

2022
STORMWATER
ORDINANCE

CASCADE CHARTER TOWNSHIP

1 **2022 STORMWATER ORDINANCE**
2 **CASCADE CHARTER TOWNSHIP**

3
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CASCADE CHARTER TOWNSHIP
COUNTY OF KENT, MICHIGAN

AN ORDINANCE to provide for the regulation and control of stormwater runoff; to provide for stormwater Permits and the procedures and standards for the issuance thereof; to provide for payment or reimbursement of costs and expenses incurred by Cascade Charter Township associated with stormwater Permits and the consideration thereof; to establish standards and requirements for the protection of Floodways and for the control of Soil Erosion and sedimentation; to adopt other provisions for the establishing, maintaining and protection of drains and drainageways; to provide regulations for the inspection, sampling and monitoring of stormwater and other discharges; to establish performance and design standards for stormwater management in Cascade Charter Township; and to provide penalties for violations of the ordinance.

THE BOARD OF CASCADE CHARTER TOWNSHIP ORDAINS:

Article I – General

Sec. 1.01 Statutory Authority and Title

This ordinance is adopted in accordance with the Charter Township Act as amended, being MCL 42.1, et seq.; the Township and Village Public Improvement Act, as amended, being MCL 41.721, et seq.; the Drain Code of 1956, as amended, being MCL 280.1, et seq.; the Land Division Act, as amended, being MCL 560.1, et seq.; the Revenue Bond Act, as amended, being MCL 141.101, et seq.; and the Natural Resources and Environmental Protection Act, as amended, being MCL 324.101, et seq.; Section 401(p) of the Federal Water Pollution Control Act (also known as the Clean Water Act), as amended, being 33 USC 1342(p) and 40 CFR Parts 9, 122, 123 and 124; and other applicable state and federal laws.

This ordinance shall be known and may be cited as the Cascade Charter Township Stormwater Ordinance.

Sec. 1.02 Findings

Cascade Charter Township finds that:

- (1) Water bodies, roadways, structures, and other property within, and downstream of Cascade Charter Township are at times subjected to Flooding;

- 119 (2) Flooding is a danger to the lives and property of the public and is also a
120 danger to the natural resources of Cascade Charter Township and the
121 region;
122
- 123 (3) Land development alters the hydrologic response of Watersheds, resulting
124 in increased Stormwater Runoff rates and volumes, increased Flooding,
125 increased Stream channel erosion, and increased sediment transport and
126 deposition;
127
- 128 (4) Stormwater Runoff produced by land development contributes to
129 increased quantities of water-borne Pollutants;
130
- 131 (5) Increases of Stormwater Runoff, Soil Erosion, and non-point source
132 pollution have occurred as a result of land development, and cause
133 deterioration of the water resources of Cascade Charter Township and
134 downstream municipalities;
135
- 136 (6) Stormwater Runoff, Soil Erosion, and non-point source pollution, due to
137 land development within Cascade Charter Township, have resulted in a
138 deterioration of the water resources of Cascade Charter Township and
139 downstream municipalities;
140
- 141 (7) Increased Stormwater Runoff rates and volumes, and the sediments and
142 Pollutants associated with Stormwater Runoff from future Development
143 projects within Cascade Charter Township will, absent reasonable
144 regulation and control, adversely affect Cascade Charter Township's water
145 bodies and water resources, and those of downstream;
146
- 147 (8) Stormwater Runoff, Soil Erosion, and non-point source pollution can be
148 controlled and minimized by the regulation of Stormwater Runoff from
149 Development;
150
- 151 (9) Post-Construction Stormwater Runoff Program requirements for new
152 Development and redevelopment within Cascade Charter Township are
153 set forth in the 2013 Michigan Department of Environmental Quality (DEQ)
154 Permit Application for Discharge of Storm Water to Surface Waters of the
155 State from a Municipal Separate Storm Sewer System (MS4) under the
156 NPDES program (Rev 10/2014).
157
- 158 (10) Adopting the standards, criteria and procedures contained in this
159 ordinance and implementing the same will address many of the
160 deleterious effects of Stormwater Runoff;
161
- 162 (11) Adopting these standards is necessary for the preservation of the public
163 health, safety and welfare.
164

- 165 (12) Adopting these standards is necessary to comply with the NPDES MS4
166 Permit.
167
168 (13) Illicit discharges contain pollutants that will significantly degrade Cascade
169 Charter Township's waterbodies and water resources;
170
171 (14) Illicit discharges enter Cascade Charter Township's municipal separate
172 storm sewer system (MS4) through either direct connections (e.g. sanitary
173 sewer laterals mistakenly or deliberately connected to the storm sewers)
174 or indirect connections (e.g. infiltration, or spills conveyed by surface flow
175 into the storm sewer system).
176
177 (15) Establishing and implementing measures for controlling Illicit Discharges
178 and connections will address many of their deleterious effects.
179

180 **Sec. 1.03 Purpose**

181
182 It is the purpose of this ordinance to establish minimum stormwater management
183 requirements and controls to accomplish, among others, the following objectives:
184

- 185 (1) To reduce artificially induced Flood damage;
186
187 (2) To minimize increased Stormwater Runoff rates and volumes from
188 identified new land development;
189
190 (3) To minimize the deterioration of existing watercourses, culverts and
191 bridges, and other structures;
192
193 (4) To encourage water recharge into the ground where geologically favorable
194 conditions exist;
195
196 (5) To prevent an increase in non-point source pollution;
197
198 (6) To maintain the integrity of Stream channels for their biological functions,
199 as well as for drainage and other purposes;
200
201 (7) To minimize the impact of Development upon Stream bank and streambed
202 stability;
203
204 (8) To reduce erosion from Development or construction projects;
205
206 (9) To preserve and protect water supply facilities and water resources by
207 means of controlling increased Flood discharges, Stream erosion, and
208 runoff pollution; and,
209

- 210 (10) To reduce Stormwater Runoff rates and volumes, Soil Erosion, and non-
 211 point source pollution, wherever practicable, from lands that were
 212 developed without stormwater management controls meeting the
 213 purposes and standards of this ordinance.
 214
- 215 (11) To reduce the adverse impact of changing land use on water bodies and,
 216 to that end, this ordinance establishes minimum standards to protect water
 217 bodies from degradation resulting from changing land use where there are
 218 insufficient stormwater management controls.
 219
- 220 (12) To regulate the contribution of Pollutants to the municipal separate storm
 221 sewer system (MS4) from stormwater discharges.
 222
- 223 (13) To prohibit Illicit Discharges and connections to the municipal separate
 224 storm sewer system.
 225
- 226 (14) To establish legal authority to carry out all inspection, surveillance and
 227 monitoring procedures necessary to ensure compliance with this
 228 Ordinance.
 229

230 **Sec. 1.04 Applicability, Exemptions and General Provisions**
 231

- 232 (1) This ordinance shall apply to all new Development and all redevelopment
 233 projects, including private, commercial and public projects that disturb one
 234 (1) acre or more, and projects less than one (1) acre that are part of a
 235 larger common Plan of Development or sale that would disturb one (1)
 236 acre or more.
 237
- 238 (2) This ordinance shall apply to sites less than one (1) acre as set forth in
 239 Chapter 21 of the Township Zoning Ordinance.
 240
- 241 (3) This ordinance shall not apply to the following:
 242
- 243 (a) The installation or removal of individual mobile homes within a
 244 mobile home park. This exemption shall not be construed to apply
 245 to the construction, expansion, or modification of a mobile home
 246 park.
 247
- 248 (b) Construction of, or an addition, extension or modification to, an
 249 individual single-family or a two-family detached dwelling.
 250
- 251 (c) Farm operations and buildings, except dwellings, directly related
 252 to farm operations. This exemption shall not apply to greenhouses
 253 and other similar structures.
 254
- 255 (d) Plats with preliminary plat approval and other Developments with

256 final land use approval prior to the effective date of this ordinance,
257 where such approvals remain in effect.

258
259 (e) Construction, development or redevelopment associated with
260 aeronautical facilities at the Gerald R. Ford International Airport.

261
262 **Sec. 1.05 Definitions**

263
264 For the purpose of this ordinance, the following words and phrases shall have the
265 meanings respectively ascribed to them by this Section unless the context in
266 which they are used specifically indicates otherwise:

- 267
268 (1) Local Government – Cascade Charter Township, or a properly delegated
269 official.
- 270
271 (2) Base Flood – A Flood having a one (1) percent chance of being equaled or
272 exceeded in any given year.
- 273
274 (3) Base Flood Elevation – The high water elevation of the Base Flood,
275 commonly referred to as the "100-year Flood elevation".
- 276
277 (4) Base Flood Plain – The area inundated by the Base Flood.
- 278
279 (5) Best Management Practices (BMPs) – A practice, or combination of
280 practices and design criteria that accomplish the purposes of this
281 ordinance (including, but not limited to reducing Stormwater Runoff rates,
282 reducing Stormwater Runoff volume, and reducing the amount of
283 Pollutants in stormwater) as determined by Cascade Charter Township,
284 and, where appropriate, the standards of the County Drain Commissioner.
- 285
286 (6) Building Opening – Any opening of a solid wall such as a window or door,
287 through which Floodwaters could penetrate.
- 288
289 (7) Clean Water Act – The Federal Water Pollution Control Act, 33 USC Sec
290 1251 et seq., as amended, and the applicable regulations promulgated
291 thereunder.
- 292
293 (8) Construction Site Stormwater Runoff – Stormwater runoff from a
294 Development site following an earth change and before final site
295 stabilization.
- 296
297 (9) Detention – A system which is designed to capture stormwater and
298 release it over a given period of time through an outlet structure at a
299 controlled rate.
- 300 (10) Development –The installation or construction of buildings, structures or
301 other Impervious Surfaces on a site that disturbs one (1) acre of land or

302 more, including projects less than one (1) acre that are part of a larger
303 common Plan or sale that would disturb one (1) acre or more. A
304 Development may include a land division, plat, site condominium, planned
305 unit Development, mobile home park, private road or other special land
306 use requiring land use or other review and approval by Cascade Charter
307 Township.

308
309 (11) Developer – Any Person or entity proposing or implementing the
310 Development of land.

311
312 (12) Development Site – Any land that is being or has been developed, or that
313 a Developer proposes for Development.

314
315 (13) Discharger – Any Person or entity who directly or indirectly discharges
316 stormwater from any property.

317
318 (14) Drain – Any drain as defined in the Drain Code of 1956, as amended,
319 being MCL 280.1, et. seq.

320
321 (15) Drainage – The collection or conveyance of stormwater, ground water
322 and/or surface water.

323
324 (16) Drainageway – The area within which surface water or ground water is
325 conveyed from one part of a lot or parcel to another part of the lot or
326 parcel or to adjacent land or to a watercourse.

327
328 (17) Earth Change – Any human activity which removes ground cover, changes
329 the slope or contours of the land, or exposes the soil surface to the actions
330 of wind and rain. Earth change includes, but is not limited to, any
331 excavating, surface Grading, filling, landscaping, or removal of vegetative
332 roots.

333
334 (18) EPA – The United States Environmental Protection Agency or any
335 successor agency.

336
337 (19) Erosion – The process by which the ground surface is worn away by
338 action of wind, water, gravity or a combination thereof.

339
340 (20) Federal Emergency Management Agency (FEMA) – The agency of the
341 federal government charged with emergency management.

342
343 (21) Flood or Flooding – A general and temporary condition of partial or
344 complete inundation of normally dry land areas resulting from the overflow
345 of water bodies or the unusual and rapid accumulation of surface water
346 runoff from any source.

347

- 348 (22) Hazardous Material(s) – Any material including any substance, waste or
349 combination thereof, which because of its quantity, concentration or
350 physical, chemical, or infectious characteristics may cause, or significantly
351 contribute to, a substantial present or potential hazard to human health,
352 safety, property, or the environment when improperly treated, stored,
353 transported, disposed of, or otherwise managed.
354
- 355 (23) Local Floodplain – Any land area subject to periodic Flooding as
356 determined by Cascade Charter Township.
357
- 358 (24) State-Regulated Floodplain – Any area of land adjoining a river or Stream
359 that will be inundated by a Base Flood that has a drainage area of 2
360 square miles or more when measured at the downstream limits of the
361 proposed Development site.
362
- 363 (25) Flood-Proofing – Any structural and/or non-structural additions, changes,
364 or adjustments to structures or property that reduce or eliminate Flood
365 damage to land, improvements, utilities or structures.
366
- 367 (26) Flood Protection Elevation (FPE) – The Base Flood Elevation plus one (1)
368 foot at any given location.
369
- 370 (27) Floodway – The channel of a river or Stream and the portions of the
371 Floodplain adjoining the channel that are reasonably required to carry and
372 discharge a 100-year Flood.
373
- 374 (28) Grading – Any stripping, excavating, filling, and stockpiling of soil or any
375 combination thereof, and the land in its excavated or filled condition.
376
- 377 (29) Groundwater – Water below the land surface in the zone of saturation as
378 defined in Part 213 of Act No. 451 of the Public Acts of 1994, as amended.
379
- 380 (30) High Groundwater – A groundwater elevation which does not meet
381 minimum distance from the bottom of proposed practice as defined in the
382 Stormwater Standards Manual.
383
- 384 (31) Illicit Connection – Any method or means for conveying an Illicit Discharge
385 into water bodies or Cascade Charter Township's stormwater system.
386
- 387 (32) Illicit Discharge – Any discharge to water bodies or stormwater systems
388 that does not consist entirely of stormwater, discharges pursuant to the
389 terms of an NPDES Permit, or exempted discharges as defined in this
390 ordinance.
391
- 392 (33) Impervious Surface – Any surface that does not allow stormwater to
393 percolate into the ground.

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- (34) Lowest Floor – The lowest floor or the lowest enclosed area (including a basement), but not including an unfinished or Flood-resistant enclosure which is usable solely for parking of vehicles or building access.
 - (35) EGLE – Michigan Department of Environment, Great Lakes & Energy or any successor department.
 - (36) NPDES – National Pollution Discharge Elimination System The NPDES Program protects the surface waters of the state by assuring that discharges of Wastewater comply with state and federal regulations. Anyone discharging or proposing to discharge Wastewater to the surface waters of the state are required to make application for and obtain a valid NPDES Permit prior to Wastewater discharge.
 - (37) MS4 – A Municipal Separate Storm Sewer System is a system of drainage (including roads, Storm Drains, pipes, and ditches, etc.) that is not a combined sewer or part of a sewage treatment plant. During wet weather, Pollutants are transported through MS4s to local water bodies.
 - (38) MS4 Permit – Regulated Communities with Municipal Separate Storm Sewer Systems (MS4s) that discharge to waters of the state are required to obtain a Permit under Section 402 of the Federal Clean Water Act, as amended, and under Part 31 (Water Resources Protection) of Act 451 of the Public Acts of 1994, as amended.
 - (39) Overland flow-way – Surface area that conveys a concentrated flow of Stormwater Runoff.
 - (40) Person – An individual, firm, partnership, association, public or private corporation, public agency, instrumentality, or any other legal entity.
 - (41) Plan – Written narratives, specifications, drawings, sketches, written standards, operating procedures, or any combination of these.
 - (42) Pollutant – A substance discharged which includes, but is not limited to the following: any dredged spoil, solid waste, vehicle fluids, yard wastes, animal wastes, agricultural waste products, sediment, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological wastes, radioactive materials, heat, wrecked or discharged equipment, rock, sand, cellar dirt, and industrial, municipal, commercial and agricultural waste, or any other contaminant or other substance defined as a Pollutant under the Clean Water Act.
 - (43) Project Site – Area of earth change or disturbance.

- 440 (44) Property Owner – Any Person having legal or equitable title to property or
441 any Person having or exercising care, custody, or control over any
442 property.
443
- 444 (45) Retention – A system which is designed to capture stormwater and contain
445 it until it infiltrates the soil or evaporates.
446
- 447 (46) Riparian Property Owner – A Property Owner who’s land is adjacent to a
448 waterbody.
449
- 450 (47) Sewershed – A catchment defined by Storm Drain infrastructure emptying
451 into a common outlet.
452
- 453 (48) Soil Erosion – The stripping of soil and weather rock from land creating
454 sediment for transportation by water, wind, or ice, and enabling formation
455 of new sedimentary deposits.
456
- 457 (49) State of Michigan Water Quality Standards – All applicable State rules,
458 regulations, and laws pertaining to water quality, including the provisions
459 of Section 3106 of Part 31 of Act 451 of the Public Acts of 1994, as
460 amended.
461
- 462 (50) Storm Drain – A system of open or enclosed conduits and appurtenant
463 structures intended to convey or manage Stormwater Runoff, ground
464 water and drainage.
465
- 466 (51) Stormwater Permit – A Permit issued pursuant to this ordinance.
467
- 468 (52) Stormwater Runoff – Water that originates during precipitation events or
469 with snowmelt. Stormwater that does not soak into the ground or
470 evaporate becomes Stormwater Runoff, which either flows directly into
471 surface waters or is channeled into storm drainage systems.
472
- 473 (53) Stormwater Management Facility – The method, structure, area, system,
474 plantings, trees, or other equipment or measures which are designed to
475 receive, control, store, convey, infiltrate, or treat stormwater.
476
- 477 (54) Stormwater Standards Manual – Establishes a uniform set of minimum
478 stormwater design standards necessary to provide for public safety, the
479 protection of property, and to comply with the National Pollutant Discharge
480 Elimination System (NPDES) Municipal Separate Storm Sewer System
481 (MS4) Individual Permit.
482
- 483 (55) Stream – A river, Stream or creek which may or may not be serving as a
484 drain, or any other Water Body that has definite banks, a bed, and visible
485 evidence of a continued flow or continued occurrence of water.

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- (56) Substantial Improvement – A repair, reconstruction, or improvement of an existing structure, such that the cost equals or exceeds fifty (50) percent of the true cash value of the structure either: before the improvement is started, or before the damage occurred if the structure has been damaged and is being restored, or Substantial Improvement is started when the first alteration of any structural part of the building commences.
 - (57) Uncontaminated Pumped Groundwater – Pumped groundwater from dewatering wells at sites where no known soil or groundwater contamination exists.
 - (58) Wastewater – Any water or other liquid, other than uncontaminated stormwater discharged from a facility.
 - (59) Water Body – A river, lake, Stream, creek or other watercourse or Wetlands.
 - (60) Watershed – A land area draining into a Water Body.
 - (61) Wetlands – Land characterized by the presence of water at a frequency and duration sufficient to support Wetland vegetation or aquatic life.

508 **Article II – Stormwater Permits**

509
510 **Sec. 2.01 Permit Required**

- 511
512 (1) No Person shall engage in any Development activity without first receiving
513 a Stormwater Permit from the Cascade Charter Township pursuant to
514 Section 2.02.
515
516 (2) The granting of a Stormwater Permit only authorizes the discharge of
517 stormwater from the Development for which the Permit is required, subject
518 to the terms of the Permit. It shall not be deemed to approve other
519 Development, other land use activities, or replace other required Permits.
520

521 **Sec. 2.02 Stormwater Permit Review Procedures**

522 Cascade Charter Township shall grant a Stormwater Permit, which may impose
523 terms and conditions in accordance with Section 2.09, only upon compliance with
524 each of the following requirements:
525

- 526 (1) The Developer has submitted a site (drainage) Plan complying with
527 Section 2.03.
528
529 (2) The Developer has paid or deposited the stormwater Permit review fee
530 pursuant to Section 2.04.
531
532 (3) The Developer has paid or posted any applicable performance guarantee
533 pursuant to Section 2.06.
534
535 (4) The Developer agrees to provide all easements necessary to implement
536 the approved drainage Plan and to otherwise comply with this Ordinance
537 including, but not limited to, Section 7.02. All easements shall be
538 acceptable to Cascade Charter Township in form and substance and shall
539 be recorded with the County Register of Deeds. At the discretion of the
540 local government the final easement may be required to be recorded prior
541 to Permit issuance.
542
543 (5) The Developer provides the required maintenance agreement for routine,
544 emergency, and long-term maintenance of all structural and vegetative
545 BMPs installed and implemented to meet the performance standards, and
546 to comply with the approved drainage Plan and this Ordinance including,
547 but not limited to, Section 7.03. The maintenance agreement shall be
548 acceptable to Cascade Charter Township in form and substance, may not
549 be amended without the approval of Cascade Charter Township, shall be
550 binding on all future Property Owners, and shall be recorded with the
551 County Register of Deeds.
552
553

554 **Sec. 2.03 Drainage Plan**

555
556 The Developer shall provide adequate stormwater management facilities for the
557 Development site. Adequate facilities reduce the exposure of people to drainage-
558 related adverse impacts and to health and safety hazards. They reduce the
559 exposure of real and personal property to damage through stormwater
560 inundation. The stormwater management system and stormwater best
561 management practices (BMPs) shall be designed in accordance with the latest
562 version of the document "Stormwater Standards, Procedures and Design Criteria
563 for Stormwater Management" (aka "Stormwater Standards" manual) of Cascade
564 Charter Township.

565
566 The Developer shall provide a drainage Plan to Cascade Charter Township for
567 review and approval by Cascade Charter Township. The drainage Plan shall
568 identify and contain all of the information required in the "Stormwater Standards"
569 manual, including an implementation Plan relative to the Development site.

570
571 The implementation Plan for construction and inspection of all stormwater
572 management facilities necessary to the overall drainage Plan shall include a
573 schedule of the estimated dates of completing construction of the stormwater
574 management facilities shown on the Plan and an identification of the proposed
575 inspection procedures to ensure that the stormwater management facilities are
576 constructed in accordance with the approved drainage Plan.

577
578 **Sec. 2.04 Stormwater Permit Review Fees.**

579
580 (1) All expenses and costs incurred by Cascade Charter Township directly
581 associated with processing, reviewing and approving or denying a
582 Stormwater Permit application shall be paid to Cascade Charter Township
583 from the funds in a separate escrow account established by the
584 Developer, as provided in subsection (2). Cascade Charter Township shall
585 draw funds from a Developer's escrow account to reimburse Cascade
586 Charter Township for out-of-pocket expenses incurred by Cascade Charter
587 Township relating to the application. Such reimbursable expenses include,
588 but are not limited to, the following:

- 589
590 (a) Services of Cascade Charter Township Attorney directly related to
591 the application.
592
593 (b) Services of Cascade Charter Township Engineer directly related to
594 the application.
595
596 (c) Services of other independent contractors or consultants working
597 for Cascade Charter Township which are directly related to the
598 application.
599

- 600 (d) Any additional public hearings, required mailings and legal notice
601 requirements necessitated by the application.
602
- 603 (2) At the time a Developer applies for a Stormwater Permit, Cascade Charter
604 Township may require the Developer to deposit with Cascade Charter
605 Township clerk, as an escrow deposit, an initial amount as determined by
606 resolution of the Board of Trustees for such matters and shall provide
607 additional amounts as requested by Cascade Charter Township in such
608 increments as are specified in said resolution. Any excess funds remaining
609 in the escrow account after the application has been fully processed,
610 reviewed, and the final Cascade Charter Township approval and
611 acceptance of the Development has occurred will be refunded to the
612 Developer with no interest to be paid on those funds. At no time prior to
613 Cascade Charter Township's final decision on an application shall the
614 balance in the escrow account fall below the amount as designated by the
615 Local Government. If the funds in the account are reduced to less than the
616 required amount, the Developer shall deposit into the account an
617 additional amount as determined by Cascade Charter Township Board of
618 Trustees resolution, before the application review process will be
619 continued. Additional amounts necessary to process the application may
620 be required to be placed in the escrow account by the Developer, at the
621 discretion of the and based upon the criteria set forth in this ordinance
622 Cascade Charter Township.
623

624 **Sec. 2.05 Construction Site Runoff Controls**
625

626 Prior to making any earth change on a Development site regulated by this
627 ordinance, the Developer shall first obtain a Soil Erosion Permit issued in
628 accordance with Part 91 of Act No. 451 of the Public Acts of 1994, as amended, if
629 otherwise required by law. The Developer shall install stormwater management
630 facilities and shall phase the Development activities so as to prevent construction
631 site stormwater runoff and off-site sedimentation. During all construction activities
632 on the Development site, Cascade Charter Township may inspect the
633 Development site to ensure compliance with the approved construction site
634 runoff controls.
635

636 **Sec. 2.06 Performance guarantee**
637

- 638 (1) Cascade Charter Township shall not approve a Stormwater Permit until
639 the Developer submits a letter of credit or other performance guarantee to
640 Cascade Charter Township, in a form and amount satisfactory to Cascade
641 Charter Township, a letter of credit or other performance guarantee to
642 ensure the timely and satisfactory construction of all approved stormwater
643 management facilities and to complete site Grading in accordance with the
644 approved drainage Plan. Upon 1) certification by a registered professional
645 engineer that the stormwater management facilities have been completed

646 in accordance with the approved drainage Plan including, but not limited
647 to, the implementation Plan required to be submitted in Section 2.03, and
648 2) receipt of construction record drawings meeting the minimum
649 requirements of Local Government or the County Drain Commissioner,
650 Cascade Charter Township may release the letter of credit, or other
651 performance guarantee subject to final Cascade Charter Township
652 acceptance and approval.

- 653
- 654 (2) Except as provided in subsection (3), the amount of the performance
655 guarantee shall be \$ 10,000, unless Cascade Charter Township
656 reasonably determines that a greater amount is appropriate, in which case
657 the basis for such determination shall be provided to the Developer in
658 writing. In determining whether an amount greater than \$ 10,000 is
659 appropriate, Cascade Charter Township shall consider the size and type of
660 the Development, the size and type of the on-site stormwater system, and
661 the nature of the off-site stormwater management facilities the
662 Development will utilize.
- 663
- 664 (3) Cascade Charter Township Planning Commission may reduce or waive
665 the amount of the performance guarantee for a Development that will not
666 increase the percentage of Impervious Surface of the Development site by
667 more than ten percent (10%) and in accordance with those factors set
668 forth in subsection (2).
- 669
- 670 (4) This ordinance shall not be construed or interpreted as relieving a
671 Developer of its obligation to pay all costs associated with on-site private
672 stormwater management facilities as well as those costs arising from the
673 need to make other drainage improvements in order to reduce a
674 Development's impact on a drain consistent with adopted design
675 standards.

676
677 **Sec. 2.07 Certificate of Occupancy**

678

679 No final certificate of occupancy shall be issued to a Development until
680 stormwater management facilities have been completed in accordance with the
681 approved drainage Plan; provided, however, Cascade Charter Township may
682 issue a certificate of occupancy if an acceptable letter of credit or other
683 performance guarantee has been submitted to Cascade Charter Township, for
684 the timely and satisfactory construction of all stormwater management facilities
685 and site Grading in accordance with the approved drainage Plan.

686
687 **Sec. 2.08 No Change in Approved Facilities**

688

689 Stormwater management facilities, after construction and approval, shall be
690 maintained in good operational condition, in accordance with the approved
691 drainage Plan, and shall not be subsequently altered, revised or replaced except

692 in accordance with the approved drainage Plan, or in accordance with approved
693 amendments or revisions to that Plan.

694

695 **Sec. 2.09 Terms and Conditions of Permits**

696

697 In granting a Stormwater Permit, Cascade Charter Township may impose such
698 terms and conditions as are reasonably necessary to effectuate the purposes of
699 this ordinance. A Developer shall comply with such terms and conditions.

700 **Article III – Stormwater System, Floodplain and Other Standards, Soil Erosion**
701 **Control**

702
703 **Sec. 3.01 Management of and Responsibility for Stormwater System**
704

705 Cascade Charter Township is not responsible for providing drainage facilities on
706 private property for the management of stormwater on said property. It shall be
707 the responsibility of the Property Owner to provide for, and maintain, private
708 stormwater management facilities serving the property and to prevent or correct
709 the accumulation of debris that interferes with the drainage function of a Water
710 Body or the functioning of such drainage.

711
712 **Sec. 3.02 Stormwater System**
713

714 All stormwater management facilities shall be constructed and maintained in
715 accordance with all applicable federal, state and local ordinances, and rules and
716 regulations.

717
718 **Sec. 3.03 Stormwater Discharge Rates and Volumes**
719

720 Cascade Charter Township has minimum design standards set forth in Article VIII
721 of this ordinance shall apply to all new Development and redevelopment projects,
722 including preventing or minimizing water quality impacts. Specific exemptions are
723 listed in the Stormwater Standards Manual.

724
725 **Sec. 3.04 Floodplain Standards**
726

- 727 (1) All new buildings and Substantial Improvements to existing buildings shall
728 be protected from Flood damage up to the Flood Protection Elevation
729 (FPE) and shall be in accordance with all applicable federal, state and
730 local ordinances, and rules and regulations. Floodway alteration in a Local
731 Floodplain shall be permitted only upon review and approval by the
732 Cascade Charter Township, in accordance with an approved drainage
733 Plan.
- 734 (2) A drainage Plan providing for the filling or alteration of a Floodway within a
735 local Floodplain shall include provisions for maintaining stability of the
736 banks of Streams or other water bodies. Establishing buffer zones is one
737 means of providing protection of the slopes and banks of water bodies.
- 738 (3) Within any required buffer zone, no earth change shall take place except
739 in accordance with the approved drainage Plan. Such a Plan may also
740 include provisions for the replacement of local Flood plain storage volume,
741 where such storage volume is lost or diminished as a result of approved
742 Development.
743
744
745

746 (4) Any earth change within a State-Regulated Floodplain shall only be
747 undertaken in accordance with any required state or federal Permit.

748
749 (a) Advisability of Additional Flood Protection:
750 The degree of Flood protection required by this Ordinance is here
751 found to be the minimum necessary and reasonable for regulatory
752 purposes. Larger Floods may occur and higher Floodwater heights
753 may occur than will be mitigated or controlled by compliance with
754 these requirements. This Ordinance shall not be interpreted to
755 imply or guarantee that areas outside the Floodway or the State-
756 Regulated Floodplain or uses permitted within such areas, shall
757 remain free from Flooding or Flood damage. Compliance with the
758 terms of this Ordinance will not guarantee freedom from damage,
759 injury or loss of life. This Ordinance shall not be interpreted or
760 applied to create liability for Cascade Charter Township or any
761 officer, agent or employee of Cascade Charter Township for any
762 Flood or Flood related damage.

763
764 **Sec. 3.05 Soil Erosion and Sedimentation Control**

765
766 (1) All Persons who cause, in whole or in part, any earth change to occur
767 shall provide Soil Erosion and sedimentation control so as to adequately
768 prevent soils from being eroded and discharged or deposited onto
769 adjacent properties or into a stormwater drainage system, a public street
770 or right of way, Wetland, creek, Stream, Water Body, or Floodplain. All
771 Development shall be in accordance with all applicable federal, state and
772 local ordinances, rules and regulations.

773
774 (2) During any earth change which exposes soil to an increased risk of
775 erosion or sediment track-out, the Property Owner and other Persons
776 causing or participating in the earth change shall do the following:
777
778 (a) Comply with the stormwater management standards of this
779 ordinance.
780
781 (b) Obtain and comply with the terms of a Soil Erosion and
782 sedimentation control Permit if required by law.
783
784 (c) Prevent damage to any public utilities or services within the limits of
785 Grading and within any routes of travel or areas of work of
786 construction equipment.
787
788 (d) Prevent damage to or impairment of any Water Body on or near the
789 location of the earth change or affected thereby.
790
791 (e) Prevent damage to adjacent or nearby land.

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- (f) Apply for all required approvals or Permits prior to the commencement of work.
- (g) Proceed with the proposed work only in accordance with the approved Plans and in compliance with this ordinance and the Stormwater Standards Manual.
- (h) Maintain all required Soil Erosion and sedimentation control measures, including but not limited to, measures required for compliance with the terms of this ordinance.
- (i) Promptly remove all soil, sediment, debris, or other materials applied, dumped, tracked, or otherwise deposited on any lands, public streets, sidewalks, or other public ways or facilities, as directed by the regulatory agency issuing the Soil Erosion and sedimentation control Permit. Removal of all such soil, sediment, debris or other materials within twenty-four (24) hours shall be considered prima facie compliance with this requirement, unless such materials present an immediate hazard to public health and safety. Refrain from Grading lands at locations near or adjoining lands, public streets, sidewalks, alleys, or other public or private property without providing adequate support or other measures so as to protect such other lands, streets, sidewalks or other property from settling, cracking or sustaining other damage.
- (k) The Property Owner shall have the Soil Erosion and sedimentation control measures inspected weekly and within twenty-four (24) hours of a rain event of sufficient quantity to cause runoff. The inspection for sites one (1) acre or greater shall be conducted by an EGLE certified Construction Site Stormwater Operator who shall maintain written inspection logs. Logs shall be made available to Cascade Charter Township upon request.

Sec. 3.06 Building Openings

- (1) No Building Opening shall be constructed below the following elevations:
 - (a) One foot above the Base Flood Elevation.
 - (b) One foot above the 100-year water surface hydraulic grade line of the stormwater system.
 - (c) The Building Opening established at the time of plat or Development approval and on file with the Cascade Charter Township.

- 838
839 (2) No Lowest Floor shall be constructed below the following elevations:
840
841 (a) One foot above the highest known ground water elevation.
842
843 (b) The lowest allowable floor established at the time of plat or
844 development approval and on file with the Cascade Charter
845 Township.
846
847 (3) A waiver from elevations stated in Section 3.05(1) may be granted by
848 Cascade Charter Township following receipt of a certification from a
849 registered professional engineer demonstrating that the proposed
850 elevation does not pose a risk of Flooding.
851
852 (4) Upon completion of construction of the structure's foundation and or slab
853 on grade, a registered land surveyor shall certify any minimum Building
854 Opening or Lowest Floor elevation specified by this ordinance. This
855 certificate shall attest that the Building Opening or Lowest Floor elevation
856 complies with the standards of this ordinance. The permittee for the
857 building Permit shall submit the certificate to the Township Building
858 Inspections official prior to the commencement of framing and/or structural
859 steel placement. If the surveyor should find that the minimum Building
860 Opening or Lowest Floor elevation is below the elevation specified in
861 Section 3.06(1) (a) through (c), that opening must be raised using a
862 method that meets with the approval of Cascade Charter Township. After
863 reconstruction, a registered land surveyor or engineer shall re-certify that
864 the minimum Building Opening or Lowest Floor elevation complies with
865 the standards of this ordinance prior to the commencement of framing
866 and/or structural steel placement.
867

868 **Sec. 3.07 Sump Pump Discharge**
869

- 870 (1) Whenever building footing drains are required or utilized, a direct
871 connection between the footing drains and the storm sewer through a
872 sump pump-check valve system, or a gravity pipe with a double flap gate
873 valve for backflow prevention is required. The check valve system shall be
874 installed on private property and maintained by the Property Owner
875 property owner.
876
877 (2) A stormwater lateral shall be provided for each parcel at the time of storm
878 sewer construction. If no lateral is provided, the Property Owner shall
879 discharge said water in such a manner as not to impact neighboring land
880 or public streets. If a stormwater lateral does not exist, and it is technically
881 feasible to construct one, the Property Owner may install one at their
882 expense. Any work to be conducted within the right-of-way must be
883 expressly authorized by Cascade Charter Township.

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- (3) The Property Owner property owner assumes all risks associated with connecting directly into the storm sewer system. The requirements outlined in subsection (1) of this section (3.07) are the minimum required for Cascade Charter Township to allow a Property Owner to connect a foundation drain to the storm sewer system. Additional measures may be considered to reduce the risk of storm sewer backups, such as the inclusion of a physical air gap between the residential stormwater discharge line and the public storm sewer system. All backflow prevention devices shall be installed on private property and maintained by the Property Owner.
- (4) Stormwater runoff shall not be redirected or infiltrated within the influence of footing drains.
- (5) None of the requirements of this section (3.07) shall be interpreted to require a Property Owner to connect into the storm sewer system.
- (6) If a storm sewer connection is not utilized, foundation drain outlets shall comply with Cascade Charter Township Code of Ordinances.

904 **Article IV – Prohibitions and Exemptions**

905
906 **Sec. 4.01 Prohibited Discharges**

- 907
908 (1) No Person shall discharge to a Water Body, directly or indirectly, any
909 substance other than stormwater or an exempted discharge. Any Person
910 discharging stormwater shall effectively prevent Pollutants from being
911 discharged with the stormwater, except in accordance with BMPs.
912
913 (2) Cascade Charter Township is authorized to require Dischargers to
914 implement pollution prevention measures, utilizing BMPs as necessary, to
915 prevent or reduce the discharge of Pollutants into Cascade Charter
916 Township’s stormwater drainage system.
917
918 (3) No Person shall discharge or cause to be discharged into Cascade
919 Charter Township storm drain system or watercourses any materials,
920 including, but not limited to, Pollutants, or water containing any Pollutants
921 that cause or contribute to a violation of applicable water quality standards
922 other than stormwater. The commencement, conduct, or continuance of
923 any Illicit Discharge to the Storm Drain system is prohibited except for
924 discharges authorized by the Cascade Charter Township as being
925 necessary to protect public health and safety.
926
927 (4) Prohibition of Illicit Connections
928
929 (a) The construction, use, maintenance, or continued existence of Illicit
930 Connections to the MS4 is prohibited.
931
932 (b) This prohibition expressly includes, without limitation, Illicit Connections
933 made in the past, regardless of whether the connection was permissible
934 under law or practices applicable or prevailing at the time of connection.
935
936 (c) Without limitation, a Person is considered to be in violation of this
937 Ordinance if the Person connects a line conveying Wastewater to the
938 MS4, or allows such a connection to continue. The prohibitions of this
939 section shall not apply to any non-stormwater discharge permitted under
940 an NPDES Permit, waiver, or waste discharge order issued to the
941 Discharger and administered under the authority of the EPA, provided,
942 that the discharge is in full compliance with all requirements of the Permit,
943 waiver, or order and other applicable laws and regulations, and provided
944 that written approval has been granted for any discharge to the MS4.
945

946 **Sec. 4.02 Exempted Discharges**

- 947
948 (1) The following non-stormwater discharges shall be exempted from the

949 requirement of this Article, provided that they do not result in a violation of
950 State of Michigan Water Quality Standards:

- 951 (a) Water supply line flushing;
- 952 (b) Landscape irrigation;
- 953 (c) Diverted Stream flows;
- 954 (d) Rising ground water;
- 955 (e) Uncontaminated ground water infiltration to Storm Drains;
- 956 (f) Uncontaminated Pumped Ground Water;
- 957 (g) Discharges from potable water sources;
- 958 (h) Foundation drains;
- 959 (i) Air conditioning condensate;
- 960 (j) Individual residential car washing;
- 961 (k) Dechlorinated swimming pool water;
- 962 (l) Street washwater;
- 963 (m) Discharges or flows from emergency firefighting activities; and
- 964 (n) Discharges for which a specific federal or state Permit has been
965 issued.

- 966 (2) None of the above exemptions eliminate the need to provide appropriate
967 pollution control or pollution prevention measures required under this
968 Ordinance or under any other Federal or State Law, rule or regulation.
969

970 **Sec. 4.03 Interference with Natural or Artificial Drains**

- 971 (1) It shall be unlawful for any Person to stop, fill, dam, confine, pave, alter the
972 course of, or otherwise interfere with any natural or constructed drain,
973 ditch, swale, culvert, Water Body, Floodplain, or Flood prone area without
974 first submitting a drainage Plan to Cascade Charter Township and
975 receiving approval of that Plan. Any deviation from the approved Plan is a
976 violation of this ordinance. This section shall not prohibit, however,
977 necessary emergency action so as to prevent or mitigate drainage that
978 would be injurious to the environment, the public health, safety, or welfare.
979

- 995
996 (2) No filling, blocking, fencing or above-surface vegetation planting shall take
997 place within a Floodway.
998
999 (3) No shrubs or trees shall be planted below the top of the bank of a Water
1000 Body.
1001
1002 (4) For an overland flow-way:
1003
1004 (a) Silt screen fences shall not be permitted below the top of the bank
1005 of a Water Body.
1006
1007 (b) Chain link fences shall be permitted if Cascade Charter Township
1008 determines that the fence will not obstruct or divert the flow of
1009 water.
1010
1011 (c) If a fence is removed by Cascade Charter Township for drain
1012 access or drain maintenance, the fence shall be replaced by the
1013 owner of the fence at the owner's expense.
1014
1015 (5) Shrubs, trees or other above-ground vegetation shall not be planted
1016 over the top of an underground storm sewer or over the top of the
1017 easement within which the storm sewer has been installed.
1018

1019 **Sec. 4.04 Storage of Materials in Drainageway**
1020

1021 It shall be unlawful for any Person to store, stockpile or dispose of any
1022 hazardous, toxic, or non-toxic material including but not limited to chemicals,
1023 explosives, buoyant materials, yard wastes, log and brush piles, unsecured
1024 landscaping materials, play or work sheds, animal wastes, fertilizers, flammable
1025 liquids and Pollutants win an overland flow-way, drainage system or a Floodplain
1026 unless adequate protection and or containment has been provided to prevent
1027 such materials from entering, diverting or blocking Cascade Charter Township
1028 drainage system, except as specifically permitted by State and Federal Law.

1029 **Article V – Inspection, Monitoring, Reporting, and Recordkeeping**

1030

1031 **Sec. 5.01 Inspection and Sampling**

1032

1033 To assure compliance with the standards outlined in Article VIII, Cascade Charter
1034 Township may inspect and/or obtain stormwater samples from stormwater
1035 management facilities of any Discharger to determine compliance with the
1036 requirements of this ordinance. Upon request, the Discharger shall allow
1037 Cascade Charter Township's properly identified representative to enter upon the
1038 premises of the Discharger at all hours necessary for the purposes of such
1039 inspection or sampling absent exigent circumstances. Cascade Charter Township
1040 shall make a reasonable effort to provide the Discharger with advance notice of
1041 such inspection and/or sampling. Unreasonable delays in allowing access to a
1042 Discharger's facility is a violation of this Ordinance. As a condition of the
1043 issuance of any Permit in accordance with this ordinance, the permittee shall be
1044 deemed to have consented to Cascade Charter Township's exercise of its right to
1045 place on the Discharger's property the equipment or devices used for such
1046 sampling or inspection under this Ordinance

1047

1048 **Sec. 5.02 Stormwater Monitoring Facilities**

1049

1050 A Discharger of stormwater runoff shall install and operate equipment or devices
1051 for the monitoring of stormwater runoff, at its own expense, so as to provide for
1052 inspection, sampling, and flow measurement of each discharge to a Water Body
1053 or a Stormwater Management Facility, when directed in writing to do so by
1054 Cascade Charter Township. Cascade Charter Township may require a
1055 Discharger to provide and operate such equipment and devices if it is necessary
1056 or appropriate for the inspection, sampling and flow measurement of discharges
1057 in order to determine whether adverse effects from or as a result of such
1058 discharges may occur. All such equipment and devices for the inspection,
1059 sampling and flow measurement of discharges shall be installed and maintained
1060 in accordance with applicable laws, ordinances and regulations.

1061

1062 **Sec. 5.03 Accidental Discharges**

1063

1064 (1) Any Discharger who accidentally discharges into a Water Body any
1065 substance other than stormwater or an exempted discharge shall
1066 immediately inform Cascade Charter Township concerning the discharge.
1067 If such information is given orally, a written report concerning the
1068 discharge shall be filed with Cascade Charter Township within five (5)
1069 days. The written report shall specify:

1070

1071 (a) The composition of the discharge and the cause thereof.

1072

1073 (b) The exact date, time, and estimated volume of the discharge.

1074

1075 (c) All measures taken to date to clean up the accidental discharge,
1076 and all measures proposed to be taken to reduce and prevent any
1077 recurrence.

1078
1079 (d) The name and telephone number of the Person making the report,
1080 and the name of a Person who may be contacted for additional
1081 information on the matter.

1082
1083 (2) A properly reported accidental discharge shall be an affirmative defense to
1084 a civil infraction proceeding brought under this ordinance against a
1085 Discharger for such discharge. It shall not, however, be a defense to a
1086 legal action brought to obtain an injunction, to obtain recovery of costs or
1087 to obtain other relief as a result of or arising out of the discharge. A
1088 discharge shall be considered properly reported only if the Discharger
1089 complies with all the requirements of Section 5.03(1).

1090
1091 **Sec. 5.04 Record Keeping Requirement**

1092
1093 Any Person subject to this ordinance shall retain and preserve for no less than
1094 three (3) years any and all books, drawings, Plans, prints, documents,
1095 memoranda, reports, correspondence and records, including records on
1096 magnetic or electronic media and any and all summaries of such records, relating
1097 to monitoring, sampling and chemical analysis of any discharge or stormwater
1098 runoff from any property.

1099 **Article VI – Enforcement**

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Sec. 6.01 Sanctions for Violation

(1) Any Person violating any provision of this ordinance shall be responsible for a municipal civil infraction and subject to a fine of not less than \$ 500 for a first offense, and not less than \$ 500 for a subsequent offense, plus costs, damages, expenses, and other sanctions as authorized under Chapter 87 of the Revised Judicature Act of 1961 and other applicable laws, including, without limitation, equitable relief; provided, however, that the violation stated in Section 6.01(2) shall be a misdemeanor. Each day such violation occurs or continues shall be deemed a separate offense and shall make the violator liable for the imposition of a fine for each day. The rights and remedies provided for in this section are cumulative and in addition to any other remedies provided by law. An admission or determination of responsibility shall not exempt the offender from compliance with the requirements of this ordinance.

For purposes of this section, "subsequent offense" means a violation of the provisions of this ordinance committed by the same Person within 12 months of a previous violation of the same provision of this ordinance for which said Person admitted responsibility or was adjudicated to be responsible.

Cascade Charter Township Manager of duly appointed designee is authorized to issue municipal civil infraction citations for a violation of any provision of this ordinance.

(2) Any Person who neglects or fails to comply with a stop work order issued under Section 6.02 shall, upon conviction, be guilty of a misdemeanor, punishable by a fine of not more than \$500 or imprisonment for not more than 93 days, or both such fine and imprisonment, and such Person shall also pay such costs of prosecution and other charges as may be imposed in the discretion of the court.

(3) Any Person who aids or abets a Person in a violation of this ordinance shall be subject to the sanctions provided in this section.

Sec. 6.02 Stop Work Order

Where there is work in progress that causes or constitutes in whole or in part, a violation of any provision of this ordinance, Cascade Charter Township is authorized to issue a Stop Work Order to prevent further or continuing violations or adverse effects. All Persons to whom a stop work order is directed, or who are involved in any way with the work or matter described in a stop work order shall fully and promptly comply therewith.

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Sec. 6.03 Failure to Comply; Completion

In addition to any other remedies, should any owner fail to comply with the provisions of this ordinance, Cascade Charter Township may, after giving reasonable notice and an opportunity for compliance, have the necessary work done, and the owner shall be obligated to promptly reimburse Cascade Charter Township for all costs of such work. Without limiting the foregoing, a failure to comply or otherwise bring property into compliance with other violation of this ordinance shall be deemed a public nuisance and shall be subject to abatement.

Sec. 6.04 Emergency Measures

When emergency measures are necessary to protect public safety, health and welfare, and/or to prevent loss of life, injury or damage to property, Cascade Charter Township is authorized to carry out or arrange for all such emergency measures. Property owners shall be responsible for the cost of such measures made necessary as a result of a violation of this ordinance, and shall promptly reimburse Cascade Charter Township for all of such costs.

Sec. 6.05 Cost Recovery for Damage to Storm Drain System

A Discharger shall be liable for all costs incurred by Cascade Charter Township as the result of causing a discharge that produces a deposit or obstruction, or causes damage to, or impairs a Storm Drain, or violates any of the provisions of this ordinance. Costs include, but are not limited to, those penalties levied by the EPA or MDEQ for violation of an NPDES Permit, attorney fees, and other costs and expenses.

Sec. 6.06 Collection of Costs; Lien

To the extent permitted by law, service charge incurred by Cascade Charter Township and the Drain Commissioner including, without limitation, applicable charges incurred pursuant to Sections 6.02, 6.03, 6.04 and 6.05 may be collected by Cascade Charter Township or Drain Commissioner in any manner authorized by law including, but not limited to, all remedies authorized by Act No. 94 of the Public Acts of 1933, as amended. When applicable, said costs shall be a lien on the premises which shall be enforceable in accordance with Act No. 94 of the Public Acts of 1933, as amended from time to time or as otherwise authorized by law with any such charges which are delinquent for six (6) months or more may be certified annually to Cascade Charter Township Treasurer who shall enter the lien on the next tax roll against the premises and the costs shall be collected and the lien shall be enforced in the same manner as provided for in the collection of taxes assessed upon the roll and the enforcement of a lien for taxes.

1191 **Sec. 6.07 Appeals**

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Any Person as to whom any provision of this ordinance has been applied may appeal in writing, not later than 30 days after the action or decision being appealed from, to Cascade Charter Township Board of Trustees the action or decision whereby any such provision was so applied. Such appeal shall identify the matter being appealed, and the basis for the appeal. Cascade Charter Township shall Board of Trustees shall consider the appeal at a public hearing and shall affirm, reject or modify the action being appealed based on the standards set forth in this ordinance. Cascade Charter Township Board of Trustees may impose reasonable conditions on an affirmative decision in an appeal. Cascade Charter Township Board of Trustees shall make its decision in writing and shall furnish a copy of the decision to the Person making the appeal. In considering any such appeal, Cascade Charter Township Board of Trustees may consider the recommendations of Cascade Charter Township Engineer and the comments of other Persons having knowledge of the matter. In considering any such appeal, Cascade Charter Township Board of Trustees may grant a variance from the terms of this ordinance so as to provide relief, in whole or in part, from the action being appealed, but only upon finding that the following requirements are satisfied:

- (1) The application of the ordinance provisions being appealed will present or cause practical difficulties for a Development or Development site; provided, however, that practical difficulties shall not include the need for the Developer to incur additional reasonable expenses in order to comply with the ordinance; and
- (2) The granting of the relief requested will not substantially prevent the goals and purposes sought to be accomplished by this ordinance, nor result in less effective management of stormwater runoff.

Sec. 6.08 Suspension of MS4 Access

(1) The Local Government may, without prior notice, suspend a Person's discharge access to the MS4 when such suspension is necessary to stop an actual or threatened discharge that presents or may present imminent and substantial danger to the environment, or to the health or welfare of Persons or the MS4. If the Person fails to comply with a suspension order issued in an emergency, the Local Government may take such steps as deemed necessary to prevent or minimize damage to the MS4 or the environment, or to minimize danger to Persons. A person failing to comply with a suspension order pursuant to this section shall be liable for all cost incurred by Cascade Charter Township as the result of such failure to comply and a violation shall constitute a public nuisance.

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- (2) Any Person discharging to the MS4 in violation of this Ordinance may have their MS4 access terminated if such termination would abate or reduce an Illicit Discharge. Cascade Charter Township will notify a violator of the proposed termination of its MS4 access. A Person violates this Ordinance if the Person reinstates MS4 access to a premise terminated pursuant to this section, without the prior approval of Cascade Charter Township.

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Article VII – Stormwater Easements and Maintenance Agreements

Sec. 7.01 Applicability of Requirements

The requirements of this Article concerning stormwater easements and maintenance agreements shall apply to all Persons required to submit a drainage Plan to Cascade Charter Township for review and approval.

Sec. 7.02 Stormwater Management Easements

The Property Owner shall provide all stormwater management easements necessary to implement the approved drainage Plan and to otherwise comply with this ordinance in form and substance required by Cascade Charter Township and shall record such easements as directed by Cascade Charter Township. The easements shall assure access for proper inspection and maintenance of stormwater management facilities and shall provide adequate emergency Overland Flow-ways.

Sec. 7.03 Maintenance Agreements

- (1) Maintenance Agreement Required. The Developer shall provide all stormwater maintenance agreements necessary to implement the approved drainage Plan, to provide and require easements as necessary for implementation and to otherwise comply with this ordinance in form and substance as required by Cascade Charter Township, and shall record such agreements as directed by Cascade Charter Township. The Maintenance Agreements shall, among other matters, assure access for proper inspection and maintenance or corrective actions of stormwater BMPs, including emergency Overland Flow-ways, and include provisions for tracking the transfer of operation and maintenance responsibility to ensure the performance standards are met in perpetuity.
- (2) Maintenance Agreement Provisions.
 - (a) The maintenance agreement shall include a maintenance plan and schedule for routine, emergency and long-term maintenance of all structural and vegetative stormwater BMPs installed and implemented to meet the performance standards, with a detailed annual estimated budget for the initial three years, and a clear statement that only future maintenance activities in accordance with the maintenance agreement Plan shall be permitted without the necessity of securing new Permits.
 - (b) Written notice and submittal of maintenance documentation shall be provided to Cascade Charter Township by the Property Owner at

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the interval set forth in the maintenance agreement and subject to the provisions of Sections 5-01 through 6-07.

- (c) If it has been found by Cascade Charter Township, following notice and an opportunity to be heard by the Property Owner, that there has been a material failure or refusal to undertake maintenance as required under this ordinance and/or as required in the approved maintenance agreement as required hereunder, Cascade Charter Township shall then be authorized, but not required, to hire an entity with qualifications and experience in the subject matter to undertake the monitoring and maintenance required, in which event the Property Owner shall be obligated to advance or reimburse payment for all costs and expenses associated with such monitoring and maintenance, together with a reasonable administrative fee. The maintenance agreement required under this Ordinance shall contain a provision spelling out the requirements and, if the applicant objects in any respect to such provision or the underlying rights and obligations, such objection shall be resolved prior to the commencement of construction of the proposed Development on the property.
- (d) The maintenance agreement and any amendment to the maintenance agreement and its exhibits shall be recorded.

Sec. 7.04 Establishment of County Drains

Prior to final approval of a platted subdivision, all stormwater management facilities for platted subdivisions shall be established as county drains, as authorized in Section 433, Ordinance 18 of the Michigan Drain Code (P.A. 40 of 1956, as amended) for long-term maintenance.

1318 **Article VIII – Performance and Design Standards**

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1320 **Sec. 8.01 Design Standards**

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1322 Stormwater BMPs shall be designed to manage stormwater flow within the
1323 available capacity of the downstream conveyance system as determined by
1324 Cascade Charter Township.

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1326 In addition, stormwater BMPs shall be designed to meet Performance Standards
1327 as described in Section 8.02. Stormwater system design shall be in accordance
1328 with the latest version the “Stormwater Standards” manual published by Cascade
1329 Charter Township.

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1331 **Sec. 8.02 Performance Standards**

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1333 In order to achieve the goals and purposes of this ordinance, the following
1334 stormwater management performance standards are hereby established.

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1336 (1) Water Quality Treatment. Treat the calculated site runoff for the entire
1337 Project Site from the 90 percent annual non-exceedance storm, which is
1338 approximately equal to 1-inch of rain (i.e. on average, 90 percent of the
1339 storms in a given year produce 1-inch of rainfall or less). The treatment
1340 volume specified is based on capturing and treating the volume of
1341 stormwater that is the first to runoff in a storm and expected to contain the
1342 majority of Pollutants. This volume of runoff is often referred to as the “first
1343 flush.” The water quality treatment standard is required for all sites.

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1345 (a) Total Suspended Solids (TSS). The methods selected to treat the
1346 volume of water calculated for the Water Quality Treatment
1347 performance standard shall be designed on a site-specific basis
1348 to achieve either a minimum of 80 percent removal of TSS, as
1349 compared with uncontrolled runoff, or a discharge concentration
1350 of TSS that does not exceed 80 milligrams per liter (mg/l). This
1351 performance standard is based on TSS as a surrogate for other
1352 Pollutants normally found in stormwater runoff. Control of TSS to
1353 meet this standard is expected to achieve control of other
1354 Pollutants to an acceptable level that protects water quality.

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1356 (2) Channel Protection. Maintain the post-development Project Site runoff
1357 volume and peak flow rate at or below pre-development levels for all
1358 storms up to the 2-year, 24-hour event. At a minimum, pre-development is
1359 defined as the last land use prior to the planned new Development or
1360 redevelopment. The channel protection standard is required for
1361 stormwater discharges to surface waters or the MS4.

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(3) Flood Control. Control the volume of site runoff from the Flood control rainfall event with a maximum allowable release rate to reduce the potential for property damage from overbank Flooding and preserve existing Floodplains. The Flood control event and maximum allowable release rate shall be determined by Cascade Charter Township. The Flood control standard is required for all sites.

(a) Overflow Routes. Acceptable overflow routes for the 100-year Flood shall be identified for the site and for downstream areas between the site and the nearest acceptable Floodway or outlet. Stormwater conveyance systems are usually designed to handle flows generated by the 10-year storm. When larger storms generate higher flows, the conveyance system is expected to surcharge resulting in stormwater accumulating on the surface of the ground. Gravity will cause such stormwater to flow overland to lower elevations. By carefully managing the shape of the land surface such overland stormwater flow can be directed to locations that will not cause property damage. Adequate emergency Overland Flow-ways will direct stormwater flows generated by the 100-year storm to avoid damage to structures and facilities.

(4) Site-Specific Requirements

(a) Pretreatment. Pretreatment of site runoff is required on a site specific basis prior to discharging to certain stormwater BMPs. Pretreatment provides for the removal of fine sediment, trash and debris, and preserves the longevity and function of the BMP.

(b) Hot Spots and Groundwater Contamination. Some land use activities have a potentially greater risk of polluted runoff than others. Project sites with these types of activities are referred to as "hot spots" and include uses such as gas stations, commercial vehicle maintenance and repair, auto recyclers, recycling centers, and scrap yards. Hot spots also include areas with the potential for contaminating public water supply intakes. Pretreatment of stormwater runoff to address Pollutants associated with hot spots is required for the site. Stormwater management strategies and BMPs that reduce the potential to mobilize existing soil and groundwater contaminants, or that capture and treat stormwater runoff and/or accidental spills to protect groundwater or nearby surface waters are required.

(c) Coldwater Streams. Stormwater management strategies and BMPs that minimize thermal impacts from site runoff and maximize groundwater recharge are required for sites with a surface water

1408 discharge to a coldwater Stream as determined by the Michigan
1409 Department of Natural Resources.

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1411 **Sec. 8.03 Alternative Approach for Channel Protection**

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1413 In many cases, infiltration will likely be used as the primary means of Retention. It
1414 is not, however, the sole means of providing onsite Retention, and the developer
1415 must include consideration of stormwater reuse, interception, evapo-
1416 transpiration, and other vegetative (non-structural) BMPs at the Project Site. Site
1417 constraints that limit the use of infiltration may include:

- 1418
1419 (1) Poorly draining soils (<0.24 inches per hour; typically hydrologic soil
1420 groups C and D).
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1422 (2) Bedrock.
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1424 (3) High groundwater, or the potential of mounded groundwater to impair
1425 other uses.
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1427 (4) Wellhead protection areas.
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1429 (5) Stormwater hot spots.
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1431 (6) Sites subject to Part 201 and Part 213 of Act No. 451 of the Public Acts of
1432 1994, as amended, and areas of soil or groundwater contamination.
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1434 Cascade Charter Township may grant a waiver of the on-site Retention criteria
1435 for channel protection described in Section 8.01(2), and allow an alternative
1436 approach to meet the channel protection performance standard if the developer
1437 demonstrates that site constraints preclude sufficient Retention onsite. If a waiver
1438 is granted, the developer must meet the following extended detention criteria:

- 1439
1440 (1) Extended Detention. Detain the portion of the channel protection volume
1441 unable to be retained onsite for a minimum of 24-hours with a maximum
1442 release rate no greater than the existing 1-year peak discharge, and a
1443 drawdown time no greater than 72 hours. A waiver from the Local
1444 Government must be granted to use this alternative approach.
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1446 **Sec. 8.04 Resolution to Implement Performance and Design Standards**

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1448 The Board of Trustees of Cascade Charter Township may adopt a resolution
1449 establishing more detailed design and performance standards for stormwater
1450 management facilities, consistent with the terms of this ordinance, and in order to
1451 further implement its goals and purposes.

1452 **Sec. 9.01 Interpretation**

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Words and phrases in this ordinance shall be construed according to their common and accepted meanings, except that words and phrases defined in Section 1.05 shall be construed according to the respective definitions given in that section. Technical words and technical phrases that are not defined in this ordinance but which have acquired particular meanings in law or in technical usage shall be construed according to such meanings.

1461 **Sec. 9.02 Catch-Line Headings**

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The catch-line headings of the articles and sections of this ordinance are intended for convenience only, and shall not be construed as affecting the meaning or interpretation of the text of the articles or sections to which they may refer.

1467 **Sec. 9.03 Severability**

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The provisions of this ordinance are hereby declared to be severable, and if any part or provision of this ordinance should be declared invalid or unenforceable by any court of competent jurisdiction, such invalidity or unenforceability shall not affect any other part or provision of the ordinance.

1474 **Sec. 9.04 Other Ordinances**

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This ordinance shall be in addition to other ordinances of Cascade Charter Township, and shall not be deemed to repeal or replace other ordinances or parts thereof except to the extent that such repeal is specifically provided for in this Article. In the situation where a different standard is applicable from another ordinance, the stricter standard shall apply.

1482 **Sec. 9.05 Effective Date**

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This ordinance shall become effective, following its publication or following the publication of a summary of its provisions in a local newspaper of general circulation.

1488 **Sec. 9.06 Repeal**

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Ordinance No. 7 of 2002 and as amended Ordinance No. 2 of 2008 , titled Storm Water Ordinance for Cascade Charter Township Kent County, Michigan, is hereby repealed, as of the effective date of this ordinance.

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This ordinance was adopted and made effective April 27, 2022, by the
Township Board.

Susan B. Slater
Cascade Charter Township Clerk