Loamy Mucky M | ineral (F1 |) | | Other (E | Explain in Remarks) |
| 2 cm Mucl | (A10) | | Loamy Gleyed N | 1atrix (F2) | | | | |
| | Below Dark Surface (A11 |) | Depleted Matrix | | | | | |
| | Surface (A12) | | Redox Dark Sur | | | | | |
| | cky Mineral (S1) | | Depleted Dark S | | 7) | | | |
| | xy Peat or Peat (S3) | | Redox Depressi | ons (F8) | | | _ | |
| | ayer (if observed): | | | | | | | |
| Type: | | | | | | | | · · · · · · |
| Depth (in | cnes): | | | | | | Hydric Soil Pres | ent? Yes X No |
| Remarks: | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| HYDROLO | | | | | | | | |
| _ | drology Indicators: ators (minimum of on | o io rogi | uirod: abook all that | annly) | | | Secondary Inc | dicators (minimum of two required) |
| | | ie is requ | | | | | Surface | Soil Cracks (B6) |
| Surface Wa | , , | | Water-Stained | | 39) | | | e Patterns (B10) |
| Saturation | Table (A2) | | Aquatic Fauna | | 1) | | | son Water Table (C2) |
| Water Mark | • | | True Aquatic F Hydrogen Sulf | , | • | | | Burrows (C8) |
| | Deposits (B2) | | Oxidized Rhize | | - | note (C3) | | on Visible on Aerial Imagery (C9) |
| Drift Depos | | | Presence of R | | • | 0010 (00) | | or Stressed Plants (D1) phic Position (D2) |
| | or Crust (B4) | | Recent Iron Re | | | s (C6) | | utral Test (D5) |
| Iron Depos | | | Thin Muck Sui | | | () | | and 1001 (20) |
| Inundation | Visible on Aerial Imagery | (B7) | Gauge or Well | |) | | | |
| Sparsely V | egetated Concave Surface | e (B8) | Other (Explain | in Remark | ks) | | | |
| Field Observ | /ations: | | | | • | | | |
| Surface Wate | er Present Yes | | | epth (incl | nes): | | | |
| Water Table | Present Yes | | | epth (incl | · — | | | |
| Saturation Pr | | | No X De | epth (incl | nes): | | Wetland Hydrology | y Present? Yes <u>X</u> No |
| (includes cap Describe Red | corded Data (stream ç | gauge, n | nonitoring well, aeria | l photos | . previous | s inspec | tions), if available: | |
| | | , | | | , | | ,, | |
| Remarks: | | | | | | | | |
| | | | | | | | | |

| Project/Site: Castlerock | | c | ity/County: | Dako | ota | Sa | mpling Date | 10/19/ | 2022_ |
|---|----------------------------|-------------------------|-----------------|-----------|-------------------------------------|---------------|--|-------------|--------|
| Applicant/Owner: Stone Solar | | | | | State: | | mpling Point | | |
| Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon | | | Sec | tion, Tc | wnship, Range: | | | | |
| Landform (hillside, terrace, etc.): Footslope | | Local relie | — f (concave | , conve | x, none): <u>Lin</u> | near | SI | ope %: | 2-3 |
| Subregion (LRR or MLRA): LRR_K_MLRA_91 Lat | 44.606173 | s | | Long | : -93.094903 | | Datum | : WGS | 384 |
| Soil Map Unit Name: Spillville loam, 0 to 2 percent | slopes, occa | sionally fl | ooded | | NWI classific | cation: | | | |
| Are climatic / hydrologic conditions on the site typical for | this time of y | year? | Υe | es | No X | (If no, expl | lain in Rema | ırks.) | |
| Are Vegetation X , Soil , or Hydrology | significant | tly disturbe | ed? An | e "Norn | nal Circumstance | es" present? | Yes_ | No | _X |
| Are Vegetation , Soil , or Hydrology | _ naturally ӷ | problemati | c? (If | needed | d, explain any ans | swers in Rei | marks.) | | |
| SUMMARY OF FINDINGS – Attach site map sh | — lowing samp | oling point | locations | , transe | ects, important f | features, et | C. | | |
| Hydrophytic Vegetation Present? Yes | No _X | | Is the San | ~nlad / | | | | | |
| Hydric Soil Present? Yes | No X | _ | within a V | • | | s M | No X | | |
| | NoX | | | | | | <u> </u> | | |
| Remarks: (Explain alternative procedures here or in a s Hay field south of wetland, W9. Climatic conditions are drier that | an normal. | ort.) | | | | | | | |
| VEGETATION – Use scientific names of pla | | Damine | · t India | -1 | | | | | |
| Tree Stratum (Plot size: 30 ft) | Absolute <u>% Cover</u> | Domina <u>Specie</u> | _ | - 1 | Dominance Te | st workshe | et: | | |
| 1 | | | | | Number of Don | ninant Spec | ies | | |
| 2 | | | | | That Are OBL, | | | 0 | (A) |
| 3 | | | | | Total Number o | of Dominant | _ | | _ |
| 4 | | | | | Species Across | | | 2 | (B) |
| 5 | | | | | Percent of Dom | ninant Speci | | | _ |
| Sapling/Shrub Stratum (Plot size:15 ft) | U | _ = Total C | over | | That Are OBL, | • | | 0 | (A/B) |
| 1 | | | | | Prevalence Inc | dex worksh | | | _ |
| 2. | | | | | Total % C | Cover of: | Mu | Itiply by: | |
| 3 | | | | | OBL species | 0 | | | |
| 4. | | - | | | FACW species | | | | |
| 5 | | | | | FAC species | | | | |
| | 0 = | = Total Co | ver | | FACU species | | ^3 x4 = | 180 | |
| <u>Herb Stratum</u> (Plot size: <u>5 ft</u>) | | | | | UPL species | 50 | | 250 | |
| 1. Setaria viridis | 50 | Yes | UP | <u>'L</u> | · | | | 460 | —— (B) |
| 2. Medicago sativa | 40 | Yes | FAC | <u>u</u> | Column Totals: | | (A) _ | 4.38 | (B) |
| 3. Plantago major | | No | FA | | | nce Index = | | | |
| 4. Ambrosia artemisiifolia | 5 | No | FAC | <u> </u> | Hydrophytic V | _ | | | |
| 5 | | | | | 1 - Rapid | , | . , | getation | |
| 6 | | | | | 2 - Domin | ance Test is | s >50% | | |
| 7 | | | | | 3 - Preval | ence Index | is ≤3.0¹ | | |
| 8 | | | | | | nological Ada | aptations ¹ emarks or on a s | enarate she | aet) |
| 9 | | | | | Problema | • | | • | , |
| 10 | 405 | = Total Co | | | ¹ Indicators of hydric s | , , | , , | ` . | , |
| Woody Vine Stratum (Plot size: 30 ft) | | - 10tai 00 | VEI | | disturbed or problema | | 11, 4. 4 3, | DO F | u |
| 1 | | | | | Hydrophytic | | | | |
| 2. | | | | | Vegetation | | | | |
| | 0 | = Total Co | ver | | Present? | Yes _ | No | X | |
| Remarks: (Include photo numbers here or on a sepa 50% planted oats. | rate sheet.) | | | | | | | | |

SOIL Sampling Point: W9-1u

| | - | to the dep | oth neede | | | | or or co | onfirm the absence o | f indicators.) |
|-------------------|-------------------------|------------|------------|--------------------------------|-----------------|-------------|------------------|-----------------------|---|
| Depth (inches) | Color (moist) | % | Color | (moist) | x Featur % | es Type¹ | Loc ² | Texture | Remarks |
| 0-15 | 10YR 3/2 | 100 | | (moist) | | Туре | | Silt Loam | Remarks |
| 15-20 | 10YR 2/1 | 80 | 10YR | 3/6 | 3 | | | Silty Clay Loam | |
| 15-20 | 10YR 3/2 | 17 | | | 0 | | | Silt Loam | |
| 20-24 | 10YR 2/1 | 20 | | | 0 | | | Silty Clay Loam | |
| 20-24 | 10YR 3/1 | 60 | 10YR | 3/6 | 20 | <u></u> | M_ | Silty Clay Loam | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | <u> </u> | | | | | | | |
| | oncentration, D=De | pletion, R | M=Reduc | ed Matrix, | MS=Mas | sked San | d Grains | | Pore Lining, M=Matrix. |
| Hydric Soil I | naicators: | | | | | | | indicators | for Problematic Hydric Soils ³ : |
| — Histosol (A | • | | | dy Gleyed M | | | | | rairie Redox (A16) |
| Histic Epip | | | | dy Redox (S | - | | | | nganese Masses (F12) |
| Black Histi | c (A3) Sulfide (A4) | | | ped Matrix (Surface (S | | | | | rent Material (F21) allow Dark Surface (F22) |
| | ayers (A5) | | | my Mucky M | • |) | | | Explain in Remarks) |
| 2 cm Muck | | | | my Gleyed N | | | | Outer (E | Explain in remarks) |
| | Below Dark Surface (A | .11) | | leted Matrix | | | | | |
| Thick Dark | Surface (A12) | • | | ox Dark Sur | | | | | |
| Sandy Mu | cky Mineral (S1) | | Dep | leted Dark S | Surface (F | 7) | | | |
| 5 cm Muck | xy Peat or Peat (S3) | | Red | ox Depressi | ons (F8) | | | | |
| Restrictive L | ayer (if observed) | : | | | | | | | |
| Type: | | | | | | | | | |
| Depth (in | ches): | | | | | | | Hydric Soil Prese | ent? Yes No X |
| Remarks: | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| HYDROLO | GY | | | | | | | | |
| Wetland Hyd | drology Indicators | : | | | | | | Secondary Inc | dicators (minimum of two required) |
| Primary Indic | ators (minimum of | one is req | uired; che | ck all that | apply) | | | · | Soil Cracks (B6) |
| Surface Wa | ater (A1) | | v | Vater-Stained | l Leaves (E | 39) | | Drainage | Patterns (B10) |
| High Water | Table (A2) | | A | quatic Fauna | a (B13) | | | Dry-Seas | son Water Table (C2) |
| Saturation | (A3) | | т | rue Aquatic F | Plants (B14 | !) | | Crayfish | Burrows (C8) |
| Water Mark | | | H | lydrogen Sulf | fide Odor (| C1) | | Saturatio | n Visible on Aerial Imagery (C9) |
| | Deposits (B2) | | <u></u> | xidized Rhiz | • | • | oots (C3) | Stunted of | or Stressed Plants (D1) |
| Drift Depos | | | | resence of R | | | (00) | | phic Position (D2) |
| Iron Depos | or Crust (B4) | | | lecent Iron R | | Tilled Soil | s (C6) | FAC-Neu | ıtral Test (D5) |
| | Visible on Aerial Image | rv (B7) | · | hin Muck Su | | | | | |
| | egetated Concave Surfa | | | Sauge or Wel Other (Explain | | | | | |
| Field Observ | | (- / | | triei (Expiaii | i iii i Keinair | (3) | | | |
| Surface Wate | er Present Y | es | No | X De | epth (incl | nes): | | | |
| Water Table | Present Y | es | No | X De | epth (incl | nes): | | | |
| Saturation Pr | | es | No | X De | epth (incl | nes): | | Wetland Hydrology | Present? Yes No X |
| (includes cap | <u> </u> | | | ,, | | | | | |
| Describe Red | corded Data (strear | n gauge, n | nonitoring | well, aeria | ai photos | , previous | s inspec | tions), if available: | |
| Remarks: | | | | | | | | | |

| Project/Site: Castlerock | | City | y/County: | Dakota | | Sampling | Date: | 10/19/2 | :022 |
|--|-------------------------|---------------------------|------------------|------------------------------|---------------------------------|------------|---------------------------------|--------------|-----------|
| Applicant/Owner: Stone Solar | | | | St | ate: Min | _Samplinç | Point: | <u>W9-1w</u> | <u> </u> |
| Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon | l | | Section | on, Township, Ran | ige: T113 | 3N, R019 | W, S10 | | |
| Landform (hillside, terrace, etc.): Toeslope | | Local relief | — (concave, d | convex, none): | Concave | | Slop | oe %: | 2-3 |
| Subregion (LRR or MLRA): LRR_K_MLRA_91 La | at: 44.606275 | 5 | | Long: -93.09488 | 7 | | Datum: | WGS | 384 |
| Soil Map Unit Name: Zumbro fine sandy loam | | | | | ssification: | | | | |
| Are climatic / hydrologic conditions on the site typical for | or this time of | year? | Yes | No X | (If no, o | explain in | Remark | (s.) | |
| Are Vegetation , Soil , or Hydrology | | - | | "Normal Circumst | | | Yes X | | |
| Are Vegetation , Soil , or Hydrology | | | | eeded, explain any | , answers in | | | _ | |
| SUMMARY OF FINDINGS – Attach site map s | | | | ransects, import | ant features | s, etc. | | | |
| Hydrophytic Vegetation Present? Yes_> | X No | le | s the Samp | alad Araa | | | | | |
| | X No | _ `` | ithin a Weر | | Yes X | No | | | |
| Wetland Hydrology Present? Yes | X No | | | | | | | | |
| Remarks: (Explain alternative procedures here or in a Shrub-carr community within large wetland complex north of I | hay field. Climat | , | re drier than | normal. | | | | | |
| VEGETATION – Use scientific names of pl | | Dominon | t Indiaat | I | | | | | |
| Tree Stratum (Plot size: 30 ft) | Absolute <u>% Cover</u> | Dominan <u>Species</u> | _ | l | e Test work | sheet: | | | |
| 1 | | | | Number of | Dominant S | necies | | | |
| 2 | | | | 1 | BL, FACW, | • | | 3 | (A) |
| 3 | | | | Total Numb | ber of Domin | ant | | | _ |
| 4 | | | - | I | cross All Stra | | | 3 | (B) |
| 5 | | | | _ | D 4 O | | | | _ |
| Sapling/Shrub Stratum (Plot size: 15 ft) | 0 | _ = Total Cov | ver | l l | Dominant Sp BL, FACW, | • | 1 | 00 | (A/B) |
| 1. Salix discolor | 50 | Yes | FACW | Duningland | e Index wor | | | | <u>-`</u> |
| O Callin intenian | | | - | — Total | % Cover of: | | Multi | ply by: | |
| 2. Sailx interior 3. | | 163 | TACV | | es3 | × | | | |
| 4 | | - | - | I | cies 18 | | | | _ |
| 5. | | | | I | es 0 | | | | |
| | 80 | = Total Cove | - | FACU specie | | | 4 = | 0 | |
| Herb Stratum (Plot size: 5 ft) | | | | , UPL specie | | | 5 = | 0 | _ |
| 1. Phalaris arundinacea | 100 | Yes | FACW | <u>/</u> . | | | | 373 | — (B) |
| Symphyotrichum lateriflorum | 5 | No | FACW | | | | ⁴⁾ _ | 1.98 | (B) |
| 3. <u>Scirpus atrovirens</u> | 3 | No | OBL | | /alence Inde | | | 1.00 | |
| 4 | · | | | — ' ' | tic Vegetation | | | | |
| 5 | | | | — I | apid Test for | , , , | · | etation | |
| 6 | | | | | ominance Te | | | | |
| 7 | | | | — <u>X</u> 3 - Pr | evalence Inc | ex is ≤3.0 |) ¹ | | |
| 8 9. | | | | 4 - Mo | orphological supporting data | Adaptatio | ons ¹ or on a sec | arate she | eet) |
| | | | | — I ` | ematic Hydro | | | | |
| 10 | 400 | = Total Cove | er | ¹ Indicators of h | ydric soil and we | . , | Ü | ` ' | , |
| Woody Vine Stratum (Plot size: 30 ft) | | | | disturbed or pro | blematic. | | | | |
| 1 | | | | — Hydrophy | /tic | | | | |
| 2 | | | | Vegetatio | | Y | A1. | | |
| | 0 | = Total Cove | er | Present? | Yes | <u> </u> | No | | |
| Remarks: (Include photo numbers here or on a sep | parate sheet.) | | | | | | | | |

SOIL Sampling Point: W9-1w

| Depth | Matrix | | | | x Feature | | | - . | 5 |
|--|--|----------------|----------------------------|--|--|---|------------------|--|---|
| inches) Co | lor (moist) | | Colo | r (moist) | | Type ¹ | Loc ² | Texture | Remarks |
| 0-7 10YR | 2/1 | 85 | 10YR | 3/6 | 15 | <u>C</u> | M | Silt Loam | _ |
| 7-15 10YF | 2/1 | 75 | 10YR | 3/6 | 25 | | M | Silt Loam | |
| 15-24 10YR | 2/1 | 65 | 10YR | 3/6 | 25 | <u> </u> | M | Silt Loam | 10YR 10% depletion |
| | | <u> </u> | | | | <u> </u> | <u> </u> | | |
| Type: C=Concent | ration D-Day | | M-Podu | and Matrix | | | d Grains | ² Location: E | PL=Pore Lining, M=Matrix. |
| ydric Soil Indicate | | ellon, N | vi-i\euu | Jeu Mailix, I | ivio-ivias | Neu Saii | u Grains | | ors for Problematic Hydric Soils ³ : |
| Histosol (A1) Histic Epipedon (A Black Histic (A3) Hydrogen Sulfide Stratified Layers (A2) 2 cm Muck (A10) Depleted Below D Thick Dark Surface | (A4) A5) ark Surface (A1 | 1) | Sar Stri Dar Loa Loa X Rec | ndy Gleyed M ndy Redox (Si pped Matrix (rk Surface (Si amy Mucky M amy Gleyed N poleted Matrix dox Dark Surf | 5) S6) 7) ineral (F1) datrix (F2) (F3) face (F6) | | | Iron- Red Very | st Prairie Redox (A16) Manganese Masses (F12) Parent Material (F21) Shallow Dark Surface (F22) er (Explain in Remarks) |
| Sandy Mucky Min 5 cm Mucky Peat | | | | oleted Dark S dox Depression | - | , | | | |
| 5 cm Mucky Peat | or Peat (S3) | | | | - | , | | | |
| 5 cm Mucky Peat | or Peat (S3) | | | | - | , | | | |
| 5 cm Mucky Peat Restrictive Layer (i Type: Depth (inches): | or Peat (S3) | | | | - | , | | Hydric Soil Pr | esent? Yes X No |
| 5 cm Mucky Peat lestrictive Layer (i Type: Depth (inches): Remarks: | or Peat (S3) | | | | - | , | | Hydric Soil Pr | esent? Yes X No |
| 5 cm Mucky Peat lestrictive Layer (i Type: Depth (inches): Remarks: | or Peat (S3) if observed): | | | | - | | | | NO |
| 5 cm Mucky Peat Restrictive Layer (i Type: Depth (inches): Remarks: YDROLOGY Wetland Hydrology | y Indicators: minimum of or A2) | ne is requ | uired; che | dox Depressio | apply) Leaves (B (B13) Plants (B14 ide Odor (C ospheres o educed Iro | 9)): 21) n Living Ren (C4) | , , | Secondary Surfa Surfa Drair Cray Satur Stunt | esent? Yes X No No Indicators (minimum of two required) ace Soil Cracks (B6) age Patterns (B10) Beason Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) ated or Stressed Plants (D1) anorphic Position (D2) Reutral Test (D5) |
| 5 cm Mucky Peat estrictive Layer (i Type: Depth (inches): Remarks: YDROLOGY Vetland Hydrolog Primary Indicators (Surface Water (A1) High Water Table (Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust (| y Indicators: minimum of or (B2) | | uired; che | eck all that a Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulfi Oxidized Rhizo Presence of Ro Recent Iron Re | apply) Leaves (B (B13) Plants (B14 ide Odor (C ospheres o educed Iro eduction in face (C7) | 9)): 21) n Living Ren (C4) | , , | Secondary Surfa Surfa Drair Cray Satur Stunt | A Indicators (minimum of two required) ace Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) aced or Stressed Plants (D1) morphic Position (D2) |
| 5 cm Mucky Peat estrictive Layer (i Type: Depth (inches): emarks: Property Vetland Hydrology Primary Indicators (Surface Water (A1) High Water Table (Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust (Iron Deposits (B5) Inundation Visible of Sparsely Vegetated | or Peat (S3) if observed): y Indicators: minimum of or A2) (B2) (B4) on Aerial Imagery I Concave Surface | (B7) | uired; che | eck all that a Water-Stained Aquatic Fauna True Aquatic P Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re | apply) Leaves (B (B13) Plants (B14 ide Odor (C ospheres o educed Iro eduction in face (C7) Data (D9) | 9) C1) n Living Ro n (C4) Tilled Soil | , , | Secondary Surfa Surfa Drair Cray Satur Stunt | A Indicators (minimum of two required) ace Soil Cracks (B6) age Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) aced or Stressed Plants (D1) morphic Position (D2) |
| 5 cm Mucky Peat Restrictive Layer (i Type: Depth (inches): Remarks: PDROLOGY Wetland Hydrology Primary Indicators (Surface Water (A1) High Water Table (Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust (Iron Deposits (B5) Inundation Visible of | y Indicators: minimum of or (B2) (B2) (Concave Surfaces: ent Yes the Yes | (B7) e (B8) | uired; che | eck all that a water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulfi Oxidized Rhizo Presence of Recent Iron Reach Muck Sur Gauge or Well Other (Explain LX De X De X De Control Co | apply) Leaves (B (B13) Plants (B14 ide Odor (C ospheres o educed Iro eduction in face (C7) Data (D9) | 9) C1) n Living Ren (C4) Tilled Soil | , , | Secondary Surfa Surfa Drair Cray Satur Stunt | r Indicators (minimum of two required) noe Soil Cracks (B6) nage Patterns (B10) Season Water Table (C2) fish Burrows (C8) ration Visible on Aerial Imagery (C9) need or Stressed Plants (D1) norphic Position (D2) Neutral Test (D5) |

| Project/Site: Castlerock | | Cit | ty/County: | Dakota | | | Sampl | ing Date: | 10/19/2 | 022 |
|---|--------------|----------------|------------|---------------------------------------|-----------------------------|-----------|----------|------------------|----------------|-----------|
| Applicant/Owner: Stone Solar | | | | | State: | Min | Sampl | ing Point | : <u>W9-2u</u> | |
| Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon | | | Secti | on, Towns | – ship, Range: | T113 | N, R0 | 1 <u>9W, S1</u> | 0 | |
| Landform (hillside, terrace, etc.): Backslope | | Local relief | (concave, | convex, n | one): Co | nvex | | Slo | ope %: _ | 5-8 |
| Subregion (LRR or MLRA): LRR_K_MLRA_91 Lat | : 44.610324 | ļ | | Long: -9 | 3.094653 | | | Datum: | WGS | 384 |
| Soil Map Unit Name: Aquolls and Histosols, ponded | d b | | | | NWI classific | cation: | | | | |
| Are climatic / hydrologic conditions on the site typical for | this time of | year? | Yes | <u> </u> | No X | (If no, e | explain | in Rema | rks.) | |
| Are Vegetation , Soil , or Hydrology | significan | tly disturbed | d? Are | "Normal (| Circumstance | es" prese | ent? | Yes_ | X No | |
| Are Vegetation , Soil , or Hydrology | naturally | problematic | ;? (If n | eeded, ex | plain any an | swers in | Remar | ks.) | | |
| SUMMARY OF FINDINGS – Attach site map sh | nowing samp | oling point | locations, | transects | , important | features | , etc. | | | |
| Hydrophytic Vegetation Present? Yes X | No | | ls the Sam | alad Aras | | | | | | |
| Hydric Soil Present? Yes | No X | _ ; | within a W | • | | s | No | Х | | |
| | NoX | | W | · · · · · · · · · · · · · · · · · · · | • - | | | | | |
| Remarks: (Explain alternative procedures here or in a supplied to the state of the | | , | an normal. | | | | | | | |
| VEGETATION – Use scientific names of pla | ants. | | | | | | | | | |
| | Absolute | Dominar | nt Indica | tor | | | | | | |
| <u>Tree Stratum</u> (Plot size: <u>30 ft</u>) | % Cover | Species | Statu | <u>ıs</u> Do | ominance Te | est work | sheet: | | | |
| 1. Acer negundo | 25 | Yes | FAC | — Nı | ımber of Dor | minant S | pecies | | | |
| 2. Fraxinus pennsylvanica | 5 | No | FAC\ | <u>//</u> Th | at Are OBL, | FACW, | or FAC | <u> </u> | 3 | _(A) |
| 3 | | | _ | $-\mid$ Tc | tal Number o | of Domin | ant | | | |
| 4 | | | _ | 1 | ecies Across | | | | 5 | (B) |
| 5 | | | | — _{Pe} | ercent of Don | ninant Sr | necies | _ | | _ |
| Sapling/Shrub Stratum (Plot size:15 ft) | 30 | _ = Total Co | over | | at Are OBL, | | | <u></u> | 60 | (A/B) |
| 1. Rhamnus cathartica | 15 | Yes | FAC | Pr | evalence In | dex wor | ksheet | : | | |
| Lonicera tatarica | 5 | Yes | FACL | | Total % C | Cover of: | | Mul | tiply by: | |
| 3. | | | | | BL species | 0 | | x 1 = _ | 0 | |
| 4. | | | | | ACW species | | | x 2 = | | |
| 5 | | | | | C species | |) | x 3 = | | |
| _ | 20 | = Total Cov | er | | CU species | | | x 4 = | 20 | _ |
| <u>Herb Stratum</u> (Plot size: <u>5 ft</u>) | | | | Lui | PL species | 32 | | x5= | 160 | |
| 1. Phalaris arundinacea | 85 | Yes | FACV | <u>~</u> | olumn Totals: | | | (A) | 486 | —— (B) |
| 2. Rubus occidentalis | 30 | No | UPL | | | | | _ | 2.86 | (D) |
| 3. Urtica dioica | | No | FACV | | | nce Inde | | | | |
| 4. Ribes missouriense | | | UPL | <u> </u> | drophytic V | • | | | | |
| 5 | | | _ | | 1 - Rapid | | | - | getation | |
| 6 | | | | - | 2 - Domin | | | | | |
| 7 | | | | — - × | 3 - Preval | lence Inc | lex is ≤ | 3.0 ¹ | | |
| 8 | | | _ | | 4 - Morph (Provide suppo | | | | enerate she | eat) |
| 9 | | | | — | Problema | • | | | • | , |
| 10 | | = Total Cov | | | icators of hydric | , | | ŭ | | , |
| Woody Vine Stratum (Plot size: 30 ft) | | - TOTAL COV | /ei | | urbed or problem | | | ologya | DO PICCO, | umoss |
| 1 | | | | _ - | ydrophytic | | | | | |
| 2. | | | <u> </u> | | egetation | | | | | |
| | 0 | = Total Cov | er | _ P | resent? | Yes | X | No | | |
| Remarks: (Include photo numbers here or on a sepa Wetland determination based on the lack of hydric soil and w | | gy indicators. | | • | | | _ | | | |

SOIL Sampling Point: W9-2u

| Profile Desc | ription: (Describe to | the dep | th needed to docu | ment th | e indicat | tor or co | onfirm the absence o | f indicators.) | | | |
|-----------------------------------|----------------------------|------------|------------------------------|-------------|-------------------|------------------|-----------------------|-----------------------|----------------|--------------|---|
| Depth | Matrix | | | x Featur | | | | | | | |
| (inches) | Color (moist) | % | Color (moist) | %_ | Type ¹ | Loc ² | Texture | | Remarks | | |
| 0-20 | 10YR 3/3 | 100 | | | | | Silt Loam | - | | | |
| 20-24 | 10YR 3/2 | 100 | | | | | Silt Loam | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | - | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | oncentration, D=Dep | letion, RN | M=Reduced Matrix, | MS=Mas | sked San | d Grains | | Pore Lining, M= | | 3 | |
| Hydric Soil I | ndicators: | | | | | | Indicators | for Problemation | c Hydric So | ils°: | |
| Histosol (A | A1) | | Sandy Gleyed M | latrix (S4) | 1 | | | rairie Redox (A16) | | | |
| ——Histic Epip | | | Sandy Redox (S | - | | | | nganese Masses (| • | | |
| Black Hist | • | | Stripped Matrix | ` ' | | | | ent Material (F21) | | | |
| | Sulfide (A4) ayers (A5) | | Dark Surface (S | • | | | | allow Dark Surface | | | |
| 2 cm Muck | • | | Loamy Mucky M Loamy Gleyed M | | | | Other (E | Explain in Remarks | ·) | | |
| _ | Selow Dark Surface (A1 | 1) | Depleted Matrix | | , | | | | | | |
| | Surface (A12) | ., | Redox Dark Sur | | | | | | | | |
| | cky Mineral (S1) | | Depleted Dark S | | 7) | | | | | | |
| 5 cm Mucl | ky Peat or Peat (S3) | | Redox Depressi | ons (F8) | | | | | | | |
| Restrictive L | .ayer (if observed): | | | | | | | | | | |
| Type: | | | | | | | | | | | |
| Depth (in | ches): | | | | | | Hydric Soil Prese | ent? Ye | s ! | 10 X | _ |
| Remarks: | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| HYDROLO | GY | | | | | | | | | | |
| | drology Indicators: | | | | | | Secondary Inc | dicators (minimum | of two require | <u>ed)</u> | |
| Primary Indic | ators (minimum of o | ne is requ | ired; check all that | apply) | | | - | Soil Cracks (B6) | • | - | |
| Surface Wa | ater (A1) | | Water-Stained | l Leaves (E | 39) | | Drainage | Patterns (B10) | | | |
| | Table (A2) | | Aquatic Fauna | a (B13) | | | Dry-Seas | son Water Table (C | 2) | | |
| Saturation | | | True Aquatic F | • | • | | Crayfish | Burrows (C8) | | | |
| Water Mark | | | Hydrogen Sulf | , | • | . (00) | | n Visible on Aerial I | | | |
| Drift Depos | Deposits (B2) | | Oxidized Rhiz | | • | oots (C3) | | or Stressed Plants (| D1) | | |
| | or Crust (B4) | | Presence of R | | | s (C6) | | ohic Position (D2) | | | |
| Iron Depos | • • | | Thin Muck Su | | oa oo | 0 (00) | FAC-Net | ıtral Test (D5) | | | |
| | Visible on Aerial Imagery | (B7) | Gauge or Wel | |) | | | | | | |
| Sparsely V | egetated Concave Surfac | e (B8) | Other (Explain | | | | | | | | |
| Field Observ | vations: | | | | | | | | | | |
| Surface Wate | | | | epth (inc | | | | | | | |
| Water Table | | | | epth (inc | · — | | | | | | |
| Saturation Proceed (includes cape | | · — | No X De | epth (inc | nes): | | Wetland Hydrology | Present? | Yes | _No _ | X |
| | corded Data (stream | gauge. m | nonitoring well. aeria | al photos | , previous | s inspec | tions), if available: | | | | |
| | (| | J, 2.3 | - | | | ,, | | | | |
| Remarks: | | | | | | | | | | | |
| | | | | | | | | | | | |

| Applicant Conversion Stone Sciolar Stone Sciolar Stone Sciolar Stone Sciolar Stone Sciolar Stone Sciolar Sciol | Project/Site: Castlerock | | City/C | ounty: <u>Dak</u> | ota | Samp | ling Date | 10/19/2 | 022 |
|--|---|------------------|------------------|-------------------|---------------------------|-----------------|-------------|-----------------|----------|
| Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope %: 0 | Applicant/Owner: Stone Solar | | | | State: | Min Samp | ling Poin | t: <u>W9-2w</u> | <u>'</u> |
| Sold Map Unit Name | Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon | | | Section, T | ownship, Range: | T113N, R0 | 19W, S1 | 10 | |
| No image Note Not | Landform (hillside, terrace, etc.): Floodplain | | Local relief (co | ncave, conv | ex, none): Con | cave | SI | ope %: _ | 0 |
| Are climatic / hydrologic conditions on the site typical for this time of year? Are Vegetation Soil or Hydrology significantly disturbed? | Subregion (LRR or MLRA): LRR_K_MLRA_91 La | t: 44.610216 | | Long | g: -93.09484 | | Datum | : WGS | 884 |
| Are Vegetation, Soil, or Hydrology | Soil Map Unit Name: Aquolls and Histosols, ponde | d | | | NWI classifica | tion: PS | S1/EM10 | Cd | |
| Are Vegetation | Are climatic / hydrologic conditions on the site typical fo | r this time of y | ear? | Yes | — No X (| (If no, explair | n in Rema | arks.) | |
| Statistic Stat | Are Vegetation , Soil , or Hydrology | significant | ly disturbed? | Are "Nor | — —— mal Circumstances | " present? | Yes | X No | |
| SumMary OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. | | | | (If neede | d, explain any ansv | vers in Rema | rks.) | | |
| Hydric Soil Present? Yes X No | _ _ | | | ations, trans | ects, important fe | atures, etc. | | | |
| Hydric Soil Present? Yes X No | Hydrophytic Vegetation Present? Yes X | No | lo 4k | na Camplad | Avaa | | | | |
| Wetland Hydrology Present? Yes_X No_ | | | _ .0 | • | | X No. | | | |
| VEGETATION - Use scientific names of plants. Absolute % Cover Status Dominant Species Status Number of Dominant Species Number of Dominant Species Status Species Across All Strata: 2 (A) Total Number of Dominant Species Status Species Across All Strata: 2 (B) Sapling/Shrub Stratum (Plot size: 15 ft) | Wetland Hydrology Present? YesX | No | _ '''' | a rrotian | | | | | |
| Absolute % Cover Species Slatus Dominant Indicator Species Slatus Dominance Test worksheet: | | | , | mal. | | | | | |
| Tree Stratum | VEGETATION – Use scientific names of pla | ants. | | | | | | | |
| 2. | | % Cover | <u>Species</u> | <u>Status</u> | Dominance Tes | t worksheet | : | | |
| Total Number of Dominant Species Across All Strata: | | | | | | • | | | |
| 4 | | | | | That Are OBL, F | ACW, or FAC |): — | 2 | _(A) |
| Sapling/Shrub Stratum (Plot size: 15 ft) 0 | | | | | | | | | |
| Sapling/Shrub Stratum (Plot size: _15 ft) Sapling/Shrub Stratum (Plot size: _5 ft) Sapling/Shrub Stratum (Plot size: _30 ft) Sapling/Shrub Shrub Shru | | | | - | Species Across A | All Strata: | _ | 2 | _(B) |
| 1 | | _ | = Total Cover | | | • | D: | 100 | _(A/B) |
| 2. | | | | | Prevalence Inde | ex workshee | t: | | |
| 3 | | | | | Total % Co | ver of: | Mu | Itiply by: | |
| FAC species 0 | | | | | OBL species | 75 | x 1 = _ | 75 | |
| No | 4 | | | | FACW species _ | 50 | x 2 = | 100 | |
| Herb Stratum (Plot size:5 ft) | 5 | | | | FAC species | 0 | x 3 = | 0 | |
| 1. Calamagrostis canadensis 55 Yes OBL UPL species 0 x 5 = 0 2. Phalaris arundinacea 40 Yes FACW 3. Carex lacustris 20 No OBL 4. Urtica dioica 10 No FACW 5. 6. 7. 8. 9. 10. Woody Vine Stratum (Plot size: 30 ft) 1. 1. | Horb Stratum (Plot size: 5 ft) | | Total Cover | | FACU species | 0 | x 4 = | 0 | |
| 2. Phalaris arundinacea 40 Yes FACW Column Totals:125 (A)175 (B) 3. Carex lacustris 20 No OBL Prevalence Index = B/A =1.4 4. Urtica dioica 10 No FACW Hydrophytic Vegetation Indicators: | riorb otratam (riot size) | 55 | Ves | OBL | UPL species | 0 | x 5 = | 0 | |
| 20 No OBL | | | | | Column Totals: | 125 | (A) | 175 | (B) |
| 4. Urtica dioica 10 No FACW Hydrophytic Vegetation Indicators: X 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0¹ A - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) 125 = Total Cover Woody Vine Stratum (Plot size: 30 ft) 1. | | | | | Prevalenc | e Index = B/ | A = . | 1.4 | |
| 5. | | | | | Hydrophytic Ve | getation Ind | icators: | | |
| 6 | | | | | X 1 - Rapid T | est for Hydro | phytic Ve | getation | |
| 8 | | | | | X 2 - Domina | nce Test is > | 50% | | |
| 8 | 7 | | | | X 3 - Prevale | nce Index is : | ≤3.0¹ | | |
| 9 | 8 | | | | | | | | |
| Woody Vine Stratum (Plot size: 30 ft) 1 | 9 | | | | | | | separate she | eet) |
| Woody Vine Stratum (Plot size:30 ft) | 10 | | | | Problemation | c Hydrophytic | : Vegetat | ion¹ (Exp | lain) |
| 2 | Woody Vine Stratum (Plot size: 30 ft) | 125 : | = Total Cover | | | | drology mus | t be present, | unless |
| | 1 | | | | | | | | |
| Remarks: (Include photo numbers here or on a separate sheet.) | 2 | ^ | Total Cover | | | Yes X | _ No | | |
| | Remarks: (Include photo numbers here or on a sepa | arate sheet.) | | | | | | | |

SOIL Sampling Point: W9-2w

| Profile Desc Depth | ription: (Describe to Matrix | to the dep | oth need | | ument th | | tor or co | onfirm the absence of | indicators.) |
|--------------------------|-----------------------------------|-------------|---------------|------------------------------|--------------------------|-------------------|------------------|-----------------------|--|
| (inches) | Color (moist) | % | Colo | r (moist) | % | Type ¹ | Loc ² | Texture | Remarks |
| 0-20 | 10YR 2/1 | 95 | 10YR | 3/6 | 5 | C | | Mucky Loam | |
| | | | | | | | | | |
| 20-24 | 10YR 2/1 | 95 | 10YR | 3/6 | 5 | <u>C</u> | M_ | Silty Clay Loam | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | - | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | oncentration, D=De | pletion, R | M=Reduc | ced Matrix, | MS=Mas | sked San | d Grains | | Pore Lining, M=Matrix. |
| Hydric Soil I | ndicators: | | | | | | | Indicators f | or Problematic Hydric Soils ³ : |
| Histosol (A | A1) | | | ndy Gleyed N | | | | Coast Pra | airie Redox (A16) |
| | pedon (A2) | | | ndy Redox (S | • | | | | ganese Masses (F12) |
| Black Hist | • • | | | pped Matrix | | | | | ent Material (F21) |
| | Sulfide (A4) Layers (A5) | | | k Surface (S my Mucky N | • | ` | | | ıllow Dark Surface (F22) xplain in Remarks) |
| 2 cm Muc | | | | ımy Gleyed I | • | - | | Other (E) | xpiairi iri ixemaiks) |
| | R (7110) Below Dark Surface (A | 11) | | oleted Matrix | | ' | | | |
| | k Surface (A12) | , | $\overline{}$ | dox Dark Sui | | | | | |
| Sandy Mu | icky Mineral (S1) | | | oleted Dark S | | 7) | | | |
| 5 cm Muc | ky Peat or Peat (S3) | | Red | dox Depress | ions (F8) | | | | |
| | _ayer (if observed) | : | | | | | | | |
| Type: | | | | | | | | | |
| Depth (ir | nches): | | | | | | | Hydric Soil Prese | nt? Yes X No |
| Remarks: | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| <u>HYDROLO</u> | GY | | | | | | | | |
| - | drology Indicators: | | | | | | | Secondary Indi | cators (minimum of two required) |
| Primary India | cators (minimum of o | one is requ | uired; che | eck all that | apply) | | | Surface S | oil Cracks (B6) |
| Surface W | , , | | | Water-Stained | , | 39) | | Drainage | Patterns (B10) |
| High Wate Saturation | r Table (A2) | | | Aquatic Faun | | | | | on Water Table (C2) |
| Water Mar | ` ' | | | True Aquatic Hydrogen Sul | | - | | - | Burrows (C8) |
| | Deposits (B2) | | | Oxidized Rhiz | • | | nots (C3) | | n Visible on Aerial Imagery (C9) r Stressed Plants (D1) |
| Drift Depos | , | | | Presence of F | · | • | 0010 (00) | | nic Position (D2) |
| Algal Mat o | or Crust (B4) | | | Recent Iron R | | | s (C6) | <u></u> | ral Test (D5) |
| Iron Depos | sits (B5) | | | Thin Muck Su | ırface (C7) | | | | • |
| Inundation | Visible on Aerial Imager | y (B7) | | Gauge or We | II Data (D9) |) | | | |
| | egetated Concave Surfa | ace (B8) | | Other (Explain | n in Remarl | ks) | | 1 | |
| Field Obser | V | 26 | No | Y D | anth (incl | has). | | | |
| Surface Wat | | | No No | | epth (incl epth (incl | | | | |
| Water Table Saturation P | | | No | | epth (incl | · | | | |
| (includes cap | | ~~ — | 140 | | -Pai (11101 | | | Wetland Hydrology | Present? Yes X No |
| , , | corded Data (stream | n gauge, n | nonitoring | g well, aeria | al photos | , previous | s inspec | tions), if available: | |
| Remarks: | | | | | | | | | |
| | | | | | | | | | |

| Project/Site: Castlerock | | City/County: [| Dakota | Sampling | Date: <u>10/19/2022</u> |
|---|----------------------|---|--|---|----------------------------|
| Applicant/Owner: Stone Solar | | | State: | Min Sampling | Point: W10-1u |
| Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon | | Section | n, Township, Range: | T113N, R019\ | N, S10 |
| Landform (hillside, terrace, etc.): Footslope | Local | relief (concave, co | onvex, none): Lin | near | Slope %: 3-4 |
| Subregion (LRR or MLRA): LRR_K_MLRA_91 Lat | : 44.613811 | ι | ong: -93.09179 | | Datum: WGS84 |
| Soil Map Unit Name: Maxfield silty clay loam | | <u> </u> | NWI classific | cation: | |
| Are climatic / hydrologic conditions on the site typical for | r this time of year? | Yes | No X | (If no, explain in | Remarks.) |
| Are Vegetation X , Soil , or Hydrology | significantly dis | turbed? Are "l | Normal Circumstance | es" present? | Yes No X |
| Are Vegetation , Soil , or Hydrology | naturally proble | ematic? (If nee | eded, explain any ans | swers in Remarks. |) |
| SUMMARY OF FINDINGS – Attach site map sh | nowing sampling | point locations, tr | ansects, important f | features, etc. | |
| Hydrophytic Vegetation Present? Yes | NoX | Is the Sampl | ad Araa | | |
| Hydric Soil Present? Yes | No <u>X</u> | within a Wet | | s No | < |
| Wetland Hydrology Present? Yes | No _X | | | | _ |
| Remarks: (Explain alternative procedures here or in a secondary Harvested corn field south of wetland. Climatic conditions are conditions.) | , | | | | |
| VEGETATION – Use scientific names of pla | ants. | | | | |
| Tree Stratum (Plot size: 30 ft) | | minant Indicato pecies <u>Status</u> | l | est worksheet: | |
| 1 | | | Number of Dom | ninant Species | |
| 2 | | | | FACW, or FAC: | 0 (A) |
| 3 | | | | of Dominant | |
| 4 | | | Species Across | | 0 (B) |
| 5 | _ | otal Cover | Percent of Dom | ninant Species FACW, or FAC: | NaN (A/B) |
| Sapling/Shrub Stratum (Plot size: 15 ft) | | | | dex worksheet: | |
| 1 2 | | | Total % C | Cover of: | Multiply by: |
| 3 | | | OBL species | 0 x | 1 = 0 |
| 4. | | | | | 2 = 0 |
| 5. | | | FAC species | | 3 =0 |
| | = Tota | al Cover | FACU species | | 4 = 0 |
| Herb Stratum (Plot size: 5 ft) | | | UPL species | | 5 = 0 |
| 1 | | | | | A) 0 (B) |
| 2 | | | <u> </u> | nce Index = B/A = | , |
| 3 | | | | egetation Indicate | ors: |
| 5. | | | — | Test for Hydrophy | |
| 6 | | | _ | nance Test is >50% | · · |
| 7. | | | | lence Index is ≤3.0 | |
| 8. | | | | | |
| 9. | | | | iological Adaptation orting data in Remarks or | |
| 10 | - <u></u> - | <u></u> | Problema | tic Hydrophytic Ve | egetation¹ (Explain) |
| Woody Vine Stratum (Plot size: 30 ft) | | al Cover | ¹ Indicators of hydric s disturbed or problema | | gy must be present, unless |
| 1 | | | _ Hydrophytic | | |
| 2 | | | Vegetation | v | ٧ |
| | = Tota | al Cover | Present? | Yes | No X |
| Remarks: (Include photo numbers here or on a sepa Successfully harvest corn field. No volunteer vegetation obse | | | | | |

SOIL Sampling Point: W10-1u

| | | o the dep | | | | or or co | onfirm the absence of | indicators.) |
|--------------------------------|--------------------------|--------------|----------------------|---------------|-------------------------|------------------|--------------------------------|--|
| Depth (inches) | Color (moist) | % | Color (moist) | x Featur % | es Type ¹ | Loc ² | Texture | Remarks |
| (inches) 0-9 | 10YR 3/2 | 100 | Color (moist) | | Туре | | Sandy Loam | Remarks |
| 9-16 | 10YR 2/1 | 50 | | 0 | | | Silt Loam | |
| 9-16 | 10YR 3/2 | 50 | | 0 | | | Sandy Loam | |
| 16-24 | 10YR 4/3 | 80 | | 0 | | | Sandy Loam | |
| 16-24 | 10YR 2/1 | 20 | | 0 | | | Sandy Loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹Type: C=Co | oncentration, D=Dep | oletion, RN | /=Reduced Matrix, | MS=Mas | sked San | d Grains | s. ² Location: PL=P | ore Lining, M=Matrix. |
| Hydric Soil II | | | | | | | | or Problematic Hydric Soils ³ : |
| Histosol (A | (1) | | Sandy Gleyed M | latrix (S4) | | | Coast Pra | nirie Redox (A16) |
| Histic Epip | - | | Sandy Redox (S | | | | | ganese Masses (F12) |
| Black Histi | c (A3) | | Stripped Matrix (| S6) | | | Red Pare | nt Material (F21) |
| Hydrogen | Sulfide (A4) | | Dark Surface (S | 7) | | | Very Shal | low Dark Surface (F22) |
| Stratified L | ayers (A5) | | Loamy Mucky M | |) | | Other (Ex | plain in Remarks) |
| 2 cm Muck | (A10) | | Loamy Gleyed N | latrix (F2) |) | | | |
| Depleted E | Below Dark Surface (A | 11) | Depleted Matrix | (F3) | | | | |
| Thick Dark | Surface (A12) | | Redox Dark Sur | face (F6) | | | | |
| Sandy Mud | cky Mineral (S1) | | Depleted Dark S | urface (F | 7) | | | |
| 5 cm Muck | xy Peat or Peat (S3) | | Redox Depressi | ons (F8) | | | | |
| Restrictive L | ayer (if observed): | | | | | | | |
| Type: | | | | | | | | |
| Depth (in | ches): | | | | | | Hydric Soil Presen | nt? Yes No _X |
| Remarks: | <u> </u> | | | | | | • | |
| | | | | | | | | |
| | | | | | | | | |
| HYDROLO | GY | | | | | | | |
| | Irology Indicators: | | | | | | 0 1 1 1 | |
| _ | ators (minimum of c | | ired; check all that | apply) | | | | cators (minimum of two required) |
| Surface Wa | ater (A1) | | Water-Stained | Leaves (E | 39) | | | oil Cracks (B6) Patterns (B10) |
| —— High Water | | | Aquatic Fauna | , | , | | | n Water Table (C2) |
| Saturation (| | | True Aquatic F | | 1) | | | urrows (C8) |
| Water Mark | (s (B1) | | Hydrogen Sulf | | • | | | Visible on Aerial Imagery (C9) |
| Sediment D | Deposits (B2) | | Oxidized Rhize | ospheres o | on Living Ro | oots (C3) | | Stressed Plants (D1) |
| Drift Depos | its (B3) | | Presence of R | educed Iro | on (C4) | | Geomorph | ic Position (D2) |
| Algal Mat o | r Crust (B4) | | Recent Iron Re | eduction in | Tilled Soil: | s (C6) | FAC-Neutr | ral Test (D5) |
| Iron Deposi | its (B5) | | Thin Muck Sui | face (C7) | | | | |
| Inundation | Visible on Aerial Imager | y (B7) | Gauge or Well | Data (D9) |) | | | |
| Sparsely Ve | egetated Concave Surfa | ce (B8) | Other (Explain | in Remarl | ks) | | _ | |
| Field Observ | V- | _ | No V 5 | | h = = \ | | | |
| Surface Wate | | | | epth (incl | | | | |
| Water Table | | | | epth (incl | · - | | | |
| Saturation Pr (includes cap | | es | No X De | epth (incl | nes): | | Wetland Hydrology F | Present? YesNo _X_ |
| , , | corded Data (stream | n dalide im | onitoring well serie | ıl nhotos | previous | s inspec | tions) if available. | |
| 200011001100 | Julia Data (Stream | . gaage, 111 | | p. 10103 | , p. cvious | opco | ,, avaliable. | |
| Remarks: | | | | | | | | |

| Project/Site: Castlerock | | City/C | County: Dal | kota | Sampling Date | e: <u>10/19/202</u> | 22 |
|--|------------------|------------------|---------------|---|-----------------|---------------------|----------|
| Applicant/Owner: Stone Solar | | | | State: Min | Sampling Poir | nt: <u>W10-1w</u> | |
| Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon | | | Section, 7 | ownship, Range:T113 | N, R019W, S | 10 | |
| Landform (hillside, terrace, etc.): Toeslope | | Local relief (co | oncave, conv | rex, none): Concave | S | lope %:1 | 1-2 |
| Subregion (LRR or MLRA): LRR_K_MLRA_91 Lat | : 44.61388 | | Lon | g: <u>-93.091729</u> | Datum | n: WGS8 | 4 |
| Soil Map Unit Name: Maxfield silty clay loam | | | | NWI classification: | PEM1A | | |
| Are climatic / hydrologic conditions on the site typical for | r this time of y | /ear? | Yes | No _X_ (If no, e | explain in Rema | arks.) | |
| Are Vegetation , Soil , or Hydrology | significan | tly disturbed? | Are "No | mal Circumstances" prese | nt? Yes_ | X No | |
| Are Vegetation , Soil , or Hydrology | — naturally լ | problematic? | (If neede | ed, explain any answers in | Remarks.) | | |
| SUMMARY OF FINDINGS – Attach site map sh | | | ations, trans | sects, important features | , etc. | | |
| Hydrophytic Vegetation Present? Yes X | No | le t | he Sampled | Aroa | | | |
| | No | _ .5 . | hin a Wetlar | | No | | |
| Wetland Hydrology Present? Yes X | No | | | | | | |
| Remarks: (Explain alternative procedures here or in a secondary Hardwood swamp community. Climatic conditions are drier that | | ort.) | | | | | |
| VECTATION Has a significant and a significant an | | | | | | | |
| VEGETATION – Use scientific names of pla | Absolute | Dominant | Indicator | | | | |
| Tree Stratum (Plot size: 30 ft) | % Cover | Species Species | <u>Status</u> | Dominance Test work | sheet: | | |
| 1. Salix nigra | 40 | Yes | OBL | Number of Dominant S | nocios | | |
| 2. Salix discolor | 30 | No | FACW | That Are OBL, FACW, | • | 6 (| (A) |
| 3 | | | | Total Number of Demin | | | |
| 4 | | | | Total Number of Domin Species Across All Stra | | 6 (| (B) |
| 5 | | | | | _ | | , |
| Openition (Objects Objects on April 15 ft) | 70 | _ = Total Cove | r | Percent of Dominant Sp That Are OBL, FACW, | | 100 (| (A/B) |
| Sapling/Shrub Stratum (Plot size: 15 ft) | 15 | Yes | OBL | Prevalence Index wor | | | |
| Salix nigra Salix discolor | 15 | Yes | FACW | Total % Cover of: | | ultiply by: | |
| Salix discolor Cornus alba | 10 | | FACW | OBL species 55 | | | |
| 4 | | | TAOV | FACW species 14 | | | _ |
| 5. | | | | FAC species 0 | | | _ |
| | 40 | = Total Cover | | FACU species 0 | | 0 | _ |
| Herb Stratum (Plot size: 5 ft) | | | | UPL species 0 | | 0 | _ |
| 1. Phalaris arundinacea | 80 | Yes | FACW | | | 345 | — (D) |
| Solidago gigantea | 10 | No | FACW | <u> </u> | ` ' / | 1.73 | (B) |
| 3 | | | | Prevalence Inde | | | |
| 4 | | | | Hydrophytic Vegetation | | | |
| 5 | | | | X 1 - Rapid Test for | , , , | egetation | |
| 6. | | | | X 2 - Dominance Te | | | |
| 7 | | | | X 3 - Prevalence Inc | lex is ≤3.0¹ | | |
| 8 | | | | 4 - Morphological (Provide supporting data | | senarate sheet | ١ |
| 9 | | | | Problematic Hydro | | , | • |
| 10 | | = Total Cover | | ¹ Indicators of hydric soil and we | . , | ` . | , |
| Woody Vine Stratum (Plot size: 30 ft) | | TOTAL COVE | | disturbed or problematic. | , = | , 2, , ui | |
| 1 | | | | Hydrophytic | | | |
| 2. | | | | Vegetation | V | | |
| | 0 | = Total Cover | | Present? Yes | X No | | |
| Remarks: (Include photo numbers here or on a sepa | arate sheet.) | | | | | | |
| | | | | | | | |

SOIL Sampling Point: W10-1w

| Depth (inches) - 0-16 | Matrix Color (moist) 10YR 3/1 10YR 4/1 | 95 90 | Color 10YR 10YR | 4/6 5/6 | x Feature | Type ¹ | Loc ² | Texture | Remarks |
|--|--|-------------|-----------------------|--------------------------------|-------------|-------------------|------------------|--------------------------------|--|
| | | | | | | | М | Sandy Loam | |
| 16-24 | 10YR 4/1 | 90 | 10YR | 5/6 | 10 | | | | |
| | | | 10111 | | | С | M | Silty Clay Loam | |
| | | | | | | _ | | City Clay Loan | |
| | | | | | | | | | |
| · | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| . | | | | | | .— | | 2 | |
| Type: C=Cor Hydric Soil Inc | ncentration, D=Dep | oletion, RM | 1=Reduc | ced Matrix, I | MS=Mas | ked San | d Grains | | ining, M=Matrix. oblematic Hydric Soils³: |
| - | | | | | | | | | - |
| Histosol (A1 | | | | ndy Gleyed M | | | | Coast Prairie R | |
| Histic Epipe Black Histic | | | | ndy Redox (Sa pped Matrix (| , | | | Iron-Manganes Red Parent Ma | |
| Hydrogen S | ` ' | • | | k Surface (Sī | - | | | | ark Surface (F22) |
| Stratified La | | , | | my Mucky Mi | • |) | | Other (Explain i | · |
| 2 cm Muck (| | | | my Gleyed M | | | | | , |
| Depleted Be | elow Dark Surface (A1 | l1) | Dep | oleted Matrix | (F3) | | | | |
| Thick Dark S | Surface (A12) | | X Red | dox Dark Surf | ace (F6) | | | | |
| Sandy Muck | ky Mineral (S1) | | Dep | oleted Dark S | urface (F7 | 7) | | | |
| | Peat or Peat (S3) | | Red | dox Depression | ons (F8) | | | _ | |
| | ayer (if observed): | | | | | | | | |
| Type: | | | | | | | | | V |
| Depth (inc | ches): | | | | | | | Hydric Soil Present? | YesX No |
| Remarks: | | | | | | | | | |
| | | | | | | | | | |
| | N/ | | | | | | | | |
| YDROLOG | rology Indicators: | | | | | | | | |
| - | ators (minimum of o | ne is requ | ired: che | eck all that a | apply) | | | | (minimum of two required) |
| Surface Water | | <u> </u> | , | Nater-Stained | | ·0) | | Surface Soil Cra | |
| High Water 1 | | | | Aquatic Fauna | , | 9) | | Drainage Pattern | |
| Saturation (A | | | | True Aquatic P | |) | | Dry-Season Wat | |
| Water Marks | s (B1) | | | Hydrogen Sulfi | • | | | _ | e on Aerial Imagery (C9) |
| Sediment De | eposits (B2) | | | Oxidized Rhizo | spheres o | n Living Ro | oots (C3) | Stunted or Stress | |
| Drift Deposits | ts (B3) | | | Presence of Re | educed Iro | n (C4) | | X Geomorphic Pos | ition (D2) |
| Algal Mat or | Crust (B4) | | | Recent Iron Re | eduction in | Tilled Soils | s (C6) | X FAC-Neutral Tes | t (D5) |
| Iron Deposits | | | _ | Thin Muck Sur | face (C7) | | | | |
| | /isible on Aerial Imagery | | | Gauge or Well | , , | | | | |
| | getated Concave Surface | ce (B8) | | Other (Explain | in Remark | s) | | T | |
| Field Observa Surface Water | | :S | No | X De | pth (inch | nes): | | | |
| Carrage Maici | | | No | | pth (inch | · — | | | |
| | | | No | | pth (inch | · | | Wetland Hydrology Prese | mt2 Van Y Na |
| Water Table P Saturation Pre | esent Ye | | | | | | | | |
| Water Table P | | | | | | | | | nt? Yes X No |
| Water Table P Saturation Pre (includes capil | | | | | l photos, | previous | s inspec | | rit! TesNO |

| Project/Site: Castlerock | | City/ | /County: <u>Dak</u> | kota | Samı | oling Date: <u>1</u> | 0/20/2022 |
|--|-------------------------|----------------------------|----------------------------|---|-----------------|----------------------------------|----------------|
| Applicant/Owner: Stone Solar | | | | State: | Min Samı | pling Point: <u>v</u> | V11-1u |
| Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon | | | Section, T | ownship, Range: | T113N, R | 019W, S03 | |
| Landform (hillside, terrace, etc.): Footslope | İ | Local relief (d | - concave, conv | ex, none): Lin | ear | Slope | %: 2 |
| Subregion (LRR or MLRA): LRR_K_MLRA_91 Lat | ± 44.616003 | | Lon | g: -93.091334 | | Datum: | WGS84 |
| Soil Map Unit Name: Lindstrom silt loam, 1 to 4 per | cent slopes | | _ | NWI classific | ation: | - | |
| Are climatic / hydrologic conditions on the site typical for | this time of y | /ear? | Yes | No X | (If no, explain | n in Remarks. | .) |
| Are Vegetation, Soil, or Hydrology | significant | tly disturbed? | Are "Nor | — mal Circumstance | s" present? | Yes_X | No |
| Are Vegetation , Soil , or Hydrology | | | 416 | d, explain any ans | wers in Rema | arks.) | |
| SUMMARY OF FINDINGS – Attach site map sh | | | | sects, important f | eatures, etc. | | |
| Hydrophytic Vegetation Present? Yes | NoX | le | the Sampled | Area | | | |
| | No X | " | ithin a Wetlan | | s No | X | |
| Wetland Hydrology Present? Yes | No _X | _ | | | | | |
| Remarks: (Explain alternative procedures here or in a subpland meadow in roadside ditch south of soybean field that he | | | stem. Climatic co | nditions are drier tha | n normal. | | |
| VEGETATION – Use scientific names of pla | ants. | | | | | | |
| Tree Stratum (Plot size: 30 ft) | Absolute <u>% Cover</u> | Dominant <u>Species</u> | Indicator <u>Status</u> | Dominance Te | st worksheet | t: | |
| 1 | | | | Number of Dom | inant Species | 3 | |
| 2 | | | | That Are OBL, F | • | | (A) |
| 3 | | | | Total Number o | f Dominant | | |
| 4 | | | | Species Across | | 1 | (B) |
| 5 Sapling/Shrub Stratum (Plot size:15 ft) | _ | = Total Cove | er | Percent of Dom That Are OBL, F | • | | (A/B) |
| | | | | Prevalence Ind | | | `_ |
| 1 2 | | | | Total % C | over of: | Multiply | y by: |
| 3 | | | | OBL species | 0 | x 1 = | 0 |
| 4. | | | | FACW species | | - | |
| 5 | | | | FAC species | | x 3 = | 0 |
| F # | | = Total Cover | r | FACU species | | | 300 |
| Herb Stratum (Plot size: 5 ft) | | | | UPL species | 0 | x 5 = | 0 |
| 1. Bromus inermis | 65 | Yes | FACU | Column Totals: | 80 | - | 310 (B) |
| 2. Urtica dioica | 5 | No No | FACW | | ce Index = B/ | · ` ′ — | .88 |
| 3. Asclepias syriaca | | No No | FACU | Hydrophytic Ve | - | | |
| Cirsium arvense Sonchus oleraceus | | | | - 1 - Rapid | • | | ation |
| - Continue dioracció | | | | - 2 - Domina | • | . , . | 111011 |
| 6 | | | | | | | |
| 8 | | | | 3 - Prevale | | | |
| 9 | | | | 4 - Morpho (Provide suppo | | tations ' arks or on a separa | ate sheet) |
| 10. | | | | Problemat | ic Hydrophyti | c Vegetation¹ | (Explain) |
| Woody Vine Stratum (Plot size: 30 ft) | | = Total Cove | r | ¹ Indicators of hydric so disturbed or problema | | drology must be p | resent, unless |
| 1 | | | | Hydrophytic | | | |
| 2 | | | | Vegetation | | | |
| | 0 | = Total Cove | r | Present? | Yes | No _ | <u>X</u> |
| Remarks: (Include photo numbers here or on a sepa Debris from soybean harvest. | rate sheet.) | | | | | | |

SOIL Sampling Point: W11-1u

| Profile Desc | ription: (Describe to | the de | oth needed to docu | ment th | e indicat | tor or co | onfirm the absence of i | ndicators.) | |
|-------------------------------|---|-----------|--------------------------------|-------------|-------------------|------------------|---------------------------------------|-------------------------|--------------|
| Depth | Matrix | | | x Featur | | | | | |
| (inches) | Color (moist) | <u>%</u> | Color (moist) | <u>%</u> | Type ¹ | Loc ² | Texture | Ren | narks |
| 0-8 | 10YR 2/2 | 100 | | | | | Silty Clay Loam | | |
| 8-24 | 10YR 2/2 | 98 | 10YR 4/4 | 2 | С | М | Silty Clay Loam | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| ¹ Type: C=C | oncentration, D=Depl | etion, R | M=Reduced Matrix, | MS=Mas | sked San | d Grains | s. ² Location: PL=Po | ore Lining, M=Matı | ix. |
| Hydric Soil I | ndicators: | | | | | | Indicators fo | r Problematic Hy | dric Soils³: |
| Histosol (A | A1) | | Sandy Gleyed M | latrix (S4) | | | Coast Prai | rie Redox (A16) | |
| Histic Epip | edon (A2) | | Sandy Redox (S | • | | | Iron-Manga | anese Masses (F12) | |
| Black Histi | • • | | Stripped Matrix (| , | | | | t Material (F21) | |
| | Sulfide (A4) | | Dark Surface (S | • | | | | ow Dark Surface (F2 | 2) |
| | ayers (A5) | | Loamy Mucky M | | | | Other (Exp | olain in Remarks) | |
| 2 cm Muck | k (A10) Below Dark Surface (A11 | 1\ | Loamy Gleyed N Depleted Matrix | |) | | | | |
| | Surface (A12) | 1) | Redox Dark Sur | | | | | | |
| | cky Mineral (S1) | | Depleted Dark S | | 7) | | | | |
| | 5 cm Mucky Peat or Peat (S3) Redox Depressions (F8) | | | | | | | | |
| Restrictive L | ayer (if observed): | | | | | | | | |
| Type: | | | | | | | | | |
| Depth (in | ches): | | | | | | Hydric Soil Present | t? Yes _ | No _X |
| Remarks: | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| HYDROLO | GY | | | | | | | | |
| | drology Indicators: | | | | | | Secondary Indica | ators (minimum of tw | o required) |
| Primary Indic | ators (minimum of or | ne is req | uired; check all that | apply) | | | · · · · · · · · · · · · · · · · · · · | il Cracks (B6) | |
| Surface Wa | ater (A1) | | Water-Stained | Leaves (E | 39) | | Drainage Pa | atterns (B10) | |
| High Water | Table (A2) | | Aquatic Fauna | (B13) | | | Dry-Season | n Water Table (C2) | |
| Saturation | | | True Aquatic F | Plants (B14 | 4) | | Crayfish Bu | rrows (C8) | |
| Water Mark | ` ' | | Hydrogen Sulf | , | • | | Saturation \ | √isible on Aerial Image | ry (C9) |
| | Deposits (B2) | | Oxidized Rhize | • | • | oots (C3) | | Stressed Plants (D1) | |
| Drift Depos | or Crust (B4) | | Presence of R | | | o (C6) | Geomorphic | c Position (D2) | |
| Iron Depos | , , | | Thin Muck Sui | | i Tillea Soli | s (CO) | FAC-Neutra | il Test (D5) | |
| | Visible on Aerial Imagery | (B7) | Gauge or Well | |) | | | | |
| Sparsely V | egetated Concave Surface | e (B8) | Other (Explain | | | | | | |
| Field Observ | vations: | | | | , | | | | |
| Surface Wate | er Present Yes | · | | epth (incl | hes): | | | | |
| Water Table | Present Yes | · | | epth (incl | · — | | | | |
| Saturation Pr | | · — | No X De | epth (inc | hes): | | Wetland Hydrology P | resent? Y | esNo _X_ |
| (includes cap Describe Red | corded Data (stream o | gauge. r | nonitoring well. aeria | l photos | , previous | s inspec | tions), if available: | | |
| | (| J J-, . | | , | ,, | .,, | ,, | | |
| Remarks: | | | | | | | | | |
| | | | | | | | | | |

| Project/Site: Castlerock | | City/C | ounty: <u>Dak</u> | kota | Samp | ling Date: | 10/20/20 |)22_ |
|---|---------------------|---------------------|---------------------------|---|--------------------|-----------------|---------------|--------------------|
| Applicant/Owner: Stone Solar | | _ | | State: | Min Samp | ling Point: | W11-1w | |
| Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon | | | Section, T | ownship, Range: | | | | |
| Landform (hillside, terrace, etc.): Depression | | | | ex, none): Co | ncave | Slop | pe %: 3 | 3-4 |
| Subregion (LRR or MLRA): LRR_K_MLRA_91 Lat | | | | g: -93.091358 | | | WGS8 | 34 |
| Soil Map Unit Name: Estherville sandy loam, 2 to 6 | | | | NWI classific | ation: | | | |
| Are climatic / hydrologic conditions on the site typical for | | | Yes | No X | (If no, explain | in Remark | (s.) | |
| Are Vegetation X , Soil , or Hydrology | significant | tly disturbed? | Are "Nor | — —— mal Circumstance | s" present? | Yes | No | X |
| Are Vegetation , Soil , or Hydrology | | | (If neede | d, explain any ans | wers in Rema | rks.) | | |
| SUMMARY OF FINDINGS – Attach site map sh | | | ations, trans | sects, important f | eatures, etc. | | | |
| Hydrophytic Vegetation Present? Yes X | No | le th | e Sampled | Aroa | | | | |
| | No | | ie Sampleu in a Wetlan | | X No | | | |
| Wetland Hydrology Present? Yes X | No | _ | | | | | | |
| Remarks: (Explain alternative procedures here or in a s Partially harvested soybean field with a center pivot irrigation s | | , | rier than norm | al. | | | | |
| VEGETATION – Use scientific names of pla | ınts. | | | | | | | |
| Tree Stratum (Plot size:30 ft) | Absolute % Cover | Dominant Species | Indicator Status | Dominance Te | st worksheet: | | | |
| 1 | | | | | | | | |
| 2. | | | | Number of Dom That Are OBL, F | | | 2 | (A) |
| 3 | | | | | | | | ` / |
| 4 | | | | Total Number of Species Across | | | 2 | (B) |
| 5 | _ | = Total Cover | | Percent of Dom | inant Species | | | • |
| Sapling/Shrub Stratum (Plot size: 15 ft) | | | | That Are OBL, F | | | 00 | (A/B) |
| 1 | | | | Prevalence Ind Total % C | | | indicate in a | |
| 2 | | | | | | | iply by: | |
| 3 | | | | OBL species | | | | _ |
| 4 | | | | FACW species | | | | _ |
| 5 | 0 - | Total Cover | | FAC species | | x 3 = | | _ |
| <u>Herb Stratum</u> (Plot size: 5 ft) | | - Total Cover | | FACU species | | x 4 = | 0 | _ |
| 1. Bolboschoenus fluviatilis | 8 | Yes | OBL | UPL species | | x 5 = | 0 | _ |
| 2. Ranunculus sceleratus | 2 | Yes | OBL | Column Totals: | 10 | (A) | 10 | (B) |
| 3 | | | | Prevalen | ce Index = B/A | / = | 1 | _ |
| 4 | | | | Hydrophytic Ve | egetation Indi | cators: | | |
| 5 | | | | X 1 - Rapid | Test for Hydro | phytic Veg | etation | |
| 6 | | | | X 2 - Domina | ance Test is > | 50% | | |
| 7 | | | | X 3 - Prevale | ence Index is s | ≤3.0¹ | | |
| 8 | | | | 4 - Morpho | | | | |
| 9 | | | | I ' '' | rting data in Rema | | | , |
| 10 | | | | Problemat | , , , | Ū | ` . | , |
| Woody Vine Stratum (Plot size: 30 ft) | 10: | = Total Cover | | ¹ Indicators of hydric so disturbed or problema | | irology must be | e present, u | niess |
| 1 | | | | Hydrophytic | | | | |
| 2 | | | | Vegetation | ,, Y | | | |
| | | = Total Cover | | Present? | Yes X | No | | |
| Remarks: (Include photo numbers here or on a sepa Planted soybean crop. | rate sheet.) | | | | | | | |

US Army Corps of Engineers

SOIL Sampling Point: W11-1w

| 12-24 11 1Type: C=Conc Hydric Soil India Histosol (A1) Histic Epipedo Black Histic (A Hydrogen Sulf Stratified Laye 2 cm Muck (A' Depleted Belo Thick Dark Su Sandy Mucky | oyr 2/1 s oyr 2/1 s oyr 2/1 s opentration, D=Depletic cators: on (A2) A3) fide (A4) ers (A5) 10) ow Dark Surface (A11) inface (A12) | 93 5YR 98 5YR 99 5YR 99 5YR 99 5YR 99 5YR 99 5YR 99 5YR 90 | 3/4 3/4 | Matrix (S4) (S5) (S6) | Type¹ C C | M M | | ematic Hydric Soils ³ : x (A16) |
|--|--|--|--|---------------------------------|--------------|-----------|---|---|
| 12-24 11 1Type: C=Conc Hydric Soil India Histosol (A1) Histic Epipedo Black Histic (A Hydrogen Sulf Stratified Laye 2 cm Muck (A' Depleted Belo Thick Dark Su Sandy Mucky | centration, D=Depletic cators: on (A2) A3) fide (A4) ers (A5) 10) ow Dark Surface (A11) | 98 5YR on, RM=Redu Sa Sa Str Lo Lo De | andy Gleyed Matrix, andy Redox (Siripped Matrix ark Surface (Siripped (Sirip | | <u>C</u> | | Silty Clay Loam 2Location: PL=Pore Lining Indicators for ProbleCoast Prairie Redo. | ematic Hydric Soils ³ : x (A16) |
| 1Type: C=Conc Hydric Soil India Histosol (A1) Histic Epipedo Black Histic (A Hydrogen Sulf Stratified Laye 2 cm Muck (A' Depleted Belo Thick Dark Su Sandy Mucky | centration, D=Depletic fcators: on (A2) A3) fide (A4) ers (A5) 10) ow Dark Surface (A11) urface (A12) | on, RM=ReduSaStrDaLoLoDe | ndy Gleyed M ndy Redox (S ripped Matrix (rrk Surface (S | MS=Mas Matrix (S4) (S5) (S6) | | | s. ² Location: PL=Pore Linin Indicators for ProbleCoast Prairie Redo | ematic Hydric Soils ³ : x (A16) |
| 1Type: C=Conc Hydric Soil India Histosol (A1) Histic Epipedo Black Histic (A Hydrogen Sulf Stratified Laye 2 cm Muck (A' Depleted Belo Thick Dark Su Sandy Mucky | centration, D=Depletic fcators: on (A2) A3) fide (A4) ers (A5) 10) ow Dark Surface (A11) urface (A12) | on, RM=ReduSaStrDaLoLoDe | ndy Gleyed M ndy Redox (S ripped Matrix (rrk Surface (S | MS=Mas Matrix (S4) (S5) (S6) | | | s. ² Location: PL=Pore Linin Indicators for ProbleCoast Prairie Redo | ematic Hydric Soils ³ : x (A16) |
| Hydric Soil India Histosol (A1) Histic Epipedo Black Histic (A Hydrogen Sulf Stratified Laye 2 cm Muck (A' Depleted Belo Thick Dark Su Sandy Mucky | on (A2) A3) fide (A4) ers (A5) 10) bw Dark Surface (A11) urface (A12) | Sa St Da Lo Lo Lo | indy Gleyed M indy Redox (S ripped Matrix (irk Surface (S | Matrix (S4) (S5) (S6) | ked Sand | d Grains | Indicators for ProbleCoast Prairie Redo | ematic Hydric Soils ³ : x (A16) |
| Hydric Soil India Histosol (A1) Histic Epipedo Black Histic (A Hydrogen Sulf Stratified Laye 2 cm Muck (A' Depleted Belo Thick Dark Su Sandy Mucky | on (A2) A3) fide (A4) ers (A5) 10) bw Dark Surface (A11) urface (A12) | Sa St Da Lo Lo Lo | indy Gleyed M indy Redox (S ripped Matrix (irk Surface (S | Matrix (S4) (S5) (S6) | ked Sand | d Grains | Indicators for ProbleCoast Prairie Redo | ematic Hydric Soils ³ : x (A16) |
| Hydric Soil India Histosol (A1) Histic Epipedo Black Histic (A Hydrogen Sulf Stratified Laye 2 cm Muck (A' Depleted Belo Thick Dark Su Sandy Mucky | on (A2) A3) fide (A4) ers (A5) 10) bw Dark Surface (A11) urface (A12) | Sa St Da Lo Lo Lo | indy Gleyed M indy Redox (S ripped Matrix (irk Surface (S | Matrix (S4) (S5) (S6) | ked Sand | d Grains | Indicators for ProbleCoast Prairie Redo | ematic Hydric Soils ³ : x (A16) |
| Hydric Soil India Histosol (A1) Histic Epipedo Black Histic (A Hydrogen Sulf Stratified Laye 2 cm Muck (A' Depleted Belo Thick Dark Su Sandy Mucky | on (A2) A3) fide (A4) ers (A5) 10) bw Dark Surface (A11) urface (A12) | Sa St Da Lo Lo Lo | indy Gleyed M indy Redox (S ripped Matrix (irk Surface (S | Matrix (S4) (S5) (S6) | ked San | d Grains | Indicators for ProbleCoast Prairie Redo | ematic Hydric Soils ³ : x (A16) |
| Hydric Soil India Histosol (A1) Histic Epipedo Black Histic (A Hydrogen Sulf Stratified Laye 2 cm Muck (A' Depleted Belo Thick Dark Su Sandy Mucky | on (A2) A3) fide (A4) ers (A5) 10) bw Dark Surface (A11) urface (A12) | Sa St Da Lo Lo Lo | indy Gleyed M indy Redox (S ripped Matrix (irk Surface (S | Matrix (S4) (S5) (S6) | ked Sand | d Grains | Indicators for ProbleCoast Prairie Redo | ematic Hydric Soils ³ : x (A16) |
| Hydric Soil India Histosol (A1) Histic Epipedo Black Histic (A Hydrogen Sulf Stratified Laye 2 cm Muck (A' Depleted Belo Thick Dark Su Sandy Mucky | on (A2) A3) fide (A4) ers (A5) 10) bw Dark Surface (A11) urface (A12) | Sa St Da Lo Lo Lo | indy Gleyed M indy Redox (S ripped Matrix (irk Surface (S | Matrix (S4) (S5) (S6) | ked Sand | d Grains | Indicators for ProbleCoast Prairie Redo | ematic Hydric Soils ³ : x (A16) |
| Hydric Soil India Histosol (A1) Histic Epipedo Black Histic (A Hydrogen Sulf Stratified Laye 2 cm Muck (A' Depleted Belo Thick Dark Su Sandy Mucky | on (A2) A3) fide (A4) ers (A5) 10) bw Dark Surface (A11) urface (A12) | Sa St Da Lo Lo Lo | indy Gleyed M indy Redox (S ripped Matrix (irk Surface (S | Matrix (S4) (S5) (S6) | ked Sand | d Grains | Indicators for ProbleCoast Prairie Redo | ematic Hydric Soils ³ : x (A16) |
| Hydric Soil India Histosol (A1) Histic Epipedo Black Histic (A Hydrogen Sulf Stratified Laye 2 cm Muck (A' Depleted Belo Thick Dark Su Sandy Mucky | on (A2) A3) fide (A4) ers (A5) 10) bw Dark Surface (A11) urface (A12) | Sa St Da Lo Lo De | indy Gleyed M indy Redox (S ripped Matrix (irk Surface (S | Matrix (S4) (S5) (S6) | ked San | d Grains | Indicators for ProbleCoast Prairie Redo | ematic Hydric Soils ³ : x (A16) |
| Histosol (A1) Histic Epipedo Black Histic (A Hydrogen Sulf Stratified Laye 2 cm Muck (A Depleted Belo Thick Dark Su Sandy Mucky | on (A2) A3) fide (A4) ers (A5) 10) bw Dark Surface (A11) urface (A12) | Sa Str Da Lo Lo De | indy Redox (S ripped Matrix (ark Surface (S | (S6) | | | Coast Prairie Redo | x (A16) |
| Histic Epipedo Black Histic (A Hydrogen Sulf Stratified Laye 2 cm Muck (A Depleted Belo Thick Dark Su Sandy Mucky | A3) fide (A4) ers (A5) 10) bw Dark Surface (A11) urface (A12) | Sa Str Da Lo Lo De | indy Redox (S ripped Matrix (ark Surface (S | (S6) | | | | |
| Black Histic (A Hydrogen Sulf Stratified Laye 2 cm Muck (A Depleted Belo Thick Dark Su Sandy Mucky | A3) fide (A4) ers (A5) 10) bw Dark Surface (A11) urface (A12) | Str Da Lo. De | ripped Matrix on the Surface (S | (S6) | | | iron-iviandanese ivi | asses (F12) |
| Hydrogen Sulf Stratified Laye 2 cm Muck (A Depleted Belo Thick Dark Su Sandy Mucky | ride (A4) ers (A5) 10) bw Dark Surface (A11) urface (A12) | Da Lo. Lo. De | ark Surface (S | | | | Red Parent Materia | |
| Stratified Laye 2 cm Muck (A Depleted Belo Thick Dark Su Sandy Mucky | ers (A5) 10) ow Dark Surface (A11) urface (A12) | LoLo | • | | | | Very Shallow Dark | |
| 2 cm Muck (A Depleted Belo Thick Dark Su Sandy Mucky | 10) ow Dark Surface (A11) urface (A12) | Lo. | | ineral (F1) |) | | Other (Explain in R | ` , |
| Thick Dark Su Sandy Mucky | ırface (A12) | | amy Gleyed N | | | | | • |
| Sandy Mucky | | | pleted Matrix | (F3) | | | | |
| | Thick Dark Surface (A12) Sandy Mucky Mineral (S1) X Redox Dark Surface (F6) Depleted Dark Surface (F7) | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| _ | er (if observed): | | | | | | | |
| Type: | | | | | | | | V |
| Depth (inche | es): | | | | | | Hydric Soil Present? | Yes X No |
| Remarks: | | | | | | | | |
| | | | | | | | | |
| IVDDOL OCY | 7 | | | | | | | |
| HYDROLOGY Wetland Hydrol | | | | | | | | |
| = | ors (minimum of one is | s required: ch | eck all that | apply) | | | Secondary Indicators (mi | |
| Surface Water | | , | | | 0) | | Surface Soil Cracks | |
| High Water Tak | | | Water-Stained Aquatic Fauna | , | 9) | | Drainage Patterns (B | • |
| Saturation (A3) | | | True Aquatic F | |) | | Dry-Season Water Ta | |
| Water Marks (E | 31) | | .Hydrogen Sulf | • | | | X Saturation Visible on | |
| Sediment Depo | osits (B2) | | Oxidized Rhiz | ospheres o | n Living Ro | oots (C3) | Stunted or Stressed | |
| Drift Deposits (I | (B3) | | Presence of R | teduced Iro | n (C4) | | X Geomorphic Position | (D2) |
| Algal Mat or Cr | rust (B4) | | Recent Iron R | eduction in | Tilled Soils | s (C6) | X FAC-Neutral Test (D | 5) |
| Iron Deposits (E | • | | Thin Muck Su | rface (C7) | | | | |
| | ble on Aerial Imagery (B7) | | Gauge or Wel | l Data (D9) | | | | |
| Sparsely Vegetated Concave Surface (B8)Other (Explain in Remarks) | | | | | | | | |
| Field Observation Surface Water P | | No | X De | epth (inch | nes): | | | |
| Water Table Pre | | — No | | epth (inch | | | | |
| Saturation Prese | | — No | | epth (inch | ´ — | | Watland Hydrology Drasset |) Voc Y Na |
| (includes capilla | _ | | | <u> </u> | | | Wetland Hydrology Present? | ? Yes <u>X</u> No |
| Describe Record | ded Data (stream gau | ge, monitorin | ıg well, aeria | al photos, | previous | inspec | tions), if available: | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: | | | | | | | | |

| Project/Site: Castlerock | | City/County: | Dakota | Sampling | Date: <u>10/20/2022</u> |
|---|------------------------|--------------------------------------|--|--|----------------------------|
| Applicant/Owner: Stone Solar | | | State: | Min Sampling | Point: W12-1u |
| Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon | | Sectio | n, Township, Range: | T113N, R019\ | N, S04 |
| Landform (hillside, terrace, etc.): Hillside | Local re | elief (concave, c | onvex, none): Lin | near | Slope %: 7-8 |
| Subregion (LRR or MLRA): LRR_K_MLRA_91 Lat: | 44.617265 | | Long: -93.107247 | | Datum: WGS84 |
| Soil Map Unit Name: Klinger silt loam, 1 to 5 percen | it slopes | | NWI classific | ation: | |
| Are climatic / hydrologic conditions on the site typical for | this time of year? | Yes | No X | (If no, explain in | Remarks.) |
| Are Vegetation X , Soil , or Hydrology | significantly distu | rbed? Are " | Normal Circumstance | es" present? | Yes No X |
| Are Vegetation , Soil , or Hydrology | naturally problem | atic? (If ne | eded, explain any ans | swers in Remarks. |) |
| SUMMARY OF FINDINGS – Attach site map sh | — owing sampling po | int locations, t | ransects, important f | features, etc. | |
| Hydrophytic Vegetation Present? Yes | NoX | la the Sama | lad Araa | | |
| Hydric Soil Present? Yes | No X | Is the Samp within a We | | s No | Κ |
| Wetland Hydrology Present? Yes | NoX | Within a we | tiana. | | |
| Remarks: (Explain alternative procedures here or in a s Successfully harvested corn field with a center pivot irrigation s | | ons are drier than | normal. | | |
| VEGETATION – Use scientific names of pla | nts. | | | | |
| Tree Stratum (Plot size: 30 ft) | Absolute Domi Spec | inant Indicato cies <u>Status</u> | | est worksheet: | |
| 1 | | | Number of Dom | • | |
| 2 | | | That Are OBL, I | FACW, or FAC: | (A) |
| 3 | | | Total Number o | | |
| 5. | | | Species Across | s All Strata: | (B) |
| Sapling/Shrub Stratum (Plot size:15 ft) | 0 = Total | l Cover | Percent of Dom That Are OBL, I | ninant Species FACW, or FAC: | NaN (A/B) |
| 1 | | | Prevalence Inc | dex worksheet: | |
| 2. | | | Total % C | Cover of: | Multiply by: |
| 3. | | | OBL species | 0 x | 1 =0 |
| 4 | | | FACW species | x | 2 =0 |
| 5 | | | FAC species | 0 x | 3 =0 |
| Herb Stratum (Plot size: 5 ft) | 0 = Total (| Cover | FACU species | 0 x | 4 =0 |
| | | | UPL species | 0 x | 5 =0 |
| 1 | | | Column Totals: | · 0 (A | A) 0 (B) |
| | | | — Prevalen | nce Index = B/A = | |
| 3 4 | | | Hydrophytic V | egetation Indicat | ors: |
| 5 | | | — I | Test for Hydrophy | |
| 6. | | | | nance Test is >50% | - |
| 7. | | | | lence Index is ≤3.0 | |
| 8. | | | | | |
| 9. | | | | iological Adaptation orting data in Remarks o | |
| 10 | | | Problemat | tic Hydrophytic Ve | egetation¹ (Explain) |
| Woody Vine Stratum (Plot size: 30 ft) | = Total (| Cover | ¹ Indicators of hydric s disturbed or problema | | gy must be present, unless |
| 1 | | | — Hydrophytic | | |
| 2 | 0 = Total (| | Vegetation Present? | Yes | No X |
| Remarks: (Include photo numbers here or on a sepa | | | | | |
| Successfully harvested corn field with no volunteer vegetation | | unted or stress co | rn crop. | | |

SOIL Sampling Point: W12-1u

| Profile Desc Depth | ription: (Describe Matrix | to the dep | | ument th | | tor or co | onfirm the absence of | indicators.) |
|--|------------------------------|--------------|----------------------------|---------------|-------------------|------------------|-----------------------|---|
| (inches) | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | Texture | Remarks |
| 0-14 | 10YR 2/2 | 100 | | | | | Silty Clay Loam | |
| 14-24 | 10YR 2/2 | 98 | 10YR 3/4 | | | | Silty Clay Loam | |
| 14-24 | 101K 2/2 | | 101K 3/4 | | | IVI | Silly Clay Loan | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | _ | |
| | | | | | | | | |
| | | | | | | | | |
| 1T C=C | tustian D-D | | A-Daduard Matrix | _ NC=N= | olead Com | | 21 anation, DI = 0 | Dana Limina M-Makriy |
| Hydric Soil I | oncentration, D=Dendicators: | epietion, Ki | VI=Reduced Matrix | i, MS=Mas | sked San | d Grains | | Pore Lining, M=Matrix. for Problematic Hydric Soils³: |
| _ | | | Sandy Clayed | Motrix (S4) | | | | airie Redox (A16) |
| Histosol (A | pedon (A2) | | Sandy Gleyed Sandy Redox (| | | | | ganese Masses (F12) |
| Black Hist | | | Stripped Matrix | | | | | ent Material (F21) |
| | Sulfide (A4) | | Dark Surface (| | | | | allow Dark Surface (F22) |
| Stratified L | _ayers (A5) | | Loamy Mucky | Mineral (F1 |) | | Other (Ex | xplain in Remarks) |
| 2 cm Mucl | k (A10) | | Loamy Gleyed | Matrix (F2) |) | | | |
| Depleted I | Below Dark Surface (A | A11) | Depleted Matri | x (F3) | | | | |
| | k Surface (A12) | | Redox Dark Su | | | | | |
| Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) 5 cm Mucky Peat or Peat (S3) Redox Depressions (F8) | | | | | | | | |
| 5 cm Mucky Peat or Peat (S3) Redox Depressions (F8) Restrictive Layer (if observed): | | | | | | | 1 | |
| | ayer (if observed |): | | | | | | |
| Type: | | | | | | | | nt? Yes No X |
| Depth (in | iches). | | | | | | Hydric Soil Prese | nt? Yes No _^_ |
| Remarks: | | | | | | | | |
| | | | | | | | | |
| HYDROLO | GV | | | | | | | |
| | drology Indicators | · | | | | | | |
| - | cators (minimum of | | uired: check all tha | t apply) | | | - | icators (minimum of two required) |
| Surface W | • | • | Water-Staine | | 39) | | | oil Cracks (B6) |
| | r Table (A2) | | Aquatic Faur | , | 30) | | | Patterns (B10) on Water Table (C2) |
| Saturation | | | True Aquatio | | 1) | | | Burrows (C8) |
| Water Mar | ks (B1) | | Hydrogen St | ulfide Odor (| C1) | | <u></u> | n Visible on Aerial Imagery (C9) |
| Sediment [| Deposits (B2) | | Oxidized Rhi | izospheres o | on Living Ro | oots (C3) | Stunted or | r Stressed Plants (D1) |
| Drift Depos | sits (B3) | | Presence of | Reduced Iro | on (C4) | | Geomorph | hic Position (D2) |
| Algal Mat o | or Crust (B4) | | Recent Iron | Reduction in | Tilled Soil | s (C6) | FAC-Neut | tral Test (D5) |
| Iron Depos | | | Thin Muck S | urface (C7) | | | | |
| Inundation Visible on Aerial Imagery (B7)Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) | | | | | | | | |
| Field Obser | | ace (B8) | Other (Expla | in in Remar | ks) | | T | |
| Surface Water | | 'es | No X [| Depth (inc | hes): | | | |
| Water Table | 01 1 1000110 | es — | | · | | | | |
| Saturation P | | 'es | | Depth (inc | · | | Wetland Hydrology | Present? Ves No Y |
| (includes capillary fringe) | | | | | | | Wetland Hydrology | Present? |
| Describe Re | corded Data (strea | m gauge, n | nonitoring well, aer | ial photos | , previous | s inspec | tions), if available: | |
| Remarks: | | | | | | | | |
| | | | | | | | | |

| Project/Site: Castlerock | | City/Cou | nty: <u>Dal</u> | kota | San | npling Date: | 10/20/202 | 22_ |
|---|-------------------|------------------|--------------------|--|--------------------|----------------|-----------------|-------|
| Applicant/Owner: Stone Solar | | | | State: | Min San | npling Point | : <u>W12-1w</u> | |
| Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon | | | Section, T | ownship, Range: | T113N, F | R019W, S0 | 4 | |
| Landform (hillside, terrace, etc.): Toeslope | Loc | cal relief (conc | ave, conv | ex, none): Co | ncave | Slo | ope %:3 | 3-4 |
| Subregion (LRR or MLRA): LRR_K_MLRA_91 Lat: | 44.617298 | | Lon | g: -93.106945 | | Datum: | WGS8 | 34 |
| Soil Map Unit Name: Klinger silt loam, 1 to 5 percen | it slopes | | | NWI classific | ation: | | | |
| Are climatic / hydrologic conditions on the site typical for | this time of year | r? | Yes | No X | (If no, expla | ain in Rema | rks.) | |
| Are Vegetation X , Soil , or Hydrology | significantly o | disturbed? | Are "Nor | mal Circumstance | es" present? | Yes_ | No _ | X |
| Are Vegetation , Soil , or Hydrology | naturally prob | blematic? | (If neede | ed, explain any ans | swers in Rem | narks.) | | |
| SUMMARY OF FINDINGS - Attach site map sh | owing sampling | g point location | ons, trans | sects, important f | eatures, etc | . | | |
| Hydrophytic Vegetation Present? Yes X | _ No | ls the | Sampled | Aroa | | | | |
| Hydric Soil Present? Yes X | _ No | | a Wetlar | | s_X_N | 0 | | |
| Wetland Hydrology Present? Yes X | _ No | | | | | | | |
| Remarks: (Explain alternative procedures here or in a s Farmed wetland community with a center pivot irrigation system | | | n normal. | | | | | |
| VEGETATION – Use scientific names of pla | nts. | | | | | | | |
| Tree Stratum (Plot size:30 ft) | | | ndicator Status | Dominance Te | st workshe | et: | | |
| 1 | | | | Number of Dom | ninant Specie | es | | |
| 2 | | | | That Are OBL, I | FACW, or FA | AC: | 1 (| (A) |
| 3 | | | | Total Number o | of Dominant | | | |
| 5. | | | | Species Across | All Strata: | | 1 (| (B) |
| Sapling/Shrub Stratum (Plot size: 15 ft) | 0 = | Total Cover | | Percent of Dom | | | 100 (| (A/B) |
| 1 | | | | Prevalence Inc | dex workshe | eet: | | - |
| 2 | | | | Total % C | Cover of: | Mul | tiply by: | |
| 3. | | | | OBL species | 0 | _ x 1 = _ | 0 | _ |
| 4 | | | | FACW species | 5 | x 2 = | 10 | |
| 5 | | | | FAC species | 0 | x 3 = | 0 | |
| Herb Stratum (Plot size: 5 ft) | = To | otal Cover | | FACU species | 0 | x 4 = | 0 | |
| | 5 | Yes | FACW | UPL species | 0 | x 5 = _ | 0 | |
| | | | FACW | Column Totals: | 5 | (A) | 10 | (B) |
| 3 | | | | Prevalen | nce Index = E | | 2 | |
| 4 | | | | Hydrophytic V | egetation In | dicators: | | |
| 5 | | | | _X 1 - Rapid | Test for Hvd | rophytic Ve | getation | |
| 6. | | | | X 2 - Domina | - | | 3 | |
| 7. | | | | X 3 - Prevale | | | | |
| 8 | | | | 4 - Morpho | | | | |
| 9 | | | | | orting data in Rer | | eparate sheet) | t) |
| 10 | | | | Problemat | tic Hydrophy | tic Vegetation | on¹ (Explai | iin) |
| Woody Vine Stratum (Plot size: 30 ft) | 5 = To | otal Cover | | ¹ Indicators of hydric s disturbed or problema | | nydrology must | be present, ur | nless |
| 1 | | | | Hydrophytic | | | | |
| 2 | 0 | | | Vegetation Present? | Yes X | No | | |
| | 0 = Te | otal Cover | | Present? | res ^ | NO | | |
| Remarks: (Include photo numbers here or on a sepal Harvested corn does not appear stressed or stunted. | rate sheet.) | | | | | | | |

US Army Corps of Engineers

SOIL Sampling Point: W12-1w

| Profile Desc | ription: (Describe | to the dep | th needed to docu | ment th | e indicat | or or co | onfirm the absence of in | dicators.) |
|--|---|--------------|--|------------|-------------------|------------------|----------------------------------|--|
| Depth | Matrix | | Redo | x Featur | es | | | |
| (inches) | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | Texture | Remarks |
| 0-7 | 10YR 2/1 | 100 | | | | | Silty Clay Loam | |
| 7-16 | 10YR 2/1 | 97 | 10YR 3/6 | 3 | <u> </u> | M_ | Silty Clay Loam | |
| 16-24 | 10YR 2/1 | 82 | 10YR 3/6 | 3 | <u>C</u> | M_ | Silty Clay Loam | |
| 16-24 | 10YR 3/1 | 15 | | 0 | | | Silty Clay Loam | |
| | | - — - — | | | | | | |
| ¹Type: C=C | oncentration, D=De | epletion, RN | /I=Reduced Matrix, | MS=Mas | ked San | d Grains | s. ² Location: PL=Por | e Lining, M=Matrix. |
| Hydric Soil I | ndicators: | | | | | | Indicators for | Problematic Hydric Soils ³ : |
| Histosol (A Histic Epip Black Histi Hydrogen | edon (A2) | | Sandy Gleyed M Sandy Redox (S Stripped Matrix (Dark Surface (S) | 5) S6) | | | Iron-Mangar Red Parent | e Redox (A16) nese Masses (F12) Material (F21) w Dark Surface (F22) |
| l — | ayers (A5) | | Loamy Mucky M | | | | Other (Expla | ain in Remarks) |
| 2 cm Muck | | | Loamy Gleyed M | | | | | |
| I — · | Below Dark Surface (A | A11) | Depleted Matrix | | | | | |
| | Surface (A12) | | A Redox Dark Surf | | | | | |
| | Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) | | | | | | | |
| | xy Peat or Peat (S3) | | Redox Depression | ons (F8) | | | | |
| | ayer (if observed) |): | | | | | | |
| Type: Depth (in | ches): | | | | | | Hydric Soil Present? | ? Yes ^X No |
| Remarks: | · | | | | | | 1 - | |
| LIVEROLO | ov. | | | | | | | |
| HYDROLO | | | | | | | | |
| Primary Indic | | | ired; check all that | apply) | | | Secondary Indicat Surface Soil | ors (minimum of two required) Cracks (B6) |
| Surface Wa | * * | | Water-Stained | | 39) | | Drainage Pat | terns (B10) |
| _ • | Table (A2) | | Aquatic Fauna | ` ' | | | | Nater Table (C2) |
| Saturation Water Mark | • | | True Aquatic P | , | • | | Crayfish Burr | |
| | Deposits (B2) | | Hydrogen Sulfi | , | • | oto (C2) | | sible on Aerial Imagery (C9) |
| Drift Depos | | | Presence of Re | • | • | oois (C3) | | ressed Plants (D1) |
| | r Crust (B4) | | Recent Iron Re | | | c (C6) | Geomorphic X FAC-Neutral | |
| Iron Depos | | | Thin Muck Sur | | Tilled Coll | 3 (00) | FAC-Neutral | Test (D5) |
| | Visible on Aerial Image | ery (B7) | Gauge or Well | . , | | | | |
| Sparsely V | egetated Concave Surf | ace (B8) | Other (Explain | | | | | |
| Field Observ | | • | | | / | | | |
| Surface Wate | er Present Y | 'es | No X De | pth (incl | nes): | | | |
| Water Table | Present Y | 'es | No X De | pth (incl | nes): | | | |
| Saturation Pr (includes cap | | es | No X De | epth (incl | nes): | | Wetland Hydrology Pro | esent? Yes <u>X</u> No |
| | | m gauge, m | onitoring well, aeria | I photos | , previous | sinspec | tions), if available: | |
| Remarks: | | | | | | | | |

| Project/Site: Castlerock | | City/County: | Dakota | Sampling | Date: 10/20/2022_ |
|--|--------------------------------------|---|--|---|----------------------------|
| Applicant/Owner: Stone Solar | | | State: | Min Sampling | Point: W13-1u |
| Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon | | Section | on, Township, Range: | T113N, R019\ | W, S04 |
| Landform (hillside, terrace, etc.): Hillside | Local re | elief (concave, d | convex, none): Lin | near | Slope %: 4-5 |
| Subregion (LRR or MLRA): LRR_K_MLRA_91 Lat: | 44.616714 | | Long: -93.113559 | Г | Datum: WGS84 |
| Soil Map Unit Name: Hawick gravelly sandy loam, 6 | to 12 percent slop | es | NWI classific | cation: PEM1 | Af |
| Are climatic / hydrologic conditions on the site typical for | this time of year? | Yes | No X | (If no, explain in | Remarks.) |
| Are Vegetation X , Soil , or Hydrology | significantly distu | rbed? Are | "Normal Circumstance | es" present? | Yes No X |
| Are Vegetation , Soil , or Hydrology | naturally problem | atic? (If ne | eeded, explain any ans | swers in Remarks. | .) |
| SUMMARY OF FINDINGS – Attach site map she | – owing sampling po | int locations, t | transects, important t | features, etc. | |
| Hydrophytic Vegetation Present? Yes | X | le the Same | alad Araa | | |
| Hydric Soil Present? Yes | No X | Is the Samp within a We | | s No | X |
| Wetland Hydrology Present? Yes | _ No <u>X</u> | Within a W | Juliu I C. | | <u> </u> |
| Remarks: (Explain alternative procedures here or in a s Successfully harvested corn field with a center pivot irrigation sy | | ons are drier than | normal. | | |
| VEGETATION – Use scientific names of pla | nts. | | | | |
| Tree Stratum (Plot size: 30 ft) | Absolute Domi <u>% Cover Spec</u> | inant Indicat <u>cies</u> <u>Statu</u> | l | est worksheet: | |
| 1 | | | — Number of Don | ninant Species | |
| 2 | | | | FACW, or FAC: | (A) |
| 3 | | | Total Number o | of Dominant | |
| 4 | | | — Species Across | | (B) |
| 5 | 0 = Total | I Cover | Percent of Dom | ninant Species FACW, or FAC: | NaN (A/B) |
| | | | | dex worksheet: | ` / |
| 1 | | | Total % C | Cover of: | Multiply by: |
| 3. | | | OBL species | 0 x | 1 = 0 |
| 4 | | | | | 2 = 0 |
| 5 | | | | | 3 = 0 |
| E # | 0 = Total (| Cover | FACU species | | 4 = 0 |
| Herb Stratum (Plot size: 5 ft) | | | UPL species | | 5 = 0 |
| 1 | | | Column Totals: | | A) 0 (B) |
| 2 | | | | nce Index = B/A = | |
| 3. | | | _ | /egetation Indicat | |
| 4 5. | | | <u> </u> | Test for Hydrophy | |
| 5 6 | | | _ · | nance Test is >50% | _ |
| 7. | | | | | |
| 8 | | | | lence Index is ≤3.0 | |
| 9. | | | | nological Adaptatio orting data in Remarks o | |
| 10. | | | Problema | itic Hydrophytic Ve | egetation¹ (Explain) |
| Woody Vine Stratum (Plot size: 30 ft) | 0 = Total (| Cover | ¹ Indicators of hydric s disturbed or problema | | gy must be present, unless |
| 1 | | | Hydrophytic | | |
| 2 | | | Vegetation | v | |
| | 0 = Total (| Cover | Present? | Yes | No X |
| Remarks: (Include photo numbers here or on a separ Harvested corn, no volunteer vegetation. Vegetation assumed | | due to the lack o | f hydric soil and wetland l | hydrology indicators. | |

SOIL Sampling Point: W13-1u

| Profile Desc | ription: (Describe to | the de | oth needed to docu | ment th | e indicat | tor or co | onfirm the absence o | of indicators.) | | |
|---------------|---|---------------|------------------------|-------------|-------------------|------------------|-----------------------------------|------------------------|----------------|-------------|
| Depth | Matrix | | Redo | x Featur | es | | | | | |
| (inches) | Color (moist) | % | Color (moist) | <u>%</u> | Type ¹ | Loc ² | Texture | | Remarks | |
| 0-5 | 10YR 2/2 | 100 | | | | | Sandy Clay Loam | | | |
| 5-10 | 10YR 2/2 | 98 | 10YR 3/6 | 2 | <u>C</u> | M | Sandy Clay Loam | | | |
| 10-20 | 10YR 2/1 | 85 | 10YR 3/6 | 15 | | M | Sandy Clay Loam | 10% gravel | | |
| 20-24 | 10YR 2/1 | 100 | | | | | Sandy Clay | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| Type: C=C | oncentration, D=Dep | letion. R | M=Reduced Matrix. | MS=Mas | ked San | d Grains | s. ² Location: PL= | Pore Lining, M= | :Matrix. | |
| Hydric Soil I | | , | , | | | _ | | for Problemation | | ils³: |
| Histosol (A | \1) | | Sandy Gleyed M | atrix (S4) | | | Coast F | Prairie Redox (A16) | ١ | |
| | pedon (A2) | | Sandy Redox (S | | | | | anganese Masses (| | |
| Black Hist | • • | | Stripped Matrix (| - | | | | rent Material (F21) | ' ' | |
| | Sulfide (A4) | | Dark Surface (S | • | | | | nallow Dark Surface | | |
| | ayers (A5) | | Loamy Mucky M | • |) | | | Explain in Remarks | | |
| 2 cm Muck | | | Loamy Gleyed M | | | | | _xpiaiii iii itemano | ·) | |
| | Selow Dark Surface (A1 | 1) | Depleted Matrix | | , | | | | | |
| | Surface (A12) | ') | Redox Dark Surf | | | | | | | |
| | cky Mineral (S1) | | Depleted Dark S | | 7) | | | | | |
| | | | | - | ., | | | | | |
| | 5 cm Mucky Peat or Peat (S3) Redox Depressions (F8) Restrictive Layer (if observed): | | | | | | | | | |
| Type: | , (00000 | | | | | | | | | |
| Depth (in | ches): | | | | | | Hydric Soil Pres | ent? Ye | s N | lo X |
| Remarks: | | | | | | | • | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| HYDROLO | GY | | | | | | | | | |
| Wetland Hyd | drology Indicators: | | | | | | Secondary In | dicators (minimum | of two require | rd) |
| Primary Indic | ators (minimum of or | ne is req | uired; check all that | apply) | | | | Soil Cracks (B6) | or two require | <u>.u.j</u> |
| Surface Wa | ater (A1) | | Water-Stained | Leaves (E | 39) | | | e Patterns (B10) | | |
| High Wate | Table (A2) | | Aquatic Fauna | | • | | | ison Water Table (C2 | 2) | |
| Saturation | (A3) | | True Aquatic F | lants (B14 | 1) | | | Burrows (C8) | -, | |
| Water Mar | ks (B1) | | Hydrogen Sulf | de Odor (| C1) | | | on Visible on Aerial I | magery (C9) | |
| Sediment [| Deposits (B2) | | Oxidized Rhize | spheres o | on Living R | oots (C3) | | or Stressed Plants (| | |
| Drift Depos | sits (B3) | | Presence of R | educed Iro | on (C4) | | | phic Position (D2) | , | |
| Algal Mat o | or Crust (B4) | | Recent Iron Re | eduction in | Tilled Soil | s (C6) | | utral Test (D5) | | |
| Iron Depos | its (B5) | | Thin Muck Sur | face (C7) | | | | , , | | |
| Inundation | Visible on Aerial Imagery | (B7) | Gauge or Well | Data (D9) |) | | | | | |
| Sparsely V | Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) | | | | | | | | | |
| Field Observ | vations: | | | | | | | | | |
| Surface Wate | er Present Yes | · | | pth (incl | hes): | | | | | |
| Water Table | Water Table Present Yes No X Depth (inches): | | | | | | | | | |
| Saturation Pr | | · | No X De | pth (incl | hes): | | Wetland Hydrology | / Present? | Yes | No X |
| (includes cap | | | | | | | | · - | | |
| Describe Red | corded Data (stream | gauge, r | nonitoring well, aeria | ı pnotos | , previou | s inspec | uons), it available: | | | |
| Remarks: | | | | | | | | | | |
| | | | | | | | | | | |

| Project/Site: Castlerock | | City/ | /County: | Dakota | Sampl | ling Date: | 10/20/2022 |
|--|--------------------|---------------------|-------------------|---|---------------------|----------------|------------------|
| Applicant/Owner: Stone Solar | | | | State: | Min Samp | ling Point: | W13-1w |
| Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon | | | Section | on, Township, Range: | T113N, R0 | 19W, S04 | |
| Landform (hillside, terrace, etc.): Toeslope | | Local relief (d | concave, c | convex, none): Co | ncave | Slop | oe %: <u>2-3</u> |
| Subregion (LRR or MLRA): LRR_K_MLRA_91 Lat | : <u>44.616604</u> | | | Long: <u>-93.113554</u> | | Datum: | WGS84 |
| Soil Map Unit Name: Hawick gravelly sandy loam, 6 | to 12 perce | ent slopes | | NWI classific | ation: PEI | M1Af | |
| Are climatic / hydrologic conditions on the site typical for | this time of y | /ear? | Yes | No X | (If no, explain | in Remark | .s.) |
| Are Vegetation , Soil , or Hydrology | significant | tly disturbed? | Are ' | "Normal Circumstance | es" present? | Yes_X | No |
| Are Vegetation , Soil , or Hydrology | naturally p | oroblematic? | (If ne | eeded, explain any ans | swers in Remai | rks.) | |
| SUMMARY OF FINDINGS – Attach site map sh | owing samp | ling point lo | cations, t | ransects, important t | features, etc. | | |
| Hydrophytic Vegetation Present? Yes X | No | le | the Samp | olod Aroa | | | |
| Hydric Soil Present? Yes X | No | _ wi | ithin a We | | s_X_No | | |
| Wetland Hydrology Present? Yes X | No | _ " | | | | | |
| Remarks: (Explain alternative procedures here or in a s Recently rough mowed shrub-carr community located southwe | | , | a center piv | ot irrigation system. Clima | atic conditions are | e drier than r | normal. |
| VEGETATION – Use scientific names of pla | ınts. | | | | | | |
| Tree Stratum (Plot size:30 ft) | Absolute % Cover | Dominant Species | Indicat Status | | est worksheet: | | |
| 1 | | | | — Number of Den | aim amt Cm a ai a a | | |
| 2 | | | | Number of DonThat Are OBL, | • | | 3 (A) |
| 3 | | | | | of Dominant | | |
| 4 | | | | Total Number of Species Across | | 3 | 3 (B) |
| 5 | _ | = Total Cove | er | Percent of Dom | | | 00 (A/B) |
| Sapling/Shrub Stratum (Plot size: 15 ft) | | | | That Are OBL, | | | 00 (A/B) |
| 1 | | | | Total % C | | | ply by: |
| 2 | | | | OBL species | | | |
| 3 | | | | OBL species FACW species | | | |
| 5. | | | | | | | |
| · | 0 = | Total Cover | r | — FAC species | | | 0 |
| <u>Herb Stratum</u> (Plot size: <u>5 ft</u>) | | | | FACU species | 0 | x 4 = | |
| 1. Equisetum hyemale | 70 | Yes | FACW | | | x 5 = | <u>0</u> (D) |
| 2. Typha x glauca | 50 | Yes | OBL | Column Totals: | | (A) | 330 (B) |
| 3. Phalaris arundinacea | 40 | Yes | FACW | | nce Index = B/A | ` | |
| Panicum dichotomiflorum | 30 | No | FACW | | • | | |
| 5 | | | | | Test for Hydro | | atation |
| 6 | | | | | ance Test is >5 | | |
| 7 | | | | — X 3 - Preval | ence Index is ≤ | ≦3.0¹ | |
| 8 9. | | | | | ological Adapta | | arate sheet) |
| 10 | | | - | — Problema | • | · | , |
| 10. | | Total Cove | | ¹Indicators of hydric s | , , , | Ū | ` ' ' |
| Woody Vine Stratum (Plot size: 30 ft) | | - Total Gove | | disturbed or problema | | 37 | • • |
| 1 | | | | Hydrophytic | | | |
| 2 | | | | Vegetation | V | | |
| | | = Total Cove | r | Present? | Yes X | _ No . | |
| Remarks: (Include photo numbers here or on a sepa Sandbar willow and red osier dogwood killed with herbicide. | rate sheet.) | | | | | | |

US Army Corps of Engineers

SOIL Sampling Point: W13-1w

| Profile Desc | ription: (Describe t | o the dep | oth needed to docu | ment th | e indicat | or or co | onfirm the absence of | indicators.) |
|---|--|-------------|--|--|--|------------------|---|---|
| Depth | Matrix | | Redo | x Featur | es | | | |
| (inches) | Color (moist) | % | Color (moist) | %_ | Type ¹ | Loc ² | Texture | Remarks |
| 0-4 | 10YR 2/2 | 100 | | | | | Sandy Loam | |
| 4-15 | 10YR 2/1 | 95 | 10YR 3/6 | _ 5 | С | M | Sandy Clay Loam | |
| 15-24 | 10YR 2/1 | 85 | 10YR 3/6 | 15 | С | M | Sandy Clay Loam | |
| | | | | | | | | |
| ¹Type: C=C | oncentration, D=Dep | oletion, RI | M=Reduced Matrix, | MS=Mas | ked San | d Grains | s. ² Location: PL=F | Pore Lining, M=Matrix. |
| Hydric Soil I | | | | | | | | or Problematic Hydric Soils ³ : |
| Histosol (A Histic Epip Black Histi Hydrogen Stratified L 2 cm Muck Depleted E Thick Dark Sandy Mu | edon (A2) ic (A3) Sulfide (A4) .ayers (A5) c (A10) Below Dark Surface (A2 c Surface (A12) cky Mineral (S1) cy Peat or Peat (S3) .ayer (if observed): | | Sandy Gleyed M Sandy Redox (S Stripped Matrix (Dark Surface (S: Loamy Mucky M Loamy Gleyed M Depleted Matrix X Redox Dark Surf Depleted Dark S Redox Depression | 5) S6) 7) ineral (F1 flatrix (F2) (F3) face (F6) urface (F7 | | | Coast PraIron-Man Red Pare Very Sha | airie Redox (A16) ganese Masses (F12) ent Material (F21) Illow Dark Surface (F22) explain in Remarks) |
| HYDROLO | GY | | | | | | | |
| Primary Indic Surface Wa High Water Saturation Water Mark Sediment I Drift Depos Algal Mat of Iron Depos Inundation | r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4) | γ (B7) | uired; check all that water-Stained — Water-Stained — Aquatic Fauna — True Aquatic F — Hydrogen Sulf — Oxidized Rhizo — Presence of Roman Recent Iron Recent Iron Roman Recent Iron | Leaves (E (B13) Plants (B14) ide Odor (Cospheres deduced Iro eduction in face (C7) Data (D9) | C1) C1) on Living Ro n (C4) Tilled Soil: | , , | Surface So Drainage I Dry-Seaso Crayfish B Saturation Stunted or X Geomorph | cators (minimum of two required) poil Cracks (B6) Patterns (B10) on Water Table (C2) turrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) nic Position (D2) ral Test (D5) |
| Field Observ | vations: | | | | / | | | |
| Surface Water Water Table Saturation Pr (includes cap | Present Yeresent Yeresent Yeresent Yeresent Yeresent Yeresent | es | No X De | epth (inchepth (inchepth (inchepth) | nes): nes): | | Wetland Hydrology | Present? Yes X No |
| Describe Red Remarks: | corded Data (stream | gauge, n | nonitoring well, aeria | i photos | , previous | s inspec | itions), if available: | |

| Project/Site: Castlerock | | City/ | County: <u>Dal</u> | kota | Sampl | ling Date: | 10/21/2 | 2022 |
|--|------------------|----------------|------------------------------|--------------------------------------|--------------------------------------|---------------|------------|----------|
| Applicant/Owner: Stone Solar | | | | State: | Min Samp | | | |
| Investigator(s): S. Kinsler, M. Volbrecht, D. Hixon | | | Section, T | ownship, Range: | T113N, R0 | 19W, S04 | + | |
| Landform (hillside, terrace, etc.): Backslope | L | ocal relief (c | oncave, conv | rex, none): Con | ivex | Slo | pe %: _ | 2-3 |
| Subregion (LRR or MLRA): LRR_K_MLRA_91 Lat: | 44.623151 | | Lon | g: -93.110685 | | Datum: | WGS | 84 |
| Soil Map Unit Name: Cylinder loam, 0 to 2 percent s | slopes | | | NWI classifica | | | | |
| Are climatic / hydrologic conditions on the site typical for | | | Yes | No X | (If no, explain | in Remarl | ks.) | |
| Are Vegetation X , Soil , or Hydrology | significantl | y disturbed? | Are "No | mal Circumstances | s" present? | Yes | _ No | X |
| Are Vegetation, Soil, or Hydrology | naturally p | roblematic? | (If neede | ed, explain any ansv | wers in Remai | rks.) | | |
| SUMMARY OF FINDINGS – Attach site map she | — owing sampl | ing point lo | cations, trans | sects, important fe | eatures, etc. | | | |
| Hydrophytic Vegetation Present? Yes | No X | | | | | | | |
| | No X | 1 | the Sampled thin a Wetlar | | No | Х | | |
| | No X | - Wii | iiiii a vvetiai | iur res | NO | | | |
| Remarks: (Explain alternative procedures here or in a s Cornfield with successfully harvested corn and a center pivot irr | | , | he farmed wetl | and swale and roadsid | le ditch Climatio | c conditions | are drier | than |
| normal. However, when aerial photos were reviewed and area | | | | | | | u.o uo. | |
| VEGETATION – Use scientific names of pla | nts. | | | | | | | |
| - 0 | Absolute | Dominant | Indicator | I | | | | |
| Tree Stratum (Plot size: 30 ft) | % Cover | <u>Species</u> | <u>Status</u> | Dominance Tes | st worksheet: | | | |
| 1 | | | | Number of Domi | • | | | |
| 2 3. | | | | That Are OBL, F | ACW, or FAC |): | 0 | _(A) |
| | | | | Total Number of | | | | |
| 5 | | | | Species Across | All Strata: | | 1 | _(B) |
| Sapling/Shrub Stratum (Plot size:15 ft) | _ | = Total Cove | er | Percent of Domi | | : | 0 | (A/B) |
| 1 | | | | Prevalence Inde | ex worksheet | t: | | |
| 2 | | | | Total % Co | over of: | Mult | iply by: | |
| 3. | | | | OBL species | 0 | x 1 = | 0 | |
| 4. | | | | FACW species | | | | |
| 5 | | | | FAC species | | | | |
| 5 ft . | = | Total Cover | | FACU species | 3 | x 4 = | 12 | |
| Herb Stratum (Plot size: 5 ft) | • | ., | 7.011 | UPL species | 0 | x 5 = | 0 | _ |
| 1. Cirsium arvense | 3 | Yes | FACU | Column Totals: | 3 | (A) | 12 | — (B) |
| 2 | | | | - | ce Index = B/A | | 4 | |
| 3 | | | | Hydrophytic Ve | | | | |
| 5. | | | | 1 - Rapid T | _ | | otation | |
| 6. | | | | | | | Clalloll | |
| 7. | | | | - 2 - Domina | | | | |
| 8 | | | | 3 - Prevale | | | | |
| 9. | | | | — 4 - Morpho (Provide support | logical Adapta ting data in Remar | | parate she | et) |
| 10. | | | | Problemati | c Hydrophytic | Vegetatio | n¹ (Expl | lain) |
| | _ | Total Cover | | ¹ Indicators of hydric so | | rology must b | e present, | unless |
| Woody Vine Stratum (Plot size: 30 ft) | | | | disturbed or problemati | IC. | | | |
| 1 | | | | Hydrophytic | | | | |
| 2 | | | | Vegetation | Vaa | Na | ~ | |
| | = | Total Cover | | Present? | Yes | No | <u> </u> | |
| Remarks: (Include photo numbers here or on a separ Harvested corn debris. | rate sheet.) | | | | | | | |

SOIL Sampling Point: W14-1u

| Profile Desc | ription: (Describe to | the de | oth needed to docu | ment th | e indicat | tor or co | onfirm the absence of i | ndicators.) | | |
|--------------------------------|---------------------------|-----------------|-------------------------------------|-------------|-------------------|------------------|-----------------------------|---|---------------|---|
| Depth | Matrix | | | x Featur | | | | | | |
| (inches) | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | Texture | Re | emarks | |
| 0-10 | 10YR 3/3 | 100 | | | | | Silt Loam | | | |
| 10-14 | 10YR 2/2 | 100 | | | | | Silty Clay Loam | | | |
| 14-24 | 10YR 2/2 | 98 | 10YR 3/6 | 2 | С | М | Silty Clay Loam | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| 17 0 0 | | . . | | | .— | | 21 11 21 2 | | | |
| Type: C=C Hydric Soil I | oncentration, D=Depl | letion, R | M=Reduced Matrix, | MS=Mas | sked San | d Grains | | ore Lining, M=Ma r Problematic H | | |
| _ | | | 0 1 01 11 | (0.4) | | | | | ., | |
| Histosol (A | • | | Sandy Gleyed M | | | | | rie Redox (A16) | 2) | |
| | pedon (A2) | | Sandy Redox (S Stripped Matrix (| • | | | | anese Masses (F1: nt Material (F21) | 2) | |
| Black Hist | Sulfide (A4) | | Dark Surface (S | - | | | | ow Dark Surface (F | =22) | |
| | _ayers (A5) | | Loamy Mucky M | • |) | | | ow bark odnace (i olain in Remarks) | 22) | |
| 2 cm Mucl | | | Loamy Gleyed M | | | | | Jan III (Gillano) | | |
| | Below Dark Surface (A1 | 1) | Depleted Matrix | | • | | | | | |
| | s Surface (A12) | - / | Redox Dark Surf | | | | | | | |
| l | cky Mineral (S1) | | Depleted Dark S | | 7) | | | | | |
| | ky Peat or Peat (S3) | | Redox Depression | | , | | | | | |
| Restrictive L | ayer (if observed): | | | | | | | | | |
| Type: | | | | | | | | | | |
| Depth (in | iches): | | | | | | Hydric Soil Presen | t? Yes | No X | |
| Remarks: | | | | | | | 1 - | <u> </u> | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| HYDROLO | GY | | | | | | | | | |
| | drology Indicators: | | | | | | Sacandary India | otoro (minimum of | two required) | |
| | cators (minimum of or | ne is requ | uired; check all that | apply) | | | · · | ators (minimum of ill il Cracks (B6) | two required) | |
| Surface W | ater (A1) | | Water-Stained | Leaves (E | 39) | | | atterns (B10) | | |
| High Wate | r Table (A2) | | Aquatic Fauna | | • | | | n Water Table (C2) | | |
| Saturation | (A3) | | True Aquatic F | lants (B14 | 1) | | Crayfish Bu | | | |
| Water Mar | ks (B1) | | Hydrogen Sulf | de Odor (| C1) | | | Visible on Aerial Ima | gery (C9) | |
| Sediment [| Deposits (B2) | | Oxidized Rhizo | spheres o | on Living Ro | oots (C3) | Stunted or | Stressed Plants (D1) |) | |
| Drift Depos | sits (B3) | | Presence of R | educed Iro | on (C4) | | Geomorphi | c Position (D2) | | |
| Algal Mat o | or Crust (B4) | | Recent Iron Re | eduction in | Tilled Soil | s (C6) | FAC-Neutra | al Test (D5) | | |
| Iron Depos | sits (B5) | | Thin Muck Sur | face (C7) | | | | | | |
| Inundation | Visible on Aerial Imagery | (B7) | Gauge or Well | Data (D9) |) | | | | | |
| | egetated Concave Surface | e (B8) | Other (Explain | in Remar | ks) | | 1 | | | |
| Field Obser | | | No V Do | nth (incl | haa\. | | | | | |
| Surface Wate | ., | | | epth (incl | | | | | | |
| Water Table | | | | pth (incl | · — | | | | | |
| Saturation Pi (includes cap | | ` — | No X De | epth (inc | | | Wetland Hydrology P | resent? | YesNo _ | X |
| | corded Data (stream | gauge, n | nonitoring well, aeria | l photos | , previous | s inspec | _t tions), if available: | | | |
| Remarks: | | | | | | | | | | |
| . tomanto. | | | | | | | | | | |

| Project/Site: Castlerock | | | City/Cour | nty: <u>Da</u> | kota | Sa | ampling Da | ite: 10/21 | /2022 |
|---|-----------------|--------------|---|---------------------|-------------------------------------|---------------------------------|--|---------------|------------|
| Applicant/Owner: Stone Solar | | | | | State: | Min Sa | ampling Po | oint: W14- | 1w |
| Investigator(s): M. Volbrecht, D. Hixon | | | | Section, 7 | гоwnship, Range: | T113N | , R019W, | S04 | |
| Landform (hillside, terrace, etc.): Depression | | Local reli | ef (conca | ave, conv | vex, none): _Co | ncave | | Slope %: | 1-2 |
| Subregion (LRR or MLRA): LRR_K_MLRA_91 La | at: 44.623168 | 3 | | Lor | ng: -93.110593 | | Datu | ım: WG | S84 |
| Soil Map Unit Name: Cylinder loam, 0 to 2 percen | | | | | NWI classific | | | | |
| Are climatic / hydrologic conditions on the site typical f | or this time of | year? | | Yes | No X | (If no, exp | olain in Rer | marks.) | |
| Are Vegetation X , Soil , or Hydrology | significan | ntly disturb | ed? | Are "No | mal Circumstance | s" present | ? Yes | No | X_ |
| Are Vegetation , Soil , or Hydrology _ | naturally | problema | tic? | (If neede | ed, explain any ans | swers in Re | emarks.) | | |
| SUMMARY OF FINDINGS – Attach site map s | | | | ons, tran | sects, important f | eatures, e | tc. | | |
| Hydrophytic Vegetation Present? Yes | X No | | lo the C | Campled | Aron | | | | |
| | X No | | | Sampled a Wetlar | | s X | No | | |
| Wetland Hydrology Present? Yes | X No | | *************************************** | | | | | | |
| Remarks: (Explain alternative procedures here or in a Sample point located in a wet meadow community of a roads | | | nd swale s | south of a | culvert inlet. Wetland | W14 is loca | ted within ar | n agricultura | l field |
| with center pivot irrigation system. Climatic conditions are dri | er than normal. | | | | | | | | |
| VEGETATION – Use scientific names of p | lants. | | | | | | | | |
| Tree Stratum (Plot size: 30 ft) | Absolute | Domin | _ | dicator | Dominanco To | et workeh | oot: | | |
| | % Cover | <u>Speci</u> | | <u>Status</u> | Dominance Te | St WOIKSII | eet. | | |
| 1 2 | | | | | Number of Don | | | 1 | (A) |
| 3. | | | | | That Are OBL, | FACVV, OI | | 1 | _(A) |
| 4. | | | | | Total Number of | | | 4 | (D) |
| 5 | | | | | Species Across | s All Strata: | : - | 1 | (B) |
| Sapling/Shrub Stratum (Plot size: 15 ft) | 0 | = Total (| Cover | | Percent of Dom That Are OBL, | • | | 100 | (A/B) |
| | | | | | Prevalence Inc | | | | <u> </u> |
| 1 2 | | | | | Total % C | Cover of: | N | Multiply by: | |
| 3. | | | | | OBL species | 0 | | 0 | |
| 4. | | | | | FACW species | | | 118 | |
| 5 | | | | | FAC species | | | | |
| - 6 | 0 | = Total C | over | | FACU species | 0 | x 4 = | | |
| Herb Stratum (Plot size: 5 ft) | | | | | UPL species | 0 | x 5 = | | |
| 1. Phalaris arundinacea | | Yes | | FACW | Column Totals: | | — (A) | 124 | —— (B) |
| Panicum dichotomiflorum | 10 | No | | FACW | | nce Index = | | 2.03 | (D) |
| 3. <u>Urtica dioica</u> | 4 | | | FACW | Hydrophytic V | | | | |
| 4. Apocynum cannabinum | | No_ | | FAC | X 1 - Rapid | _ | | | |
| 5 | | | | | 1 — | • | | vegetation | 1 |
| 7 | | | | | X 2 - Domin | | | | |
| 8. | | | | | X 3 - Preval | | | | |
| 9. | | | | | 4 - Morph (Provide suppo | ological Ac orting data in F | laptations ¹ Remarks or on | a separate sh | eet) |
| 10. | | | | | Problema | tic Hydropl | nytic Veget | ation¹ (Ex | olain) |
| | 0.4 | = Total C | over | | ¹ Indicators of hydric s | | d hydrology m | ust be presen | t, unless |
| Woody Vine Stratum (Plot size: 30 ft) | | | | | disturbed or problema | atic. | | | |
| 1 | | | | | Hydrophytic | | | | |
| 2 | | | | | Vegetation | | Y - | | |
| | 0 | = Total C | over | | Present? | Yes _ | <u>^ </u> | lo | |
| Remarks: (Include photo numbers here or on a sep | parate sheet.) | | | | | | | | |

SOIL Sampling Point: W14-1w

| Profile Desc Depth | | latrix | | Redox Fea | | | | , |
|-------------------------------------|------------------------------------|------------------|--------------|---------------------------------------|--------------|------------------|---------------------------------------|---|
| (inches) | Color (mo | | Color (n | | | Loc ² | Texture | Remarks |
| 0-7 | 10YR 2/1 | 100 | | | | | Silty Clay Loam | |
| 7-20 | 10YR 2/1 | 93 | 5YR 3/4 | 7 | | М | Silty Clay Loam | |
| 20-24 | 10YR 3/1 | 95 | 10YR 3/6 | | | | | |
| 20-24 | 1011 3/1 | | 1011 3/0 | | | IVI | Silty Clay Loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹Type: C=C | oncentration. | D=Depletion, R | M=Reduced | Matrix. MS=N | Masked Sai | nd Grains | 2 S. ² Location: PL=Por | re Lining, M=Matrix. |
| Hydric Soil I | | <u> </u> | | | | | | Problematic Hydric Soils ³ : |
| Histosol (A | A 1) | | Sandy | Gleyed Matrix (| S4) | | Coast Prairi | e Redox (A16) |
| Histic Epip | pedon (A2) | | Sandy | Redox (S5) | | | Iron-Mangai | nese Masses (F12) |
| Black Hist | ic (A3) | | Strippe | d Matrix (S6) | | | Red Parent | Material (F21) |
| Hydrogen | Sulfide (A4) | | | urface (S7) | | | Very Shallov | w Dark Surface (F22) |
| | _ayers (A5) | | | Mucky Mineral | | | Other (Expla | ain in Remarks) |
| 2 cm Mucl | , | | | Gleyed Matrix (| (F2) | | | |
| | Below Dark Sur | | | ed Matrix (F3) Dark Surface (F | -e) | | | |
| | k Surface (A12) cky Mineral (S1 | | ixedox | ed Dark Surface (F | • | | | |
| | ky Peat or Peat | - | | Depressions (F | | | | |
| | ayer (if obse | | | (- | | | 1 | |
| Type: | • , | • | | | | | | |
| Depth (in | nches): | | | | | | Hydric Soil Present | ? Yes ^X No |
| Remarks: | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| HYDROLO | GY | | | | | | | |
| Wetland Hyd | drology Indic | ators: | | | | | Secondary Indicat | tors (minimum of two required) |
| Primary Indic | cators (minimu | um of one is req | uired; check | all that apply | .) | | Surface Soil | Cracks (B6) |
| Surface W | ater (A1) | | Wat | er-Stained Leave | es (B9) | | X Drainage Pat | terns (B10) |
| | r Table (A2) | | Aqu | atic Fauna (B13) | | | Dry-Season | Water Table (C2) |
| Saturation | | | | Aquatic Plants (| ` ' | | Crayfish Burr | |
| Water Mar | , , | | | ogen Sulfide Od | | | Saturation VI | sible on Aerial Imagery (C9) |
| Drift Depos | Deposits (B2) | | | ized Rhizospher ence of Reduced | _ | Roots (C3) | | ressed Plants (D1) |
| | or Crust (B4) | | | ence of Reduced ent Iron Reduction | | ils (C6) | X FAC-Neutral | Position (D2) |
| Iron Depos | | | | Muck Surface (0 | | 110 (00) | FAC-Neutral | rest (D3) |
| Inundation | Visible on Aerial | Imagery (B7) | | ge or Well Data (| • | | | |
| Sparsely V | egetated Conca | ve Surface (B8) | Othe | r (Explain in Rer | marks) | | | |
| Field Obser | vations: | ., | | | | | | |
| Surface Water | | Yes | No X | - ' ' | · — | | | |
| Water Table | | Yes | No X | _ ' ' | ´— | | | |
| Saturation Procession (includes cap | | Yes | No X | _ Depth (i | incnes): | | Wetland Hydrology Pro | esent? Yes X No |
| • | | stream gauge, r | nonitoring w | ell, aerial pho | tos, previou | ıs inspec | tions), if available: | |
| | (| | <u> </u> | | · · | | | |
| Remarks: | | | | | | | | |

| Project/Site: Castlerock | | City/County: Da | akota | Sampling Date: 10/21/2022 |
|--|-------------------|-----------------------------|---|---|
| Applicant/Owner: Stone Solar | | | State: Min | Sampling Point: W14-2u |
| Investigator(s): M. Volbrecht, D. Hixon | | Section, | Township, Range:T1 | 13N, R019W, S04 |
| Landform (hillside, terrace, etc.): Footslope | | | nvex, none): Linear | Slope %: 5-6 |
| Subregion (LRR or MLRA): LRR_K_MLRA_91 La | at: 44.620619 | Lo | ong: -93.109392 | Datum: WGS84 |
| Soil Map Unit Name: Klinger silt loam, 1 to 5 perce | · | | NWI classification: | |
| Are climatic / hydrologic conditions on the site typical f | | | No X (If no | , explain in Remarks.) |
| Are Vegetation X , Soil , or Hydrology | significantly dis | _ | | sent? Yes No X |
| Are Vegetation , Soil , or Hydrology _ | | | ded, explain any answers i | |
| SUMMARY OF FINDINGS – Attach site map s | | | nsects. important feature | es. etc. |
| | | | - | |
| Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes | No X No X | Is the Sample | | |
| Wetland Hydrology Present? Yes | NoX | within a Wetla | and? Yes | NoX |
| Remarks: (Explain alternative procedures here or in a | | | | |
| Successfully harvested corn field with center pivot irrigation s | | ve W14. Climatic condi | tions are drier than normal. | |
| VEGETATION – Use scientific names of p | lants | | | |
| | | minant Indicator | | |
| <u>Tree Stratum</u> (Plot size: <u>30 ft</u>) | | <u>oecies</u> <u>Status</u> | Dominance Test wo | rksheet: |
| 1 | | | Number of Dominant | Snecies |
| 2 | | | That Are OBL, FACW | • |
| 3 | | | - Tatal Number of Dama | |
| 4 | | | Total Number of Dom Species Across All St | |
| 5 | | | - ` | |
| Sapling/Shrub Stratum (Plot size: 15 ft) | = To | tal Cover | Percent of Dominant That Are OBL, FACW | • |
| 1 | | | Prevalence Index wo | |
| 2 | | | Total % Cover o | of: Multiply by: |
| 3 | | | OBL species | 0 x 1 =0 |
| 4 | | | _ FACW species | 0 x 2 =0 |
| 5 | | | - FAC species | |
| 5 ft. | = Tota | al Cover | FACU species | 0 x 4 = 0 |
| Herb Stratum (Plot size: 5 ft) | | | | 0 x 5 = 0 |
| 1 | | | _ | 0 (A) 0 (B) |
| 2. | | | Prevalence Inc | |
| 3 | | | Hydrophytic Vegetat | |
| 4 | | | - | |
| 5 | | | - I | or Hydrophytic Vegetation |
| 6. | | | _ | Test is >50% |
| 7 | | | – | ndex is ≤3.0¹ |
| 8 | | | - 4 - Morphologica | al Adaptations ¹ ta in Remarks or on a separate sheet) |
| 9 | | | - `` `` ` | drophytic Vegetation¹ (Explain) |
| 10 | • | al Cover | - | wetland hydrology must be present, unless |
| Woody Vine Stratum (Plot size: 30 ft) | | ai OUVEI | disturbed or problematic. | a nyarology made bo prosont, umess |
| 1 | . <u> </u> | | - Hydrophytic | |
| 2 | | | _ Vegetation | na V |
| | 0 = Tota | al Cover | Present? Ye | es No X |

hydrology indicators.

US Army Corps of Engineers

Harvested corn field with corn debris from successful harvest. No volunteer vegetation. Vegetation assumed to be non-hydrophytic due to the lack of hydric soil and wetland

SOIL Sampling Point: W14-2u

| | | o the de | oth need | | | | or or co | onfirm the absence of | f indicators.) |
|------------------------|---------------------------|------------|-----------|----------------|--------------|-------------------|------------------|--------------------------------|---|
| Depth (inches) | Matrix | % | Colo | | x Featur | | 1 002 | Taytura | Domorko |
| (inches) 0-10 | Color (moist) 10YR 3/3 | 100 | | r (moist) | | Type ¹ | Loc ² | Texture | Remarks |
| 10-18 | 10YR 3/3 10YR 2/2 | 98 | 10YR | 3/6 | 2 | | | Silt Loam Silty Clay Loam | |
| 18-24 | 10YR 2/1 | 50 | 10YR | 3/6 | 2 | <u>с</u> | | Silty Clay Loam | |
| 18-24 | 10YR 3/1 | 48 | 10111 | 0,0 | 0 | _ | | Silty Clay Loam | |
| | | | | | | | | <u> </u> | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| ¹ Type: C=C | oncentration, D=Dep | oletion, R | M=Redu | ced Matrix, | MS=Mas | ked San | d Grains | s. ² Location: PL=I | Pore Lining, M=Matrix. |
| Hydric Soil I | ndicators: | | | | | | | Indicators 1 | for Problematic Hydric Soils ³ : |
| Histosol (A | A1) | | Sai | ndy Gleyed N | Matrix (S4) | | | Coast Pr | rairie Redox (A16) |
| Histic Epip | pedon (A2) | | | ndy Redox (S | | | | Iron-Mar | nganese Masses (F12) |
| Black Hist | ic (A3) | | Str | ipped Matrix | (S6) | | | Red Pare | ent Material (F21) |
| Hydrogen | Sulfide (A4) | | Da | rk Surface (S | 7) | | | Very Sha | allow Dark Surface (F22) |
| Stratified L | ayers (A5) | | Loa | amy Mucky M | lineral (F1 |) | | Other (E | xplain in Remarks) |
| 2 cm Mucl | (A10) | | Loa | amy Gleyed N | Matrix (F2) | | | | |
| Depleted B | Below Dark Surface (A1 | 11) | De | pleted Matrix | (F3) | | | | |
| Thick Dark | Surface (A12) | | Re | dox Dark Sur | face (F6) | | | | |
| Sandy Mu | cky Mineral (S1) | | De | pleted Dark S | Surface (F7 | 7) | | | |
| 5 cm Mucl | ky Peat or Peat (S3) | | Re | dox Depressi | ons (F8) | | | | |
| | .ayer (if observed): | | | | | | | | |
| Type: | | | | | | | | | |
| Depth (in | ches): | | | | | | | Hydric Soil Prese | ent? Yes No _X |
| Remarks: | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| HYDROLO | GY | | | | | | | | |
| Wetland Hyd | drology Indicators: | | | | | | | Secondary Ind | licators (minimum of two required) |
| Primary Indic | ators (minimum of c | ne is req | uired; ch | eck all that | apply) | | | - | Soil Cracks (B6) |
| Surface Wa | ater (A1) | | | Water-Stained | d Leaves (E | 39) | | | Patterns (B10) |
| High Water | Table (A2) | | | Aquatic Fauna | a (B13) | | | Dry-Seas | on Water Table (C2) |
| Saturation | (A3) | | | True Aquatic I | Plants (B14 | 4) | | Crayfish I | Burrows (C8) |
| Water Marl | ks (B1) | | | Hydrogen Sul | fide Odor (0 | C1) | | Saturation | n Visible on Aerial Imagery (C9) |
| Sediment [| Deposits (B2) | | | Oxidized Rhiz | ospheres o | n Living Ro | oots (C3) | Stunted o | or Stressed Plants (D1) |
| Drift Depos | | | | Presence of R | Reduced Iro | n (C4) | | Geomorp | hic Position (D2) |
| | or Crust (B4) | | | Recent Iron R | eduction in | Tilled Soils | s (C6) | FAC-Neu | tral Test (D5) |
| Iron Depos | | (==) | - | Thin Muck Su | | | | | |
| | Visible on Aerial Imagery | | | Gauge or Wel | | | | | |
| Field Observ | egetated Concave Surfa | Се (Бо) | | Other (Explair | in Remark | (S) | | | |
| Surface Water | V- | es | No | X D | epth (inch | nes): | | | |
| Water Table | ., | | No | | epth (inch | | | | |
| Saturation Pr | | | No | | epth (incl | · — | | Matlematities | Dunanda V N V |
| (includes cap | | | | | | <i>'</i> — | | Wetland Hydrology | Present? YesNo _X |
| Describe Red | corded Data (stream | gauge, r | nonitorin | g well, aeria | al photos, | , previous | s inspec | tions), if available: | |
| Remarks: | | | | | | | | | |
| | | | | | | | | | |

| Project/Site: Castlerock | | City/County: _I | Dakota | Sampling Date | 10/21/2022 |
|---|-----------------------|---|-------------------------------|--|--------------------|
| Applicant/Owner: Stone Solar | | | State: M | /linSampling Point | |
| Investigator(s): M. Volbrecht, D. Hixon | | Section | n, Township, Range: | | |
| Landform (hillside, terrace, etc.): Toeslope | Local | relief (concave, co | onvex, none): Conca | ave SI | ope %: 0-1 |
| Subregion (LRR or MLRA): LRR_K_MLRA_91 Lat: | 44.620646 | I | Long: -93.109697 | Datum | : WGS84 |
| Soil Map Unit Name: Klinger silt loam, 1 to 5 percent | | | | on: PEM1Af | |
| Are climatic / hydrologic conditions on the site typical for | this time of year? | Yes | No X (If | f no, explain in Rema | rks.) |
| Are Vegetation X , Soil , or Hydrology | significantly dist | urbed? Are " | Normal Circumstances" | present? Yes_ | No _X |
| Are Vegetation , Soil , or Hydrology | _ naturally probler | matic? (If ne | eded, explain any answe | ers in Remarks.) | |
| SUMMARY OF FINDINGS - Attach site map sho | owing sampling p | oint locations, tr | ansects, important feat | tures, etc. | |
| Hydrophytic Vegetation Present? Yes X | _ No | le the Samp | lad Araa | | |
| | No | Is the Sample within a Wet | | X No | |
| Wetland Hydrology Present? Yes X | _ No | Within & 1.5. | | | |
| Remarks: (Explain alternative procedures here or in a set Farmed wetland community under a center pivot irrigation systems outh. Climatic conditions are drier than normal. | em. The farmed wetlar | nd community within | n W14 is a swale at the base | of broad slopes to the | east, west and |
| VEGETATION – Use scientific names of plan | | | | | |
| Tree Stratum (Plot size: 30 ft) | | ninant Indicato <u>ecies</u> <u>Status</u> | | worksheet: | |
| 1 | | | Number of Domina | ant Species | |
| 2 | | | | • | 0 (A) |
| 3 | | | | ominant | |
| 4 | | | Species Across All | | 0 (B) |
| 5 | = Tota | al Cover | Percent of Domina | • | NaN (A/B) |
| Sapling/Shrub Stratum (Plot size: 15 ft) | | | Prevalence Index | | (, v.=, |
| 1 | | | Total % Cove | | Itiply by: |
| 3 | | | _ | 0 x1=_ | ' ' ' |
| 3 | | | | $\begin{array}{ccc} & & & & \\ & & \\ & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & \\ & & & \\ & & \\ & & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & \\ & & $ | |
| 5. | | | FAC species | | _ |
| | 0 = Total | Cover | FAC species | | 0 |
| Herb Stratum (Plot size: 5 ft) | | | | ^ | 0 |
| 1 | | | UPL species | ~~ - | |
| 2 | | | Column Totals: | ` ′ - | (B) |
| 3 | | | | Index = B/A = | |
| 4 | | | — | etation Indicators: | |
| 5 | | | | st for Hydrophytic Ve | getation |
| 6 | | | 2 - Dominand | ce Test is >50% | |
| 7 | | | 3 - Prevalenc | ce Index is ≤3.0¹ | |
| 8 | | | — 4 - Morpholog | gical Adaptations ¹ | |
| 9 | | | — I ' ' ' ' | g data in Remarks or on a s | , |
| 10 | 0 | <u> </u> | | Hydrophytic Vegetati | ` ' ' |
| Woody Vine Stratum (Plot size: 30 ft) | = 10ta | ll Cover | disturbed or problematic. | and wetland hydrology must | be present, unless |
| 1 | | | Lively and valia | | |
| 2. | | | — Hydrophytic Vegetation | | |
| | ^ | l Cover | Present? | Yes X No | |
| Remarks: (Include photo numbers here or on a separ | | | | | |
| No volunteer vegetation. Harvested corn debris. Wetland deter | | he presence of hydri | ic soil and wetland hydrology | y indicators. | |

US Army Corps of Engineers

SOIL Sampling Point: W14-2w

| Profile Desc Depth | ription: (Describe Matrix | to the de | oth need | | ument th ox Featur | | tor or co | onfirm the absence of | r indicators.) |
|-------------------------|------------------------------------|-------------|-----------|------------------------------|------------------------------|-------------------|------------------|-----------------------|---|
| (inches) | Color (moist) | % | Colo | r (moist) | % | Type ¹ | Loc ² | Texture | Remarks |
| 0-6 | 10YR 2/2 | 95 | 10YR | 4/6 | 5 | C | М | Silty Clay Loam | |
| 6-24 | 10YR 2/1 | 95 | 10YR | 3/6 | 5 | | М | Silty Clay Loam | |
| 0-24 | 101K 2/1 | | 101K | 3/0 | | | | Silly Clay Loan | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | oncentration, D=De | pletion, R | M=Redu | ced Matrix, | MS=Mas | sked San | d Grains | | Pore Lining, M=Matrix. |
| Hydric Soil I | | | | | | | | | for Problematic Hydric Soils ³ : |
| Histosol (A | • | | | ndy Gleyed M | | | | | rairie Redox (A16) |
| Histic Epip Black Histi | | | | ndy Redox (S ipped Matrix | • | | | | nganese Masses (F12) ent Material (F21) |
| | Sulfide (A4) | | | rk Surface (S | | | | | allow Dark Surface (F22) |
| | _ayers (A5) | | | amy Mucky N | • |) | | | xplain in Remarks) |
| 2 cm Mucl | | | | amy Gleyed | • | - | | | , |
| Depleted B | Below Dark Surface (A | .11) | De | pleted Matrix | (F3) | | | | |
| | Surface (A12) | | X Re | dox Dark Su | rface (F6) | | | | |
| | cky Mineral (S1) | | | pleted Dark | - | 7) | | | |
| | ky Peat or Peat (S3) | | Re | dox Depress | ions (F8) | | | - | |
| Type: | ayer (if observed) | : | | | | | | | |
| | ahaa). | | | | | | | Headain Onli Barra | ent? Yes ^X No |
| Depth (in Remarks: | | | | | | | | Hydric Soil Prese | ent? Yes ^ No |
| rtemarks. | | | | | | | | | |
| | | | | | | | | | |
| HYDROLO | GY | | | | | | | | |
| | drology Indicators | <u> </u> | | | | | | | |
| - | ators (minimum of | | uired; ch | eck all that | apply) | | | | licators (minimum of two required) |
| Surface Wa | ater (A1) | | | Water-Staine | d Leaves (E | 39) | | | Soil Cracks (B6) Patterns (B10) |
| High Water | Table (A2) | | | Aquatic Faun | a (B13) | • | | | con Water Table (C2) |
| Saturation | (A3) | | | True Aquatic | Plants (B14 | 1) | | | Burrows (C8) |
| Water Mark | ks (B1) | | | Hydrogen Sul | lfide Odor (| C1) | | X Saturation | n Visible on Aerial Imagery (C9) |
| | Deposits (B2) | | _ | Oxidized Rhiz | zospheres c | on Living Ro | oots (C3) | Stunted o | or Stressed Plants (D1) |
| Drift Depos | | | | Presence of F | | | | XGeomorp | hic Position (D2) |
| | or Crust (B4) | | | Recent Iron F | | Tilled Soil | s (C6) | FAC-Neu | tral Test (D5) |
| Iron Depos | บร (๒๖) Visible on Aerial Image | ry (B7) | | Thin Muck Su Gauge or We | | | | | |
| | egetated Concave Surfa | | | Other (Explain | , , | | | | |
| Field Observ | | . , | | Curor (Expidi | roman |) | | | |
| Surface Wate | er Present Y | es | No | | epth (incl | hes): | | | |
| Water Table | | es | No | X D | epth (incl | nes): | | | |
| Saturation Pr | | es | No | <u>X</u> D | epth (incl | hes): | | Wetland Hydrology | Present? Yes X No |
| (includes cap | <u> </u> | n daligo s | nonitorin | a well see | al photos | proviou | e inenaa | | |
| Describe Ket | corded Data (strear | ıı yauge, r | IOHIOH | y well, aerl | ai priolos | , previous | s mspec | aions), ii avaliable: | |
| Remarks: | | | | | | | | | |
| | | | | | | | | | |

| Project/Site: Castlerock | | City | //County: | Dakota | | | Samplin | g Date: | 10/11 | /2023_ |
|---|-------------------------|---------------------|-------------------------|--------------------|-------------------------------|---------------------------------------|-----------------------|---------------------|-----------|-----------|
| Applicant/Owner: Stone Solar | | | | | State: | Min | Samplin | ng Point: | W15- | 1u |
| Investigator(s): MB MS | | | Section | on, Townsl | hip, Range: | T113 | N, R19\ | W, S2 | | |
| Landform (hillside, terrace, etc.): Shoulder | L | ocal relief (| — (concave, c | convex, no | ne): Co | nvex | | Slo | pe %: | 5-7 |
| Subregion (LRR or MLRA): LRR M La | t: 44.616852 | | | Long: -93 | 3.062172 | | | Datum: | WG | S84 |
| Soil Map Unit Name: Kato silty clay loam | | | | | NWI classific | | | | | |
| Are climatic / hydrologic conditions on the site typical fo | r this time of ye | ear? | Yes | X | No | (If no, e | xplain ir | n Remar | ks.) | |
| Are Vegetation X , Soil , or Hydrology | significantly | y disturbed | ? Are | —— "Normal C | ircumstance | es" prese | nt? | Yes | No | _ X_ |
| Are Vegetation , Soil , or Hydrology | | | | eeded, exp | olain any ans | swers in I | Remark | s.) | | |
| SUMMARY OF FINDINGS – Attach site map sl | | | | ransects, | important f | features, | etc. | | | |
| Hydrophytic Vegetation Present? Yes | NoX | lo lo | the Comr | olod Aroo | | | | | | |
| | No X | ' | the Samp oithin a We | | Ye | s | No | Х | | |
| | No _X | - " | | | | | | _ | | |
| Remarks: (Explain alternative procedures here or in a Edge of garden plot and lightly traveled track. | | t.) | | | | | | | | |
| VEGETATION – Use scientific names of pla | | Daminani | t lodioo4 | | | | | | | |
| Tree Stratum (Plot size: 30 ft) | Absolute <u>% Cover</u> | Dominant Species | _ | l _ | minance Te | est works | sheet: | | | |
| 1 | | | | _ Nu | mber of Don | ninant Sr | necies | | | |
| 2 | | | | | at Are OBL, | | | | 1 | (A) |
| 3 | | | | $-\mid_{Tot}$ | al Number o | of Domins | ant | | | _ |
| 4 | | | | I | ecies Across | | | | 3 | (B) |
| 5 | _ | | | _ _{Box} | cent of Dom | ainant Cn | ooioo | | | _ |
| Sapling/Shrub Stratum (Plot size:15 ft) | 0 | = Total Cov | /er | | at Are OBL, | | | ; | 33 | (A/B) |
| 1. Rhamnus cathartica | 40 | Yes | FAC | Pre | evalence Inc | dex work | sheet: | | | _ |
| 2. | | | | | Total % C | Cover of: | | Mult | iply by: | |
| 3. | | | | — ов | L species | | : | x 1 = | | |
| 4. | | | | ı | CW species | | <u> </u> | | | |
| 5 | | | | ı | C species | | | x 3 = _ | | |
| 5.4 | = | Total Cove | er | ı | CU species | | | x 4 = | | |
| Herb Stratum (Plot size: 5 ft) | | | | LIP | L species | | | x 5 = | | |
| 1. Digitaria sanguinalis | 45 | Yes | FACU | <u>'</u> | Lumn Totals: | | | (A) _ | | —— (B) |
| 2. Setaria faberi | | Yes | FACU | <u> </u> | | nce Index | | | | (|
| 3. <u>Dioscorea villosa</u> | | | | Hv | drophytic V | | | | | |
| Taraxacum officinale 5. | | No | FACU | <u> </u> | 1 - Rapid | _ | | | etation | , |
| 5 6 | | | | _ _ | | | | | jetatioi | |
| 7. | | | | - | _ 2 - Domin | | | | | |
| 8. | | | | l | _ 3 - Preval | | | | | |
| 9. | | | | _ _ | _ 4 - Morph (Provide suppo | i ological / orting data ir | Adaptati n Remarks | ons ' or on a se | parate sh | eet) |
| 10. | | | | _ _ | _ Problema | itic Hydro | phytic V | /egetatio | n¹ (Ex | olain) |
| | 400 | Total Cove | - ——— er | | cators of hydric s | soil and wetl | . , | J | ` ' | , |
| Woody Vine Stratum (Plot size: 30 ft) | | | | distu | bed or problem | atic. | | | | |
| 1 | | | | Ну | /drophytic | | | | | |
| 2 | | | | | egetation | V | | AI - | ~ | |
| | = | Total Cove | er | Pr | esent? | Yes | | No | X | <u> </u> |
| Remarks: (Include photo numbers here or on a sepa | arate sheet.) | | | | | | | | | |

SOIL Sampling Point: W15-1u

| Profile Desc | ription: (Describe to | the de | pth needed to docu | ment th | e indicat | tor or co | onfirm the absence o | of indicators.) | | | |
|--------------------------------|--|-----------|--------------------------------|--------------------------|-------------------|------------------|-----------------------|--|-----------------|-------------------|----------|
| Depth | Matrix | | | x Featur | | | | | | | |
| (inches) | Color (moist) | <u>%</u> | Color (moist) | <u></u> % | Type ¹ | Loc ² | Texture | | Remarks | | |
| 0-11 | 10YR 2/1 | 100 | | | | | Clay Loam | | | | |
| 11-24 | 10YR 2/1 | 97 | 2.5YR 4/4 | 3 | С | М | Clay Loam | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | — |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| · | | | | | | | | - | | | |
| ¹Type: C=C | oncentration, D=Depl | etion, R | M=Reduced Matrix, | MS=Mas | ked San | d Grains | Location: PL= | Pore Lining, M=N | Matrix. | | |
| Hydric Soil I | | | | | | | | for Problematic | | ls³: | |
| Histosol (A | A1) | | Sandy Gleyed M | latrix (S4) | | | Coast F | Prairie Redox (A16) | | | |
| Histic Epip | pedon (A2) | | Sandy Redox (S | 5) | | | Iron-Ma | nganese Masses (F | 12) | | |
| Black Histi | ic (A3) | | Stripped Matrix (| (S6) | | | | rent Material (F21) | | | |
| | Sulfide (A4) | | Dark Surface (S | - | | | | allow Dark Surface | | | |
| | ayers (A5) | | Loamy Mucky M | | | | Other (E | Explain in Remarks) | | | |
| 2 cm Muck | k (A10) Below Dark Surface (A1 ² | 1) | Loamy Gleyed N Depleted Matrix | | | | | | | | |
| | Surface (A12) | ') | Redox Dark Sur | | | | | | | | |
| | cky Mineral (S1) | | Depleted Dark S | | 7) | | | | | | |
| 5 cm Mucl | xy Peat or Peat (S3) | | Redox Depressi | | | | | | | | |
| Restrictive L | .ayer (if observed): | | | | | | | | | | |
| Type: | | | | | | | | | | | |
| Depth (in | ches): | | | | | | Hydric Soil Pres | ent? Yes | N | o <u>X</u> | _ |
| Remarks: | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| HYDROLO | | | | | | | | | | | |
| | drology Indicators: | | | | | | Secondary Inc | dicators (minimum o | of two required | <u>d)</u> | |
| | ators (minimum of or | ne is req | | | | | Surface | Soil Cracks (B6) | | | |
| Surface Wa | , , | | Water-Stained | | 39) | | Drainage | e Patterns (B10) | | | |
| High Water Saturation | Table (A2) | | Aquatic Fauna | | 1) | | | son Water Table (C2) |) | | |
| Water Mark | • | | True Aquatic F | | | | | Burrows (C8) | (00) | | |
| | Deposits (B2) | | Oxidized Rhize | | - | oots (C3) | | on Visible on Aerial In or Stressed Plants (D | | | |
| Drift Depos | | | Presence of R | | _ | () | | phic Position (D2) | , . , | | |
| Algal Mat o | or Crust (B4) | | Recent Iron Re | eduction in | Tilled Soil | s (C6) | | utral Test (D5) | | | |
| Iron Depos | its (B5) | | Thin Muck Sui | face (C7) | | | | , , | | | |
| Inundation | Visible on Aerial Imagery | (B7) | Gauge or Well | Data (D9) | | | | | | | |
| Sparsely V | egetated Concave Surface | e (B8) | Other (Explain | in Remarl | (s) | | _ | | | | |
| Field Observ | | | No V D | | | | | | | | |
| Surface Water | | | | epth (incl | | | | | | | |
| Water Table | | | | epth (incl epth (incl | · — | | | | | | |
| Saturation Pr (includes cap | | <i></i> | 140 <u>X</u> De | יאלי (וווטו | | | Wetland Hydrology | Present? | Yes | _ ^{No} _ | <u>X</u> |
| | corded Data (stream | gauge, r | nonitoring well, aeria | l photos | , previous | s inspec | tions), if available: | | | | |
| Remarks: | | | | | | | | | | | |
| | | | | | | | | | | | |

| Project/Site: Castlerock | | City/C | ounty: D | akota | Sam | pling Date | : 10/11 | /2023 |
|--|-----------------------|-----------------|--------------------------|--|--|---|-----------------|--------|
| Applicant/Owner: Stone Solar | | | | State: | Min Sam | pling Poin | t: <u>W15-1</u> | w |
| Investigator(s): MB MS | | | Section, | Township, Range: | T113N, R | 19W, S2 | | |
| Landform (hillside, terrace, etc.): Depression | L | ocal relief (co | ncave, cor | ivex, none): Con | icave | SI | ope %: _ | 0-3 |
| Subregion (LRR or MLRA): LRR M | Lat: 44.616956 | | Lo | ng: -93.062265 | | Datum | : WGS | S84 |
| Soil Map Unit Name: Colo silt loam, occasionall | y flooded | | _ | NWI classifica | ition: PS | S1/EM1A | | |
| Are climatic / hydrologic conditions on the site typical | I for this time of ye | ear? | Yes | X No | (If no, explai | n in Rema | ırks.) | |
| Are Vegetation , Soil , or Hydrology | significantly | y disturbed? | Are "N | ormal Circumstances | " present? | Yes_ | X No | |
| Are Vegetation , Soil , or Hydrology | naturally p | oblematic? | (If need | ded, explain any ansv | wers in Rema | arks.) | | |
| SUMMARY OF FINDINGS - Attach site map | showing sampl | ing point loc | ations, tra | nsects, important fe | atures, etc. | | | |
| Hydrophytic Vegetation Present? Yes _ | X No | lo 4l | a Comple | d Augo | | | | |
| | X No | | ne Sample nin a Wetla | | X No | | | |
| Wetland Hydrology Present? Yes _ | X No | - | iii a vvoiic | | | | | |
| Remarks: (Explain alternative procedures here or in | | | | | | | | |
| Wetland complex around S. Vermillion River with grasses | and occasional trees | and shrubs | | | | | | |
| VEGETATION – Use scientific names of | plants. | | | | | | | |
| | Absolute | Dominant | Indicator | | | | | |
| <u>Tree Stratum</u> (Plot size: <u>30 ft</u>) | % Cover | <u>Species</u> | <u>Status</u> | Dominance Tes | t workshee | t: | | |
| 1. Salix nigra | | Yes | OBL | Number of Domi | nant Specie | S | | |
| 2. | | | | . That Are OBL, F | ACW, or FA | C: | 2 | _(A) |
| 3 | - | | | Total Number of | Dominant | | | |
| 4 5. | | | | Species Across | All Strata: | | 2 | (B) |
| J | | = Total Cover | | Percent of Domin | nant Species | 5 | | |
| Sapling/Shrub Stratum (Plot size: 15 ft) | | - Total Govel | | That Are OBL, F | ACW, or FA | C: | 100 | _(A/B) |
| 1 | <u> </u> | | | Prevalence Inde | | et: | | |
| 2 | | | | Total % Co | over of: | Mu | Itiply by: | |
| 3 | | | | OBL species | | | | |
| 4 | | | | FACW species | 85 | x 2 = _ | 170 | |
| 5 | | | | FAC species | | x 3 = _ | 0 | |
| Herb Stratum (Plot size: 5 ft) | = | Total Cover | | FACU species | 10 | _ x 4 = _ | 40 | |
| 1. Phalaris arundinacea | 70 | Yes | FACW | UPL species | 0 | x 5 = _ | 0 | |
| 2. Solidago gigantea | 15 | No | FACW | Column Totals: | 120 | (A) | 235 | (B) |
| Hypericum perforatum | 10 | No | <u>FACU</u> | Prevalenc | e Index = B/ | 'A = _ | 1.96 | |
| 4. <u>Carex lacustris</u> | 5 | No | OBL | Hydrophytic Ve | getation Inc | licators: | | |
| 5 | | | | _ | est for Hydro | ophytic Ve | getation | |
| 6 | | | | _ X 2 - Domina | nce Test is > | >50% | | |
| | | | | - X 3 - Prevale | nce Index is | ≤3.0 ¹ | | |
| 7 | | | | | | | | |
| 8. | | | | 4 - Morpho | logical Adap | tations ¹ | onarato che | ot) |
| 8. 9. | | | | Provide support | ting data in Rem | arks or on a s | | , |
| 8. | | | | Provide support | ting data in Remi | arks or on a s c Vegetat | ion¹ (Exp | lain) |
| 8. 9. | | Total Cover | | Provide support | ting data in Remi c Hydrophyti il and wetland hy | arks or on a s c Vegetat | ion¹ (Exp | lain) |
| 8. 9. 10. | 100 = | | | (Provide support Problemation Indicators of hydric so disturbed or problemation | ting data in Remi c Hydrophyti il and wetland hy | arks or on a s c Vegetat | ion¹ (Exp | lain) |
| 8. 9. 10. Woody Vine Stratum (Plot size: 30 ft) | = | | | (Provide support Problemation Indicators of hydric so disturbed or problemation Hydrophytic Vegetation | iting data in Remo C Hydrophyti il and wetland hy ic. | arks or on a s c Vegetati rdrology must | ion¹ (Exp | lain) |
| 8 | | | | (Provide support Problemation Indicators of hydric so disturbed or problemation Hydrophytic | ting data in Remi c Hydrophyti il and wetland hy | arks or on a s c Vegetat | ion¹ (Exp | lain) |

SOIL Sampling Point: W15-1w

| Profile Desc Depth | cription: (Describe to Matrix | the dep | oth needed to | document Redox Fea | | tor or co | onfirm the absence of | indicators.) |
|-----------------------|----------------------------------|-----------|---|-----------------------------------|-------------------|------------------|-----------------------|---|
| (inches) | Color (moist) | % | Color (mo | | | Loc ² | Texture | Remarks |
| (ITICTICS) | | | 1000 | 131) / | Турс | | Texture | Remains |
| 0-24 | 10YR 2/1 | 96 | 2.5YR 4/4 | 4 | <u></u> | M | Clay Loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| 1Type: C=C | Concentration, D=Deple | etion Pl | M-Reduced N | latriy MS-N | Masked San | d Grains | 2l ocation: DI -E | Pore Lining, M=Matrix. |
| Hydric Soil | | etion, ra | vi-rteduced iv | iatrix, ivio-i | viaskeu Saii | u Orani | | or Problematic Hydric Soils ³ : |
| | | | 0 | oved Masteria (1 | C4) | | | - |
| Histosol (| • | | | eyed Matrix (| 54) | | | airie Redox (A16) |
| | pedon (A2) | | Sandy Re | | | | | ganese Masses (F12) |
| Black His | iic (A3) i Sulfide (A4) | | Dark Sur | Matrix (S6) | | | | ent Material (F21) Ilow Dark Surface (F22) |
| | Layers (A5) | | | ucky Mineral | (F1) | | | φlain in Remarks) |
| 2 cm Muc | | | | leyed Matrix (| | | Outlet (EX | .piani in remains) |
| | Below Dark Surface (A11 |) | | Matrix (F3) | · -/ | | | |
| | k Surface (A12) | , | $\overline{\sim}$ | ark Surface (F | - 6) | | | |
| | ucky Mineral (S1) | | | Dark Surface | | | | |
| | ky Peat or Peat (S3) | | | epressions (F | | | | |
| Restrictive | Layer (if observed): | | | <u> </u> | · | | | |
| Type: | | | | | | | | |
| Depth (ii | nches): | | | | | | Hydric Soil Presei | nt? Yes ^X No |
| Remarks: | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| HYDROLO | ocv - | | | | | | | |
| | drology Indicators: | | | | | | | |
| _ | cators (minimum of on | e is real | iired: check a | ll that annly | 1 | | Secondary Indi | cators (minimum of two required) |
| | | c is requ | | | | | | oil Cracks (B6) |
| Surface W | | | | Stained Leave | ` , | | | Patterns (B10) |
| Saturation | er Table (A2) | | | c Fauna (B13) | | | | on Water Table (C2) |
| Water Ma | | | · <u></u> | quatic Plants (jen Sulfide Od | | | · | Burrows (C8) |
| | Deposits (B2) | | | | es on Living R | nots (C3) | | i Visible on Aerial Imagery (C9) r Stressed Plants (D1) |
| Drift Depo | , | | | ce of Reduced | - | 0010 (00) | | nic Position (D2) |
| | or Crust (B4) | | | | on in Tilled Soil | s (C6) | <u></u> | ral Test (D5) |
| Iron Depo | sits (B5) | | | uck Surface (0 | | , | | 1001 (20) |
| Inundation | n Visible on Aerial Imagery (| (B7) | | or Well Data (| • | | | |
| Sparsely \ | /egetated Concave Surface | e (B8) | _ | Explain in Rer | | | | |
| Field Obser | vations: | | | • | , | | | |
| Surface Wat | ter Present Yes | | No X | Depth (i | inches): | | | |
| Water Table | | | No X | Depth (i | · - | | | |
| Saturation P | | X | No | Depth (i | inches): | 6 | Wetland Hydrology I | Present? Yes X No |
| , | pillary fringe) | 2011 | onite de la la la la la la la la la la la la la | ooriel l- | too massis | o le - : - | | |
| Describe Re | corded Data (stream g | jauge, n | ionitoring wel | , aeriai pho | ιοs, previou | s mspec | cuons), ii avallable: | |
| Remarks: | | | | | | | | |
| No water table | after 15. | | | | | | | |

| Project/Site: Castlerock | | City/County: | Dakota | Sampling Dat | te: <u>10/11/202</u> | 23_ |
|--|------------------------|------------------|---|---------------------------------|----------------------|---------------|
| Applicant/Owner: Stone Solar | _ | | State: | Min Sampling Poi | nt: W15-2u | |
| Investigator(s): MB MS | | Section | on, Township, Range: | T113N, R19W, S2 | 2 | |
| Landform (hillside, terrace, etc.): Backslope | Local | relief (concave, | convex, none): Line | ar : | Slope %: 4 | 6 |
| Subregion (LRR or MLRA): LRR M La | it: 44.617781 | | Long: -93.063198 | Datu | m: WGS84 | 4 |
| Soil Map Unit Name: Colo silt loam, occasionally | | | NWI classificat | tion: | | _ |
| Are climatic / hydrologic conditions on the site typical for | | Yes | X No (| (If no, explain in Rem | narks.) | |
| Are Vegetation , Soil , or Hydrology | significantly dist | urbed? Are | "Normal Circumstances" | " present? Yes | X No _ | |
| Are Vegetation , Soil , or Hydrology | — naturally probler | matic? (If n | eeded, explain any answ | vers in Remarks.) | | |
| SUMMARY OF FINDINGS – Attach site map s | | | transects, important fea | atures, etc. | | |
| Hydrophytic Vegetation Present? Yes | No _X | la tha Cama | ulad Ausa | | | |
| | | Is the Sam | | No X | | |
| | No <u>X</u> _ | Within a 11 | | | | |
| Remarks: (Explain alternative procedures here or in a | separate report.) | | | | | |
| | | | | | | |
| VEGETATION – Use scientific names of pl | ants | | | | | |
| VEGETATION — Ose scientific frames of pr | | ninant Indica | tor | | | |
| <u>Tree Stratum</u> (Plot size: <u>30 ft</u>) | | ecies Statu | | t worksheet: | | |
| 1 | | | Number of Domir | nant Species | | |
| 2 | | | That Are OBL, FA | • | 1 (/ | A) |
| 3 | | | Total Number of | Dominant | | |
| 4 | | | — Species Across A | | 2 (I | B) |
| 5 | | -1.0 | — Percent of Domir | ant Species | | |
| Sapling/Shrub Stratum (Plot size:15 ft) | = 100 | ai Covei | That Are OBL, FA | • | 50 (/ | A/B) |
| 1 | | | Prevalence Inde | | | |
| 2 | | | Total % Co | ver of: | lultiply by: | |
| 3 | | | OBL species | x 1 = | | _ |
| 4 | | | FACW species _ | x 2 = | | _ |
| 5 | | | FAC species _ | x 3 = | | _ |
| Herb Stratum (Plot size:5 ft) | 0 = Tota | l Cover | FACU species | x 4 = | | _ |
| 1. Trifolium repens | 45 Y | es FACL | UPL species _ | x 5 = | | _ |
| 2. Scirpus cyperinus | | es OBL | Column Totals: | (A) | | _(B) |
| 3. | | | Prevalence | e Index = B/A = | | _ |
| 4. | | | Hydrophytic Veg | getation Indicators: | | |
| 5 | | | 1 - Rapid Te | est for Hydrophytic V | /egetation | |
| 6 | | | | nce Test is >50% | | |
| 7 | | | | nce Index is ≤3.0¹ | | |
| 8 | | | | ogical Adaptations ¹ | | |
| 9 | | | (Provide supporti | ing data in Remarks or on a | | |
| 10 | 00 | | | c Hydrophytic Vegeta | ` ' | , |
| Woody Vine Stratum (Plot size: 30 ft) | 80 = Tota | I Cover | ¹ Indicators of hydric soil disturbed or problemation | I and wetland hydrology muc. | ıst be present, un | less |
| 1 | | | I leading in beating | | | |
| 2. | | | — Hydrophytic Vegetation | | | |
| | • | Cover | Present? | Yes No | o <u>X</u> | |
| Remarks: (Include photo numbers here or on a sep | | | I | <u> </u> | | |
| | • | | | | | |

SOIL Sampling Point: W15-2u

| Profile Des | cription: (Describe to Matrix | the dep | oth needed to | document the Redox Featu | | tor or co | onfirm the absence of | indicators.) |
|------------------------------|---|------------|------------------|------------------------------------|-------------------|------------------|----------------------------|--|
| (inches) | Color (moist) | % | Color (moi | | Type ¹ | Loc ² | Texture | Remarks |
| | | | | | | | | - Communication of the Communi |
| 0-22 | 10YR 2/1 | 97 | 2.5YR 4/4 | 3 | <u> </u> | M | Clay Loam . | |
| | | | - | | | | | |
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| | | | | | | | | |
| | | | | | | | | |
| | Concentration, D=Depl | etion, RI | M=Reduced M | atrix, MS=Ma | sked San | d Grains | | Pore Lining, M=Matrix. |
| Hydric Soil | Indicators: | | | | | | Indicators for | or Problematic Hydric Soils ³ : |
| Histosol | (A1) | | Sandy Gle | eyed Matrix (S4 |) | | Coast Pra | airie Redox (A16) |
| Histic Ep | ipedon (A2) | | Sandy Re | dox (S5) | | | Iron-Man | ganese Masses (F12) |
| Black His | | | Stripped N | | | | | ent Material (F21) |
| | n Sulfide (A4) | | Dark Surfa | | | | | llow Dark Surface (F22) |
| | Layers (A5) | | | ıcky Mineral (F | • | | Other (Ex | plain in Remarks) |
| 2 cm Mud | | | | eyed Matrix (F2 | 2) | | | |
| | Below Dark Surface (A11 | 1) | | Matrix (F3) rk Surface (F6) | | | | |
| | rk Surface (A12) ucky Mineral (S1) | | Nedox Da | nk Suriace (F6) Dark Surface (F | | | | |
| | cky Peat or Peat (S3) | | | pressions (F8) | ') | | | |
| | Layer (if observed): | | redox Be | pressions (1 0) | | | 1 | |
| Type: | , | | | | | | | |
| Depth (i | nches). | | | | | | Hydric Soil Preser | nt? Yes ^X No |
| Remarks: | , | | | | | | 1 1., 4 | <u> </u> |
| · tomaine | | | | | | | | |
| | | | | | | | | |
| HYDROLO | ngv | | | | | | | |
| | drology Indicators: | | | | | | | |
| _ | cators (minimum of on | ne is real | uired: check al | that apply) | | | - | cators (minimum of two required) |
| - | Vater (A1) | | | Stained Leaves (| BO) | | | oil Cracks (B6) |
| | er Table (A2) | | | Fauna (B13) | D9) | | | Patterns (B10) |
| Saturation | | | | quatic Plants (B1 | 4) | | | on Water Table (C2) surrows (C8) |
| Water Ma | rks (B1) | | | en Sulfide Odor | • | | · | Visible on Aerial Imagery (C9) |
| Sediment | Deposits (B2) | | Oxidize | d Rhizospheres | on Living R | oots (C3) | | Stressed Plants (D1) |
| Drift Depo | osits (B3) | | Presen | ce of Reduced Ir | on (C4) | | X Geomorph | nic Position (D2) |
| Algal Mat | or Crust (B4) | | Recent | Iron Reduction i | n Tilled Soil | s (C6) | FAC-Neuti | ral Test (D5) |
| Iron Depo | sits (B5) | | Thin Mu | uck Surface (C7) |) | | | |
| Inundation | n Visible on Aerial Imagery | (B7) | Gauge | or Well Data (D9 | 9) | | | |
| | Vegetated Concave Surface | e (B8) | Other (| Explain in Rema | rks) | | | |
| Field Obse | V | | No. Y | Denth (inc | shee). | | | |
| Surface Wa | ., | | No $\frac{X}{X}$ | Depth (inc | | | | |
| Water Table | | | No X | Depth (inc | · — | | | |
| Saturation F (includes ca | resent res pillary fringe) | — | NO | րեկու (<u>ա</u> յ | | | Wetland Hydrology I | Present? YesNo _X |
| , | ecorded Data (stream o | gauge, n | nonitoring well | aerial photos | s, previou | s inspec | ctions), if available: | |
| Domarka | • | • | - | • | | - | | |
| Remarks: | | | | | | | | |
| | | | | | | | | |

| Project/Site: Castlerock | | City | y/County: | Dakota | | _ Sampling [| Date: <u>10</u> |)/11/2023 |
|---|---------------|-----------------|------------------|------------------------|----------------------------------|----------------------------|-----------------|---------------|
| Applicant/Owner: Stone Solar | | | | | State: Min | Sampling F | Point: W1 | 15-2w |
| Investigator(s): MB MS | | | Section | on, Township, | Range: T1 | 13N, R19W, | S2 | |
| Landform (hillside, terrace, etc.): Depression | | Local relief | _ (concave, d | convex, none |): Concav | е | Slope % | 6: 3-5 |
| Subregion (LRR or MLRA): LRR M La | t: 44.617721 | | | Long: -93.06 | 33125 | Da | – ıtum: V | /GS84 |
| Soil Map Unit Name: Colo silt loam, occasionally | | | | | l classification | | M1A | |
| Are climatic / hydrologic conditions on the site typical for | | year? | Yes | X N | lo (If n | o, explain in R | emarks.) | |
| Are Vegetation , Soil , or Hydrology | significan | tly disturbed | | | umstances" pre | | es_X_ | |
| Are Vegetation , Soil , or Hydrology | | | | eeded, explai | n any answers | in Remarks.) | | |
| SUMMARY OF FINDINGS – Attach site map s | | | | ransects, im | portant featur | es, etc. | | |
| Hydrophytic Vegetation Present? Yes | (No | Is | s the Samp | nlad Area | | | | |
| | < No | _ `` | vithin a We | | Yes X | (No | | |
| Wetland Hydrology Present? Yes | < No | | | | | | _ | |
| Remarks: (Explain alternative procedures here or in a Shrubby area with wetland veg understory VEGETATION – Use scientific names of pl | | ort.) | | | | | | |
| VEGETATION – Ose scientific flames of pr | Absolute | Dominan | t Indicat | tor | | | | |
| Tree Stratum (Plot size: 30 ft) | % Cover | Species Species | _ | l | nance Test wo | orksheet: | | |
| 1 | | | | Numb | er of Dominant | Species | | |
| 2 | | | | l l | re OBL, FACV | • | 4 | (A) |
| 3 | | | | _ | | | | |
| 4 | | | | ı | Number of Dor es Across All S | | 4 | (B) |
| 5 | | | | _ _ | | | | (|
| Sapling/Shrub Stratum (Plot size:15 ft) | 0 | _ = Total Cov | ver | I | nt of Dominant are OBL, FACV | • | 100 | (A/B) |
| 1 Cornus alba | 30 | Yes | FACW | Preva | lence Index w | orksheet: | | |
| 2. Salix interior | | Yes | FACW | _ - | Γotal % Cover | of: | Multiply | by: |
| 3. | | - | | OBL s | pecies | x 1 | = | |
| 4. | | | | | species | | | |
| 5 | | | | | pecies | | | |
| | 60 | = Total Cove | er | | species | x 4 | | |
| Herb Stratum (Plot size: 5 ft) | | | | | pecies | | = | |
| 1. Scirpus cyperinus | 35 | Yes | OBL | | | | | (B) |
| 2. Solidago gigantea | 35 | Yes | _ FACW | <u>/</u> Colum | ın Totals: | | | (D) |
| 3 | | | | _ | Prevalence In | | | |
| 4 | | | | — I · | phytic Vegeta | | | |
| 5 | | | _ | _ _ | - Rapid Test | , , , | c Vegetati | on |
| 6 | | | | $-\mid \frac{x}{}^{2}$ | 2 - Dominance | Test is >50% | | |
| 7 | | | | — <u> -</u> 3 | 3 - Prevalence | Index is ≤3.0 ¹ | | |
| 8 | | | | — <u> </u> | - Morphologic | cal Adaptations | s ¹ | shoot) |
| 9 | | | | — I ` | | | • | , |
| 10 | 70 | | | | Problematic Hy | . , . | ` | . , |
| Woody Vine Stratum (Plot size: 30 ft) | | = Total Cove | er | | or problematic. | welland hydrology | musi pe pre | sent, unless |
| 1 | | | | Hydr | ophytic | | | |
| 2 | | | | | tation | V | | |
| | 0 | = Total Cove | er | Pres | ent? Y | es X | No | |
| Remarks: (Include photo numbers here or on a sep | arate sheet.) | | | | | | | |

SOIL Sampling Point: W15-2w

| Depth Matrix | Redo | x Feature | s | | | |
|--|---|--|---|------------------|--|--|
| (inches) Color (moist) % | Color (moist) | % | Type ¹ | Loc ² | Texture | Remarks |
| 0-22 10YR 2/1 96 | 2.5YR 4/6 | 4 | С | М | Clay Loam | |
| | | | | | | |
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| | | | | | | |
| ¹ Type: C=Concentration, D=Depletion, | RM=Reduced Matrix, | MS=Mask | ed San | d Grains | | Pore Lining, M=Matrix. |
| lydric Soil Indicators: | | | | | Indicators 1 | for Problematic Hydric Soils ³ : |
| Histosol (A1) | Sandy Gleyed M | atrix (S4) | | | Coast Pr | rairie Redox (A16) |
| Histic Epipedon (A2) | Sandy Redox (S | 5) | | | Iron-Mar | iganese Masses (F12) |
| Black Histic (A3) | Stripped Matrix (| • | | | | ent Material (F21) |
| Hydrogen Sulfide (A4) | Dark Surface (S7 | • | | | | allow Dark Surface (F22) |
| Stratified Layers (A5) | Loamy Mucky M | | | | Other (E | xplain in Remarks) |
| 2 cm Muck (A10) | Loamy Gleyed M | | | | | |
| Depleted Below Dark Surface (A11) | Z Depleted Matrix | | | | | |
| Thick Dark Surface (A12) | Redox Dark Suri | . , | | | | |
| Sandy Mucky Mineral (S1) | Depleted Dark S | |) | | | |
| | D - d D : . | (EO) | | | | |
| 5 cm Mucky Peat or Peat (S3) | Redox Depression | ons (F8) | | | 1 | |
| Restrictive Layer (if observed): | Redox Depression | ons (F8) | | | | |
| Restrictive Layer (if observed): Type: | Redox Depression | ons (F8) | | | Under Call Dance | TAD Voc X No |
| Restrictive Layer (if observed): Type: Depth (inches): | Redox Depression | ons (F8) | | | Hydric Soil Prese | nt? Yes X No |
| Restrictive Layer (if observed): Type: | Redox Depression | ons (F8) | | | Hydric Soil Prese | nt? Yes X No |
| Restrictive Layer (if observed): Type: Depth (inches): | Redox Depression | ons (F8) | | | Hydric Soil Prese | nt? Yes X No |
| Restrictive Layer (if observed): Type: Depth (inches): Remarks: | Redox Depression | ons (F8) | | | Hydric Soil Prese | nt? Yes X No |
| Restrictive Layer (if observed): Type: Depth (inches): Remarks: | Redox Depression | ons (F8) | | | Hydric Soil Prese | nt? Yes X No |
| Restrictive Layer (if observed): Type: Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: | | | | | | nt? Yes X No |
| Restrictive Layer (if observed): Type: Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is re | | | | | Secondary Ind | 100 <u></u> NO <u></u> |
| Restrictive Layer (if observed): Type: Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is re Surface Water (A1) | equired; check all that a | apply) Leaves (B9 |)) | | Secondary Ind | icators (minimum of two required) |
| Restrictive Layer (if observed): Type: Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is reconstructed by the control of the cont | equired; check all that aWater-StainedAquatic Fauna | apply) Leaves (B9 (B13) |)) | | Secondary Ind Surface S Drainage | icators (minimum of two required) Soil Cracks (B6) |
| Restrictive Layer (if observed): Type: Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is re Surface Water (A1) High Water Table (A2) Saturation (A3) | equired; check all that a Water-Stained Aquatic Fauna True Aquatic F | apply) Leaves (B9 (B13) Plants (B14) | | | Secondary Ind Surface S Drainage Dry-Seas Crayfish I | icators (minimum of two required) Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) |
| Restrictive Layer (if observed): Type: Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is result of the company of | equired; check all that a Water-Stained ——Aquatic Fauna ——True Aquatic P | apply) Leaves (B9 (B13) Plants (B14) ide Odor (C | 1) | | Secondary Ind Surface S Drainage Dry-Seas Crayfish B | icators (minimum of two required) Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) |
| Restrictive Layer (if observed): Type: Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is re Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) | equired; check all that a Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulfi Oxidized Rhizo | apply) Leaves (B9 (B13) Plants (B14) ide Odor (Copspheres on | 1) Living Ro | oots (C3) | Secondary Ind Surface S Drainage Dry-Seas Crayfish I Saturation | icators (minimum of two required) Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) |
| Restrictive Layer (if observed): Type: Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is result of the second of t | equired; check all that a water-Stained ———————————————————————————————————— | apply) Leaves (B9 (B13) Plants (B14) ide Odor (Cospheres on | 1) Living Ro (C4) | | Secondary Ind Surface S Drainage Dry-Seas Crayfish I Saturation Stunted of | icators (minimum of two required) Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2) |
| Restrictive Layer (if observed): Type: Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is result of the second of t | equired; check all that a water-Stained | apply) Leaves (B9 (B13) Plants (B14) ide Odor (Coppheres on educed Iron eduction in 1 | 1) Living Ro (C4) | | Secondary Ind Surface S Drainage Dry-Seas Crayfish I Saturation Stunted of | icators (minimum of two required) Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) |
| Restrictive Layer (if observed): Type: Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is result of the second of | equired; check all that a equired; check all that a equiver a constant of the | apply) Leaves (B9 (B13) Plants (B14) ide Odor (Coppheres on educed Iron eduction in Target (C7) | 1) Living Ro (C4) | | Secondary Ind Surface S Drainage Dry-Seas Crayfish I Saturation Stunted of | icators (minimum of two required) Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2) |
| Restrictive Layer (if observed): Type: Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is result of the second of th | equired; check all that a water-Stained Aquatic Fauna True Aquatic F Sufficial Advisor Sufficial Advisor Andrews Area Carlon Recent Iron Iron Recent Iron Recent Iron Recent Iron Recent Iron Recent Iron Recent Iron Iron Recent Iron Iron Iron Iron Iron Iron Iron Iron | apply) Leaves (B9 (B13) Plants (B14) ide Odor (Coppheres on educed Iron eduction in Target (C7) Data (D9) | 1) Living Ro (C4) Filled Soils | | Secondary Ind Surface S Drainage Dry-Seas Crayfish I Saturation Stunted of | icators (minimum of two required) Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2) |
| Restrictive Layer (if observed): Type: Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is researched) 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) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) | equired; check all that a equired; check all that a equiver a constant of the | apply) Leaves (B9 (B13) Plants (B14) ide Odor (Coppheres on educed Iron eduction in Target (C7) Data (D9) | 1) Living Ro (C4) Filled Soils | | Secondary Ind Surface S Drainage Dry-Seas Crayfish I Saturation Stunted of | icators (minimum of two required) Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2) |
| Restrictive Layer (if observed): Type: Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is result of the second of t | equired; check all that a water-Stained Aquatic Fauna True Aquatic F Sufficial Control of Recent Iron | apply) Leaves (B9 (B13) Plants (B14) ide Odor (Coppheres on educed Iron eduction in Target (C7) Data (D9) | 1) Living Ro (C4) Filled Soils | | Secondary Ind Surface S Drainage Dry-Seas Crayfish I Saturation Stunted of | icators (minimum of two required) Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2) |
| Restrictive Layer (if observed): Type: Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is result of the second of | equired; check all that a water-Stained Aquatic Fauna True Aquatic Pauna Oxidized Rhizo Presence of Recent Iron Remarks Sure Gauge or Well Other (Explain No X De | apply) Leaves (B9 (B13) Plants (B14) ide Odor (Coppheres on educed Iron eduction in Tarace (C7) Data (D9) in Remarks | 1) Living Ro (C4) Filled Soils (S) | | Secondary Ind Surface S Drainage Dry-Seas Crayfish I Saturation Stunted of | icators (minimum of two required) Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2) |
| Restrictive Layer (if observed): Type: Depth (inches): Remarks: PYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is result of the second of | equired; check all that a water-Stained Aquatic Fauna True Aquatic Fauna Oxidized Rhizo Presence of Recent Iron Recent Iron Recent Iron Recent Iron Recent Iron Muck Sur Gauge or Well Other (Explain No X Decent Iron Decent Iron Recent Iron Iron Recent Iron Recent Iron Recent Iron Iron Iron Iron Iron Iron Iron Iron | apply) Leaves (B9 (B13) Plants (B14) ide Odor (Copspheres on educed Iron eduction in Tarace (C7) Data (D9) in Remarks | 1) Living Ro (C4) Filled Soils s) es): | | Secondary Ind Surface S Drainage Dry-Seas Crayfish B Saturation X Geomorp X FAC-Neu | icators (minimum of two required) Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2) tral Test (D5) |
| Restrictive Layer (if observed): Type: Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is result of the second of t | equired; check all that a water-Stained — Water-Stained — Aquatic Fauna — True Aquatic F — Hydrogen Sulfi — Oxidized Rhize — Presence of Re — Recent Iron Re — Thin Muck Sur — Gauge or Well — Other (Explain No X De No X De No X De | apply) Leaves (B9 (B13) Plants (B14) ide Odor (Coppheres on educed Iron eduction in Taface (C7) Data (D9) in Remarks epth (inchesepth (inc | 1) Living Ro (C4) Filled Soils s) es): es): | s (C6) | Secondary Ind Surface S Drainage Dry-Seas Crayfish I Saturation X Geomorp X FAC-Neu Wetland Hydrology | icators (minimum of two required) Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2) tral Test (D5) |

| Project/Site: Castlerock | | City/County: | Dakota | Sampling Date: <u>10/11/2023</u> |
|--|-----------------------|-------------------|----------------------------|---|
| Applicant/Owner: Stone Solar | | | State: Min | Sampling Point: W16-1u |
| Investigator(s): MB MS | | Section | on, Township, Range: T1 | 13N, R19W, S2 |
| Landform (hillside, terrace, etc.): Backslope | Local i | elief (concave, d | convex, none): Linear | Slope %:5-7 |
| Subregion (LRR or MLRA): LRR M La | t: 44.622115 | | Long: -93.062746 | Datum: WGS84 |
| Soil Map Unit Name: Hawick gravelly sandy loam, | 6 to 12 percent slop | oes | NWI classification | : |
| Are climatic / hydrologic conditions on the site typical for | or this time of year? | Yes | X No (If n | o, explain in Remarks.) |
| Are Vegetation X , Soil , or Hydrology | significantly dist | urbed? Are | "Normal Circumstances" pro | esent? Yes No_X |
| Are Vegetation , Soil , or Hydrology _ | naturally probler | natic? (If ne | eeded, explain any answers | in Remarks.) |
| SUMMARY OF FINDINGS - Attach site map s | howing sampling p | oint locations, t | ransects, important featu | es, etc. |
| Hydrophytic Vegetation Present? Yes | No _X_ | Is the Samp | alod Aroa | |
| | K No | within a We | | No X |
| Wetland Hydrology Present? Yes | No _X | | | |
| Remarks: (Explain alternative procedures here or in a | separate report.) | | | |
| Alfalfa field | | | | |
| VEGETATION – Use scientific names of pl | ants. | | | |
| | | ninant Indicat | or | |
| <u>Tree Stratum</u> (Plot size: <u>30 ft</u>) | % Cover Spe | ecies Statu | S Dominance Test wo | orksheet: |
| 1 | | | Number of Dominant | Species |
| 2 | | | That Are OBL, FACV | V, or FAC: 0 (A) |
| 3 | | | Total Number of Dor | ninant |
| 4 | | | — Species Across All S | Strata: 1 (B) |
| 5 | 0 = Tota | al Cover | Percent of Dominant | Species |
| Sapling/Shrub Stratum (Plot size: 15 ft) | | 0010. | That Are OBL, FACV | V, or FAC: 0 (A/B) |
| 1 | | | Prevalence Index w | - f |
| 2 | | | Total % Cover | Walapiy by. |
| 3 | | | OBL species | |
| 4 | | | | x 2 = |
| 5 | | | FAC species | x 3 = |
| Herb Stratum (Plot size: 5 ft) | = Total | Cover | FACU species | x 4 = |
| 1. Medicago sativa | 85Y | es FACL | UPL species | x 5 = |
| Setaria faberi | 10N | No FACL | Column Totals: | (B) |
| 3 | | | Prevalence In | |
| 4 | | | Hydrophytic Vegeta | |
| 5 | | | 1 - Rapid Test | for Hydrophytic Vegetation |
| 6 | | | 2 - Dominance | Test is >50% |
| 7 | | | — 3 - Prevalence | Index is ≤3.0 ¹ |
| 8 | | | — 4 - Morphologic | cal Adaptations ¹ ata in Remarks or on a separate sheet) |
| 9 10 | | | — I · · · · · · | vdrophytic Vegetation¹ (Explain) |
| 10 | 0.5 | Cover | ' | wetland hydrology must be present, unless |
| Woody Vine Stratum (Plot size: 30 ft) | | 30.01 | disturbed or problematic. | 3, , , , , , , , , , , , , , , , , , , |
| 1 | | | Hydrophytic | |
| 2 | | | Vegetation | |
| | 0 = Total | Cover | Present? Y | es <u>No X</u> |
| Remarks: (Include photo numbers here or on a sep | arate sheet.) | | | |

SOIL Sampling Point: W16-1u

| Profile Desc Depth | ription: (Describe Matrix | to the dep | oth need | | ument the | | tor or co | onfirm the absence of | of indicators.) |
|------------------------|---|-------------|---------------|--------------------------------|--------------|-------------------|------------------|-------------------------------|---|
| (inches) | Color (moist) | % | Colo | r (moist) | % | Type ¹ | Loc ² | Texture | Remarks |
| 0-13 | 10YR 3/2 | 97 | 2.5YR | 4/4 | 3 | C | M | Loam | |
| 13-23 | 10YR 2/2 | 97 | 2.5YR | 4/4 | 3 | | | Loam | - |
| 13-23 | 10110 2/2 | | 2.5110 | 4/4 | | | | Loani | |
| | | | | | | | | | |
| | | | | | · — | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| ¹ Type: C=C | oncentration, D=D | epletion, R | M=Redu | ced Matrix, | MS=Mas | ked San | d Grains | s. ² Location: PL= | Pore Lining, M=Matrix. |
| Hydric Soil I | ndicators: | | | | | | | Indicators | for Problematic Hydric Soils ³ : |
| Histosol (A | A1) | | Sai | ndy Gleyed N | //atrix (S4) | | | Coast F | Prairie Redox (A16) |
| Histic Epip | pedon (A2) | | Sai | ndy Redox (S | S5) | | | Iron-Ma | inganese Masses (F12) |
| Black Hist | ic (A3) | | Stri | pped Matrix | (S6) | | | | rent Material (F21) |
| | Sulfide (A4) | | | k Surface (S | • | | | - | nallow Dark Surface (F22) |
| | _ayers (A5) | | | my Mucky N | • | - | | Other (| Explain in Remarks) |
| 2 cm Mucl | | | | my Gleyed I | | | | | |
| | Below Dark Surface (A | A11) | $\overline{}$ | oleted Matrix | | | | | |
| | c Surface (A12) cky Mineral (S1) | | | dox Dark Sui oleted Dark \$ | | 7) | | | |
| | ky Peat or Peat (S3) | | | dox Depress | - | ') | | | |
| | ayer (if observed |): | | <u>аох В оргосо</u> | 10110 (1 0) | | | 1 | |
| Type: | , | , | | | | | | | |
| Depth (in | iches): | | | | | | | Hydric Soil Pres | ent? Yes ^X No |
| Remarks: | · | | | | | | | , , | |
| | | | | | | | | | |
| | | | | | | | | | |
| HYDROLO | GY | | | | | | | | |
| Wetland Hyd | drology Indicators | s: | | | | | | Secondary In | dicators (minimum of two required) |
| Primary Indic | cators (minimum of | one is requ | uired; ch | eck all that | apply) | | | - | Soil Cracks (B6) |
| Surface Wa | ater (A1) | | | Water-Stained | d Leaves (E | 39) | | | e Patterns (B10) |
| High Water | r Table (A2) | | | Aquatic Faun | a (B13) | | | Dry-Sea | son Water Table (C2) |
| Saturation | (A3) | | | True Aquatic | Plants (B14 | 1) | | Crayfish | Burrows (C8) |
| Water Mark | ks (B1) | | | Hydrogen Sul | fide Odor (| C1) | | Saturati | on Visible on Aerial Imagery (C9) |
| <u> </u> | Deposits (B2) | | | Oxidized Rhiz | ospheres o | on Living Ro | oots (C3) | Stunted | or Stressed Plants (D1) |
| Drift Depos | | | | Presence of F | | | | Geomor | phic Position (D2) |
| | or Crust (B4) | | | Recent Iron R | | Tilled Soil | s (C6) | FAC-Ne | utral Test (D5) |
| Iron Depos | มีเร (เฮอ) Visible on Aerial Image | on. (D7) | | Thin Muck Su | | | | | |
| | egetated Concave Sur | | | Gauge or We | ` ' | | | | |
| Field Observ | | lace (Bo) | | Other (Explain | n in Remari | KS) | | T | |
| Surface Water | | es/es | No | X D | epth (incl | nes): | | | |
| Water Table | | es — | No | | epth (incl | | | | |
| Saturation Pr | _ | /es | No | | epth (incl | · — | | Watland Hydrolog | Present? Yes No X |
| (includes cap | | | | | | | | Wetland Hydrology | y Present? YesNo _X_ |
| Describe Red | corded Data (strea | m gauge, n | nonitorin | g well, aeria | al photos | , previous | s inspec | tions), if available: | |
| Remarks: | | | | | | | | | |
| | | | | | | | | | |

| Project/Site: Castlerock | | Cit | y/County: | Dakota | Sampling Da | ate: <u>10/1</u> | 1/2023 |
|--|-------------------------|---------------------------|-----------------------|--|--------------------------|------------------|------------|
| Applicant/Owner: Stone Solar | | | | State: <u>N</u> | Min Sampling Po | oint: W16 | -1w |
| Investigator(s): MB MS | | | Section | on, Township, Range: _ | T113N, R19W, S | 32 | |
| Landform (hillside, terrace, etc.): Depression | | Local relief | (concave, c | convex, none): Conc | ave | Slope %: | 0-2 |
| Subregion (LRR or MLRA): LRR M La | at: 44.622114 | 4 | | Long: -93.062883 | Dat | um: WG | 3S84 |
| Soil Map Unit Name: Marshan silty clay loam | | | | NWI classificati | on: | | |
| Are climatic / hydrologic conditions on the site typical for | or this time of | year? | Yes | X No (I | f no, explain in Re | marks.) | |
| Are Vegetation \underline{X} , Soil $\underline{\hspace{1cm}}$, or Hydrology $\underline{\hspace{1cm}}$ | significar | ntly disturbed | d? Are | "Normal Circumstances" | present? Yes | s_X No | ٥ |
| Are Vegetation , Soil , or Hydrology _ | naturally | problematic | ? (If ne | eeded, explain any answ | ers in Remarks.) | | |
| SUMMARY OF FINDINGS – Attach site map s | howing sam | pling point | locations, t | ransects, important fea | tures, etc. | | |
| Hydrophytic Vegetation Present? Yes | X No | _ , | s the Samp | oled Area | | | |
| | X No | _ , | within a We | | X No | | |
| | X No | | | _ | | <u>-</u> | |
| Remarks: (Explain alternative procedures here or in a Mown vegetation at toeslope in wet basin | ı separate rep | ort.) | | | | | |
| VEGETATION – Use scientific names of pl | | Damina | | T | | | |
| Tree Stratum (Plot size: 30 ft) | Absolute <u>% Cover</u> | Dominar <u>Species</u> | Statu: | | worksheet: | | |
| 1. | | | | Number of Domin | • | | |
| 2 | | | | That Are OBL, FA | CW, or FAC: | 1 | (A) |
| 3 | | | | Total Number of D | Dominant | | |
| 4 | | | _ | — Species Across A | II Strata: | 1 | (B) |
| 5 | | = Total Co | ver | Percent of Domina That Are OBL, FA | • | 100 | (A/B) |
| 1 | | | | Prevalence Index | x worksheet: | | |
| 2. | | | | Total % Cov | er of: | Multiply by | <i>/</i> : |
| 3. | | | | OBL species | x 1 : | = | |
| 4 | | | _ | FACW species | x 2 = | = | |
| 5 | | - | | FAC species | x3: | = | |
| Herb Stratum (Plot size: 5 ft.) | 0 | = Total Cov | er | FACU species | x 4 = | = | |
| 1 10t 5126 | 70 | Vaa | FA C\A | , UPL species | x 5 = | = | |
| Phalaris arundinacea Persicaria maculosa | 70 15 | Yes No | _ <u>FACW</u> FACW | Column Totals: | (A) | | (B) |
| Trifolium repens | | | _ FACV | — Brovolones | e Index = B/A = | | |
| 4 | | | | _ | etation Indicators | s: | |
| 5 | | | | | est for Hydrophytic | | n |
| 6. | | | | | ice Test is >50% | J | |
| 7. | | | _ | | | | |
| 8 | | | _ | | ogical Adaptations | 1 | |
| 9 | | | _ | (Provide supportin | ng data in Remarks or or | ı a separate s | heet) |
| 10 | | | | Problematic | Hydrophytic Vege | tation¹ (Ex | (plain) |
| Woody Vine Stratum (Plot size: 30 ft) | 100 | = Total Cov | er | ¹ Indicators of hydric soil disturbed or problematic | | nust be prese | nt, unless |
| 1 | | | | Hydrophytic | | | |
| 2 | | | _ | Vegetation | v | | |
| | 0 | = Total Cov | er | Present? | Yes X | No | |
| Remarks: (Include photo numbers here or on a sep | parate sheet.) | | | | | | |

SOIL Sampling Point: W16-1w

| Depth | Matrix | | F | Redox Feature | 25 | | | |
|---|---|---------------------------------|--|--|--|------------------|--|--|
| (inches) | Color (moist) | % | Color (mois | | Type ¹ | Loc ² | Texture | Remarks |
| 0-3 | 10YR 3/2 | 98 | 2.5YR 4/4 | 2 | C | | Loam | |
| | | | | | | | | |
| 3-22 | 10YR 2/1 | 95 | 2.5YR 4/6 | 5 | <u>C</u> | M | Clay Loam | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹Type: C=C | Concentration, D=De | nletion RN | | trix MS=Mas | ked San | d Grains | ² I ocation: PI =Por | e Lining, M=Matrix. |
| Hydric Soil I | | piction, rai | 7 Troduced Ma | unx, mo mac | itou ouri | a Oranic | | Problematic Hydric Soils ³ : |
| Histosol (A | | | Sandy Glev | ed Matrix (S4) | | | | e Redox (A16) |
| | pedon (A2) | | Sandy Red | | | | | nese Masses (F12) |
| Black Hist | | | Stripped Ma | | | | | Material (F21) |
| | Sulfide (A4) | | Dark Surface | ` ' | | | | v Dark Surface (F22) |
| Stratified I | Layers (A5) | | Loamy Mud | ky Mineral (F1 |) | | Other (Expla | ain in Remarks) |
| 2 cm Muc | k (A10) | | Loamy Gle | ed Matrix (F2) | | | | |
| Depleted I | Below Dark Surface (A | (11) | Depleted M | atrix (F3) | | | | |
| Thick Darl | k Surface (A12) | | X Redox Dark | Surface (F6) | | | | |
| | ıcky Mineral (S1) | | | ark Surface (F7 | 7) | | | |
| | ky Peat or Peat (S3) | | Redox Dep | ressions (F8) | | | | |
| | Layer (if observed) |): | | | | | | |
| Type: | | | | | | | | y |
| Depth (ir | nches): | | | | | | Hydric Soil Present | Yes X No |
| Remarks: | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| HYDROLO | | | | | | | | |
| - | drology Indicators | | | | | | | |
| | cators (minimum or | | بالماءا ممامات الممسك | | | | Secondary Indicat | ors (minimum of two required) |
| | | one is requ | ired; check all | | | | Secondary Indicat Surface Soil | • |
| Surface W | | one is requ | Water-St | ained Leaves (B | 9) | | Surface Soil Drainage Pat | Cracks (B6) terns (B10) |
| Surface W | er Table (A2) | one is requ | Water-St | ained Leaves (B auna (B13) | , | | Surface Soil Drainage Pat Dry-Season | Cracks (B6) terns (B10) Water Table (C2) |
| Surface W High Wate Saturation | er Table (A2) (A3) | <u>one is requ</u> | Water-St Aquatic F True Aqu | ained Leaves (B auna (B13) atic Plants (B14 |) | | Surface Soil Drainage Pat Dry-Season \ Crayfish Burr | Cracks (B6) terns (B10) Water Table (C2) ows (C8) |
| Surface W High Wate Saturation Water Mar | er Table (A2) (A3) | one is requ | Water-St Aquatic F True Aqu Hydroge | ained Leaves (B auna (B13) atic Plants (B14 n Sulfide Odor (0 |) C1) | pots (C3) | Surface Soil Drainage Pat Dry-Season Crayfish Burn Saturation Vi | Cracks (B6) terns (B10) Water Table (C2) ows (C8) sible on Aerial Imagery (C9) |
| Surface W High Wate Saturation Water Mar | er Table (A2) (A3) ks (B1) Deposits (B2) | <u>one is requ</u> | Water-St Aquatic F True Aqu Hydrogei Oxidized | ained Leaves (B auna (B13) atic Plants (B14 |) C1) n Living Ro | oots (C3) | Surface Soil Drainage Pat Dry-Season V Crayfish Burr Saturation Vi | Cracks (B6) terns (B10) Water Table (C2) ows (C8) sible on Aerial Imagery (C9) ressed Plants (D1) |
| Surface W High Wate Saturation Water Mar Sediment I | er Table (A2) (A3) ks (B1) Deposits (B2) | <u>one is requ</u> | Water-St Aquatic F True Aqu Hydrogei Oxidized Presence | ained Leaves (B auna (B13) atic Plants (B14 n Sulfide Odor (G |) C1) n Living Ro n (C4) | , , | Surface Soil Drainage Pat Dry-Season V Crayfish Burr Saturation Vi Stunted or St | Cracks (B6) terns (B10) Water Table (C2) ows (C8) sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2) |
| Surface W High Wate Saturation Water Mar Sediment I | er Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) | <u>one is requ</u> | Water-St Aquatic F True Aqu Hydrogei Oxidized Presence | ained Leaves (B Fauna (B13) atic Plants (B14 n Sulfide Odor (0 Rhizospheres o |) C1) n Living Ro n (C4) | , , | Surface Soil Drainage Pat Dry-Season \ Crayfish Burr Saturation Vi Stunted or St | Cracks (B6) terns (B10) Water Table (C2) ows (C8) sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2) |
| Surface W High Wate Saturation Water Mar Sediment I Drift Depos Algal Mat o | er Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) | | Water-St Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir | ained Leaves (B auna (B13) atic Plants (B14 a Sulfide Odor (G Rhizospheres of e of Reduced Iro on Reduction in |) C1) n Living Ro n (C4) Tilled Soil | , , | Surface Soil Drainage Pat Dry-Season \ Crayfish Burr Saturation Vi Stunted or St | Cracks (B6) terns (B10) Water Table (C2) ows (C8) sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2) |
| Surface W High Wate Saturation Water Mar Sediment I Drift Depos Algal Mat of Iron Depos Inundation Sparsely V | or Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) visible on Aerial Image //egetated Concave Surf. | ry (B7) | Water-St Aquatic F True Aqu Hydrogei Oxidized Presence Recent Ii Thin Muc | ained Leaves (B auna (B13) atic Plants (B14 n Sulfide Odor (G Rhizospheres of e of Reduced Iro on Reduction in k Surface (C7) |) C1) n Living Ro n (C4) Tilled Soil: | , , | Surface Soil Drainage Pat Dry-Season \ Crayfish Burr Saturation Vi Stunted or St | Cracks (B6) terns (B10) Water Table (C2) ows (C8) sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2) |
| Surface W High Wate Saturation Water Mar Sediment I Drift Depos Algal Mat of Iron Depos Inundation Sparsely V | rr Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) Visible on Aerial Image /egetated Concave Surf. vations: | ry (B7) ace (B8) | Water-St Aquatic F True Aqu Hydrogei Oxidized Presence Recent Ii Thin Muc | ained Leaves (Bisauna (B13) atic Plants (B14) n Sulfide Odor (Gisauna) Rhizospheres of of Reduced Iro on Reduction in k Surface (C7) Well Data (D9) |) C1) n Living Ro n (C4) Tilled Soil: | , , | Surface Soil Drainage Pat Dry-Season \ Crayfish Burr Saturation Vi Stunted or St | Cracks (B6) terns (B10) Water Table (C2) ows (C8) sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2) |
| Surface W High Wate Saturation Water Mar Sediment I Drift Depos Algal Mat of Iron Depos Inundation Sparsely V Field Obser Surface Wate | er Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) Visible on Aerial Image //egetated Concave Surf. vations: er Present Y | ry (B7) ace (B8) es | Water-St Aquatic F True Aqu Hydrogei Oxidized Presence Recent Ii Thin Muc Gauge of Other (E: | ained Leaves (B Fauna (B13) atic Plants (B14 in Sulfide Odor (C Rhizospheres of e of Reduced Iro on Reduction in k Surface (C7) Well Data (D9) kplain in Remark |) C1) n Living Ro n (C4) Tilled Soil: | , , | Surface Soil Drainage Pat Dry-Season \ Crayfish Burr Saturation Vi Stunted or St | Cracks (B6) terns (B10) Water Table (C2) ows (C8) sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2) |
| Surface W High Wate Saturation Water Mar Sediment I Drift Depos Algal Mat of Iron Depos Inundation Sparsely V Field Obser Surface Wate Water Table | er Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) Visible on Aerial Image //egetated Concave Surf. vations: er Present Y Present Y | ry (B7) ace (B8) es es | Water-St | ained Leaves (Birauna (B13) atic Plants (B14) a Sulfide Odor (Girania (Cirania (Cira |) C1) n Living Ro n (C4) Tilled Soils s) nes): | , , | Surface Soil Drainage Pat Dry-Season V Crayfish Burr Saturation Vi Stunted or St X Geomorphic X FAC-Neutral | Cracks (B6) terns (B10) Water Table (C2) ows (C8) sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2) Test (D5) |
| Surface W High Wate Saturation Water Mar Sediment I Drift Depos Algal Mat of Iron Depos Inundation Sparsely V Field Obsert Surface Wate Water Table Saturation P | er Table (A2) (A3) (ks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) Visible on Aerial Image //egetated Concave Surf- vations: er Present Present Y resent Y | ry (B7) ace (B8) es | Water-St Aquatic F True Aqu Hydrogei Oxidized Presence Recent Ii Thin Muc Gauge of Other (E: | ained Leaves (B Fauna (B13) atic Plants (B14 in Sulfide Odor (C Rhizospheres of e of Reduced Iro on Reduction in k Surface (C7) Well Data (D9) kplain in Remark |) C1) n Living Ro n (C4) Tilled Soils s) nes): | , , | Surface Soil Drainage Pat Dry-Season \ Crayfish Burr Saturation Vi Stunted or St | Cracks (B6) terns (B10) Water Table (C2) ows (C8) sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2) Test (D5) |
| Surface W High Wate Saturation Water Mar Sediment I Drift Depos Algal Mat of Iron Depos Inundation Sparsely V Field Obser Surface Wate Water Table Saturation P (includes cap | er Table (A2) (A3) (ks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) Visible on Aerial Image //egetated Concave Surf- vations: er Present Present Y resent Y | ry (B7) ace (B8) es es | Water-St | ained Leaves (Biauna (B13) atic Plants (B14) a Sulfide Odor (Giana) Rhizospheres of Giana (G7) on Reduction in the Surface (C7) Well Data (D9) Explain in Remark Depth (inchinchinch) |) C1) n Living Ro n (C4) Tilled Soils s) nes): nes): | s (C6) | Surface Soil Drainage Pat Dry-Season V Crayfish Burn Saturation Vi Stunted or St X Geomorphic X FAC-Neutral | Cracks (B6) terns (B10) Water Table (C2) ows (C8) sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2) Test (D5) |
| Surface W High Wate Saturation Water Mar Sediment I Drift Depos Algal Mat of Iron Depos Inundation Sparsely V Field Obser Surface Wate Water Table Saturation P (includes cap | er Table (A2) (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) Visible on Aerial Image /egetated Concave Surf. vations: er Present Present Y resent Y resent Y resent Y resent Y resent Y | ry (B7) ace (B8) es es | Water-St | ained Leaves (Biauna (B13) atic Plants (B14) a Sulfide Odor (Giana) Rhizospheres of Giana (G7) on Reduction in the Surface (C7) Well Data (D9) Explain in Remark Depth (inchinchinch) |) C1) n Living Ro n (C4) Tilled Soils s) nes): nes): | s (C6) | Surface Soil Drainage Pat Dry-Season V Crayfish Burn Saturation Vi Stunted or St X Geomorphic X FAC-Neutral | Cracks (B6) terns (B10) Water Table (C2) ows (C8) sible on Aerial Imagery (C9) ressed Plants (D1) Position (D2) Test (D5) |

| Project/Site: Castlerock | | City/County: [| Dakota | Sampling Date: <u>10/12/2023</u> |
|--|-------------------------|----------------------------|---|---|
| Applicant/Owner: Stone Solar | | | State: Min | Sampling Point: W18-4u |
| Investigator(s): MB MS | | Section | , Township, Range: T11 | 13N, R19W, S2 |
| Landform (hillside, terrace, etc.): Backslope | Local r | elief (concave, co | onvex, none): Linear | Slope %: 3-5 |
| Subregion (LRR or MLRA): LRR M La | at: 44.62449 | L | ong: -93.066766 | Datum: WGS84 |
| Soil Map Unit Name: Hawick gravelly sandy loam, | | | NWI classification: | |
| Are climatic / hydrologic conditions on the site typical for | or this time of year? | Yes | X No (If no | , explain in Remarks.) |
| Are Vegetation X , Soil , or Hydrology | significantly distu | Irbed? Are "N | Normal Circumstances" pre | sent? Yes_X No |
| Are Vegetation , Soil , or Hydrology | | | eded, explain any answers i | n Remarks.) |
| SUMMARY OF FINDINGS – Attach site map s | | | ansects, important feature | es, etc. |
| Hydrophytic Vegetation Present? Yes | K No | le the Sempl | od Aroo | |
| | X No | Is the Sample within a Wet | | No X |
| Wetland Hydrology Present? Yes | No <u>X</u> | Within a voc | | - |
| Remarks: (Explain alternative procedures here or in a | , | | | |
| Healthy soil. At the 10/02/2024 TEP meeting the sampled are | a was determined to nav | e met wetland nydro | ology criteria and is considered | wetiand. |
| VEGETATION – Use scientific names of pl | ants | | | |
| VESTIATION OSC SCIONAIIO NAMIOS OF PA | | ninant Indicato | r | |
| Tree Stratum (Plot size: 30 ft) | | ecies Status | | ksheet: |
| 1 | | | Number of Dominant | Species |
| 2 | | | _ That Are OBL, FACW | • |
| 3 | | | _ | inant |
| 4 | | | Species Across All St | |
| 5 | _ | | Percent of Dominant 9 | Snecies |
| Sapling/Shrub Stratum (Plot size:15 ft) | 0 = Tota | al Cover | That Are OBL, FACW | • |
| 1 | | | Prevalence Index wo | orksheet: |
| 2. | | | Total % Cover o | f: Multiply by: |
| 3. | | | OBL species | x 1 = |
| 4 | | | _ FACW species | x 2 = |
| 5 | | | _ FAC species | x 3 = |
| Hart Otratage (Districts 5 ff) | 0 = Total | Cover | FACU species | x 4 = |
| Herb Stratum (Plot size: 5 ft) | 15 V | es FACW | UPL species | x 5 = |
| Cyperus esculentus | | | Column Totals: | (A)(B) |
| 2. 3. | | | — Prevalence Ind | ex = B/A = |
| 4 | | | Hydrophytic Vegetat | ion Indicators: |
| 5. | | | ─ | or Hydrophytic Vegetation |
| 6. | | | X 2 - Dominance T | est is >50% |
| 7 | | | _ 3 - Prevalence I | |
| 8 | | | — 4 - Morphologica | |
| 9 | | | (Provide supporting dat | a in Remarks or on a separate sheet) |
| 10 | | | Problematic Hyd | Irophytic Vegetation¹ (Explain) |
| Washi Vina Chatana (District 20 ft) | 15 = Total | Cover | ¹ Indicators of hydric soil and w disturbed or problematic. | vetland hydrology must be present, unless |
| Woody Vine Stratum (Plot size: 30 ft) | | | | |
| 1 | | | Hydrophytic Vegetation | |
| 2 | 0 = Total | Cover | _ Vegetation Present? Ye | s X No |
| Remarks: (Include photo numbers here or on a seg | | OUVEI | | |
| Tomano. (molade proto numbers here of olf a sep | arato sileet.) | | | |

SOIL Sampling Point: W18-4u

| Depth | Profile Desc | ription: (Describe to | the dep | oth needed to docu | ment th | e indicat | tor or co | onfirm the absence o | f indicators.) | |
|--|---------------|-----------------------|-----------|------------------------|------------|-------------------|------------------|-----------------------|---------------------------|---------------|
| Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Rocation: PL=Pove Lining, M=Matrix | Depth | | | | | | | | | |
| Type: C=Concentration. D=Depletion, PM=Reduced Matrix, MS=Masked Saind Grains. PLocation: PL=Pore Lining, M=Matrix, Hydric Soil indicators: Indicators for Problematic Hydric Soils*: Indicators f | (inches) | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | Texture | Re | marks |
| Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. **Location: PL=Pore Lining, M=Matrix.* Indicators for Problematic Hydric Soils*: Coast: Praine Redox (A1s) Indicators for Problematic Hydric Soils*: Indicators for Problematic Hydric Soils*: Indicators for Problematic Hydric Soils*: Coast: Praine Redox (A1s) Indicators for Problematic Hydric Soils*: Indicators for Problemat | 0-18 | 10YR 3/2 | 96 | 2.5YR 4/4 | 4 | С | М | Clay Loam | | |
| Hydric Soil Indicators: Histoso (A1) Sandy Gleyed Matrix (S4) Coast Prairie Redox (A16) Iron-Margine Redox (A16) Rad Parent Material (F21) Very Shallow Dark Surface (F22) Iron-Margine Redox (A16) Iron-Margine Redox (A16) Iron-Margine Redox (A17) Iron-Margine Iron-Margine Redox (A17) Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron- | | | | | | | | | | |
| Hydric Soil Indicators: Histoso (A1) Sandy Gleyed Matrix (S4) Coast Prairie Redox (A16) Iron-Margine Redox (A16) Rad Parent Material (F21) Very Shallow Dark Surface (F22) Iron-Margine Redox (A16) Iron-Margine Redox (A16) Iron-Margine Redox (A17) Iron-Margine Iron-Margine Redox (A17) Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron- | | | | | | | | | | |
| Hydric Soil Indicators: Histoso (A1) Sandy Gleyed Matrix (S4) Coast Prairie Redox (A16) Iron-Margine Redox (A16) Rad Parent Material (F21) Very Shallow Dark Surface (F22) Iron-Margine Redox (A16) Iron-Margine Redox (A16) Iron-Margine Redox (A17) Iron-Margine Iron-Margine Redox (A17) Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron- | | | | | | | | | | |
| Hydric Soil Indicators: Histoso (A1) Sandy Gleyed Matrix (S4) Coast Prairie Redox (A16) Iron-Margine Redox (A16) Rad Parent Material (F21) Very Shallow Dark Surface (F22) Iron-Margine Redox (A16) Iron-Margine Redox (A16) Iron-Margine Redox (A17) Iron-Margine Iron-Margine Redox (A17) Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron- | | | | | | | | | | |
| Hydric Soil Indicators: Histoso (A1) Sandy Gleyed Matrix (S4) Coast Prairie Redox (A16) Iron-Margine Redox (A16) Rad Parent Material (F21) Very Shallow Dark Surface (F22) Iron-Margine Redox (A16) Iron-Margine Redox (A16) Iron-Margine Redox (A17) Iron-Margine Iron-Margine Redox (A17) Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron- | | | | | | | | | | |
| Hydric Soil Indicators: Histoso (A1) Sandy Gleyed Matrix (S4) Coast Prairie Redox (A16) Iron-Margine Redox (A16) Rad Parent Material (F21) Very Shallow Dark Surface (F22) Iron-Margine Redox (A16) Iron-Margine Redox (A16) Iron-Margine Redox (A17) Iron-Margine Iron-Margine Redox (A17) Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron- | | | | | | | | | - | |
| Hydric Soil Indicators: Histoso (A1) Sandy Gleyed Matrix (S4) Coast Prairie Redox (A16) Iron-Margine Redox (A16) Rad Parent Material (F21) Very Shallow Dark Surface (F22) Iron-Margine Redox (A16) Iron-Margine Redox (A16) Iron-Margine Redox (A17) Iron-Margine Iron-Margine Redox (A17) Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron- | | | | | | | | | | |
| Hydric Soil Indicators: Histoso (A1) Sandy Gleyed Matrix (S4) Coast Prairie Redox (A16) Iron-Margine Redox (A16) Rad Parent Material (F21) Very Shallow Dark Surface (F22) Iron-Margine Redox (A16) Iron-Margine Redox (A16) Iron-Margine Redox (A17) Iron-Margine Iron-Margine Redox (A17) Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron-Margine Iron- | | | | | | | | | | |
| Hydric Soil Indicators: Histosco (A1) | | | | | | | | | | |
| Hydric Soil Indicators: Histosco (A1) | | | | | | | | | | |
| Histosol (A1) Sandy Glayed Matrix (S4) Coast Prairie Redox (A16) Histor Epipedon (A2) Sandy Redox (S5) Iron-Manganese Masses (F12) Black Histor (A3) Stripped Matrix (S6) Red Parent Material (F21) Very Shallow Dark Surface (F22) Stratified Layers (A5) Loarry Mucky Mineral (F1) Other (Explain in Remarks) Other (Explain in Remarks) 2 om Muck (A10) Loarry Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Mark (F3) Thick Dark Surface (A12) Sandy Mucky Mineral (F1) Depleted Mark (F3) Thick Dark Surface (A12) Send Mucky Mineral (F1) Depleted Dark Surface (F6) Send Mucky Peat or Peat (S3) Redox Depressions (F8) Restrictive Layer (If observed): Type: Depth (Inches): Hydric Soil Present? Yes No Permarks: ***PAPENDEOGY** **Wetland Hydrology Indicators: Primary Indicators (minimum of two required: obeck all that apply) Surface Water (A1) Surface (F2) Depth (Inches): Surface (F2) Depth (Inches): Surface (F2) Depth (Inches): Surface (F2) Depth (Inches): Surface (F2) Depth (Inches): Surface (F2) Depth (Inches): Surface (F2) Depth (Inches): Surface (F2) Depth (Inches): Wetland Hydrology Indicators (minimum of two required: obeck all that apply) Surface Soil Cracks (F8) Depth (Inches): Water Table (C2) Depth (Inches): Surface (F2) Depth (Inches): Wetland Hydrology Resent? Ves No X Depth (Inches): Wetland Hydrology Present? Ves No X Depth (Inches): | | | tion, RI | M=Reduced Matrix, | MS=Mas | sked San | d Grains | | | |
| Histic Epipedon (A2) | Hydric Soil I | ndicators: | | | | | | Indicators | for Problematic H | ydric Soils³: |
| Black Histic (A3) Stripped Matrix (S6) Red Parent Material (F21) Hydrogen Sulfide (A4) Dark Surface (S7) Very Shallow Dark Surface (F22) Stratified Layers (A5) Loamy Mucky Mineral (F1) Other (Explain in Remarks) 2 cm Muck (A10) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Xe Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) 5 cm Mucky Peat or Peat (S3) Redox Dark Surface (F7) 5 cm Mucky Peat or Peat (S3) Redox Dark Surface (F7) Setrictive Layer (if observed): Type: Depth (inches): Hydrology Indicators: Primary Indicators (minimum of one is required: check all that apply) Surface Vater (A1) Vater-Stained Leaves (B9) Hydric Soil Present? Yes Xero- Sourface Soil Cracks (B8) Doringa Peaterns (B10) Doringa Peaterns (B10) Doring Deposits (B2) Doring Deposits (B3) Presence of Reducted into (C4) Agail Mat or Creat (B4) Doring Deposits (B5) Inundation Visible on Aerial Imagery (C7) Gauge or Well Data (D9) Spansely Vegetated Concave Surface (B8) Dother (Explain in Remarks) Wettand Hydrology Present? Yes No X Depth (inches): Wettand Hydrology Present | Histosol (A | N1) | | Sandy Gleyed M | atrix (S4) | | | Coast P | rairie Redox (A16) | |
| Hydrogen Sulfide (A4) Dark Surface (S7) Very Shallow Dark Surface (F22) Stratified Layers (A5) Loany Mucky Mineral (F1) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) X Rodox Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F6) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Som Mucky Peat or Peat (S3) Redox Depressions (F8) Restrictive Layer (if observed): Type: Depth (inches): Permarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Surface (A2) Aquatic Fauns (B13) Primary Indicators (minimum of one is required; Check all that apply) Surface Water (A1) Primary Indicators (minimum of one is required; Check all that apply) Surface Water (A1) Primary Indicators (minimum of one is required; Check all that apply) Surface Water (A2) Aquatic Fauns (B13) Drainage Patterns (B10) Drainage | Histic Epip | edon (A2) | | Sandy Redox (S | 5) | | | Iron-Ma | nganese Masses (F12 | ?) |
| Stratified Layers (A5) | Black Histi | c (A3) | | Stripped Matrix (| S6) | | | Red Pai | rent Material (F21) | |
| 2 cm Muck (A10) | Hydrogen | Sulfide (A4) | | Dark Surface (S | 7) | | | Very Sh | allow Dark Surface (F | 22) |
| Depleted Below Dark Surface (A11) | | • , , | | | | | | Other (E | Explain in Remarks) | |
| Thick Dark Surface (A12) | 2 cm Mucl | c (A10) | | | |) | | | | |
| Sandy Mucky Mineral (S1) | | |) | | | | | | | |
| Restrictive Layer (if observed): Type: Depth (inches): Permarks: Hydric Soil Present? Hydric Soil Present? Hydric Soil Present? Yes X No Hydric Soil Present? Hydric Soil Present? Yes X No Secondary Indicators (minimum of two required) Secondary Indi | | • • | | | | | | | | |
| Remarks: Hydric Soil Present? Yes X No Remarks: Hydric Soil Present? Yes X No Metiand Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) High Water Table (A2) Saturation (A3) True Aquatic Fauna (B13) Saturation (A3) Hydrogen Sulfide Odor (C1) Sadiment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Primary Indicators (Minimum of two required) Saturation (A3) Frine Aquatic Flants (B14) Saturation (A3) Frine Aquatic Plants (B14) Saturation Visible on Aerial Imagery (C9) Saturation Visible on Aerial Imagery (C9) Spansely Vegetated Concave Surface (B8) Iron Deposits (B5) Iron Deposits (B5) Thin Muck Surface (C7) Inundation Visible on Aerial Imagery (B7) Spansely Vegetated Concave Surface (B8) Other (Explain in Remarks) Field Observations: Surface Water Present Yes No X Depth (inches): Surface Water Present Yes No X Depth (inches): Surface Water Table (R5) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: | | | | | • | 7) | | | | |
| Type: | | | | Redox Depression | ons (F8) | | | 1 | | |
| Depth (inches): | | ayer (II observed): | | | | | | | | |
| Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) High Water Table (A2) Aquatic Flauna (B13) Water Marks (B1) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Aqual Mat or Crust (B4) Iron Deposits (B3) Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) Ininudation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Field Observations: Surface Water Present Yes No X Depth (inches): Water Table Present Yes No X Depth (inches): Water Mater (B1) Wetland Hydrology Present? Yes No X Depth (inches): Remarks: | | | | | | | | | | V |
| ### Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) | | ches): | | | | | | Hydric Soil Prese | ent? Yes _ | |
| Metland Hydrology Indicators: | Remarks: | | | | | | | | | |
| Metland Hydrology Indicators: | | | | | | | | | | |
| Metland Hydrology Indicators: | | | | | | | | | | |
| Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water (A1) Aquatic Fauna (B13) Dry-Season Water Table (C2) Saturation (A3) True Aquatic Plants (B14) Crayfish Burrows (C8) Water Marks (B1) Aguatic Fauna (B13) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Sediment Deposits (B2) Drift Deposits (B3) Presence of Reduced Iron (C4) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Field Observations: Surface Water Present Yes No X Depth (inches): Saturation Present Yes No X Depth (inches): Saturation Present Yes No X Depth (inches): Setlingth of a validable: Wetland Hydrology Present? Yes No X X X X X X X X X X X X X | HYDROLO | GY | | | | | | | | |
| Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) Surface Water (A1) Water-Stained Leaves (B9) Drainage Patterns (B10) Dr | Wetland Hyd | drology Indicators: | | | | | | Secondary Inc | dicators (minimum of t | wo required) |
| High Water Table (A2) | Primary Indic | ators (minimum of one | e is requ | uired; check all that | apply) | | | Surface | Soil Cracks (B6) | |
| Saturation (A3) | Surface Wa | ater (A1) | | Water-Stained | Leaves (E | 39) | | Drainage | e Patterns (B10) | |
| Water Marks (B1) | High Water | Table (A2) | | Aquatic Fauna | (B13) | | | Dry-Seas | son Water Table (C2) | |
| Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Iron Deposits (B5) Stunted or Stressed Plants (D1) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Field Observations: Surface Water Present Yes No X Depth (inches): Water Table Present Yes No X Depth (inches): Saturation Present Yes No X Depth (inches): Saturation Present Yes No No X Saturation | (A3) | | True Aquatic F | lants (B14 | 4) | | Crayfish | Burrows (C8) | |
| Drift Deposits (B3) Presence of Reduced Iron (C4) Geomorphic Position (D2) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) FAC-Neutral Test (D5) Iron Deposits (B5) Thin Muck Surface (C7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Surface Water Present | Water Mark | (s (B1) | | Hydrogen Sulf | de Odor (| C1) | | Saturatio | on Visible on Aerial Imaç | gery (C9) |
| Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) X FAC-Neutral Test (D5) Iron Deposits (B5) Thin Muck Surface (C7) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Surface Water Present | | | | Oxidized Rhize | spheres o | on Living R | oots (C3) | Stunted | or Stressed Plants (D1) | |
| Iron Deposits (B5) Thin Muck Surface (C7) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Surface Water Present | | | | Presence of R | educed Iro | on (C4) | | | ` ' | |
| Inundation Visible on Aerial Imagery (B7)Gauge or Well Data (D9)Sparsely Vegetated Concave Surface (B8)Other (Explain in Remarks) Field Observations: Surface Water Present Yes NoXDepth (inches): Water Table Present Yes NoXDepth (inches): Saturation Present Yes NoX | | , , | | | | n Tilled Soil | s (C6) | FAC-Neu | utral Test (D5) | |
| Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks) Field Observations: Surface Water Present Yes No X Depth (inches): Water Table Present Yes No X Depth (inches): Saturation Present Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: | | | 77\ | | | | | | | |
| Field Observations: Surface Water Present Yes No X Depth (inches): Water Table Present Yes No X Depth (inches): Saturation Present Yes No X Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: | | | • | _ | | | | | | |
| Surface Water Present Yes No X Depth (inches): Water Table Present Yes No X Depth (inches): Water Table Present Yes No X Depth (inches): Wetland Hydrology Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes No X Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | | _ | (D0) | Other (Explain | in Remar | ks) | | | | |
| Water Table Present Yes No X Depth (inches): Saturation Present Yes Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: | | | | No X De | oth (inc | hes): | | | | |
| Saturation Present Yes No X Depth (inches): Wetland Hydrology Present? Yes No X Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: | | ., | _ | | | | | | | |
| (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: | | | | | | · — | | L | 5 10 | |
| Remarks: | | | _ | | . , - | ′— | | vvetiand Hydrology | resent? | resNo _X |
| | Describe Red | corded Data (stream g | auge, n | nonitoring well, aeria | l photos | , previous | s inspec | tions), if available: | | |
| | Remarks: | | | | | | | | | |
| | | meeting sampled are | a was c | letermined to meet i | ndicators | s Surface | Soil Cr | acks (B6) and Geomo | rphic Position (D2). | |

| Project/Site: Castlerock | | City/C | County: Da | akota | Sampli | ng Date: _ | 10/12/2023 |
|--|-------------------|-------------------|--------------|---|---------------------|------------------|----------------|
| Applicant/Owner: Stone Solar | | | | State: | Min Sampli | ng Point: | W18-4w |
| Investigator(s): MB MS | | | Section, | Township, Range: | T113N, R19 | W, S2 | |
| Landform (hillside, terrace, etc.): Toeslope | | Local relief (co | oncave, con | vex, none): Con | cave | Slope | %: 1-3 |
| Subregion (LRR or MLRA): LRR M L | at: 44.624498 | 1 | Lo | ng: -93.066561 | | Datum: | WGS84 |
| Soil Map Unit Name: Marshan silty clay loam | | | | NWI classifica | tion: PEM | 11C | |
| Are climatic / hydrologic conditions on the site typical f | or this time of y | /ear? | Yes | X No | (If no, explain i | in Remarks | .) |
| Are Vegetation , Soil , or Hydrology | significan | tly disturbed? | Are "No | ormal Circumstances | " present? | Yes_X | No |
| Are Vegetation , Soil , or Hydrology | | | | led, explain any ansv | vers in Remark | (s.) | |
| SUMMARY OF FINDINGS – Attach site map s | | | ations, trar | nsects, important fe | atures, etc. | | |
| Hydrophytic Vegetation Present? Yes | X No | le t | he Sample | d Aroa | | | |
| | X No | _ | hin a Wetla | | X No | | |
| Wetland Hydrology Present? Yes | X No | _ | | | | | |
| Remarks: (Explain alternative procedures here or in a | a separate repo | ort.) | | | | | |
| | | | | | | | |
| VECETATION Lies ecientific names of n | lanta | | | | | | |
| VEGETATION – Use scientific names of p | Absolute | Dominant | Indicator | | | | |
| Tree Stratum (Plot size: 30 ft) | % Cover | Species | Status | Dominance Tes | t worksheet: | | |
| 1 | | | | Number of Domi | nant Species | | |
| 2 | | | | That Are OBL, F | ACW, or FAC: | 4 | (A) |
| 3 | | | | Total Number of | Dominant | | |
| 4 | | | | Species Across | All Strata: | 4 | (B) |
| 5 | 0 | _= Total Cove | r | Percent of Domin | • | 40. | • |
| Sapling/Shrub Stratum (Plot size: 15 ft) | | | | That Are OBL, F | | | 0 (A/B) |
| 1. Cornus alba | 15 | Yes | FACW | Prevalence Inde | | | |
| 2 | | | | Total % Co | | Multipl | |
| 3 | | | | OBL species | | x 1 = | |
| 4 | | | | FACW species _ | | x 2 = | |
| 5 | 15 | | | FAC species | | x 3 = | |
| Herb Stratum (Plot size: 5 ft) | | = Total Cover | | FACU species _ | | x 4 = | |
| 1. Phalaris arundinacea | 45 | Yes | FACW | UPL species _ | | x 5 = | |
| 2. Urtica dioica | | Yes | FACW | Column Totals: | | (A) | (B) |
| 3. Panicum virgatum | 25 | Yes | FAC | Prevalenc | ce Index = B/A | = | |
| 4 | | | | Hydrophytic Ve | getation Indic | ators: | |
| 5 | | | | 1 - Rapid T | est for Hydrop | hytic Veget | ation |
| 6 | | | | X 2 - Domina | nce Test is >50 | 0% | |
| 7 | | | | - 3 - Prevale | nce Index is ≤3 | 3.0 ¹ | |
| 8 | | | | 4 - Morpho | | | |
| 9 | | | | · ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` | ting data in Remark | | , |
| 10 | | | | - | c Hydrophytic \ | Ū | ` ' ' |
| Woody Vine Stratum (Plot size: 30 ft) | 95 | = Total Cover | | ¹ Indicators of hydric so disturbed or problemati | | ology must be p | resent, unless |
| | | | | | | | |
| 1 2 | | | | Hydrophytic Vegetation | | | |
| | | = Total Cover | | Present? | Yes X | No | |
| Remarks: (Include photo numbers here or on a sep | | . 5.41 50101 | | | | _ | |
| | 2 2) | | | | | | |

SOIL Sampling Point: W18-4w

| Profile Descr Depth | Matrix | | | Redox | Feature | es | | | |
|--|--|-----------------------------|---|---|--|--|------------------|---|--|
| (inches) | Color (moist) | % | Color (mo | oist) | % | Type ¹ | Loc ² | Texture | Remarks |
| 0-18 | 10YR 2/1 | 96 | 2.5YR 4/4 | | 4 | С | М | Clay Loam | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
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| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | oncentration, D=D | epletion, R | M=Reduced I | Matrix, N | //S=Mas | ked San | d Grains | | Pore Lining, M=Matrix. |
| lydric Soil Ir | ndicators: | | | | | | | Indicators | for Problematic Hydric Soils ³ : |
| Histosol (A | .1) | | Sandy G | Sleyed Ma | atrix (S4) | | | Coast P | rairie Redox (A16) |
| Histic Epipe | edon (A2) | | Sandy R | Redox (S5 | 5) | | | Iron-Mai | nganese Masses (F12) |
| Black Histic | c (A3) | | Stripped | Matrix (S | S6) | | | Red Par | rent Material (F21) |
| Hydrogen S | Sulfide (A4) | | Dark Su | rface (S7 |) | | | Very Sh | allow Dark Surface (F22) |
| Stratified L | ayers (A5) | | Loamy N | /lucky Mi | neral (F1) |) | | Other (E | explain in Remarks) |
| 2 cm Muck | ` ' | | Loamy C | Gleyed Ma | atrix (F2) | | | | |
| Depleted B | Below Dark Surface (| A11) | | d Matrix (| • | | | | |
| | Surface (A12) | | | ark Surfa | , , | | | | |
| Sandy Muc | cky Mineral (S1) | | Depleted | d Dark Sເ | ırface (F7 | 7) | | | |
| | | | | | | | | | |
| | y Peat or Peat (S3) | \ - | Redox D | epressio | ns (F8) | | | 1 | |
| Restrictive L | ayer (if observed |): | Redox D | epressio) | ns (F8) | | | | |
| Restrictive La | ayer (if observed |): | Redox D | epressio | ns (F8) | | | | · |
| Restrictive La Type: Depth (ind | ayer (if observed |): | Redox D | epressio | ns (F8) | | | Hydric Soil Prese | ent? Yes X No |
| Restrictive La | ayer (if observed |): | Redox D | epressio | ns (F8) | | | Hydric Soil Prese | ent? Yes X No |
| Restrictive La Type: Depth (ind | ayer (if observed |): | Redox D | epressio | ns (F8) | | | Hydric Soil Prese | ent? Yes X No |
| Restrictive La Type: Depth (ind | ayer (if observed |): | Redox D | epressio | ns (F8) | | | Hydric Soil Prese | ent? Yes X No |
| Restrictive Lo Type: Depth (ind Remarks: | ayer (if observed |): | Redox D | epressio | ns (F8) | | | Hydric Soil Prese | ent? Yes X No |
| Restrictive Land Type: Depth (index Remarks: | ayer (if observed | | Redox D |)epressio | ns (F8) | | | | - 100 <u>- 100 - 100</u> |
| Restrictive Leading Type: Depth (incomments) Permarks: YDROLOG Wetland Hyd | ayer (if observed | s: | | | | | | Secondary Inc | ent? Yes X No |
| Restrictive Long Type: Depth (incomments) Permarks: YDROLOG Wetland Hyd | ayer (if observed ches): GY Irology Indicators ators (minimum of | s: | uired; check a | all that a | | 9) | | Secondary Inc | licators (minimum of two required) |
| Restrictive Long Type: Depth (ind Remarks: YDROLOG Wetland Hyde Primary Indicates | ayer (if observed ches): GY Irology Indicators ators (minimum of | s: | uired; check a | all that a | ipply) Leaves (B | 9) | | Secondary Inc Surface S Drainage | licators (minimum of two required) Soil Cracks (B6) |
| Restrictive Land Type: Depth (ind Remarks: YDROLOG Wetland Hyde Primary Indicates | GY Irology Indicators ators (minimum of ster (A1) Table (A2) | s: | uired; check a Water Aquat | all that a | ipply) Leaves (B | , | | Secondary Inc Surface S Drainage Dry-Seas Crayfish | licators (minimum of two required) Soil Cracks (B6) Patterns (B10) |
| Restrictive La Type: Depth (ind Remarks: YDROLOG Wetland Hyd Primary Indica Surface Wa High Water | GY Irology Indicators ators (minimum of ater (A1) Table (A2) (A3) | s: | uired; check a Watei Aquat | all that a r-Stained l tic Fauna Aquatic Pl | upply) Leaves (B (B13) |) | | Secondary Inc Surface S Drainage Dry-Seas | dicators (minimum of two required) Soil Cracks (B6) Patterns (B10) Son Water Table (C2) |
| Restrictive Long Type: Depth (ind Remarks: YDROLOG Vetland Hyder Primary Indicated Water Mark Water Wat | GY Irology Indicators ators (minimum of ater (A1) Table (A2) (A3) | s: | uired; check a Watei Aquat True A | all that a r-Stained l tic Fauna Aquatic Pl ogen Sulfic | upply) Leaves (B (B13) ants (B14 de Odor (G |) | oots (C3) | Secondary Inc Surface S Drainage Dry-Seas Crayfish X Saturatio Stunted of | licators (minimum of two required) Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) |
| Restrictive Long Type: Depth (ind Remarks: YDROLOG Wetland Hyder Primary Indicated Water Mark Water W | GY Irology Indicators ators (minimum of ater (A1) Table (A2) (A3) (A3) (A5) (A5) (A6) (A6) (A6) (A6) | s: | uired; check aWaterAquatTrue iHydro | all that a r-Stained l tic Fauna Aquatic Pl gen Sulfic zed Rhizo | upply) Leaves (B (B13) ants (B14 de Odor (G |) C1) n Living R | oots (C3) | Secondary Inc Surface S Drainage Dry-Seas Crayfish X Saturatio Stunted G Geomorp | licators (minimum of two required) Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) |
| Restrictive La Type: Depth (ind Remarks: YDROLOG Wetland Hyd Primary Indica Surface Wa High Water Saturation (Water Mark Sediment D Drift Deposit | GY Irology Indicators ators (minimum of ster (A1) Table (A2) (A3) (s (B1) Deposits (B2) its (B3) r Crust (B4) | s: | uired; check &WaterAquatTrue /HydroOxidiz | all that a r-Stained l tic Fauna Aquatic Pl ogen Sulfic zed Rhizo | upply) Leaves (B(B13) ants (B14de Odor (Gspheres o |) C1) n Living R | | Secondary Inc Surface S Drainage Dry-Seas Crayfish X Saturatio X Geomory | licators (minimum of two required) Soil Cracks (B6) Patterns (B10) son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) or Stressed Plants (D1) |
| Restrictive La Type: Depth (ind Remarks: YDROLOG Wetland Hyd Primary Indica Surface Wa High Water Saturation (Water Mark Sediment D Drift Deposi Algal Mat or Iron Deposi | GY Irology Indicators ators (minimum of ater (A1) Table (A2) (A3) (s (B1) Deposits (B2) its (B3) r Crust (B4) its (B5) | s: one is req | uired; check a Water Aquat True / Hydro Oxidia Prese | all that a r-Stained l tic Fauna Aquatic Pl ogen Sulfic zed Rhizo | upply) Leaves (B(B13) ants (B14 de Odor (Complete Spheres of the s |) C1) n Living R n (C4) | | Secondary Inc Surface S Drainage Dry-Seas Crayfish X Saturatio X Geomory | dicators (minimum of two required) Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Solic Position (D2) |
| Restrictive Long Type: Depth (ind Remarks: PDROLOG Vetland Hyde Primary Indication (in Water Mark Sediment Deposion Inundation (in Deposion Inundation (in Type In Deposion Inundation (in Inunda | GY Irology Indicators ators (minimum of ater (A1) Table (A2) (A3) (S (B1) Deposits (B2) its (B3) r Crust (B4) its (B5) Visible on Aerial Imag | s: one is req | uired; check a Water Aquat True A Hydro Oxidiz Prese Recer | all that a r-Stained I tic Fauna Aquatic Pl ggen Sulfic zed Rhizo ence of Re nt Iron Re Muck Surf | upply) Leaves (B(B13) ants (B14 de Odor (Complete Spheres of the s |) C1) n Living R n (C4) Tilled Soil | | Secondary Inc Surface S Drainage Dry-Seas Crayfish X Saturatio X Geomory | dicators (minimum of two required) Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Solic Position (D2) |
| Restrictive Long Type: Depth (incomplete Complete Comple | GY Irology Indicators ators (minimum of ater (A1) Table (A2) (A3) as (B1) Deposits (B2) its (B3) r Crust (B4) its (B5) Visible on Aerial Imagegetated Concave Sur | s: one is req | uired; check a Water Aquat True A Hydro Oxidia Prese Recer Thin N | all that a r-Stained litic Fauna Aquatic Pl ogen Sulfic zed Rhizo ence of Re nt Iron Re Muck Surf e or Well l | Leaves (B (B13) lants (B14 de Odor (C spheres o duced Iro duction in ace (C7) |) C1) n Living R n (C4) Tilled Soil | | Secondary Inc Surface S Drainage Dry-Seas Crayfish X Saturatio X Geomory | dicators (minimum of two required) Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Solic Position (D2) |
| Restrictive La Type: Depth (ind Remarks: YDROLOG Wetland Hyd Primary Indica Surface Wa High Water Saturation (Water Mark Sediment D Drift Deposi Algal Mat or Iron Deposi Inundation V Sparsely Ve Field Observ | ayer (if observed ches): GY Irology Indicators ators (minimum of ater (A1) Table (A2) (A3) (A3) (A3) (A3) (A4) (A5) (A5) (A5) (A5) (A5) (A6) (A6) (A6) (A6) (A7) (A7) (A7) (A7) (A8) (A8) (A8) (A8) (A9) (A8) (A9) (A9) (A9) (A9) (A9) (A9) (A9) (A9 | ery (B7) | uired; check a Water Aquat True A Hydro Oxidiz Prese Recer Thin N Gauge | all that a r-Stained litic Fauna Aquatic Pl gen Sulfic zed Rhizo- ence of Re nt Iron Re- Muck Surf e or Well l (Explain i | Leaves (B (B13) lants (B14) de Odor (C spheres o duced Iro duction in ace (C7) Data (D9) in Remark |) C1) n Living R n (C4) Tilled Soil | | Secondary Inc Surface S Drainage Dry-Seas Crayfish X Saturatio X Geomory | dicators (minimum of two required) Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Solic Position (D2) |
| Restrictive La Type: Depth (ind Remarks: YDROLOG Wetland Hyd Primary Indica Surface Wa High Water Saturation (Water Mark Sediment D Drift Deposi Algal Mat or Iron Deposi Inundation N Sparsely Ve Field Observ Surface Water | GY Irology Indicators ators (minimum of ater (A1) Table (A2) (A3) (S (B1) Deposits (B2) its (B3) r Crust (B4) dis (B5) Visible on Aerial Image agetated Concave Survations: ar Present | ery (B7) face (B8) | uired; check a Water Aquat True A Oxidiz Prese Recer Thin M Gauge Other | all that a r-Stained l tic Fauna Aquatic Pl ogen Sulfic zed Rhizo ence of Re nt Iron Re Muck Surf e or Well l (Explain in | Leaves (B (B13) lants (B14 de Odor (C spheres o duced Iro duction in ace (C7) Data (D9) in Remark |) C1) n Living R n (C4) Tilled Soil | | Secondary Inc Surface S Drainage Dry-Seas Crayfish X Saturatio X Geomory | dicators (minimum of two required) Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Solic Position (D2) |
| Restrictive La Type: Depth (ind Remarks: IYDROLOG Wetland Hyd Primary Indica Surface Wa High Water Saturation (Water Mark Sediment D Drift Deposi Algal Mat on Iron Deposi Inundation N Sparsely Ve Field Observ Surface Water Water Table F | GY Irology Indicators ators (minimum of ater (A1) Table (A2) (A3) (S (B1) Deposits (B2) its (B3) r Crust (B4) its (B5) Visible on Aerial Image egetated Concave Survations: er Present Present | ery (B7) face (B8) 'es | uired; check a | all that a r-Stained l tic Fauna Aquatic Pl ogen Sulfic zed Rhizo ence of Re nt Iron Re Muck Surf e or Well I (Explain i | apply) Leaves (B(B13) ants (B14 de Odor (Cspheres of duction in ace (C7) Data (D9) in Remark pth (inch |) C1) n Living R n (C4) Tilled Soil s) nes): | | Secondary Inc Surface S Drainage Dry-Seas Crayfish X Saturatio Stunted of X Geomory FAC-Neu | dicators (minimum of two required) Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Shic Position (D2) Utral Test (D5) |
| Restrictive La Type: Depth (ind Remarks: YDROLOG Wetland Hyd Primary Indica Surface Wa High Water Saturation (Water Mark Sediment D Drift Deposi Algal Mat or Iron Deposi Inundation N Sparsely Ve Field Observ Surface Water | GY Irology Indicators ators (minimum of ater (A1) Table (A2) (A3) (S (B1) Deposits (B2) its (B3) r Crust (B4) its (B5) Visible on Aerial Image egetated Concave Survations: er Present Present Present esent | ery (B7) face (B8) | uired; check a Water Aquat True A Oxidiz Prese Recer Thin M Gauge Other | all that a r-Stained l tic Fauna Aquatic Pl ogen Sulfic zed Rhizo ence of Re nt Iron Re Muck Surf e or Well I (Explain i | Leaves (B (B13) lants (B14 de Odor (C spheres o duced Iro duction in ace (C7) Data (D9) in Remark |) C1) n Living R n (C4) Tilled Soil s) nes): | | Secondary Inc Surface S Drainage Dry-Seas Crayfish X Saturatio X Geomory | dicators (minimum of two required) Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Shic Position (D2) Utral Test (D5) |
| Restrictive La Type: Depth (inc Remarks: IYDROLOC Wetland Hyd Primary Indica Surface Wa High Water Saturation (Water Mark Sediment D Drift Deposi Inundation (Sparsely Ve Field Observ Surface Water Water Table F Saturation Pro (includes cap | GY Irology Indicators ators (minimum of ater (A1) Table (A2) (A3) (S (B1) Deposits (B2) its (B3) or Crust (B4) its (B5) Visible on Aerial Image egetated Concave Survations: er Present Present esent illary fringe) | ery (B7) face (B8) /es /es | uired; check a Water Aquat True / Hydro Oxidiz Prese Recer Thin N Gaug Other No X No X No X | all that a r-Stained I tic Fauna Aquatic Pl ogen Sulfic zed Rhizo rence of Re nt Iron Re- Muck Surf e or Well I (Explain i De De De De | upply) Leaves (B(B13) ants (B14 de Odor (Complete of the complete of the compl |) C1) n Living R n (C4) Tilled Soil s) nes): nes): | s (C6) | Secondary Inc Surface S Drainage Dry-Seas Crayfish X Saturatio Stunted of X Geomory FAC-Neu | dicators (minimum of two required) Soil Cracks (B6) Patterns (B10) Son Water Table (C2) Burrows (C8) In Visible on Aerial Imagery (C9) Or Stressed Plants (D1) Shic Position (D2) Utral Test (D5) |

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Midwest Region

See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

| Project/Site: Castlerock | City/County: Dakota | | Sampling Date: | 10/29/2024 |
|---|------------------------------------|---|----------------------------------|--------------|
| Applicant/Owner: Solar Stone | | State: MN | Sampling Point: | AWS-31-1 |
| Investigator(s): JL, JK | Section, Township, Ra | nge: <u>T113N, R019W,</u> | S09 | |
| Landform (hillside, terrace, etc.): linear | Local relief (c | concave, convex, none): | none | |
| Slope (%): 0-1 Lat: 44.613790 | Long: -93.101115 | | Datum: WGS84 | |
| Soil Map Unit Name: Maxfield silty clay loam | | NWI classi | fication: | |
| Are climatic / hydrologic conditions on the site typical for this time of | of year? Yes | No X (If no, ex | plain in Remarks.) | |
| Are Vegetation X , Soil , or Hydrology significantly of | | Circumstances" present | ? Yes No | . X |
| Are Vegetation, Soil, or Hydrologynaturally prob | | plain any answers in Re | emarks.) | |
| SUMMARY OF FINDINGS – Attach site map showing | | cations, transects | s, important fea | itures, etc. |
| Hydrophytic Vegetation Present? Yes X No | Is the Sampled Ar | rea | | |
| Hydric Soil Present? Yes No X | within a Wetland? | | No X | |
| Wetland Hydrology Present? Yes No X | | | | |
| Remarks: | | | | |
| At the time of the TEP review, climate conditons were drier than neplanted with corn. | ormal. Sampled area is like | ely distubred due to farr | ning practices, but a | area was not |
| VEGETATION – Use scientific names of plants. | | | | |
| Absolute <u>Tree Stratum</u> (Plot size: 30) % Cover | Dominant Indicator Species? Status | Dominance Test wo | rksheet: | |
| 1. | | Number of Dominant | | |
| 2. | | Are OBL, FACW, or I | • | 1 (A) |
| 3 | | Total Number of Dom | inant Species | |
| 4 | | Across All Strata: | | 1 (B) |
| 5 | Total Cover | Percent of Dominant | • | 0 00/ (A/D) |
| Sapling/Shrub Stratum (Plot size: 15) | - Total Cover | Are OBL, FACW, or F | -AC. <u>10</u> | 0.0% (A/B) |
| 1. | | Prevalence Index w | orksheet: | |
| 2. | | Total % Cover o | f: Multiply | by: |
| 3. | | OBL species | x 1 = | 0 |
| 4 | | | x 2 = | 0 |
| 5 | | | | 300 |
| | =Total Cover | | x 4 = | 0 |
| Herb Stratum (Plot size: 5) | | | x 5 = | 0 (5) |
| 1. Panicum capillare 100 | Yes FAC | Column Totals: 10 Prevalence Index | `´ | B00 (B) |
| | | Frevalence index | - B/A - 3.00 | <u>'</u> |
| | | Hydrophytic Vegeta | tion Indicators: | |
| 5. | | | r Hydrophytic Veget | ation |
| 6. | | X 2 - Dominance T | est is >50% | |
| 7. | | 3 - Prevalence In | dex is ≤3.0 ¹ | |
| 8 | | | l Adaptations ¹ (Prov | |
| 9 | | data in Remar | ks or on a separate | sheet) |
| 10 | | Problematic Hyd | ophytic Vegetation | (Explain) |
| <u>100</u> : <u>Woody Vine Stratum</u> (Plot size:) | =Total Cover | ¹ Indicators of hydric s be present, unless dis | • | |
| 1 | | Hydrophytic | | |
| 2 | | Vegetation | | |
| | =Total Cover | Present? Yes | XNo | _ |
| Remarks: (Include photo numbers here or on a separate sheet.) | | | | |

SOIL Sampling Point: AWS-31-1

| | | o tne dept | | | | ator or o | confirm the absence of | of indicators.) | |
|------------------------|-------------------------|--------------|----------------------|---------------|-------------------------|------------------|-------------------------|----------------------------|----------------------------|
| Depth (inches) | Matrix Color (moist) | <u></u> % | Color (moist) | x Featur % | es Type ¹ | Loc ² | Texture | Remarks | |
| 0-10 | 10YR 3/1 | 100 | Color (moist) | | Турс | | Loamy/Clayey | silt loam | |
| | | | 7. FVD 4/C | | | | | | |
| 10-14 | 10YR 3/1 | 98 | 7.5YR 4/6 | 2 | <u>C</u> | M | Loamy/Clayey | Prominent redox cor | centrations |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | _ | | | | | | _ |
| ¹ Type: C=C | oncentration, D=Depl | etion. RM= | Reduced Matrix. N | ∕IS=Mas | ked San | d Grains | Location: | PL=Pore Lining, M=Ma | trix. |
| Hydric Soil | | , | , | | | | | s for Problematic Hydri | |
| Histosol | (A1) | | Sandy Gle | yed Mat | rix (S4) | | | Prairie Redox (A16) | |
| Histic E | pipedon (A2) | | Sandy Red | dox (S5) | | | Iron-N | Manganese Masses (F12 | 2) |
| Black Hi | istic (A3) | | Stripped M | latrix (S6 | 6) | | Red F | Parent Material (F21) | |
| —— Hydroge | en Sulfide (A4) | | Dark Surfa | ice (S7) | | | Very | Shallow Dark Surface (F | 22) |
| Stratified | d Layers (A5) | | Loamy Mu | cky Mine | eral (F1) | | Other | (Explain in Remarks) | |
| 2 cm Mu | uck (A10) | | Loamy Gle | eyed Mat | trix (F2) | | | | |
| Depleted | d Below Dark Surface | (A11) | Depleted N | ∕latrix (F | 3) | | | | |
| Thick Da | ark Surface (A12) | | Redox Dar | k Surfac | e (F6) | | ³ Indicators | s of hydrophytic vegetati | on and |
| Sandy N | lucky Mineral (S1) | | Depleted D | | ` ' |) | | nd hydrology must be pro | |
| 5 cm Mu | ucky Peat or Peat (S3 |) | Redox Dep | oression | s (F8) | | unles | s disturbed or problemat | ic. |
| Restrictive | Layer (if observed): | | | | | | | | |
| Type: | | | | | | | | | |
| Depth (i | nches): | | | | | | Hydric Soil Present | ? Yes | NoX |
| Remarks: | | | | | | | | | |
| | | | | | | | | | |
| HYDROLO | OGY | | | | | | | | |
| | drology Indicators: | | | | | | | | |
| _ | cators (minimum of o | ne is requir | ed: check all that | apply) | | | Secondar | y Indicators (minimum o | f two required) |
| | Water (A1) | no io roquii | Water-Stai | | ves (B9) |) | | ce Soil Cracks (B6) | r two rodanou _j |
| | ater Table (A2) | | Aquatic Fa | | ` ' | | | age Patterns (B10) | |
| — Saturation | | | True Aqua | | | | | eason Water Table (C2) |) |
| Water M | larks (B1) | | Hydrogen | Sulfide (| Odor (C1 |) | Crayf | ish Burrows (C8) | |
| Sedimer | nt Deposits (B2) | | Oxidized R | Rhizosph | eres on l | Living R | oots (C3) Satur | ation Visible on Aerial Im | nagery (C9) |
| Drift Dep | posits (B3) | | Presence of | of Reduc | ced Iron | (C4) | Stunt | ed or Stressed Plants (D | 1) |
| Algal Ma | at or Crust (B4) | | Recent Iro | n Reduc | tion in Ti | illed Soil | s (C6) Geom | norphic Position (D2) | |
| | oosits (B5) | | Thin Muck | | | | FAC- | Neutral Test (D5) | |
| | on Visible on Aerial Ir | • , , | | | ` ' | | | | |
| Sparsely | y Vegetated Concave | Surface (B | 8)Other (Exp | lain in F | Remarks) | | | | |
| Field Obser | vations: | | | | | | | | |
| Surface Wat | ter Present? Yes | <u> </u> | No <u>X</u> | Depth (i | nches): _ | | | | |
| Water Table | | <u> </u> | | Depth (i | _ | | | | |
| Saturation P | | <u> </u> | No X | Depth (i | nches): _ | | Wetland Hydrolog | y Present? Yes | No_X_ |
| | pillary fringe) | | | | | | | | |
| Describe Re | corded Data (stream | gauge, mo | nitoring well, aeria | ı pnotos | , previou | s inspec | cuons), it available: | | |
| Remarks: | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

ENG FORM 6116-7, JUL 2018Midwest – Version 2.0

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Midwest Region

See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

| Project/Site: Castlerock | City/County: Dakota | 1 | Sampling Date: | 10/29/2024 |
|---|-----------------------------------|--|--------------------------------------|----------------|
| Applicant/Owner: Solar Stone | | State: MN | Sampling Point: | AWS-31-2 |
| Investigator(s): JL, JK | Section, Township, Ra | ange: T113N, R019W, | S09 | |
| Landform (hillside, terrace, etc.): toeslope | Local relief (| (concave, convex, none): | concave | |
| Slope (%): 1-2 Lat: 44.614476 | Long: -93.102200 | | Datum: WGS84 | |
| Soil Map Unit Name: Maxfield silty clay loam | | NWI classi | fication: | |
| Are climatic / hydrologic conditions on the site typical for this tim | e of year? Yes | | | |
| Are Vegetation X , Soil , or Hydrology significant | | Circumstances" present | • | о X |
| Are Vegetation , Soil , or Hydrology naturally p | | xplain any answers in Re | | <u> </u> |
| SUMMARY OF FINDINGS – Attach site map show | | | • | itures, etc. |
| Hydrophytic Vegetation Procent? Veg. V. No. | le the Sampled A | | | |
| Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No | Is the Sampled A within a Wetland | | No | |
| Wetland Hydrology Present? Yes X No | William a vvotidina | . 100 <u>×</u> | | |
| Remarks: | | | | |
| At the time of the TEP review, climate conditons were drier that planted with corn. | n normal. Sampled area is lil | cely distubred due to farr | ning practices, but a | area was not |
| VEGETATION – Use scientific names of plants. | | | | |
| Absolut | | T | | |
| Tree Stratum (Plot size: 30) % Cove | er Species? Status | Dominance Test wo | | |
| 1 | | Number of Dominant Are OBL, FACW, or F | • | 1 (A) |
| 3 | | Total Number of Dom | inant Species | |
| 4 | | Across All Strata: | | 1 (B) |
| 5 | =Total Cover | Percent of Dominant Are OBL, FACW, or F | • | 0.0% (A/B) |
| Sapling/Shrub Stratum (Plot size: 15) | _ | , 022, 011, 0 | | (, 42) |
| 1. | | Prevalence Index we | orksheet: | |
| 2. | | Total % Cover o | f: Multiply | by: |
| 3. | | OBL species 2 | 20 x 1 = | 20 |
| 4. | | FACW species 0 | 0 x 2 = | 0 |
| 5 | | FAC species 4 | 5 x 3 = | 135 |
| | _=Total Cover | | 0 x 4 = | 0 |
| Herb Stratum (Plot size: 5) | | · · — | 0 x 5 = | 0 |
| 1. Panicum capillare 45 | Yes FAC | | `´ | 155 (B) |
| 2. Persicaria amphibia 10 | No OBL | Prevalence Index | = B/A = <u>2.38</u> | <u> </u> |
| 3. Rorippa palustris 10 | No OBL | Undua ultratia Manata | tion Indicators. | |
| 4 | | Hydrophytic Vegeta | | -4: |
| 5 | | X 2 - Dominance To | r Hydrophytic Veget | ation |
| _ | | X 3 - Prevalence In | | |
| | | | ldex is ≦3.0 I Adaptations¹ (Prov | ide supporting |
| | | 1 | ks or on a separate | |
| 10. | | | rophytic Vegetation ¹ | • |
| 65 | =Total Cover | ¹ Indicators of hydric s | . , . | ` ' ' |
| Woody Vine Stratum (Plot size:) | | be present, unless dis | | |
| 1 | | Hydrophytic | | |
| 2 | =Total Cover | Vegetation Present? Yes | X No | |
| Demonstrate (Include whater complete to the | _ | 1.1000111. 169 | | _ |
| Remarks: (Include photo numbers here or on a separate sheet | .) | | | |

SOIL Sampling Point: AWS-31-2

| Depth | ription: (Describe) Matrix | to tne dept | | u ment tr x Feature | | ator or o | confirm the absence of | of indicators.) |
|------------------------|---|--------------|------------------------------------|-------------------------------|-------------------|------------------|------------------------|---|
| (inches) | Color (moist) | <u></u> % | Color (moist) | % | Type ¹ | Loc ² | Texture | Remarks |
| 0-18 | 10YR 2/1 | 100 | 7.5YR 4/6 | 2 | C | | Loamy/Clayey | silty clay loam |
| 18-24 | 10YR 4/1 | 90 | 7.5YR 4/6 | 10 | C | M | Loamy/Clayey | Prominent redox concentrations |
| 10-24 | 1011(4/1 | | 7.511(4/0 | | | | Loamy/Olaycy | 1 Tomment redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| ¹ Type: C=C | oncentration, D=Dep | etion, RM= | Reduced Matrix, N | /IS=Masl | ked San | d Grains | | PL=Pore Lining, M=Matrix. |
| Hydric Soil | | | | | | | | s for Problematic Hydric Soils ³ : |
| Histosol | | | Sandy Gle | - | rix (S4) | | | Prairie Redox (A16) |
| | pipedon (A2) | | Sandy Red | , , | | | | Manganese Masses (F12) |
| Black Hi | | | Stripped M | - | 5) | | | Parent Material (F21) |
| | n Sulfide (A4) | | Dark Surfa | ` ' | | | · | Shallow Dark Surface (F22) |
| | Layers (A5) | | Loamy Mu | | | | Other | (Explain in Remarks) |
| | ick (A10) | (444) | Loamy Gle | • | ` ' | | | |
| | Below Dark Surface | (A11) | Depleted N | | | | 31 | |
| | ark Surface (A12) lucky Mineral (S1) | | X Redox Dar Depleted D | | | ١ | | s of hydrophytic vegetation and nd hydrology must be present, |
| | icky Peat or Peat (S3 | 1 | Redox Dep | | , , |) | | s disturbed or problematic. |
| | | , | | 7163310118 | 5 (1 0) | | unes | s disturbed of problematic. |
| | Layer (if observed): | | | | | | | |
| Type: | achae). | | | | | | Hudria Cail Dragant | . Van V Na |
| Depth (ir | iches). | | _ | | | | Hydric Soil Present | ? Yes X No |
| Remarks: | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| HYDROLC | acv | | | | | | | |
| | | | | | | | | |
| _ | drology Indicators: | | | I\ | | | 0 1 | |
| | cators (minimum of o Water (A1) | ne is requir | ed; cneck all that a Water-Stai | | voc (DO) | | | y Indicators (minimum of two require ce Soil Cracks (B6) |
| | iter Table (A2) | | Aquatic Fa | | ` ' | ' | | age Patterns (B10) |
| Saturation | ` ' | | True Aqua | • | , | | | eason Water Table (C2) |
| | arks (B1) | | Hydrogen | | , , | ` | | sh Burrows (C8) |
| | nt Deposits (B2) | | Oxidized R | | • | • | | ation Visible on Aerial Imagery (C9) |
| | posits (B3) | | Presence of | | | J | ` ′ — | ed or Stressed Plants (D1) |
| | it or Crust (B4) | | Recent Iro | | | ` ' | | norphic Position (D2) |
| | osits (B5) | | Thin Muck | | | | ` ' — | Neutral Test (D5) |
| | on Visible on Aerial I | magery (B7) | | | | | | , , |
| Sparsely | Vegetated Concave | Surface (B | 8) Other (Exp | lain in R | emarks) |) | | |
| Field Obser | vations: | | | | | | | |
| Surface Wat | er Present? Ye | S | No X | Depth (in | nches): | | | |
| Water Table | Present? Ye | s | | | nches): | | | |
| Saturation P | resent? Ye | s | No X | Depth (ir | nches): | | Wetland Hydrolog | y Present? Yes X No |
| (includes ca | oillary fringe) | | · | | | | | |
| Describe Re | corded Data (stream | gauge, moi | nitoring well, aeria | l photos | , previou | s inspec | ctions), if available: | |
| Domestra | | | | | | | | |
| Remarks: | | | | | | | | |
| | | | | | | | | |
| I | | | | | | | | |

ENG FORM 6116-7, JUL 2018Midwest – Version 2.0

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Midwest Region

See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

| Project/Site: Castlerock | | City/Cou | ınty: <u>Dakota</u> | | s | Sampling Date | e: <u>10/2</u> | 9/2024 |
|---|---------------------|-------------------|---------------------|------------------------------------|--------------|--------------------------------------|----------------|----------------|
| Applicant/Owner: Solar Stone | | | | State: N | MN S | ampling Poir | nt: AW | /S-32-1 |
| Investigator(s): JL, JK | | Section, | Township, Ra | nge: T113N, R0 | 19W, S10 | J | | |
| Landform (hillside, terrace, etc.): toeslope | | | Local relief (d | concave, convex, | none): con | ıcave | | |
| Slope (%): 4-5 Lat: 44.614421 | | Long: | -93.093136 | | Dat | tum: WGS84 | | |
| Soil Map Unit Name: Klinger silt loam, 1 to 5 percent | slopes | | | NWI | classificat | tion: | | , |
| Are climatic / hydrologic conditions on the site typica | | of vear? | Yes | No X (If | no. explair | n in Remarks | .) | |
| Are Vegetation X , Soil , or Hydrology | | - | | Circumstances" pr | | | No X | |
| Are Vegetation , Soil , or Hydrology | | | | plain any answers | | | | _ |
| SUMMARY OF FINDINGS – Attach site r | _ | | ` | , | | • | feature: | s, etc. |
| | No No | l l | e Sampled Ai | | Х | No | | |
| Wetland Hydrology Present? Yes X | No | | | | | | | |
| Remarks: At the time of the TEP review, climate conditions we while out in the field. | | normal. Samp | oled area is fa | rmed. Lat/Long a | re approxir | mate due to a | a GPS iss | sue |
| VEGETATION – Use scientific names of p | | Damainant | lu di a akan | | | | | |
| <u>Tree Stratum</u> (Plot size: 30) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Te | est worksl | neet: | | |
| 1. 2. | | | | Number of Dor | | | 1 | (A) |
| 3. 4. | | | | Total Number of Across All Stra | of Dominar | _ | 1 | — (В) |
| 5. | | =Total Cover | . — | Percent of Don Are OBL, FAC | • | | 100.0% | _ ` ´ (A/B) |
| Sapling/Shrub Stratum (Plot size: 15 |) | | | | • | _ | | - ` ′ |
| 1. | - | | | Prevalence Inc | dex works | sheet: | | |
| 2 | | | | Total % C | over of: | Multi | iply by: | _ |
| 3 | | | | OBL species | 10 | x1=_ | 10 | _ |
| 4 | | | | FACW species | 5 | _ x2=_ | 10 | _ |
| 5 | | | | FAC species | 60 | _ x3=_ | 180 | _ |
| | | =Total Cover | • | FACU species | | x 4 = | 20 | _ |
| Herb Stratum (Plot size: 5) | | | | UPL species | | _ x5=_ | 0 | _ |
| 1. Panicum capillare | 55 | Yes | FAC | Column Totals: | | (A) | 220 | _(B) |
| 2. Rorippa palustris | | No | OBL | Prevalence | index = B/ | /A =2 | 2.75 | _ |
| 3. Rumex crispus | | No No | FAC | | | | | |
| 4. Persicaria maculosa | | No No | FACW | Hydrophytic V | - | | | |
| 5. Hypericum perforatum | 5 | No | FACU | | - | drophytic Ve | getation | |
| 6. | | | | X 2 - Domina | | | | |
| 7 | | | | X 3 - Prevale | | าร ≤3.0 aptations ¹ (P | | |
| 8 9. | | | | | | aptations (P or on a separa | | |
| | | | | | | ytic Vegetati | • | • |
| 10 | | =Total Cover | | ¹ Indicators of h | ydric soil a | and wetland h | nydrology | |
| Woody Vine Stratum (Plot size: | _' | | | be present, unl | <u> </u> | sed of bropie | matic. | |
| 1. 2. | _ | | | Hydrophytic | | | | |
| -· | | =Total Cover | . —— | Vegetation Present? | Yes X | . No | | |
| Remarks: (Include photo numbers here or on a seg | parate sheet \ | | | | | | | |
| Farmed corn within sampled area. | | | | | | | | |

SOIL Sampling Point: AWS-32-1

| Profile Desc | cription: (Descr | ibe to the dep | th needed to doc | ument t | he indica | ator or | confirm the absence | of indicators.) |
|---------------|-------------------|----------------|-----------------------|------------|--|------------------|------------------------|---|
| Depth | Matr | х | Redo | x Featur | es | | | |
| (inches) | Color (moist |) % | Color (moist) | %_ | Type ¹ | Loc ² | Texture | Remarks |
| 0-6 | 10YR 3/1 | 100 | | | | | Loamy/Clayey | sandy loam |
| 6-12 | 10YR 3/1 | 98 | 7.5YR 4/6 | 2 | _ C | M | Loamy/Clayey | Prominent redox concentrations |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | Depletion, RM | =Reduced Matrix, N | /IS=Mas | ked Sand | d Grains | | : PL=Pore Lining, M=Matrix. |
| Hydric Soil | | | 0 | | ······································ | | | rs for Problematic Hydric Soils ³ : |
| — Histosol | , | | Sandy Gle | | | | | st Prairie Redox (A16) |
| Black Hi | oipedon (A2) | | Sandy Red Stripped M | , , | | | | Manganese Masses (F12) Parent Material (F21) |
| I — | n Sulfide (A4) | | Dark Surfa | ` | 3) | | | Shallow Dark Surface (F22) |
| | l Layers (A5) | | Loamy Mu | ` , | eral (F1) | | | r (Explain in Remarks) |
| | ick (A10) | | Loamy Gle | | | | | (Explain in Remarks) |
| | d Below Dark Sur | face (A11) | Depleted N | | | | | |
| I — | ark Surface (A12) | | X Redox Dai | • | • | | ³ Indicator | s of hydrophytic vegetation and |
| l — | lucky Mineral (S1 | | Depleted [| | ` ' |) | | and hydrology must be present, |
| I — | icky Peat or Peat | • | Redox De | oression | s (F8) | | | ss disturbed or problematic. |
| Restrictive | Layer (if observe | ed): | | | | 1 | | · |
| Type: | | | | | | | | |
| Depth (ir | nches): | | | | | | Hydric Soil Present | ? Yes X No |
| Remarks: | | | | | | | | |
| rtemants. | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| HYDROLO | GY | | | | | | | |
| Wetland Hy | drology Indicato | ors: | | | | | | |
| - | | | ired; check all that | apply) | | | Secondar | ry Indicators (minimum of two required) |
| | Water (A1) | <u> </u> | Water-Sta | | aves (B9) | | | ace Soil Cracks (B6) |
| High Wa | iter Table (A2) | | Aquatic Fa | una (B1 | 3) | | —— Drain | nage Patterns (B10) |
| Saturation | | | True Aqua | - | | | | Season Water Table (C2) |
| Water M | arks (B1) | | Hydrogen | Sulfide (| Odor (C1 |) | Cray | fish Burrows (C8) |
| Sedimer | nt Deposits (B2) | | Oxidized F | Rhizosph | eres on l | _iving R | oots (C3) Satu | ration Visible on Aerial Imagery (C9) |
| Drift Dep | oosits (B3) | | Presence | of Redu | ced Iron (| (C4) | Stunt | ted or Stressed Plants (D1) |
| Algal Ma | t or Crust (B4) | | Recent Iro | n Reduc | tion in Ti | lled Soi | | morphic Position (D2) |
| I — · | osits (B5) | | Thin Muck | | | | X FAC- | Neutral Test (D5) |
| I — | on Visible on Aer | 3 , (| <i>_</i> | | | | | |
| Sparsely | Vegetated Cond | ave Surface (l | B8)Other (Exp | lain in F | Remarks) | | | |
| Field Obser | | | | | | | | |
| Surface Wat | | Yes | | | nches): _ | | | |
| Water Table | | Yes | | | nches): _ | | ,,, ,, ,,, , | 5 40 W V N |
| Saturation P | | Yes | No <u>X</u> | Depth (i | ncnes): _ | | Wetland Hydrolog | gy Present? Yes X No No |
| (includes cap | | om gougo m | anitaring wall paris | Inhotoo | provious | o inono | rtions) if available: | |
| Describe Re | corded Data (Stre | aiii yauye, m | ormorning well, aeria | ii priotos | , previous | s mspec | ctions), if available: | |
| Remarks: | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

ENG FORM 6116-7, JUL 2018Midwest – Version 2.0

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Midwest Region

See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

| Project/Site: Castlerock | | City/Cou | nty: Dakota | | Sampling Date | e: <u>10/29/2024</u> |
|---|---------------------|-------------------|---------------------|-------------------------------------|--|---------------------------|
| Applicant/Owner: Solar Stone | | | | State: MN | Sampling Poin | it: AWS-33-1 |
| Investigator(s): JL, JK | | Section, 7 | Township, Ra | nge: T113N, R019W, | S10 | |
| Landform (hillside, terrace, etc.): linear | | _ | Local relief (| concave, convex, none) | none | |
| Slope (%): 0-1 Lat: 44.613031 | | | 93.091113 | , | Datum: WGS84 | |
| Soil Map Unit Name: Maxfield silty clay loam | | | | NWI class | | |
| Are climatic / hydrologic conditions on the site typica | ol for this time o | f year? | Vos | No X (If no, ex | | \ |
| | | - | | | | |
| Are Vegetation X , Soil , or Hydrology | | | | Circumstances" present | | NO |
| Are Vegetation, Soil, or Hydrology | | | | xplain any answers in Re | • | |
| SUMMARY OF FINDINGS – Attach site | map snown | ig sampin | ig point ic | cations, transects | s, important i | eatures, etc. |
| | No | Is the | Sampled A | | | |
| | No X | withi | n a Wetland | ? Yes | No <u>X</u> | |
| Wetland Hydrology Present? Yes | No <u>X</u> | | | | | |
| Remarks: | | | | d | | |
| At the time of the TEP review, climate conditions w | ere drier than n | ormal. Samp | led area is fa | irmed. | | |
| <u> </u> | 1 (| | | | | |
| VEGETATION – Use scientific names of p | | | | | | |
| Tree Stratum (Plot size: 30) | Absolute % Cover | Dominant Species? | Indicator Status | Dominance Test wo | rksheet: | |
| 1. | | | | Number of Dominant | | |
| 2. | | | | Are OBL, FACW, or I | • | 1 (A) |
| 3. | | | | Total Number of Don | ninant Species | |
| 4 | | | | Across All Strata: | | 1 (B) |
| 5 | | | | Percent of Dominant | • | 100 004 (1/5) |
| Conline / Chrysh Ctratum / Dlataire 15 | \ | Total Cover | | Are OBL, FACW, or I | -AC: | 100.0% (A/B) |
| Sapling/Shrub Stratum (Plot size: 15 | _' | | | Prevalence Index w | orkehoot: | |
| | | | | Total % Cover o | | ply by: |
| 3. | | | | | $\frac{1}{0}$ $\frac{1}{x}$ 1 = | 0 |
| 4. | | | | | 0 x 2 = | 0 |
| 5. | | | | FAC species 8 | 33 x 3 = | 249 |
| | | Total Cover | | FACU species | 5 x 4 = | 20 |
| Herb Stratum (Plot size: 5 | | | | UPL species | 0 x 5 = | 0 |
| 1. Panicum capillare | 80 | Yes | FAC | | 88 (A) | 269 (B) |
| 2. Taraxacum officinale | _ 5 | No No | FACU | Prevalence Index | = B/A =3 | .06 |
| 3. Ambrosia trifida | _ 3 | No | FAC_ | Lhudua ula dia Manata | tion Indicators. | |
| 4. | | | | Hydrophytic Vegeta | t ιοη inαicators: r Hydrophytic Ve | notation |
| 5 6. | | | | X 2 - Dominance T | | getation |
| 7 | | | | 3 - Prevalence Ir | | |
| 8. | | | | 4 - Morphologica | | rovide supporting |
| 9. | | | | | ks or on a separa | |
| 10. | | | | Problematic Hyd | rophytic Vegetation | on ¹ (Explain) |
| | 88 | Total Cover | | ¹ Indicators of hydric s | soil and wetland h | ydrology must |
| Woody Vine Stratum (Plot size: | _) | | | be present, unless di | | |
| 1. | | | | Hydrophytic | | |
| 2 | | T-1-1-0 | | Vegetation | V 11 | |
| | | Total Cover | | Present? Yes | No | |
| Remarks: (Include photo numbers here or on a se Farmed corn within sampled area. | parate sheet.) | | | | | |

SOIL Sampling Point: AWS-33-1

| Depth . | Matrix | | Red | | - | | | | | |
|--|--|---|---|---|---|---------------------------------------|--|---|---|-----------|
| inches) | Color (moist) | <u>%</u> | Color (moist) | % | Type ¹ | Loc ² | Texture | | Remarks | |
| 0-14 | 10YR 3/1 | 100 | | | | | Loamy/Clayey | | sandy loam | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | 2, | | | |
| • | ncentration, D=Dep | etion, RM | I=Reduced Matrix, | MS=Mas | ked Sand | Grains | | n: PL=Pore Lini | _ | |
| ydric Soil In | | | Condu Cl | avad Mat | riv (C.1) | | | ors for Problem | _ | SOIIS : |
| Histosol (A | pedon (A2) | | Sandy Gl Sandy Re | - | | | | ast Prairie Redox ı-Manganese Ma | , | |
| Black Hist | | | Stripped | | | | | l-Manganese Ma l Parent Materia | | |
| | Sulfide (A4) | | — Stripped Dark Surf | |)) | | | y Shallow Dark S | | ١ |
| _ · · | Layers (A5) | | Loamy M | ` ' | eral (F1) | | | er (Explain in Re | • | , |
| 2 cm Mucl | | | Loamy G | - | | | | or (Explain in re | omano, | |
| | Below Dark Surface | (A11) | Depleted | • | , , | | | | | |
| _ : | k Surface (A12) | () | Redox Da | | • | | ³ Indicat | ors of hydrophyti | ic vegetation | and |
| | ıcky Mineral (S1) | | — Depleted | Dark Sur | face (F7) | ١ | | land hydrology n | _ | |
| 5 cm Mucl | ky Peat or Peat (S3 | 5) | Redox De | epression | s (F8) | | | ess disturbed or | | |
| estrictive La | ayer (if observed): | | | | | | | | | |
| | • ' | | | | | | | | | |
| Type: | | | | | | 1 | | | | |
| Depth (inc | ches): | | | | | | Hydric Soil Prese | nt? | Yes | No_ |
| Depth (inc | ches): | | | | | | Hydric Soil Prese | nt? | Yes | No _ |
| Depth (inc | | | | | | | Hydric Soil Prese | nt? | Yes | No _ |
| Depth (incomments: | | | | | | | Hydric Soil Prese | nt? | Yes | No _ |
| Depth (incomments: YDROLOG /etland Hydromy Indica | GY rology Indicators: ators (minimum of c | ne is requ | | | | | Second | ary Indicators (m | ninimum of tw | |
| Depth (incomments: YDROLOG /etland Hydromy Indication Surface W | GY rology Indicators: ators (minimum of c | ne is requ | Water-Sta | ained Lea | ` ' | | Second X Sur | ary Indicators (m face Soil Cracks | ninimum of two | |
| Depth (incomercial property) YDROLOG Yetland Hydromary Indicate Surface Working High Water | GY rology Indicators: ators (minimum of o | ne is requ | Water-Sta | ained Lea auna (B1 | 3) ` ´ | | <u>Second</u> Sur Dra | ary Indicators (m face Soil Cracks inage Patterns (| ninimum of two (B6) | |
| Pepth (incomercial property) Performance Washington Water Surface Washington Water Saturation | rology Indicators: ators (minimum of covater (A1) er Table (A2) n (A3) | ne is requ | Water-Sta Aquatic F True Aqu | ained Lea auna (B1 atic Plant | 3) s (B14) | | Second Sur Dra Dry | ary Indicators (m face Soil Cracks inage Patterns (-Season Water ⁻ | ninimum of tw s (B6) B10) Table (C2) | |
| Depth (incomments: YDROLOG Yetland Hydromary Indication Surface World Water Saturation Water Mai | rology Indicators: ators (minimum of covater (A1) er Table (A2) in (A3) irks (B1) | ne is requ | Water-Sta Aquatic F True Aqu Hydroger | ained Lea auna (B1 atic Plant Sulfide (| 3) s (B14) Odor (C1 |) | Second X Sur Dra Dry Cra | ary Indicators (m face Soil Cracks inage Patterns (-Season Water ⁻ yfish Burrows (C | ninimum of tw s (B6) B10) Table (C2) | vo requii |
| Depth (incomplete property of the complete pro | rology Indicators: ators (minimum of orvater (A1) er Table (A2) n (A3) urks (B1) Deposits (B2) | ne is requ | Water-Sta Aquatic F True Aqu Hydroger Oxidized | ained Lea auna (B1 atic Plant Sulfide (Rhizosph | 3) s (B14) Odor (C1 eres on I |) _iving Ro | <u>Second</u> | ary Indicators (m face Soil Cracks inage Patterns (-Season Water ⁻ yfish Burrows (C uration Visible o | ninimum of two (B6) B10) Table (C2) C8) n Aerial Imag | vo requii |
| Depth (incomplete control of the con | rology Indicators: ators (minimum of orvater (A1) er Table (A2) n (A3) nrks (B1) Deposits (B2) osits (B3) | ne is requ | Water-Sta Aquatic F True Aqu Hydroger Oxidized Presence | ained Lea auna (B1 atic Plant Sulfide (Rhizosph | 3) s (B14) Odor (C1 eres on l |) ∟iving Ro (C4) | Second X Sur Dra Dry Cra Sat Stu | ary Indicators (m face Soil Cracks inage Patterns (-Season Water ⁻ yfish Burrows (C uration Visible o nted or Stressed | ninimum of two (B6) B10) Table (C2) C8) n Aerial Imag | vo requii |
| Popth (incomplete incomplete inco | rology Indicators: ators (minimum of covater (A1) er Table (A2) in (A3) irks (B1) Deposits (B2) osits (B3) or Crust (B4) | ne is requ | Water-Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir | ained Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc on Reduc | 3) s (B14) Odor (C1 eres on I ced Iron (|) ∟iving Ro (C4) | Second X Sur Dra Dry Cra Cra Stu Stu Stu Ge Ge Ge Ge Ge Ge Ge G | ary Indicators (m face Soil Cracks inage Patterns (-Season Water ⁻ yfish Burrows (C uration Visible o nted or Stressed omorphic Positio | ninimum of two (B6) B10) Table (C2) C8) In Aerial Image Plants (D1) In (D2) | vo requii |
| POPPOLOCE YDROLOCE Yetland Hydromary Indicate Surface Work High Water Saturation Water Mana Sediment Drift Depoor Algal Mat Iron Deposite | rology Indicators: ators (minimum of covater (A1) er Table (A2) in (A3) irks (B1) Deposits (B2) osits (B3) or Crust (B4) | | Water-Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc | ained Lea fauna (B1 atic Plant n Sulfide (Rhizosph n of Reduc on Reduc k Surface | 3) s (B14) Odor (C1 eres on I ced Iron (ction in Ti |) ∟iving Ro (C4) | Second X Sur Dra Dry Cra Cra Stu Stu Stu Ge Ge Ge Ge Ge Ge Ge G | ary Indicators (m face Soil Cracks inage Patterns (-Season Water ⁻ yfish Burrows (C uration Visible o nted or Stressed | ninimum of two (B6) B10) Table (C2) C8) In Aerial Image Plants (D1) In (D2) | vo requii |
| Pepth (incomplete incomplete inco | rology Indicators: ators (minimum of orvater (A1) er Table (A2) n (A3) arks (B1) Deposits (B2) posits (B3) or Crust (B4) asits (B5) | magery (B | Water-Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc | ained Lea fauna (B1 atic Plant a Sulfide (Rhizosph of Reduc on Reduc k Surface | 3) s (B14) Odor (C1 eres on I ced Iron (ction in Ti e (C7) a (D9) |) ∟iving Ro (C4) | Second X Sur Dra Dry Cra Cra Stu Stu Stu Ge Ge Ge Ge Ge Ge Ge G | ary Indicators (m face Soil Cracks inage Patterns (-Season Water ⁻ yfish Burrows (C uration Visible o nted or Stressed omorphic Positio | ninimum of two (B6) B10) Table (C2) C8) In Aerial Image Plants (D1) In (D2) | vo requii |
| Pepth (income pepth) Permarks: Popth (income pepth) Primary Indication Surface Water Manager Manag | rology Indicators: ators (minimum of orvater (A1) er Table (A2) n (A3) nrks (B1) Deposits (B2) osits (B3) or Crust (B4) esits (B5) n Visible on Aerial II Vegetated Concave | magery (B | Water-Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc | ained Lea fauna (B1 atic Plant a Sulfide (Rhizosph of Reduc on Reduc k Surface | 3) s (B14) Odor (C1 eres on I ced Iron (ction in Ti e (C7) a (D9) |) ∟iving Ro (C4) | Second X Sur Dra Dry Cra Cra Stu Stu Stu Ge Ge Ge Ge Ge Ge Ge G | ary Indicators (m face Soil Cracks inage Patterns (-Season Water ⁻ yfish Burrows (C uration Visible o nted or Stressed omorphic Positio | ninimum of two (B6) B10) Table (C2) C8) In Aerial Image Plants (D1) In (D2) | vo requii |
| Popth (incomplete incomplete inco | rology Indicators: ators (minimum of orvater (A1) er Table (A2) in (A3) irks (B1) Deposits (B2) isits (B3) or Crust (B4) isits (B5) in Visible on Aerial Invegetated Concave ations: | magery (B Surface (| Water-Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc | ained Lea fauna (B1 atic Plant a Sulfide (Rhizosph of Reduc on Reduc k Surface | 3) s (B14) Ddor (C1 eres on I ced Iron (tition in Ti e (C7) a (D9) Remarks) |) ∟iving Ro (C4) | Second X Sur Dra Dry Cra Cra Stu Stu Stu Ge Ge Ge Ge Ge Ge Ge G | ary Indicators (m face Soil Cracks inage Patterns (-Season Water ⁻ yfish Burrows (C uration Visible o nted or Stressed omorphic Positio | ninimum of two (B6) B10) Table (C2) C8) In Aerial Image Plants (D1) In (D2) | vo requii |
| Depth (income primary Indicated Saturation Water Manage Ma | rology Indicators: ators (minimum of orvater (A1) er Table (A2) in (A3) inks (B1) Deposits (B2) posits (B3) or Crust (B4) insits (B5) in Visible on Aerial Invegetated Concave ations: r Present? | magery (B Surface (s | Water-Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc Gauge or (B8) Other (Ex | ained Lea auna (B1 atic Plant Sulfide (Rhizosph of Reduc on Reduc k Surface Well Dat | 3) s (B14) Ddor (C1 eres on I ced Iron (tition in Ti e (C7) a (D9) Remarks) |) ∟iving Ro (C4) | Second X Sur Dra Dry Cra Cra Stu Stu Stu Ge Ge Ge Ge Ge Ge Ge G | ary Indicators (m face Soil Cracks inage Patterns (-Season Water ⁻ yfish Burrows (C uration Visible o nted or Stressed omorphic Positio | ninimum of two (B6) B10) Table (C2) C8) In Aerial Image Plants (D1) In (D2) | vo requii |
| Primary Indica Saturation Water Mai Sediment Drift Depo Algal Mat Iron Depos Inundation | rology Indicators: ators (minimum of or Vater (A1) er Table (A2) n (A3) urks (B1) Deposits (B2) posits (B3) or Crust (B4) posits (B5) n Visible on Aerial II Vegetated Concave ations: r Present? Ye Present? Ye | magery (B Surface (s s | Water-Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc 37) Gauge or (B8) Other (Ex | ained Lea fauna (B1 atic Plant a Sulfide (Rhizosph of Reduc on Reduc k Surface Well Dat cplain in F | 3) s (B14) Ddor (C1 eres on I ced Iron (ction in Ti e (C7) a (D9) Remarks) nches): _ nches): _ |) ∟iving Ro (C4) | Second X Sur Dra Dry Cra Cra Stu Stu Stu Ge Ge Ge Ge Ge Ge Ge G | ary Indicators (m face Soil Cracks inage Patterns (-Season Water ⁻ yfish Burrows (C uration Visible o nted or Stressed omorphic Positio C-Neutral Test (I | ninimum of two (B6) B10) Table (C2) C8) In Aerial Image Plants (D1) In (D2) | vo requii |
| Depth (incomplete | rology Indicators: ators (minimum of or Vater (A1) er Table (A2) n (A3) nrks (B1) Deposits (B2) osits (B3) or Crust (B4) osits (B5) n Visible on Aerial In Vegetated Concave ations: r Present? Yeesent? Yeesent? | magery (B Surface (s s | Water-Sta | ained Lea fauna (B1 atic Plant a Sulfide (Rhizosph on Reduc on Reduc k Surface Well Dat cplain in F | 3) s (B14) Ddor (C1 eres on I ced Iron (ction in Ti e (C7) a (D9) Remarks) nches): _ nches): _ |) ∟iving Ro (C4) | Second X Sur Dra Dry Cra Sat Stu ary Indicators (m face Soil Cracks inage Patterns (-Season Water ⁻ yfish Burrows (C uration Visible o nted or Stressed omorphic Positio C-Neutral Test (I | ninimum of two (B6) B10) Table (C2) C8) In Aerial Image (D1) In (D2) D5) | vo requi |
| Pepth (income and income and inco | rology Indicators: ators (minimum of or Vater (A1) er Table (A2) n (A3) nrks (B1) Deposits (B2) osits (B3) or Crust (B4) osits (B5) n Visible on Aerial In Vegetated Concave ations: r Present? Yeesent? Yeesent? | magery (B Surface (s s s | Water-Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc Gauge or (B8) Other (Ex No X No X No X | ained Lea fauna (B1 atic Plant a Sulfide (Rhizosph of Reduc on Reduc k Surface Well Dat cplain in F Depth (i Depth (i | 3) s (B14) Ddor (C1 eres on I ced Iron (ttion in Ti e (C7) a (D9) Remarks) nches): _nches): _ |) Living Ro (C4) Illed Soil: | Second X Sur Dra Dry Cra Sat Stu Stu Geo FAc | ary Indicators (m face Soil Cracks inage Patterns (-Season Water ⁻ yfish Burrows (C uration Visible o nted or Stressed omorphic Positio C-Neutral Test (I | ninimum of two (B6) B10) Table (C2) C8) In Aerial Image (D1) In (D2) D5) | vo requii |
| Depth (incomendation Preduced south | rology Indicators: ators (minimum of orvater (A1) er Table (A2) n (A3) nrks (B1) Deposits (B2) posits (B3) or Crust (B4) posits (B5) n Visible on Aerial II Vegetated Concave ations: r Present? Ye present. | magery (B Surface (s s s | Water-Sta Aquatic F True Aqu Hydroger Oxidized Presence Recent Ir Thin Muc Gauge or (B8) Other (Ex No X No X No X | ained Lea fauna (B1 atic Plant a Sulfide (Rhizosph of Reduc on Reduc k Surface Well Dat cplain in F Depth (i Depth (i | 3) s (B14) Ddor (C1 eres on I ced Iron (ttion in Ti e (C7) a (D9) Remarks) nches): _nches): _ |) Living Ro (C4) Illed Soil: | Second X Sur Dra Dry Cra Sat Stu Stu Geo FAc | ary Indicators (m face Soil Cracks inage Patterns (-Season Water ⁻ yfish Burrows (C uration Visible o nted or Stressed omorphic Positio C-Neutral Test (I | ninimum of two (B6) B10) Table (C2) C8) In Aerial Image (D1) In (D2) D5) | vo requin |

ENG FORM 6116-7, JUL 2018Midwest – Version 2.0

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Midwest Region

See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp:11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

| Project/Site: Castlerock | (| City/Coun | ty: Dakota | | Sa | mpling Date | e: <u>10/2</u> | 9/2024 |
|--|--------------------------|------------------|---------------------|---|------------------|---------------------------------|----------------|--------------------|
| Applicant/Owner: Solar Stone | | | | State: I | MN Sa | mpling Poin | t: AW | /S-33-2 |
| Investigator(s): JL, JK | S | ection, To | ownship, Ra | nge: T113N, R0 |)19W, S10 | | | |
| Landform (hillside, terrace, etc.): linear | | | | concave, convex, | | <u> </u> | | |
| Slope (%): 0-1 Lat: 44.611158 | | _ | • | , | | m: WGS84 | | |
| Soil Map Unit Name: Maxfield silty clay loam | | Longc | 0.002202 | | I classification | | | |
| | | • • | | | | | | |
| Are climatic / hydrologic conditions on the site typical for this | - | | | No <u>X</u> (If | | | | |
| Are Vegetation X, Soil , or Hydrology signifi | | | re "Normal (| Circumstances" p | resent? Y | es | No X | _ |
| Are Vegetation, Soil, or Hydrology natura | ally problema | tic? (I | f needed, ex | plain any answer | s in Remark | s.) | | |
| SUMMARY OF FINDINGS – Attach site map s | howing s | amplin | g point lo | cations, tran | sects, im | portant f | eature | s, etc. |
| Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes No X Wetland Hydrology Present? Yes No X | _ | | Sampled A | | 1 | No_X_ | | |
| Remarks: At the time of the TEP review, climate conditions were drie | | I. Sample | ed area is fa | rmed. | | | | |
| VEGETATION – Use scientific names of plants. | | | | | | | | |
| | | ninant ecies? | Indicator Status | Dominance To | est workshi | oet: | | |
| 1. | <u>обусі</u> <u>ор</u> с | | Otatus | Number of Do | | | | |
| 2. | | | | Are OBL, FAC | | ies mai | 2 | (A) |
| 3. | | | | Total Number | | Species | | _ ` ` |
| 4. | | | | Across All Stra | | | 2 | (B) |
| 5 | =Tota | l Cover | | Percent of Dor Are OBL, FAC | | | 100.0% | _(A/B) |
| Sapling/Shrub Stratum (Plot size: 15) | | | | | | | | |
| 1 | | | | Prevalence In | | neet: | | |
| 2 | | | | Total % C | | | oly by: | _ |
| 3 | | | | OBL species | 0 | _ x1=_ | 0 | _ |
| 4 | | | | FACW species | 5 <u>0</u> | _ x2=_ | 0 | _ |
| 5 | | l Cover | | FAC species FACU species | | - x3= x4= | 30 0 | _ |
| <u>Herb Stratum</u> (Plot size: 5) | | Cover | | UPL species | 0 | - ^4- — x5= | 0 | _ |
| 1. Panicum capillare | 5 | ⁄es | FAC | Column Totals | | - ^ O — | 30 | (B) |
| 2. Rumex crispus | | /es | FAC | Prevalence | | - ` <i>'</i> — | .00 | - (- <i>)</i> - |
| 3 | | | | | | | | |
| 4 | | | | Hydrophytic \ | - | | | |
| 5 | | | | | - | rophytic Veg | getation | |
| 6 | | | | X 2 - Domina | ence Index is | | | |
| | | | | | | s <u>-</u> 3.0 ptations¹ (Pr | ovide su | nnorting |
| | | | | | - | on a separa | | |
| 10. | | | | | | tic Vegetatio | | |
| | 10 =Tota | l Cover | | ¹ Indicators of h | nydric soil ar | nd wetland h | ydrology | |
| 1 | | | | Hydrophytic | | | | |
| 2 | | l Cover | | Vegetation Present? | Vos V | No | | |
| <u> </u> | | OUVEI | | riesell! | Yes X | No | _ | |
| Remarks: (Include photo numbers here or on a separate s Farmed corn within sampled area. | sneet.) | | | | | | | |

SOIL Sampling Point: AWS-33-2

| | • | o the dept | | | | ator or c | confirm the absence of | of indicators.) | |
|------------------------|-------------------------|--------------|----------------------|--------------|-------------------|------------------|--------------------------|---------------------------|-------------------|
| Depth | Matrix | | | K Featur | | Loc ² | Taratrana | Damanda | _ |
| (inches) | Color (moist) | <u>%</u> _ | Color (moist) | <u>%</u> | Type ¹ | | Texture | Remark | |
| 0-10 | 10YR 3/1 | 99 | 7.5YR 4/6 | | <u>C</u> | M | Loamy/Clayey | sandy loa | |
| 10-16 | 10YR 2/1 | 98 | 7.5YR 4/6 | 2 | <u>C</u> | M | Loamy/Clayey | Prominent redox co | ncentrations |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | _ |
| | | | | | | | | | |
| ¹ Type: C=C | oncentration, D=Depl | etion RM= | Reduced Matrix N | AS=Mas | ked San | d Grains | ² Location: | PL=Pore Lining, M=M | atrix |
| Hydric Soil | | ouon, run | reduced Matrix, N | io ivido | itea eari | 2 Oranio | | s for Problematic Hyd | |
| Histosol | | | Sandy Gle | ved Mat | rix (S4) | | | t Prairie Redox (A16) | |
| | pipedon (A2) | | Sandy Red | | | | | Manganese Masses (F1 | 2) |
| | istic (A3) | | Stripped M | , , | | | | Parent Material (F21) | , |
| | en Sulfide (A4) | | Dark Surfa | | | | Very | Shallow Dark Surface (| F22) |
| Stratified | d Layers (A5) | | Loamy Mu | cky Mine | eral (F1) | | | (Explain in Remarks) | • |
| | uck (A10) | | Loamy Gle | yed Mat | rix (F2) | | | | |
| Depleted | d Below Dark Surface | (A11) | Depleted N | /latrix (F | 3) | | | | |
| Thick Da | ark Surface (A12) | | Redox Dar | k Surfac | e (F6) | | ³ Indicators | s of hydrophytic vegeta | tion and |
| Sandy N | lucky Mineral (S1) | | Depleted D | ark Sur | face (F7) |) | wetla | nd hydrology must be p | resent, |
| 5 cm Mu | ucky Peat or Peat (S3 |) | Redox Dep | ression | s (F8) | | unles | s disturbed or problema | atic. |
| Restrictive | Layer (if observed): | | | | | | | | |
| Type: | | | <u></u> | | | | | | |
| Depth (i | nches): | | <u>_</u> | | | | Hydric Soil Present | ? Yes | No X_ |
| Remarks: | | | | | | | | | |
| The top inch | es of the soil had les | than 1 pe | rcent of a redox a | presenc | e. Soil in | dicator F | -6 requires at least 2 p | ercent of redox within t | he first 8 inches |
| of the soil sa | ample. | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| HYDROLO | OGY | | | | | | | | |
| Wetland Hy | drology Indicators: | | | | | | | | |
| _ | cators (minimum of o | ne is requir | ed; check all that | apply) | | | Secondar | y Indicators (minimum | of two required) |
| Surface | Water (A1) | | Water-Stai | ned Lea | ves (B9) | | X Surfa | ce Soil Cracks (B6) | |
| High Wa | ater Table (A2) | | Aquatic Fa | una (B1 | 3) | | Drain | age Patterns (B10) | |
| Saturation | on (A3) | | True Aqua | tic Plant | s (B14) | | Dry-S | eason Water Table (C2 | 2) |
| Water M | larks (B1) | | Hydrogen | Sulfide (| Odor (C1 |) | Crayf | ish Burrows (C8) | |
| Sedimer | nt Deposits (B2) | | Oxidized R | hizosph | eres on l | _iving R | ` ′ — | ation Visible on Aerial I | 0) () |
| Drift Dep | posits (B3) | | Presence of | of Reduc | ed Iron | (C4) | Stunt | ed or Stressed Plants (| D1) |
| | at or Crust (B4) | | Recent Iro | | | lled Soil | ` ' | norphic Position (D2) | |
| | oosits (B5) | | Thin Muck | | | | FAC- | Neutral Test (D5) | |
| | on Visible on Aerial Ir | | · | | , , | | | | |
| Sparsely | y Vegetated Concave | Surface (B | 8)Other (Exp | lain in R | (emarks | | _ | | |
| Field Obser | | | | | | | | | |
| Surface Wat | | · | | Depth (i | · - | | | | |
| Water Table | | | | Depth (i | _ | | | | |
| Saturation P | | · | No <u>X</u> | Depth (i | nches): _ | | Wetland Hydrolog | y Present? Yes | No_X |
| | pillary fringe) | | | l l t | | | Alama V. Se assaultation | | |
| Describe Re | corded Data (stream | gauge, mo | nitoring well, aeria | ı pnotos | , previou | s inspec | uons), it available: | | |
| Remarks: | | | | | | | | | |
| A COMMING. | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

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WETLAND DELINEATION REPORT

Castle Rock Solar Project Appendix C Site Photographs

Appendix C SITE PHOTOGRAPHS





Photo Point 1: W1 – View North, October 17, 2022



Photo Point 2: W1 – View West, October 17, 2022



Photo Point 3: W1 – View East, October 17, 2022



Photo Point 4: W2 - View West, October 17, 2022



Stantec Client: Castle Rock Solar LLC Project: Castle Rock Solar Project



Photo Point 5: W2 – View Northwest, October 17, 2022



Photo Point 6: W2 - View East, October 18, 2022



Photo Point 7: W3 – View West, October 17, 2022



Photo Point 8: W4 – View North, October 18, 2022





Photo Point 9: W5 - View Northeast, October 18, 2022



Photo Point 10: W6 - View Southeast, October 18, 2022



Photo Point 11: W7 – View North, October 18, 2022



Photo Point 12: W8 – View North, October 19, 2022





Photo Point 13: W8 - View North, October 19, 2022



Photo Point 14: W8 – View North, October 19, 2022



Photo Point 15: W9 - View South, October 19, 2022



Photo Point 16: W10 – View West, October 19, 2022





Photo Point 17: W11 – View South, October 20, 2022



Photo Point 18: W12 - View North, October 20, 2022



Photo Point 19: W13 - View Northeast, October 20, 2022



Photo Point 20: W14 – View North, October 21, 2022





Photo Point 21: W14 - View South, October 21, 2022



Photo Point 22: W15 – View West, October 11, 2023



Photo Point 23: W16 - View East, October 11, 2023



Photo Point 24: W18 - View East, October 12, 2023