UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 7
901 NORTH 5TH STREET
KANSAS CITY, KANSAS 66101

NOV 2 4 2009

Mr. Wayne Gieselman, Director
Environmental Protection Division
Iowa Department of Natural Resources
Wallace Building
502 East 9th Street
Des Moines, Iowa 50319

Dear Mr. Gieselman:

The United States Environmental Protection Agency (EPA) has completed its review of a second subset of the August 14, 2008, revisions to Iowa's Water Quality Standards (WQS) under Iowa's Code of State Regulations (567 Iowa Administrative Code, Chapter 61). The Iowa Department of Natural Resources (IDNR) sent revisions to Iowa's WQS to EPA for review and approval, as required under federal regulations at 40 CFR §131.20, by letter dated August 14, 2008. These new or revised WQS were approved by the Iowa Environmental Protection Commission (EPC) on April 8 and 16, 2008; published in the Code of State Regulations on May 7, 2008, and formally received by EPA with the Attorney General certification on August 19, 2008. EPA approved several of the WQS revisions (the first subset) from the August 14, 2008, submission on May 22, 2009, and will act on the remaining WQS in a subsequent action.

Under Section 303(c) of the Clean Water Act (CWA), 33 U.S.C. § 1313(c), states are to review their WQS at least every three years and submit any revised or new WQS to EPA for review and approval. Federal regulations at 40 CFR §§ 131.20, 131.21, and 131.22 implement these requirements. As part of the review process, IDNR held six public hearings on the proposed rules between November 15 and 30, 2007, to receive public input and comment on the proposed WQS revisions. IDNR also solicited public comment during the UAA assessment process. The August 14, 2008, IDNR submission to EPA included many of the public comments received on the designated use changes. In August 2009, EPA requested any public comments not included in IDNR's August 14, 2008, submission. EPA received the remaining public comments from IDNR on August 13, 2009, and considered these comments in the decision EPA is making today. Based on our review, Iowa's public participation process is consistent with and satisfies the procedural requirements of 40 CFR § 131.20.

TODAY'S DECISION

As Director of the Water, Wetlands and Pesticides Division, I am charged with the responsibility of reviewing and approving or disapproving new or revised state WQS under section 303(c) of the CWA. With this letter, EPA is approving and/or disapproving the second subset of the new or revised WQS submitted by IDNR and will review the remaining new or revised WQS and determine if the bases for the revisions are approvable in a subsequent action. EPA is not taking action on certain provisions included in IDNR's submission that are not new or revised WQS. The provisions addressed in today's decision are listed below. The enclosure to this letter provides a more detailed description of EPA's rationale for approving or disapproving the new or revised WQS and for not taking action on provisions that are not new or revised WQS.

SECTION I –ITEMS EPA IS APPROVING

- **A.** Revisions to the May 18, 2009[1], Iowa Surface Water Classification Document to designate Class A2 Secondary contact recreational uses for 18 water bodies (Table 1).
- **B.** Resegmentation on certain water bodies and use designations for 61 segments (Table 2).
- **C.** Revision of Aquatic Life Uses (captured in all five enclosed Tables).

SECTION II – ITEMS EPA IS DISAPPROVING

- **A.** Designated use changes for 45 water bodies in which data did not support removing a primary contact recreational use (Table 3).
- **B.** Designated use changes for 22 water bodies in which public comments indicate that a higher recreational use is an attainable use (Table 4).
- **C.** Designated use changes for 4 water bodies in which no assessment was performed within the stream segment (Table 5).

EPA initiated consultation with the United States Fish and Wildlife Service ("the Services") under Section 7(a)(2) of the Endangered Species Act in September 2006. Section 7(a)(2) requires that federal agencies, in consultation with the Services, ensure that their actions are not likely to jeopardize the existence of federally-listed species or result in the adverse modification of designated critical habitat of such species. As of today, this consultation has not been completed. By approving the standards, "subject to the results of consultation under section 7(a)(2) of the Endangered Species Act," EPA retains the discretion to revise its approval decisions if the consultation identifies deficiencies in the WQS.

[1] As referenced in EPA's May 22, 2009 approval action on the first subset of this 8/14/08 WQS revision package from IDNR. IDNR had submitted to EPA a Surface Water Classification (SWC) Document dated June 11, 2008, which had necessarily undergone several revisions in order for EPA to approve designated use changes on May 22, 2009.

We look forward to continuing to working with IDNR to update its water quality standards through the triennial review process. The EPA expects Iowa to re-examine any water quality standards that do not include the "fishable/swimmable" uses specified in section 101(a)(2) of the CWA every three years as part of the triennial review process. If you have any questions regarding this matter, please contact John DeLashmit, Chief, Water Quality Management Branch, at (913) 551-7821 or delashmit.john@epa.gov. The staff contact regarding this letter and enclosure is John Reyna, and he may be reached at (913) 551-7021.

Sincerely,

William A. Spratlin
Director
Water, Wetlands and Pesticides Division

Enclosures

cc: Mr. Chuck Corell
IDNR

Ms. Lori McDaniel
IDNR

Ms. Amy Newman
EPA Headquarters

ENCLOSURE

EPA REGION 7 ACTION ON THE SECOND SUBSET OF THE IOWA 2008 WATER QUALITY STANDARDS REVISIONS

Under Section 303(c) of the Clean Water Act (CWA), the Administrator of the United States Environmental Protection Agency (EPA) is charged with reviewing and approving or disapproving state-adopted water quality standards (WQS). This authority has been delegated to the ten EPA Regional Administrators and, in EPA Region 7, further delegated to the Director of the Water, Wetlands, and Pesticides Division. To determine if new or revised state WQS are consistent with the CWA and its implementing regulations, pursuant to EPA Code of Federal Regulations (C.F.R.) at 40 C.F.R. §§ 131.5 and 131.6, EPA must review the WQS and determine:

(1) Whether the state has adopted water uses which are consistent with the requirements of the CWA;
(2) Whether the state has adopted criteria that protect the designated water uses;
(3) Whether the state has followed its legal procedures for revising or adopting standards;
(4) Whether the state standards which do not include the uses specified in Section 101(a)(2) of the Act are based upon appropriate technical and scientific data and analyses, and
(5) Whether the state submission meets the minimum requirements for water quality standards submissions to EPA (See 40 C.F.R. § 131.6).

The Iowa Department of Natural Resources (IDNR) has authority to develop surface WQS that apply to "Waters of the State," which had been defined in Iowa State regulations to mean:

> *"Any stream, lake, pond, marsh, watercourse, waterway, well, spring, reservoir, aquifer, irrigation system, drainage system, and any other body or accumulation of water, surface or underground, natural or artificial, public or private, which are contained within, flow through or border upon the State or any portion thereof."* 455B.171.

Background – Relevant Regulatory Text from the Federal Water Quality Standards Regulation at 40 C.F.R. § 131.10 related to Designated Uses and Use Attainability Analyses (UAAs)

EPA's regulation at 40 C.F.R. § 131.10 describes the regulatory requirements related to designated uses. Consistent with CWA Sections 101(a)(2) and 303(c)(2)(A), 40 C.F.R. § 131.10 provides the following requirements:

> **(a)** Each state must specify appropriate water uses to be achieved and protected. The classification of the waters of the state must take into consideration the use and value of water for public water supplies, protection and propagation of fish, shellfish, and wildlife, recreation in and on the water, agricultural, industrial, and other purposes including

navigation. In no case shall a state adopt waste transport or waste assimilation as a designated use for any waters of the United States.

(b) In designating uses of a water body and the appropriate criteria for those uses, the state shall take into consideration the water quality standards of downstream waters and shall ensure that its water quality standards provide for the attainment and maintenance of the water quality standards of downstream waters.

(c) States may adopt sub-categories of a use and set the appropriate criteria to reflect varying needs of such sub-categories of uses, for instance, to differentiate between cold water and warm water fisheries.

(d) At a minimum, uses are deemed attainable if they can be achieved by the imposition of effluent limitations required under Sections 301(b) and 306 of the Act, are cost-effective and reasonable best management practices for nonpoint source control.

(e) Prior to adding or removing any use, or establishing sub-categories of a use, the state shall provide notice and an opportunity for a public hearing under § 131.20(b) of this regulation.

(f) States may adopt seasonal uses as an alternative to reclassifying a water body or segment thereof to uses requiring less stringent water quality criteria. If seasonal uses are adopted, water quality criteria should be adjusted to reflect the seasonal uses, however, such criteria shall not preclude the attainment and maintenance of a more protective use in another season.

(g) States may remove a designated use which is not an existing use, as defined in § 131.3, or establish subcategories of a use if the state can demonstrate that attaining the designated use is not feasible because:

(1) Naturally occurring pollutant concentrations prevent the attainment of the use; or

(2) Natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating state water conservation requirements to enable uses to be met; or

(3) Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place; or

(4) Dams, diversions, or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in the attainment of the use; or

(5) Physical conditions related to natural features of the water body, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life protection uses; or

(6) Controls more stringent than those required by Sections 301(b) and 306 of the Act would result in substantial and widespread economic and social impact.

(h) States may not remove designated uses if:

(1) They are existing uses, as defined in § 131.3, unless a use requiring more stringent criteria is added; or

(2) Such uses will be attained by implementing effluent limits required under Sections 301(b) and 306 of the Act and by implementing cost-effective and reasonable best management practices for nonpoint source control.

(i) Where existing water quality standards specify designated uses less than those which are presently being attained, the state shall revise its standards to reflect the uses actually being attained.

(j) A state must conduct a use attainability analysis as described in § 131.3(g) whenever:

(1) The state designates or has designated uses that do not include the uses specified in Section 101(a)(2) of the Act; or

(2) The state wishes to remove a designated use that is specified in Section 101(a)(2) of the Act or to adopt subcategories of uses specified in Section 101(a)(2) of the Act which require less stringent criteria.

(k) A state is not required to conduct a use attainability analysis under this regulation whenever designating uses which include those specified in Section 101(a)(2) of the Act.

EPA's regulatory definition of a UAA is found in 40 § C.F.R. 131.3(g): "Use attainability analysis is a structured, scientific assessment of the factors affecting attainment of a designated use, which may include chemical, physical, biological, and economic factors as described in § 131.10(g)." The purpose of a UAA is to determine the highest attainable use for a water body and provide the supporting documentation when a state or tribe refines its designated uses. EPA requires that a UAA provide sufficient information to support a technical and legally defensible determination that a "fishable/swimmable" use is not attainable and to support the designation of any use that does not include the "fishable/swimmable" use (40 C.F.R. § 131.6(f)). In other words, there must be an adequate scientific and technical rationale in the administrative record to support the resulting use change. UAAs must have sufficient data and information to demonstrate that attaining the fishable and/or swimmable use is not feasible (using one or more of the 40 C.F.R. § 131.10(g) factors as cited above), and the analysis must identify and result in the adoption of the "highest attainable use," which should reflect the factors and constraints that were evaluated as part of the UAA process. In identifying the highest attainable use, the same regulatory factors and the data analysis applied to support removing a use should also be applied to determine the highest attainable use. EPA interprets the CWA's objectives at Sections 303(c) and 101(a)(2) of the CWA to mean that, "wherever attainable," waters must protect the CWA Section 101(a)(2) uses and that states should be striving to attain the CWA Section 101(a)(2) uses by designating the attainable use as close to a CWA Section 101(a)(2) use as possible (i.e., the highest attainable use).

IDNR's WQS Submission

The Iowa Department of Natural Resources (IDNR) submitted a Water Quality Standard's package to EPA for review and approval, as required under federal regulations at 40 C.F.R. §131.20, by letter dated August 14, 2008. This submission, however, did not contain all

of IDNR's new or revised use designations. The Surface Water Classification (SWC) document included in the August 2008 submission contained several revised use designations that were inconsistent with the recommendations made in the UAAs or failed to reflect the actions of the Iowa Environmental Protection Commission (EPC). A corrected SWC document consistent with the UAA recommendations and the actions of the EPC was submitted to EPA on May 19, 2009. The SWC document represents the new or revised WQS on which EPA must take action under § 303(c) of the CWA, and the UAAs are the supporting documentation/justification for the resulting use changes.

IDNR conducted UAAs pursuant to its June 22, 2005, Recreational Use Assessment and Attainability Analysis Protocol and the March 22, 2006, Warm Water Stream Assessment and Attainability Analysis Protocol; the Protocols are intended to provide guidelines to any party interested in conducting UAA investigations which provide scientifically defensible field information on the existing and attainable uses of the state's waters. The Protocols specify that field information should be gathered during base flow[1] conditions, and should include a visual inspection of the targeted water body at a minimum of three (3) road crossings and other publicly accessible locations which can include city, county, and state parks. According to the Recreational Use Protocol, areas of public use are to be included when analyzing stream uses prior to proposing a change in the recreational use designation to secondary contact recreation or when removing a recreational use designation. In addition, the Recreational Use Protocol directs the user to solicit information from the public to obtain data regarding uses occurring on the targeted water bodies. This includes interviews of the public who are present at a site while the UAA is being conducted, waterside landowners, local residents, and the county conservation offices. In an effort to fulfill its obligation to gather public comments, in some cases IDNR also left postage-paid interview postcards at nearby residences during site assessments to encourage comment as part of their UAA public participation process.

As discussed above, IDNR relied on Iowa's June 22, 2005, ***Recreational Use Assessment and Attainability Analysis Protocol*** (Protocol) to conduct the recreational UAAs and to evaluate depth data collected and the extent to which the depth of the waters were sufficient to support primary contact recreational uses. Although the 2008 revision to the Iowa Protocol removed the specific depth criteria from the protocol, the UAA conclusions submitted to EPA repeatedly relied on the depth criteria guidelines from the 2005 Protocol, which IDNR used to determine the attainability of primary contact recreation. For example, in reaching the conclusion that primary contact recreation is attainable, many UAAs state: "There were areas assessed that reached the average depths of 19 inches or greater required to support primary contact recreational uses…." IDNR's June 22, 2005, Protocol provides the following guidance:

> The field data submitter may show that naturally caused ephemeral[2], intermittent[3], or low-flow conditions exist in the water body and may prevent the

[1] Iowa's Recreational Use Assessment and Attainability Analysis Protocol define "base flow" as: "…that portion of a stream's flow contributed by sources of water other than precipitation runoff. This refers to a fair weather flow sustained primarily by springs or groundwater seepage, wastewater discharges, irrigation return flows, releases from reservoirs, or some combination of these."

[2] ***Ephemeral stream*** is a stream that flows only in direct response to precipitation in the immediate watershed or in response to the melting of a cover of snow and ice, and which has a channel bottom that is always above the local water table [30 C.F.R. 701.5].

attainment of recreational uses or preclude the attainment of the Class A1 use designation. Stream studies should be conducted during the recreational season (March 15 to November 15) unless sufficient evidence can be provided outside this season. In order to support primary contact recreation, a maximum depth of at least one (1.0) meter (3.28 feet) in the deepest pool or an average depth of at least one-half (0.5) meter (1.64 feet) must be maintained during base flow conditions (see paragraph on Base Flow Conditions on Page 14). The average depth criterion is met if more than 50 percent (%) of all of the water surveyed from an observation point is at least 0.5 meter in depth.

Iowa's 2007 revision of its Recreational Use Protocol contains language similar to that quoted above. The potential affect of the revised language is significant. The 2007 language reads, "The average depth criterion is met if more than 50% of all of the water surveyed in the assessed reach is at least 0.5 meter in depth." Interpreting this sentence literally would result in finding that primary contact recreation would be attainable on a stream reach, which may be miles in length, only if the average depth in more than 50% of the reach is greater than a half meter. EPA believes that primary contact recreation can take place in an isolated pool within a stream reach, even if 50% or less of the surveyed reach has an average depth less than one-half meter. In other words, primary contact recreation may take place in isolated pools within a stream reach even if the pools are not representative of the reach as a whole. Potential recreational users will seek out pools for recreation without regard to whether the pools are representative of the remainder of the stream segment. EPA believes that primary contact recreation is attainable if it is possible at any location within the stream reach.

These depth guidelines do not appear in Iowa's most recent revision of its Recreational Use Protocol, dated February 6, 2008.

EPA's Review of Iowa's UAAs and Subsequent Designated Use Changes

Tables 1-5 provided at the end of this Enclosure constitute the revisions upon which EPA is taking action today. Tables 1-2 include revisions to the Surface Water Classification[4] (SWC) document where IDNR provided sufficient information to support a change to the designated use or the segment length of a water body. Tables 3-5 include revisions to the SWC document where EPA has determined that IDNR's recommendation to change the recreational use was not justified.

EPA reviewed IDNR's UAAs to determine if they were sufficient to make a technically and legally defensible demonstration that the Class A1 primary contact recreational use is not attainable. EPA conducted its analysis pursuant to its implementing federal regulations, specifically 40 C.F.R. §§ 131.5, 131.6(a), (b), (f), and 131.10. These Sections govern states'

[3] *Intermittent stream* is defined as a stream that flows only part of the time. Flow generally occurs for several weeks or months in response to seasonal precipitation, due to groundwater discharge, in contrast to an ephemeral stream, which flows but a few hours or days following a single storm. [USEPA Terminology Reference System, http://oaspub.epa.gov/trs/trs_proc_qry.navigate_term?p_term_id=13328&p_term_cd=TERMDIS].
Intermittent stream means—A stream or reach of a stream that is below the local water table for at least some part of the year, and obtains its flow from both surface runoff and ground water discharge [30 C.F.R. 701.5].
[4] Subrule 61.3(5) of the Iowa WQS; a rule-referenced document.

adoption of designated uses by requiring states to: (1) adopt use designations consistent with the provisions of Sections 101(a)(2) and 303(c)(2) of the CWA (40 C.F.R. § 131.6(a)), (2) submit methods used and analyses conducted to support WQS revisions (40 C.F.R.. 131.5), (3) submit general information which will aid the Agency in determining the adequacy of the scientific basis of the standards which do not include the uses specified in Section 101(a)(2) of the Act (40 C.F.R. § 131.6(f)), and (4) set forth the circumstances and process by which states adopt and revise their designated uses as discussed previously in this Enclosure (40 C.F.R. § 131.10). This is required to enable the agency to determine whether the state standards which do not include the uses specified in Section 101(a)(2) are based upon appropriate technical and scientific data and analyses as required under 40 C.F.R. 131.5. EPA considered the Iowa 2005 Protocol when reviewing and evaluating the recreational UAAs because the UAA conclusions repeatedly reference the depth criteria guidelines as noted above. Ultimately, however, EPA relied upon the factors set forth in 40 C.F.R. § 131.10(g) in reviewing IDNR's revisions to assign the Class A2 secondary contact recreation designated uses for those streams listed in Table 1.

EPA also evaluated the public comments received as part of the UAA process and considered many of these comments relevant when reviewing the designated use change. Public comments should be considered very important especially when IDNR could not assess all parts of the stream. Many of the UAA assessments were conducted on streams outside of towns or cities and failed to include an assessment site within these urban settings. Therefore, certain UAAs may not have adequately considered the full potential for recreational uses due to a lack of assessment sites including an urban setting. Some public comments indicate that recreational uses are occurring on an assessed stream within an urban area, yet these urban locations were never selected for assessment by IDNR. One public comment letter to IDNR provides an extensive list of rivers and streams flowing through or near cities and towns and recommends that IDNR retain the Class A1 primary contact recreational use for these waters.[5]

EPA also evaluated the aquatic life UAAs (conducted concurrently with the recreational UAAs) and the supporting data provided by IDNR in order to determine if IDNR revised the warm water aquatic life uses for many of the waters listed in Tables 1-5. As noted in EPA's February 11, 2008, WQS approval action on previous Iowa WQS revisions, the numeric criteria for all three of Iowa's aquatic life uses, Classes B(WW-1), B(WW-2), and B(WW-3), are equivalent to EPA's recommendations published pursuant to Section 304(a) of the CWA. All three of these categories are considered by EPA to be Section 101(a)(2) uses. Therefore, waters placed into or moved between these warm water aquatic life use categories require EPA approval but do not require a UAA to support the change in designated use. Based on our review, we have determined that the aquatic life use designation changes in Tables 1-5 are consistent with the water quality standards requirements of CWA Sections 101(a)(2), 303(c)(2) and EPA's implementing regulations at 40 C.F.R. § 131.

[5] Riggs Gelb, Marian. (Executive Director of the Iowa Environmental Council, Des Moines, Iowa). Letter to: Adam Schnieders (Iowa Department of Natural Resources, Des Moines, Iowa). 2008 January 2.

SECTION I – WATER QUALITY STANDARDS EPA IS APPROVING

A. A Subset of Revisions to the Surface Water Classification to Designate Class A2 Secondary Contact Recreational Uses

IDNR has defined secondary contact recreational use as: "Waters in which recreational or other uses may result in contact with the water that is either incidental or accidental. Class A2 uses include fishing, commercial and recreational boating, any limited contact incidental to shoreline activities and activities in which users do not swim or float in the water body while on a boating activity." Based on the definitions for Iowa's use designations in Chapter 61 of the Iowa Administrative Code 567, the Class A2 use designation is not considered by EPA to be a Section 101(a)(2) recreational use. Federal regulations require states to conduct UAAs in any instance where a state wishes to remove those uses specified in Section 101(a)(2) of the CWA.

Table 1 of this Enclosure lists waters in which IDNR designated a water body with the Class A2 secondary contact recreational use and removed the Class A1 primary contact recreational use. This use change lowers the level of protection afforded to waters with the Class A1 primary contact recreational use because the Class A2 secondary contact recreational use is protected with less stringent criteria for pathogens.

EPA evaluated the depth data and other available data to determine whether the information supported the state's conclusion that the Class A1 primary contact recreational uses were not attainable for these waters. IDNR focused primarily on the extent to which the size, depth, and flow of the water would not be sufficient to support activities which may result in prolonged and direct contact with the water and involve considerable risk of ingesting water in quantities sufficient to pose a health hazard. As described above, IDNR assigned a secondary contact recreational use to water bodies where the maximum depth measurements were less than one meter or the average depth was less than 0.5 meters and no other information indicated that primary contact recreation was attainable.

IDNR's conclusions in the UAAs for the water bodies in Table 1 are supported by the field data sheets which state that no depth measurements demonstrated adequate depth for primary contact recreation; in addition, no other information, such as public comments, was received for these waters. IDNR has stated in its conclusions, "While the creek is too shallow to support primary contact recreational uses, it is being used for other forms of in-stream recreation as evidence of use was observed." In cases where the depth and/or flows are sufficiently low, the factor listed at 40 C.F.R. § 131.10(g)(2) is relevant in assessing whether recreational uses are attainable. That factor specifies that a designated use may be removed if attaining the designated use is not feasible because "natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating state water conservation requirements to enable uses to be met."

EPA evaluated IDNR's determination that the stream assessments were conducted during representative stream flow conditions; this information is essential to ensure the true attainability of the use is assessed. EPA's review resulted in identifying many water bodies assessed by

IDNR which were, according to the US Drought Monitor (http://drought.unl.edu/dm), in areas that were under the influence of moderate to severe drought. IDNR's August 2008 response to EPA comments, describes, "in general," how IDNR determined representative stream flows. However, IDNR did not archive the waterbody-specific data it gathered to confirm that flow in the waters was representative for inclusion with the WQS submittal. Per EPA's request, IDNR instead provided a memorandum, on October 6, 2009, that specifically described what the IDNR staff did to verify representative stream flows for surveyed waters. This memorandum explained:

> IDNR staff verifies representative stream flows by the following process:
>
> 1) Check the latest 1-day and 7-day statewide rainfall information and coverages using intellicast.com. This allows us to locate regions of the state that have experienced the most stable weather patterns.
> 2) Check the real-time USGS stream gauging information to determine if representative flow conditions are occurring. If the gauges in the area are revealing flows between the 20th percentile and the median flow values in the main trunk streams, then the Department feels comfortable that representative flow conditions may be occurring in that area or associated drainage area.
> 3) Comparison of the rainfall coverages versus the real-time gauging information to determine the most representative locations. Most assessments occur on streams that are identified intermittent by USGS and most stream gauges are located on larger rivers, thus this comparison can reveal the best locations within a given watershed or drainage basin. Furthermore, spring and summer rainfall events may indicate elevated flows are likely, but previously dry areas, plant uptake in the growing season, and evapotranspiration serve to limit the ability of the event to have a significant impact on stream flow conditions making this comparison a valuable tool.
> 4) Check the drought monitor for excessively dry areas. This is used in conjunction with real-time USGS gauging information to determine if representative stream flows are occurring.
> 5) Check the forecast prior to field work to avoid areas that will be receiving significant rainfall.
> 6) Field verification. Actually observe if stream flow appears to be representative. Inundated grasses, high water marks, velocity, and turbidity are factors that are considered when verifying representative stream flows in the field.
>
> The memo also states:
>
> > For the streams listed above, IDNR staff determined that there were representative stream flows on the date of assessment based upon field verification and a review of the information sources listed above. In situations where the drought monitor indicated less than normal moisture conditions in the general area of the watershed, other information and field

verification led to a determination that these streams were at representative flow levels.

For this action, EPA accepts the state's determination, absent waterbody-specific data, that the flow in the surveyed waters was representative despite the widespread drought conditions that existed in portions of the state of Iowa at the time of the field work. The Drought Monitor Web site states that the Monitor focuses on broad-scale conditions, and that local conditions may vary. Even though a county may be experiencing an overall drought, localized precipitation may result in a temporary volume of stream flow that can be considered representative or "typical." For future submittals, EPA expects IDNR to include in its submittals any waterbody-specific data it gathers to support representative flow determinations for water bodies surveyed in areas affected by moderate and higher levels of drought. EPA provides further explanations of the Agency's evaluation of the data and information in Table 1. EPA approves these designated use changes because they are consistent with the CWA and EPA's implementing regulations at 40 C.F.R. §§ 131.6 and 131.10.

B. Re-segmentation of Certain Water Bodies and Use Designations

Some of the SWC revisions to the streams listed in Table 2 modify the legal descriptions to reflect or update appropriate geographic locations and to identify their position in the watershed. Some revised stream segments listed in Table 2 represent a shortening of stream segments because IDNR split stream segments into two or more separate segments. For those situations, EPA is only acting on the specific stream segment that retained the Class A1 primary contact recreational use as identified in Table 2. EPA must also act on each of the remaining segments which resulted from the re-segmentation and which did not retain the Class A1 primary contact recreational use. EPA has acted on a number of these re-segmentation as depicted in Tables 1, 3, 4, and 5 and will act on the remaining segments in a subsequent action. In addition, other stream segments with the same designated use were combined. EPA provides further explanations of the Agency's evaluation of the data and information in Table 2. EPA approves these revisions because they are consistent with the CWA and EPA's implementing regulations at 40 C.F.R. §§ 131.6 and 131.10.

C. Revision of Aquatic Life Uses

The revisions to the aquatic life use designations are shown in Tables 1-5. As noted in EPA's February 11, 2008, action, the numeric criteria for all three of Iowa's aquatic life uses, Classes B(WW-1), B(WW-2), and B(WW-3), are equivalent to EPA's criteria recommendations published pursuant to Section 304(a) of the CWA. All three of these categories are considered by EPA to be Section 101(a)(2) uses. Therefore, waters placed into or moved between these warm water aquatic life use categories require EPA approval but do not require a UAA to support the change in designated use. EPA approves these revisions because they are consistent with the CWA and EPA's implementing regulations at 40 C.F.R §§ 131.6 and 131.10.

SECTION II – WATER QUALITY STANDARDS EPA IS DISAPPROVING

EPA's review of many of Iowa's UAAs identified three recurring situations associated with the data submitted for the assessed water body segments: (1) instances where the depth data did not support removing the Class A1 primary contact recreational use; (2) instances where a public comment indicated a Class A1 primary contact recreational use is attainable, yet the state removed the Class A1 use; and (3) instances where there was no data sufficient to support a change in designated use. For these situations, the data and information provided in the submission were not adequate to provide the necessary scientific and technical rationale to support changing the designated use from Class A1 to Class A2. Therefore, EPA must disapprove changing the designated use from Class A1 to Class A2 for the waters listed in Tables 3, 4 and 5. To resolve this disapproval, the state must delete the Class A2 designated uses from its May 2009 SWC document and restore the Class A1 designated uses to those waters identified in Tables 3, 4 and 5. EPA needs not promulgate replacement designated uses to resolve this disapproval action, since the previous WQS and use designations adopted by the state and approved by EPA continue to apply for all purposes of the CWA. Additional information is provided below regarding EPA's disapproval of the Class A2 secondary contact use designations.

A. Depth Data Indicate the Class A1 Primary Contact Recreational Use is an Attainable Use

As discussed above, IDNR's 2005 protocol set forth depth criteria guidelines. This Protocol described primary contact recreation as attainable if a water body segment meets an average depth of one-half meter where more than 50 percent of the water surveyed from an observation point is at least 0.5 meter in depth or if a maximum depth of at least one meter is observed at any point. Although IDNR revised its Protocol in February 2008 to delete any reference to depth criteria, IDNR continued to rely upon the depth criteria for all of the waters it assessed as demonstrated in the UAA field sheets, except for the waters set forth in Table 3. IDNR cites 40 C.F.R. § 131.10(g)(2) as the justification for removing the Class A1 primary contact recreational use for the waters identified in Table 3.

For those items listed in Table 3, EPA evaluated the depth data contained in the UAA field sheets provided by IDNR and these data indicate that the depths measured are sufficient to support a Class A1 primary contact recreational use. Assessed sites within all of the waters listed in Table 3 met the depth guidelines of an average depth of one-half meter, or a maximum depth of one meter. However, IDNR changed the use designation because more than 50% of the reach did not exceed an average depth of one-half meter. Again, EPA believes that primary contact recreation is attainable if it is possible at any location within a stream reach. Federal regulations, at 40 C.F.R. § 131.10, do not allow removal of a use designation if that use is attainable. Therefore, EPA disapproves the designated use changes for the waters listed in Table 3. To resolve this disapproval, the state must delete the Class A2 designated uses from the May 2009 SWC document and restore the Class A1 designated uses to the waters listed in Table 3. EPA provides further explanations of the Agency's evaluation of the data and information in Table 3.

B. Public Comments Indicate that a Higher Recreational Use is an Attainable Use

EPA evaluated public comments, interview and survey results, photographic evidence, and surrounding land uses as provided with the UAAs. Many public comments and/or testimony described various types of recreation occurring in some of these streams including swimming, wading, tubing, and child's play or the potential for recreation by virtue of their proximity to residential or recreational areas. IDNR cites 40 C.F.R. § 131.10(g)(2) as the justification for removing the Class A1 primary contact recreational use for the waters identified in Table 4. EPA believes it is important and necessary to consider relevant public comment and testimony when recommending a designated use change.

Many public comments were dismissed by the state because the specific location and/or frequency of the recreational activity were not provided and therefore the comments were "too general." EPA disagrees with this conclusion, especially when considering the general nature of IDNR's public notice of the designated use changes. The public notice for these use changes was provided in the form of an Iowa Notice of Intended Action (NOIA), dated October 24, 2007. In that NOIA, the public was provided a general list of stream names. The county and/or town associated with the stream were sometimes provided next to the stream name, but no other specific information was offered. The NOIA includes several references to revisions made within the rule-referenced document "Surface Water Classification;" however, the Surface Water Classification document was not provided for the public to review. The public was not provided the specific locations of the stream and river segments. Instead, IDNR provided the general location (county/town/or none at all) as contained within the NOIA. The public notice did not state that only specific comments would be considered by the IDNR. The public notice provided only the following direction to guide the public in making comments: "Any person may submit written suggestions or comments on the proposed amendment through December 11, 2007." Furthermore, the public was not informed that comments would be dismissed if they were not sufficiently specific in nature.

The following example illustrates the issues described in the previous paragraph. EPA reviewed public comments for Hardin Creek (Greene County). Several survey responses indicate the following activities occur in this creek: swimming, children playing, canoeing/kayaking, tubing, and fishing/seining/trapping minnows. IDNR attributed the majority of the comments to the portion of the stream from Highway 4 to the mouth of Hardin Creek where the primary contact recreational use was retained by IDNR. Several other surveys specified activities on Hardin creek but they did not indicate the frequency or a location. One survey indicated that the activities stated above occurred near the town of Churdan but did not specify the frequency of these activities. Another survey indicated the following activities take place near Churdan: swimming, canoeing/kayaking/john boating, and fishing/seining/trapping minnows. A survey form from the Greene County Conservation Board stated the following: "They swam in the creek in the early 1970s, occasionally see swimming activity (location not noted); occasionally see children playing near the stream (location not noted); canoeing, kayaking, and tubing all take place seasonally when enough flow is present; and fishing is a common activity in the creek." These comments were dismissed by IDNR because "Nine surveys did not indicate specific locations on the creek but may or may not pertain to this segment."

For all of the waters listed in Table 4, other evidence was observed or received, either by comment, testimony, or photographs provided in the UAAs, indicating that either a primary or children's recreational use is attainable despite the absence of depth meeting IDNR's depth criteria guidelines. It is the state's obligation to follow-up on public comments asserting that primary contact recreation is taking place before dismissing such comments and removing the Class A1 primary contact recreational use. Accordingly, EPA rejects the conclusions in the UAAs conducted for those waters listed in Table 4 as they failed to demonstrate that a primary contact recreational use is not attainable. Therefore, EPA disapproves the designated use changes for the waters listed in Table 4. To resolve this disapproval, the state must delete the Class A2 designated uses from its SWC document and restore the Class A1 designated uses to these waters as discussed above. EPA provides further explanations of the Agency's evaluation of the data and information in Table 4.

C. Designated Use Changes for Five Water Bodies in Which No Assessment was Performed Within the Stream Segment

Low flows or water levels prevent the attainment of the use (131.10(g)(2)) is cited as the basis for removing the Class A1 primary contact recreational use for the waters identified in Table 5. However, no data was submitted for these stream segments. The state's re-segmentation of the original stream segments resulted in stream segments with no recreational use assessment or only a visual (not measured) assessment within the stream segment for each of these five water bodies. Although EPA believes that visual assessments can be useful in conjunction with other supporting data, e.g., depth measurements upstream and downstream from a visual assessment site, the visual assessment alone can not be the basis for removing a primary contact recreational use. In addition, an assessment at a segment end point, with no data gathered from within the segment, does not provide sufficient information to justify removing the primary contact recreational use. Each recommended use change must have sufficient data and information to demonstrate that the fishable and/or swimmable use is not attainable (using one or more of the 40 C.F.R. § 131.10(g) factors). Without sufficient data, EPA must rely on the presumption contained in its regulations that the CWA Section 101(a) uses are attainable until demonstrated otherwise. Therefore, EPA disapproves the designated use changes for the waters listed in Table 5. To resolve this disapproval, the state must delete the Class A2 designated uses from the May 2009 SWC document and restore the Class A1 designated uses to these waters as discussed above. EPA provides further explanations of the Agency's evaluation of the data and information in Table 5.

Table 1 - Revisions to Designate Secondary Contact Recreational Uses and Aquatic Life Use Changes

	Basin	Index Number	Water Body	County(s)	Recreational use	Aquatic life Use	2008 Surface Water Classification Legal Description	Explanation	Approved
1	Western	15	East Boyer River	Crawford	A2	B(WW-2)	Mouth (S10, T83N, R39W, Crawford Co.) to the confluence with Main Street (NW ¼,, S14, T83N, R39W, Crawford Co.)	The average depth was between 9 and 10 inches with a maximum depth of 32 inches. No public comments suggested an A1 recreational use.* The Iowa Department of Natural Resources (IDNR) states: Although primary contact recreation is not expected to occur on this reach of the East Boyer River; secondary contact recreation is expected to occur and evidence of these forms of recreation was found at some of the assessed sites.	Yes
2	Western	19	East Otter Creek	Crawford	A2	B(WW-2)	Mouth of East Otter Creek (NW1/4, NW1/4, S13, T85N, R39W, Crawford Co.) to the Kiron WWTP outfall (NW1/4, SE1/4, S12, T85N, R39W, Crawford Co.)	The average depth was between 7 and 15 inches with a maximum depth of 30 inches. No public comments suggested an A1 recreational use.* IDNR states: The average depths within the assessed reach ranged from 7 to 15 inches. No areas demonstrated adequate depth for primary contact recreation. The stream is too shallow to support primary contact recreational uses and no signs of use were observed. However, secondary recreational uses are expected to occur on this stretch of the stream.	Yes
3	Western	23	East Soldier River	Monona / Crawford	A2	B(WW-2)	Mouth (S34, T84N, R42W, Monona Co.) to the bridge crossing at 6th Street (SW ¼, S19, T85N, R39W, Crawford Co.)	The average depth was between 3 and 12 inches with a maximum depth of 27 inches. No public comments suggested an A1 recreational use.* IDNR states: The river does pass through smaller communities or urban areas which may increase the possibility for recreational uses to occur at those locations.	Yes
4	Western	24	Middle Soldier River	Monona / Crawford	A2	B(WW-2)	Mouth of Middle Soldier River (S36, T84N, R42W, Monona Co.) to 150^{h} Street (E. line, S35, T85N, R41W, Crawford Co.)	The average depth was between 1 and 18 inches with a maximum depth of 32 inches. No public comments suggested an A1 recreational use.* IDNR states: The Middle Soldier River contains a minimum of 7 bridge crossings along the assessed reach allowing for the possibility of access. There are no signs of secondary recreation uses. However, secondary recreational uses, such as trapping, fishing, and minnow seining, are expected to be common on this stretch of the river.	Yes
5	Western	37	Unnamed Creek	Sac	A2	B(WW-2)	Mouth (S28, T87N, R38W, Sac Co.) to the Odebolt WWTP outfall (S27, T87N, R38W, Sac Co.)	The average depth was between 5 and 7 inches with a maximum depth of 11 inches. No public comments suggested an A1 recreational use.* IDNR states: The stream is too shallow to support primary contact recreational uses and evidence of recreational uses was not found. However, secondary recreational uses are expected to occur on this stretch of the stream in the form of minnow seining, trapping, etc.	Yes
6	Western	72	Sewer Creek	Clay / O'Brien	A2	B(WW-2)	Mouth (S8, T96N, R38W, Clay Co.) to the S. line, NE1/4, S33, T97N, R39W, O'Brien Co.	The average depth was between 2 and 16 inches with a maximum depth of 29 inches. No public comments suggested an A1 recreational use.* IDNR states: While the stream is too shallow to support primary contact recreational uses, a sign of secondary recreation uses was observed in the form of a crayfish trap. Secondary recreational uses are expected to occur on this stretch of the stream in the form of trapping, minnow seining, etc.	Yes
7	Western	106	Unnamed Creek	Sioux	A2	B(WW-2)	Mouth (NE ¼, S22, T97N, R45W, Sioux Co.) to 310th Street (S. line, S22, T97N, R45W, Sioux Co.)	The average depth was between 4 and 12 inches with a maximum depth of 16 inches. No public comments suggested an A1 recreational use.* IDNR states: While the creek is too shallow to support primary contact recreational uses, it may be used for other forms of instream recreation as evidence of the graffiti under the bridge written in mud. The creek does also possess potential of attracting recreation near the walking/bicycle path.	Yes
8	Southern	17	Unnamed Creek	Shelby	A2	B(WW-2)	Mouth (S31, T79N, R38W, Shelby Co.) to US Highway 59 (S36, T79N, R39W, Shelby Co.)	The average depth was between 6 and 9 inches with a maximum depth of 10 inches. No public comments suggested an A1 recreational use.* IDNR states: While the creek did not contain any evidence of recreational uses, the creek is accessible at the bridge crossing at U.S. Highway 59.	Yes
9	Southern	107	Chariton River	Lucas / Wayne	A2	B(WW-2)	Confluence with Chariton Cr. (S19, T71N, R23W, Lucas Co.) to the confluence with Unnamed Creek (SW1/4, S5, T70N, R23W, Wayne Co.)	The average depth was between 1 and 36 inches with a maximum depth of >48 inches at site 526-1B. No public comments suggested an A1 recreational use.* IDNR states: A large beaver dam was present at the upstream location of site 526-1B. This beaver dam created a pool that is considered to be a temporary feature.	Yes
10	Southern	112	Cathedral Creek	Appanoose	A2	B(WW-2)	Mouth (SE ¼ S29, T69N, R17W, Appanoose Co.) to the confluence with an unnamed tributary (NE ¼ S31, T69N, R17W, Appanoose Co.)	The average depth was between 1 and 6 inches with a maximum depth of 30 inches. No public comments suggested an A1 recreational use.* IDNR states: The creek is too shallow to support primary contact recreation and there were no other types of recreation observed. However, the creek does possess the potential of secondary contact recreation, such as trapping or minnow seining.	Yes
11	Southern	120	Jackson Creek	Wayne	A2	B(WW-2)	Mouth (S1, T69N, R21W, Wayne Co.) to it's confluence with West Jackson Creek (SW ¼, NE ¼ of S25, T69N, R21W, Wayne Co.)	The average depth was 18 inches with a maximum depth of 34 inches at site 528-1. No public comments suggested an A1 recreational use.* IDNR states: Despite difficult accessibility in the assessed reach, it does possess the potential of attracting secondary contact recreational uses at low frequencies due to the possibility of incidental contact (such as trapping) at the assessed locations.	Yes
12	Southern	123	Unnamed Creek	Wayne	A2	B(WW-2)	Mouth (SE ¼, S30, T69N, R21W, Wayne Co.) to the City of Corydon WWTP outfall (NE ¼, S30, T69N, R21W, Wayne Co.)	The average depth was between 3 and 8 inches with a maximum depth of 13 inches. No public comments suggested an A1 recreational use.* IDNR states: Despite difficult accessibility in the assessed reach, it does possess the potential of attracting secondary contact recreational uses at low frequencies due to the possibility of incidental contact (such as trapping) at the assessed locations.	Yes
13	Des Moines	38	Rock Creek	Jefferson	A2	B(WW-2)	Mouth (NE ¼, S34, T72N, R11W, Jefferson Co.) to confluence with Unnamed Creek (NE ¼, S5, T71N, R11W, Jefferson Co.)	The average depth was 6 inches with a maximum depth of 8 inches. No public comments suggested an A1 recreational use.* IDNR states: The creek passes through rural areas, surrounded by agricultural lands, where there were a few rural residences in proximity. There are six bridge crossings along Rock Creek that would allow for access, though no forms of recreation were observed.	Yes
14	Des Moines	53	Broadhorn Creek	Warren	A2	B(WW-3)	Mouth of Broadhorn Creek (S3, T74N, R25W, Warren Co.) to the confluence with an unnamed creek (S1, T74N, R26W, Madison Co.)	The average depth was between 3 and 30 inches with a maximum depth of 45 inches. No public comments suggested an A1 recreational use.* IDNR states: Most of the pools were created by beaver dams. The pools caused by the beaver dams are temporary and will not always be present in the creek. One of the pools caused by the beaver dams was relatively deep with a maximum depth of 45 inches. While the creek is too shallow to support primary contact recreational uses, it may be used for other forms of instream recreation such as fur trapping or minnow seining.	Yes

	Basin	Index Number	Water Body	County(s)	Recreational use	Aquatic life Use	2008 Surface Water Classification Legal Description	Explanation	Approved
15	Des Moines	88	Fourmile Creek	Polk / Story	A2	B(WW-2)	From the 142nd Ave. bridge crossing (N. line of S22, T81N, R24W, Polk Co.) to the City of Slater WWTP outfall (NE ¼, SE ¼, S31, T82N, R24W, Story Co.)	The average depth was between 3 and 9 inches with a maximum depth of 21 inches. No public comments suggested an A1 recreational use.* IDNR states: Although evidence of use was not found there is the potential for attracting uses such as trapping or minnow seining. An interview was conducted of a streamside landowner (site 516-2). The landowner stated that minnow seining was the only recreational use that takes place in the area to her knowledge. She also stated that her children were not allowed to play in or near the stream due to the effluent discharging from the City of Slater Wastewater Treatment Plant.	Yes
16	Des Moines	96	Sugar Creek	Dallas	A2	B(WW-2)	Mouth (S26, T78N, R26W, Dallas Co.) to confluence with an unnamed tributary from the West (S5, T78N, R26W, Dallas Co.)	The average depth was between 6 and 10 inches with a maximum depth of 14 inches. No public comments suggested an A1 recreational use.* IDNR states: The creek did not have any formal public access points; however, it was accessible from the bridge crossings at all 4 sites. At the time of the assessment there were no people observed using the stream for any type of recreation; however, there were signs of past recreation at some of the sites.	Yes
17	Des Moines	147	Drainage Ditch 171	Greene	A2	B(WW-2)	Mouth (S5, T83N, R31W, Greene Co.) to the Scranton WWTP outfall (SW1/4, S1, T83N, R32W, Greene Co.)	The average depth was between 3 and 6 inches with a maximum depth of 16 inches. No public comments suggested an A1 recreational use.* IDNR states: The stream is too shallow and is lacking adequate flow to support primary contact recreational uses. Although no recreational uses were seen, secondary recreational uses are expected to occur on this stretch of the stream in the form of trapping, minnow seining, etc.	Yes
18	Des Moines	173	Lateral 2	Buena Vista	A2	B(WW-2)	Mouth of Lateral 2 (NW ¼, NW ¼, S10, T91N, R36W, Buena Vista Co.) to the 220th Street bridge (E. Line, S16, T92N, R35W, Buena Vista Co.)	The average depth was between 1 and 12 inches with a maximum depth of 19 inches. No public comments suggested an A1 recreational use.* IDNR states: The creek is too shallow to support primary contact recreation and there were no other types of recreation observed. However, the creek does possess potential of secondary contact recreation, such as trapping and minnow seining, at low frequencies.	Yes

"Public Comments" consist of, but are not limited to: interviews with landowners or persons available during the assessments, survey responses from County Conservation Board member, postcards, and on-line survey results.

Table 2 - Resegmentation on Certain Water Bodies and Use Designations

	Basin	Index Number	Water Body	County(s)	Recreational Use	Aquatic Life Use	2008 Surface Water Classification (SWC) Legal Description	Explanation	Approved
1	Western	16	East Boyer River	Crawford	A1	B(WW-2)	Main Street (NW ¼, S14, T83N, R39W, Crawford Co.) to Donna Reed Road (N1/3, S13, T83N, R39W, Crawford Co.)	The original segment was subdivided into three segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
2	Western	27	Little Sioux River	Cherokee / Buena Vista	A1	B(WW-1)	Hwy. 3 in Cherokee (S26, T92N, R40W, Cherokee Co.) to Linn Grove Dam (SW 1/4, S5, T93N, R37W, Buena Vista Co.)	Legal description was revised in the SWC to more accurately describe the ending position of the stream segment.	Yes
3	Western	28	Little Sioux River	Buena Vista / Clay	A1	B(WW-1)	Linn Grove Dam (SW 1/4 S5, T93N, R37W Buena Vista Co.) to (W. line, S17, T96N, R36W, Clay Co.) (east corporate limit, Spencer)	Legal description was revised in the SWC to more accurately describe the beginning of the stream segment.	Yes
4	Western	31	Maple River	Monona / Ida	A1	B(WW-1)	Mouth (S17, T83N, R44W, Monona Co.) to Highway 59 (NE1/4, S15, T87N, R40W, Ida Co.)	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
5	Western	32	Maple River	Ida	A1	B(WW-1)	Highway 59 (NE1/4, S15, T87N, R40W, Ida Co.) to confluence with Silver Cr. (S13, T88N, R40W, Ida Co.)	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
6	Western	50	Mill Creek	Cherokee	A1	B(WW-2)	Mouth of Mill Creek (S14, T92N, R40W, Cherokee Co.) to the confluence with Bear Creek (S13, T93N, R41W, Cherokee Co.)	The original segment was subdivided into five segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
7	Western	54	Mill Creek	O'Brien	A1	B(WW-2)	From the confluence with Dry Run Creek (S29, T95N, R41W, O'Brien Co.) to confluence with W. Br. Mill Cr. (S4, T95N, R41W, O'Brien Co.)	The original segment was subdivided into five segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
8	Western	69	Ocheyedan River	Clay	A1	B(WW-2)	Mouth (S13, T96N, R37W, Clay Co.) to 340th Street (SE1/4, S5, T96N, R38W, Clay Co.)	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
9	Western	70	Ocheyedan River	Clay	A1	B(WW-2)	From 340th street (SE1/4, S5, T96N, R38W, Clay Co.) to the Iowa-Minnesota state line	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
10	Western	77	West Fork Little Sioux River	Dickinson	A1	B(WW-2)	Confluence with West Branch Little Sioux River (NW1/4, S36, T100N, R38W, Dickinson Co.).to the Iowa-Minnesota state line	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
11	Western	87	Floyd River	Plymouth / Sioux	A1	B(WW-2)	Confluence with W. Br. Floyd R. (Plymouth Co.) to the Hwy 18 bridge crossing (N. line of S36, T97N, R43W, Sioux Co.)	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
12	Western	88	Floyd River	Sioux / O'Brien	A1	B(WW-2)	From the Hwy 18 bridge crossing (N. line of S36, R97N, R43W, Sioux Co.) to confluence with North Fork (S9, T97N, R41W, O'Brien Co.)	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
13	Western	104	Little Rock River	Lyon	A1	B(WW-2)	Mouth of the Little Rock River (S35, T98N, R46W, Lyon Co.) to the Iowa-Minnesota state line	Legal description was revised in the SWC to more accurately describe the beginning of the stream segment.	Yes

	Basin	Index Number	Water Body	County(s)	Recreational Use	Aquatic Life Use	2008 Surface Water Classification (SWC) Legal Description	Explanation	Approved
14	Western	108	OtterCreek	Lyon / Osceola	A1	B(WW-2)	Mouth of Otter Creek (NW ¼ of S21, T98N, R44W, Lyon Co.) to the confluence with Wagner Creek (SW ¼ of S1, T98N, R42W, Osceola Co.).	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
15	Southern	8	Silver Creek	Pottawattamie / Shelby	A1	B(WW-2)	Road crossing at Pioneer Street (N. line, S28, T74N, R41W, Pottawattamie Co.) to confluence with Little Silver Cr. (S34, T78N, R40W, Shelby Co.)	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
16	Southern	21	East Nishnabotna River	Fremont / Cass	A1	B(WW-1)	Mouth (Fremont Co.) to confluence with Troublesome Creek (S32, T77N, R36W, Cass Co.)	Legal description was revised in the SWC to more accurately describe the ending of the stream segment.	Yes
17	Southern	117	South Fork Chariton River	Wayne	A1	B(WW-2)	Confluence with an Unnamed Creek (NW ¼, SE ¼ of S2, T69N, R21W, Wayne Co.) to outfall of Bob White State Park Lake (S4, T68N, R22W, Wayne Co.)	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
18	Southern	121	Jackson Creek	Wayne	A1	B(WW-2)	Confluence with West Jackson Creek (SW ¼, NE ¼ of S25, T69N, R21W, Wayne Co.) to confluence with an unnamed tributary (S12, T68N, R21W, Wayne Co.)	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
19	Southern	136	Fox River	Davis	A1	B(WW-2)	US Highway 63 (NW ¼, S19, T69N, R13W, Davis Co.) to confluence with an unnamed tributary (S29, T69N, R15W, Davis Co.)	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
20	Des Moines	21	Soap Creek	Davis / Monroe	A1	B(WW-2)	Confluence with South Soap Creek (SW ¼, S21, T70N, R15W, Davis Co.) to confluence with an unnamed tributary (W1/2, NE1/4, S31, T71N, R16W, Monroe Co.)	The original segment was subdivided into three segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
21	Des Moines	46	White Breast Creek	Lucas	A1	B(WW-2)	Confluence with Little White Breast Cr. (S11, T73N, R22W, Lucas Co.) to the confluence with Unnamed Creek (NE ¼ of S22, T73N, R22W, Lucas Co.)	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
22	Des Moines	55	Coal Creek	Marion	A1	B(WW-2)	Confluence with Unnamed Creek (S20, T76N, R21W, Marion Co.).to confluence with Coon Cr. (S29, T76N, R21W, Marion Co.)	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
23	Des Moines	59	OtterCreek	Warren / Lucas	A1	B(WW-2)	Highway 205 (S22, T75N, R23W, Warren Co.) to confluence with Otter Cr. and S. Otter Cr. (NE1/4, S8, T73N, R23W, Lucas Co.)	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
24	Des Moines	62	Middle River	Madison / Adair	A1	B(WW-2)	From the confluence with Bush Br. (S8, T75N, R29W, Madison Co.) to the 350th Street crossing (N. Line, S1, T77N, R32W, Adair Co.)	The original segment was subdivided into three segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
25	Des Moines	64	Middle River	Gunthrie	A1	B(WW-2)	Bridge on 340th Street (S. Line, S26, T78N, R32W, Guthrie Co.) to confluence with an unnamed tributary (NE1/4, S17, T78N, R32W, Guthrie Co.)	The original segment was subdivided into three segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
26	Des Moines	89	Fourmile Creek	Story	A1	B(WW-2)	City of Slater WWTP outfall (NE ¼, SE ¼, S31, T82N, R24W, Story Co.) to the Hwy 210 bridge crossing (N. line S31, T82N, R24W) Story Co.	Legal description was added to the SWC to more accurately describe the location of the attainable recreational use.	Yes
27	Des Moines	150	Cedar Creek	Greene / Calhoun	A1	B(WW-2)	Confluence with an unnamed tributary (NW1/4, S15, T85N, R32W, Greene Co.) to confluence with unnamed tributary (E 1/2, S23, T86N, R32W Calhoun Co.)	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes

	Basin	Index Number	Water Body	County(s)	Recreational Use	Aquatic Life Use	2008 Surface Water Classification (SWC) Legal Description	Explanation	Approved
28	Des Moines	200	Eagle Creek	Hamilton / Wright	A1	B(WW-2)	From the mouth (S6, T89N, R25W, Hamilton Co.) to 290th Street (N. Line, S7, T90N, R25W, Wright Co.)	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
29	Des Moines	209	Brushy Creek	Webster	A1	B(LW)	Brushy Creek Lake Dam (S34, T88N, R27W, Webster Co.) to Co. Highway P73 (upper extent of Brushy Creek Lake (W. line of S16, T88N, R27W, Webster Co.))	Legal description was added to the SWC to more accurately describe the location of the attainable recreational use.	Yes
30	Des Moines	210	Brushy Creek	Webster	A1	B(WW-2)	Brushy Creek Lake (W. line, S16, T88N, R27W, Webster Co.) to Highway 20 crossing (S8, T88N, R27W Webster Co.)	Legal description was added to the SWC to more accurately describe the location of the attainable recreational use.	Yes
31	Des Moines	232	Lotts Creek	Humboldt / Kossuth	A1	B(WW-2)	Confluence with Trulner Creek (S13, T93N, R29W, Humboldt Co.) to confluence with D.D. No. 79 (SE1/4, S15, T94N, R30W, Kossuth Co.)	The original segment was subdivided into three segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
32	Skunk	7	Sugar Creek (a.k.a. Big Sugar Creek)	Lee	A1	B(WW-2)	Pitman Creek (S29/30 line, T68N, R5W, Lee Co.) to confluence with an unnamed tributary (S1/2, S16, T69N, R6W, Lee Co.)	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
33	Skunk	29	Cedar Creek	Jefferson / Wapello	A1	B(WW-2)	Confluence with Little Cedar Cr. (S17, T70N, R7W, Henry Co.) to the bridge crossing on Kale Road (S10, T71N, R10W, Jefferson Co.)	The original segment was subdivided into four segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
34	Skunk	32	Cedar Creek	Wapello / Mahaska	A1	B(WW-2)	From Unnamed Creek (E ½ S11, T72, R12W, Wapello Co.) to confluence with an unnamed tributary (NW1/4, NE1/4, S24, T74N, R15W, Mahaska Co.)	The original segment was subdivided into four segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
35	Skunk	37	Competine Creek	Jefferson	A1	B(WW-2)	Mouth (North line, S28, T72N, R11W, Jefferson Co.) to the confluence with Unnamed Creek (SW ¼, S9, T72N, R11W, Jefferson Co.)	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
36	Skunk	38	Competine Creek	Jefferson / Wapello	A1	B(WW-2)	Confluence with unnamed Creek (SW ¼, S9, T72N, R11W, Jefferson Co.) to confluence with an unnamed tributary (S15, T73N, R12W, Wapello Co.)	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
37	Iowa-Cedar	93	Mud Creek	Benton	A1	B(WW-2)	United States Highway 218 (W. line, S33, T85N, R10W, Benton Co.). to confluence with an unnamed tributary (S15, T84N, R11W, Benton Co.)	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
38	Iowa-Cedar	163	Quarter Section Run	Bremer	A1	B(WW-2)	(East Line S23, T91N, R13W, Bremer Co) to confluence with an unnamed tributary (NE1/4, NW1/4, S26, T92N, R13W, Bremer Co.)	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
39	Iowa-Cedar	190	North English River	Poweshiek	A1	B(WW-2)	Dugout Creek (S15, T79N, R14W, Poweshiek Co.) to confluence with an unnamed tributary (SE1/4, S1, T79N, R16W, Poweshiek Co.)	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
40	Iowa-Cedar	203	Hoosier Creek	Linn	A1	B(WW-2)	Vista Road bridge crossing (S31, T82N, R6W, Linn Co.) to confluence with S. Hoosier Cr. (S25, T82N, R7W, Linn Co.)	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
41	Iowa-Cedar	218	Deer Creek	Tama	A1	B(WW-2)	U.S. Highway 30 bridge (S21, T83N, R15W, Tama Co.) to confluence with an unnamed tributary (NE1/4, SE1/4, S23, T84N, R16W, Tama Co.)	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes

	Basin	Index Number	Water Body	County(s)	Recreational Use	Aquatic Life Use	2008 Surface Water Classification (SWC) Legal Description	Explanation	Approved
42	Iowa-Cedar	252	East Fork Iowa River (a.k.a. East Branch Iowa River)	Wright / Hancock	A1	B(WW-2)	From the mouth (S19, T93N, R23W, Wright Co.) to Drainage Ditch 13 (S24, T96N, R24W, Hancock Co.)	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
43	Northeast	20	Wapsipinicon River	Bremer / Chickasaw	A1	B(WW-1)	Snyder Access (S34, T93N, R12W, Bremer Co.) to the confluence with Little Wapsipinicon River (S3, T94N, R13W, Chickasaw Co.)	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
44	Northeast	21	Wapsipinicon River	Chickasaw / Mitchell	A1	B(WW-1)	Little Wapsipinicon River (S3, T94N, R13W, Chickasaw Co.) to confluence with Watsons Cr. (S25, T99N, R15W, Mitchell Co.)	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
45	Northeast	46	Buffalo Creek	Jones / Linn / Buchanan	A1	B(WW-1)	Mouth (S10, T84N, R4W, Jones Co.) to confluence with an unnamed tributary (N1/2, S27, T88N, R7W, Buchanan Co.)	The original three segments were combined into one segment. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
46	Northeast	47	Buffalo Creek	Buchanan	A1	B(WW-2)	Confluence with an unnamed tributary (N1/2, S27, T88N, R7W, Buchanan Co.) to confluence with unnamed tributary (S 1/2 S31, T89N, R07W Buchanan Co.)	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
47	Northeast	70	Crane Creek	Black Hawk / Bremer	A1	B(WW-2)	Mouth (S26, T90N, R11W, Black Hawk Co.) to the confluence with Unnamed Creek (SW1/4, S4, T91N, R12W, Bremer Co.)	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
48	Northeast	71	Crane Creek	Bremer	A1	B(WW-2)	Unnamed Creek (SW1/4, S4, T91N, R12W, Bremer Co.) to confluence with an unnamed tributary (S17, T92N, R12W, Bremer Co.)	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
49	Northeast	86	Elk River	Clinton	A1	B(WW-2)	From the N. Br. Elk R. (S10, T83, R6E, Clinton Co.) to the bridge crossing at 432nd Avenue (NW 1/4 of S15, T83N, R6E, Clinton Co.)	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
50	Northeast	97	Deep Creek	Jackson	A1	B(WW-2)	Mouth (NE ¼ of NW ¼ of S18, T84N, R5E, Jackson Co.) to the confluence with Copper Creek (SW ¼, NE ¼, S19, T84N, R5E, Jackson Co.)	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
51	Northeast	100	Deep Creek	Clinton	A1	B(WW-2)	Unnamed Creek (SW ¼, SW ¼, S19, T83N, R5E, Clinton Co.) to confluence with Williams Cr. (S33, T83N, R4E, Clinton Co.)	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
52	Northeast	109	North Fork Maquoketa River	Jones / Dubuque	A1	B(WW-1)	From White Water Cr. (S10, T86N, R1W, Jones Co.) to confluence with Marcy White Drive (S7, T88N, R02W, Dubuque Co.)	The original segment was subdivided into three segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
53	Northeast	113	North Fork Maquoketa River	Dubuque	A1	B(WW-2)	State Highway 136 (S6, T89N, R02W, Dubuque Co.) to confluence with an unnamed tributary (S18, T90N, R1W, Dubuque Co.)	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
54	Northeast	125	Whitewater Creek	Jones / Dubuque	A1	B(WW-1)	Mouth (S10, T86N, R1W, Jones Co.) to the confluence with Unnamed Creek (S10, T87N, R1W, Dubuque Co.)	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
55	Northeast	173	Tete des Morts Creek (a.k.a. Tete des Morts River)	Jackson	A1	B(WW-1)	Mouth to confluence with Unnamed Creek (SW1/4, S4, T87N, R4E, Jackson Co.)	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes

	Basin	Index Number	Water Body	County(s)	Recreational Use	Aquatic Life Use	2008 Surface Water Classification (SWC) Legal Description	Explanation	Approved
56	Northeast	181	Catfish Creek	Dubuque	A1	B(CW-1)	From Swiss Valley Road (N. line, S20, T88N, R2E, Dubuque Co.) to W. line (Section 30, T88N, R2E, Dubuque Co)	The original segment was subdivided into three segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
57	Northeast	186	South Fork Catfish Creek	Dubuque	A1	B(WW-2)	English Mill Road (NW1/4, S33, T89N, R2E, Dubuque Co.) to confluence with an unnamed tributary (SW1/4, S3, T88N, R1E, Dubuque Co.)	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
58	Northeast	230	Elk Creek	Clayton / Delaware	A1	B(WW-2)	Confluence with Steeles Branch (S26, T91N, R4W, Clayton Co.) to confluence with Twin Springs Cr. (S2, T90N, R04W Delaware Co.)	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
59	Northeast	231	Elk Creek	Delaware	A1	B(WW-2)	Confluence with Fountain Spring Creek (S10, T90N, R4W Delaware Co.) to confluence with an unnamed tributary (NE1/4, S13, T90N, R4W, Delaware Co.)	The original segment was subdivided into two segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
60	Northeast	296	Little Turkey River	Fayette	A1	B(WW-1)	Mouth (S18, T95, R8W, Fayette Co.) to the the end of the Waucoma impoundment dam (NE ¼, SW ¼ of S9, T95N, R10W, Fayette Co.)	The original segment was subdivided into three segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes
61	Northeast	298	Little Turkey River	Winneshiek / Chickasaw	A1	B(WW-1)	Confluence with Unnamed Creek (SE ¼, NE ¼ of S30, T96N, R10W, Winneshiek Co.) to confluence with an unnamed tributary (SE1/4, S14, T96N, R11W, Chickasaw Co.)	The original segment was subdivided into three segments. The legal description was revised to more accurately describe the location of the attainable recreational use.	Yes

Table 3 - Depth Measurements Indicated Primary Contact is Attainable

	Basin	Index Number	Water Body	County(s)	Recommended Recreational Use	Aquatic life Use	2008 Surface Water Classification Legal Description	Explanation	Recreational Use Approved
1	Western	17	East Boyer River	Crawford	A2	B(WW-2)	Donna Reed Road (N 1/3, S13, T83N, R39W, Crawford Co.) to the outfall pipe for Westside WWTP (NW 1/4, of S24, T84N, R37W, Crawford Co.)	The average depth was between 9 and 24 inches with a maximum depth of >40 inches. The Iowa Department of Natural Resources (IDNR) states: The stream did have a perennial flow at all sites, so the potential for recreational uses is a possibility throughout the recreation season.	No
2	Western	18	Otter Creek	Crawford	A2	B(WW-2)	Mouth (S18, T84N, R38W, Crawford Co.) to confluence with E. Otter Cr. (NW1/4, S13, T85N, R39W, Crawford Co.)	The average depth was between 2 and 20 inches with a maximum depth of 34 inches. IDNR states: Most of the average depths within the assessed reach ranged from 12 to 18 inches. However, at site 421-r2, the average depth was 20 inches at the upstream sample site.	No
3	Western	41	Little Maple River	Buena Vista / Cherokee	A2	B(WW-2)	Mouth (SW ¼, S34, T90N, R39W, Cherokee Co.) upstream to the confluence with Unnamed Creek (SE ¼, S27, T91N, R38W, Buena Vista Co.)	The average depth was between 3 and 37 inches with a maximum depth of >42 inches. IDNR states: The stream did have a perennial flow at all sites, so the potential for recreational uses is a possibility throughout the recreation season.	No
4	Western	51	Mill Creek	Cherokee / O'Brien	A2	B(WW-2)	From the confluence with Bear Creek (S13, T93N, R41W, Cherokee Co.) to (S. line, S3, T94N, R41W, O'Brien Co.)	The average depth was between 15 and 25 inches with a maximum depth of 39 inches. IDNR states: Mill Creek does not pass through any towns or parks in the assessed reach; however, the creek does pass near the town of Paullina and the Mill Creek State Park. The creek did contain several bridge crossings where access to the creek may be possible. There were also several rural residences located near the creek which may increase the possibility for recreational uses to occur.	No
5	Western	57	Unnamed Creek	Cherokee	A2	B(WW-2)	Mouth (SW ¼, S36, T93N, R41W, Cherokee Co.) to 480th Street (S. line, S36, T93N, R41W, Cherokee Co.)	The average depth was between 14 and 15 inches with a maximum depth of 40 inches at site 761-2. IDNR states: At the site assessed in this portion of Unnamed Creek the average depth was found to be 14 to 15 inches with a maximum depth of 40 inches. The maximum depth was found directly under the bridge around the bridge pilings. Site 761-2 was re-assessed in 2007 to determine the size of the pool. The size of this pool was approximately 48 feet long by 24 feet wide.	No
6	Western	109	Otter Creek	Lyon / Osceola	A2	B(WW-2)	Confluence with Wagner Creek (SW ¼ of S1, T98N, R42W, Osceola Co.) to the confluence with Polly Creek (S14, T99N, R42W, Osceola Co.)	The average depth was between 14 and 26 inches with a maximum depth of 36 inches. IDNR states: Otter Creek also passes through the towns of Sibley and Ashton. The riparian features typically consisted of grasses and herbaceous vegetation. Parts of the creek were immediately surrounded by wooded areas. There were many bridge crossings in the assessed reach. There were also many rural residences located near the river that would show potential for recreating in the creek.	No
7	Western	115	Unnamed Creek	Lyon	A2	B(WW-2)	Mouth (S16, T98N, R48W, Lyon Co.) to the confluence with Unnamed Creek (S22, T98N, R48W, Lyon Co.)	The average depth was between 9 and 22 inches with a maximum depth of 48 inches at site 473-b. IDNR states: The stream flow conditions were considered adequately representative of seasonal flows at the sites assessed to appropriately characterize the recreational uses of Unnamed Creek #2.	No
8	Southern	9	Middle Silver Creek	Pottawattamie	A2	B(WW-2)	Mouth (S31, T74N, R41W, Pottawattamie Co.) to the road crossing of 300th Street (E. Line, S1, T74N, R42W, Pottawattamie Co.)	The average depth was between 6 and 31 inches with a maximum depth of 42 inches. IDNR states: There are a few residences along the assessed reach that would show potential for recreating in the creek.	No
9	Southern	29	Turkey Creek	Cass	A2	B(WW-2)	Mouth (S2, T75N, R37W, Cass Co.) to 730th Street (E. line, SW1/4, S29, T77N, R34W, Cass Co.)	The average depth was between 5 and 34 inches with a maximum depth of >45 inches. IDNR states: The creek flows near the community of Wiota and contains a minimum of 13 bridge crossings, 6 of which were assessed, within its 18 mile stretch.	No
10	Southern	32	Bluegrass Creek	Audubon	A2	B(WW-2)	Mouth (S14, T79N, R35W, Audubon Co.) to US Highway 71 (S28, T80N, R35W, Audubon Co.)	The average depth was between 7 and 37 inches with a maximum depth of >40 inches. IDNR states: Evidence of human uses were observed. Bluegrass creek runs through the town of Audubon. At site (397-d), a man made dam was causing water to back up. This created a pool where swimming and fishing would be possible.	No
11	Southern	46	Middle Nodaway River	Montgomery / Adair	A2	B(WW-1)	Mouth (Montgomery Co.) to confluence with W. Fk. Middle Nodaway R. (S33, T74N, R33W, Adair Co.)	The average depth was between 2 and 45 inches with a maximum depth of 48 inches. IDNR states: The Middle Nodaway River contains many bridge crossings along the assessed reach which allow for the possibility of access. The river flows near some communities in its 44.5 mile stretch.	No
12	Southern	49	West Fork 102 River	Taylor	A2	B(WW-1)	Iowa-Missouri state line to the confluence with W. Br. 102 R. (S10, T68N, R35W, Taylor Co.)	The average depth was between 4 and 22 inches with a maximum depth of 35 inches. IDNR states: Next to the river below the small dam, a fire pit, remnant fishing tackle, a "Y" pole for holding fishing rods, and trash was found. There were several bridge crossings found where access to the river may be possible.	No
13	Southern	51	West Branch 102 River	Taylor	A2	B(WW-1)	Mouth (Taylor Co.) to confluence with Middle Br. 102 R. (S6, T69N, R34W, Taylor Co.)	The average depth was between 3 and 35 inches with a maximum depth of >50 inches. IDNR states: There were bridge crossings and rural residences located near the river which may increase the possibility for recreational uses to occur.	No
14	Southern	53	Middle Branch 102 River	Taylor	A2	B(WW-2)	Mouth of the Middle Branch 102 River (SW ¼, S6, T69N, R34W, Taylor Co.) to the confluence with Unnamed Creek (S12, T70N, R33W, Taylor Co.)	The average depth was between 3 and 35 inches with a maximum depth of >50 inches. IDNR states: There were several bridge crossings found where access to the river may be possible.	No
15	Southern	74	Middle Fork Grand River	Ringgold	A2	B(WW-2)	Iowa-Missouri state line (S. line, S30, T67N, R30W, Ringold Co.) to the confluence with Unnamed Creek (SW ¼, NW ¼, S7, T68N, R29W, Ringold Co.)	The average depth was 24 inches with a maximum depth of 32 inches at site 503-1. IDNR states: One average depth measurement at site 503-1 demonstrated adequate depth for primary contact recreation. Though elevated at the downstream sites approximately 2-3 inches, the stream flow conditions found were considered adequately representative of seasonal flows to appropriately characterize the recreational uses of the Middle Fork Grand River.	No
16	Southern	106	Chariton River	Lucas	A2	B(WW-2)	Highway 14 (Lucas Co.) to confluence with Chariton Cr. (S19, T71N, R23W, Lucas Co.)	The average depth was between 5 and 25 inches with a maximum depth of 32 inches. IDNR states: The river flows near the City of Chariton. The river contains many bridge crossings within the assessed reaches.	No

	Basin	Index Number	Water Body	County(s)	Recommended Recreational Use	Aquatic life Use	2008 Surface Water Classification Legal Description	Explanation	Recreational Use Approved
17	Southern	122	West Jackson Creek	Wayne	A2	B(WW-2)	Mouth (S25, T69N, R21W, Wayne Co.) to confluence with an unnamed tributary (S31, T69N, R21W, Wayne Co.)	The average depth was between 6 and 20 inches with a maximum depth of 31 inches. IDNR states: The stream has six bridge crossings that would allow for access.	No
18	Southern	131	Unnamed Creek	Wayne	A2	B(WW-2)	Mouth (SW 1/4, S5, Y70N, R23W, Wayne Co.) to the City of Humeston WWTP Outfall (SW 1/4, S10, T70N, R23W, Wayne Co.)	The average depth was between .5 and 13 inches with a maximum depth of 40 inches. IDNR states: The creek did not have any formal public access areas; however the stream was accessible at three bridge crossings. One area at site 526-1.75d contained a maximum depth measurement of 40 inches in a small pool.	No
19	Southern	135	Fox River	Van Buren / Davis	A2	B(WW-2)	Iowa-Missouri state line to US Highway 63 (NW ¼, S19, T69N, R13W, Davis Co.)	The average depth was between 16 and 25 inches with a maximum depth of 42 inches at site 425-e. IDNR states: The creek does run through the city limits of Mount Sterling and near 4 other towns in the assessed reach. Other than the population from the 4 nearby towns, there are a few rural residences along the assessed reach that would show potential for recreating in the creek.	No
20	Des Moines	14	Sugar Creek	Lee	A2	B(WW-2)	Mouth (S25, T65N, R6W, Lee Co.) to Highway 2 (N. line, S6, T67N, R6W, Lee Co.)	The average depth was between 11 and 28 inches with a maximum depth of 33 inches at site 467-1E. IDNR states: Evidence of in-stream or streamside recreational use was observed at all but two bridge crossings (sites 467-1 and 467-D). A residence within close proximity to the stream was found at sites 467-1E, 467-1C, and 467-1A. The assessed reach contains approximately 12 bridge crossings allowing access to the stream. Further research into Sugar Creek indicates that during the week of the 24th of October, stream-flow conditions were drier than normal, even with light rainfall earlier in the week.	No
21	Des Moines	20	Soap Creek	Wapello / Monroe	A2	B(WW-2)	Confluence with Little Soap Cr. (S1, T70N, R13W, Davis Co.) to confluence with South Soap Creek (SW ¼, S21, T70N, R15W, Davis Co.)	The average depth was between 8 and 25 inches with a maximum depth of 36 inches at site 794-b. IDNR states: There were bridge crossings and rural residences located within the assessed reach that increase the possibility of recreating in the creek.	No
22	Des Moines	25	South Soap Creek	Davis / Appanoose	A2	B(WW-2)	Mouth of South Soap Creek (SW ¼ of S21, T70N, R15W, Davis Co.) to the City of Moravia wastewater treatment plant outfall (S9, T70N, R17W, Appanoose Co.)	The average depth was between 1 and 15 inches with a maximum depth of 26 inches. A large private lake is located within the stream reach. IDNR states: Lake Sundown is located within the assessed reach. As expected, the depth and width increased as assessments moved downstream near the mouth. There were also several rural residences and bridge crossings found within the assessed reach which may increase the possibility for access to occur.	No
23	Des Moines	32	Muchakinock Creek	Monroe / Manhaska	A2	B(WW-2)	Mouth (E. Line, S1, T73N, R16W, Monroe Co.) to Kilbourn Street (SW ¼, NE ¼, S27, T75N, R16W, Mahaska Co.	The average depth was between 15 and 24 inches with a maximum depth of >48 inches at site 108-2. IDNR states: Site 108-2 was re-assessed in 2007 to determine the size of the pool. It was found that the pool was 15 feet wide by 50 feet long. Throughout the assessed reach, Muchakinock Creek travels through or near the Cities of Leighton, Beacon, and Eddyville. The evidence of recreational uses consisted of graffiti, mud balls, fishing tackle, trash, a rope that possibly held a minnow trap, and a rope swing.	No
24	Des Moines	39	Rock Creek	Jefferson / Wapello	A2	B(WW-3)	Confluence with Unnamed Creek (NE ¼, S5, T71N, R11W, Jefferson Co.) to the outfall pipe for Cardinal School (NE ¼, S9, T71N, R12W, Wapello Co.)	The average depth was between 1 and 40 inches with a maximum depth of 48 inches at site 249-1. IDNR states: At each site there were many pools present varying in size. At site 249-1 a road culvert hindered flow, which created a pool with a >48 inch maximum depth. Site 249-1 was re-assessed in 2007 to determine the size of the pool.	No
25	Des Moines	44	Competine Creek	Marion	A2	B(WW-2)	Mouth of Competine Creek (S27, T76N, R19W, Marion Co.) to the Pleasant Road Bridge crossing (S. Line, S5, T75N, R19W, Marion Co.)	The average depth was between 3 and 35 inches with a maximum depth of 48 inches. IDNR states: The greatest potential use area would be the farthest downstream site (479-a) where the creek consists of back water from Lake Red Rock. The downstream site (479-a) consisted of back water from Lake Red Rock and had a maximum depth of greater than 48 inches and an average depth range of 33-39 inches.	No
26	Des Moines	47	White Breast Creek	Lucas / Clarke	A2	B(WW-2)	Confluence with Unnamed Creek (NE ¼ of S22, T73N, R22W, Lucas Co.) to Country Club Road (SE ¼, SE ¼, S20, T72N, R25W, Clarke Co.)	The average depth was between 5 and 25 inches with a maximum depth of >48 inches at site 417-9. IDNR states: Four out of the thirty five depth measurements demonstrated adequate depths for primary contact recreation. These depths were found a sites 417-8 and 9. These two sites were re-assessed in 2007 to determine the size of the pools.	No
27	Des Moines	52	South River	Warren	A2	B(WW-2)	Mouth of the South River (S12, T77N, R22W, Warren Co.) to the confluence with Broadhorn Creek (S3, T74N, R25W, Warren Co.)	The average depth was between 15 and 30 inches with a maximum depth of >48 inches at site 475-a. IDNR states: One pool was found to contain adequate depths for Primary Contact recreation at Site 475-a. This pool was re-assessed in 2007 to determine the size of the pool. The bridge is approximately 100 feet long by 40 feet wide. Public comments also indicated that swimming occurs in South River.	No
28	Des Moines	54	Coal Creek	Warren / Marion	A2	B(WW-2)	Mouth (Warren Co.) to the confluence with Unnamed Creek (S20, T76N, R21W, Marion Co.)	The average depth was between 15 and 19 inches with a maximum depth of 32 inches at site 233-b. IDNR states: There were many bridge crossings in the assessed reach. There are a few rural residences located near the creek which may increase the possibility for recreational uses to occur.	No
29	Des Moines	58	Otter Creek	Warren / Lucas	A2	B(WW-2)	Mouth (S33, T76N, R23W, Warren Co.) to Highway 205 (S22, T75N, R23W, Warren Co.)	The average depth was between 22 and 25 inches with a maximum depth of 38 inches at site 226-A. IDNR states: The stream-flow conditions are considered adequately representative of seasonal flow conditions at the sites assessed. Both the upstream and downstream sample sites at site 226-A consisted of average depths of 19 inches or greater, demonstrating adequate depth for primary contact recreation.	No
30	Des Moines	181	East Beaver Creek	Boone	A2	B(WW-2)	Mouth (NE ¼ S21, T83N, R28W, Boone Co.) to 210th Street (North Line S31, T84N, R27W, Boone Co.)	The average depth was between 14 and 21 inches with a maximum depth of 35 inches at site 401-2a. IDNR states: The creek passes near rural residences and the City of Ogden as well as a nature/bike trail, all which allows for the increased possibility of access.	No
31	Des Moines	197	Boone River	Wright / Hancock	A2	B(WW-2)	Confluence with Middle Br. Boone R. (S2, T93N, R26W Wright Co.) to confluence with D. D. No. 10 (S29, T95N, R26W, Hancock Co.)	The average depth was between 15 and 23 inches with a maximum depth of 33 inches. IDNR states: The Boone River contains many bridge crossings along the assessed reach allowing for the possibility of access.	No

	Basin	Index Number	Water Body	County(s)	Recommended Recreational Use	Aquatic life Use	2008 Surface Water Classification Legal Description	Explanation	Recreational Use Approved
32	Des Moines	204	Drainage Ditch 3	Wright / Humboldt	A2	B(WW-2)	Mouth (S32, T91N, R26W, Wright Co.) to the Thor waste water treatment plant outfall (NW1/4, S21, T91N, R27W, Humboldt Co.).	The average depth was between 8 and 13 inches with a maximum depth of >40 inches at site 764-1. IDNR states: Only one pooled area demonstrated adequate depth for primary contact recreation at site 764-1. The stream did not have any formal public access areas; however, the stream was accessible at a minimum of 14 bridge crossings where most of the evidence of water recreational uses were found.	No
33	Skunk	77	Middle Creek	Mahaska	A2	B(WW-2)	Mouth (S35, T76N, R14W, Mahaska Co.) to the confluence with Unnamed Creek (S26, T77N, R16W, Mahaska Co.)	The average depth was 24 inches with a maximum depth of >48 inches at site 231-a. The average depth was between 17 and 25 inches with a maximum depth of 39 inches at site 231-b. IDNR states: The creek did contain several bridge crossings where access to the creek may be possible. There were also several rural residences located near the creek which may increase the possibility for recreational uses to occur. Portions of Middle Creek demonstrated adequate depth for primary contact recreation to occur.	No
34	Iowa-Cedar	35	North Fork Long Creek	Washington	A2	B(WW-2)	Mouth (S26, T75N, R6W, Washington Co.) to the crossing of Riverside Road (S33, T76N, R7W, Washington Co.)	The average depth was between 20 and 31 inches with a maximum depth of 41 inches at site 791-1. IDNR states: There was one site (791-1) noted that had adequate maximum and average depths, and one site (791-2) that had adequate average depths, for Primary Contact recreation. The depths at site 791-1 were caused by a culvert under the road which created a pinch point for flow and backs up the water. Site 791-1 was re-assessed in 2007 to determine the size of the pool. The pool was measured to be 500 feet long. There are a few residences along the rural assessed reaches that would show potential for recreating in the creek.	No
35	Iowa-Cedar	114	Beaver Creek	Butler	A2	B(WW-1)	Bridge crossing at Terrace Rd. (W. Line S29, T90N, R15W Butler Co.) to the West Line of the (NE ¼, S30, T90N, R16W, Butler Co.)	The average depth was between 20 and 22 inches with a maximum depth of 37 inches at site 9-a. IDNR states: According to the UA/UAA Protocol, Recreational use assessments are ideally conducted at base flow conditions, but it is not always possible to sample at these times.	No
36	Iowa-Cedar	116	Beaver Creek	Butler	A2	B(WW-1)	West Line, (S30, T90N, R16W, Butler Co.) to confluence with S. Beaver Cr. (S25, T90N, R17W, Butler Co.)	The average depth was between 18 and 25 inches with a maximum depth of 42 inches at site 9-c. IDNR states: According to the UA/UAA Protocol, Recreational use assessments are ideally conducted at base flow conditions, but it is not always possible to sample at these times.	No
37	Iowa-Cedar	119	South Beaver Creek	Butler / Hardin	A2	B(WW-2)	Mouth of South Beaver Creek (SE ¼, NE ¼, S25, T90N, R17W, Butler Co.) to the confluence of Unnamed Creek (NW ¼, NE ¼, S3, T88N, R19W, Hardin Co.)	The average depth was between 19 and 29 inches with a maximum depth of 37 inches at site 692-a. The average depth was between 14 and 21 inches with a maximum depth of 31 inches at site 692-b. IDNR states: Four areas were found with average depths of 19 inches or greater. The creek passes near some rural residences as well as through an urban area near the mouth of the stream, which allows for the increased possibility of access.	No
38	Iowa-Cedar	139	Beaver Creek	Worth / Winnebago	A2	B(WW-2)	Mouth (S34, T98N, R22W, Worth Co.) to the Rice Lake outlet (S19, T99N, R22W, Worth Co.)	The average depth was between 21 and 22 inches with a maximum depth of 28 inches at site 530-1. The average depth was 19 inches with a maximum depth of 31 inches at site 530-2. IDNR states: Though evaluated, the stream flow conditions found were considered adequately representative for the assessment of Beaver Creek.	No
39	Northeast	16	Crow Creek	Scott	A2	B(WW-2)	From Utica Road (NW ¼, SW ¼, S4, T78N, R4E, Scott Co.) to Trails Road Bridge Crossing (N. line SW ¼, NE ¼, S26, T79N, R3E, Scott Co.)	The average depth was between 22 and 24 inches with a maximum depth of 27 inches at site 125-4r. IDNR states: The depths and widths of the creek are considered adequately representative for the sites even with the elevated flows noted. The creek passes primarily through urban areas which includes parks and golf courses as well as through Crow Creek Wildlife Management Area. At Mt. Joy MHP (mobile home park) the residences are right on the stream banks.	No
40	Northeast	29	McDonald Creek	Scott	A2	B(WW-2)	Mouth (S5, T80N, R4E, Scott Co.) to the confluence of the Unnamed Creek (SE1/4, SW1/4, S24, T80N, R3E, Scott Co.)	The average depth was between 4.5 and 22 inches with a maximum depth of 26 inches at site 506-2. IDNR states: One gravel Co. road and three paved roads cross the assessed reach with several homesteads approximately 500 feet from the creek. There was evidence of access under the bridge at site 506-2 (graffiti painted on bridge pilings and a broken toy truck found), but no evidence of instream recreational uses found.	No
41	Northeast	101	Copper Creek	Jackson	A2	B(WW-2)	Mouth (S19, T84N, R05E, Jackson Co.) to the confluence with South Copper Creek (NE ¼ of SE ¼ S29, T84N, R05E, Jackson Co.)	The average depth was between 20 and 22 inches with a maximum depth of 26 inches at site 234-1. IDNR states: In the City of Preston there was a bike/walking trail that ran near the stream banks. The area near the streamside path is the only potential for recreational uses anywhere within the assessed reach.	No
42	Northeast	162	Bruce Creek	Fayette / Clayton	A2	B(WW-2)	Mouth (S19/30 Line, T91N, R6W, Clayton Co.) to the confluence with Unnamed Creek (NE ¼, NE ¼, S21, T91N, R7W, Fayette Co.)	The pooled area at site 551-2 had no average depth measurements taken during the time of the assessments but had a maximum depth of >48 inches in 2006 and a maximum depth of >39 inches on October 29, 2007. The pooled area measured 50' by 80' and was documented as permanent. IDNR states: The stream passes through rural/agricultural areas as well as through portions of Joy Springs Park and near two rural residences. The stream also was accessible at the four bridge crossings that were used as sampling sites.	No
43	Northeast	176	Lux Creek	Dubuque / Jackson	A2	B(WW-2)	Mouth of Lux Creek (S7, T87N, R4E, Jackson Co.) to the road crossing of United States Highway 52 (NW ¼, NW ¼, S35, T88N, R3E, Dubuque Co.)	The average depth was between 8 and 32 inches with a maximum depth of 40 inches at site 276-a. The pooled area was reassessed on November 1, 2007 to evaluate the pool. The reassessment confirmed that the pool exists year round and measured 10' wide by 27' long. IDNR states: There are a few residences along the assessed reach that would show potential for recreating in the creek, and the small town of Saint Donatus is located at the mouth of Lux Creek.	No
44	Northeast	224	South Cedar Creek	Clayton	A2	B(WW-2)	Mouth (S33, T92N, R3W, Clayton Co.) to (N. line of S7, T92N, R3W, Clayton Co.	The average depth was 25 inches with a maximum depth of >48 inches at site 418-2. IDNR states: Seven out of the twenty depth measurements demonstrated adequate depths for primary contact recreation. Sites 418-2 and 418-3 were re-assessed in 2007 to determine the sizes of the pools. The pool size for Site 418-2 was approximately 350 feet long by 20-42 feet wide.	No
45	Northeast	225	South Cedar Creek	Clayton	A2	B(CW1)	N. line of S7, T92N, R3W, Clayton Co. to N. Line of (S30, T93N, R3W, Clayton Co.)	The average depth was between 15 and 25 inches with a maximum depth of 30.5 inches at site 418-3. IDNR states: Seven out of the twenty depth measurements demonstrated adequate depths for primary contact recreation. Sites 418-2 and 418-3 were re-assessed in 2007 to determine the sizes of the pools. The pool at Site 413-3 was approximately 90 feet long by 15-20 feet wide.	No

Table 4 - Public Comments Indicate that a Higher Recreational Use is an Attainable Use

	Basin	Index Number	Water Body	County(s)	Recommended Recreational use	Aquatic life Use	2008 Surface Water Classification Legal Description	Explanation	Recreational Use Approved
1	Western	20	Soldier River	Harrison / Monona	A2	B(WW-1)	Mouth (Harrison Co.) to confluence with E. Soldier River (S34, T84N, R42W, Monona Co.)	The average depth was between 7 and 12 inches with a maximum depth of 24 inches. A commenter lists several rivers, with no specificity towards type of activity, location, or amount of use. A public comment provided by the Loess Hills State Forest indicated that canoeing, kayaking, or tubing occurs but did not specify which activity.	No
2	Western	36	Odebolt Creek	Ida / Sac	A2	B(WW-2)	Harold Godberson Drive (S24, T87N, R40W, Ida Co.) to the confluence of Unnamed Creek #2 (NW1/4, SE1/4, S28, T87N, R38W, Sac Co.)	The average depth was between 4 and 15 inches with a maximum depth of 30 inches. A public comment was provided by a citizen of Arthur who stated children's play occurs but did not specify a location. An unidentified public comment was provided in a survey form which indicated tubing occurs occasionally in summer and estimated 10 people per month. Again, no specific location was given.	No
3	Western	76	West Fork Little Sioux River	Dickinson	A2	B(WW-2)	Mouth (S7, T99N, R37W, Dickinson Co.) to the confluence with West Branch Little Sioux River (NW1/4, S36, T100N, R38W, Dickinson Co.)	The average depth was between 3 and 11 inches with a maximum depth of 29 inches. An interview with a landowner at site 429-A indicated that people who are invited onto the property will commonly canoe, trap, fish, and swim. The assessment was conducted on November 2, 2006, the photos and fields data sheets indicated that the stream had areas of ice cover. The public comment analysis states that the initial assessment was taken at the rivers summer base flow. A survey form from the Cayler Prairie Complex indicated yes to canoeing, kayaking, or tubing but did not indicate which activity.	No
4	Western	105	Burr Oak Creek	Sioux	A2	B(WW-2)	Mouth (S11, T97N, R46W, Sioux Co.) to the confluence with Unnamed Creek #2 (SE ¼ of S15, T97N, R45W, Sioux Co.)	The average depth was between 3 and 6 inches with a maximum depth of 28 inches. A public comment, sent via email, identified a list of streams where the person personally has had considerable water contact, or where they are aware of significant use by others.	No
5	Western	114	Unnamed Creek	Lyon	A2	B(WW-2)	Mouth (SW ¼, SW ¼ of S15, T98N, R48W, Lyon Co.) to the confluence with Unnamed Creek (S. line, S7, T98N, R47W, Lyon Co.)	The average depth was between 3 and 9 inches with a maximum depth of 15 inches. An interview at site 473-2 indicated once in a while kids play in the stream. IDNR states in the UAA conclusion: At site 473-2 the streamside resident stated that once in a while kids play in the creek, however Unnamed Creek #1's overall rural location, lack of accessibility, riparian cover, and steep banks appeared to deter any elevated levels of children's recreation, therefore Children's recreation is not recommended for the assessed reach.	No
6	Southern	3	West Nishnabotna River	Shelby / Carroll	A2	B(WW-2)	Confluence with W. Fk. W. Nishnabotna R. to confluence with an unnamed tributary (S34, T83N, R36W, Carroll Co.)	The average depth was between 8 and 15 inches with a maximum depth of 20 inches. IDNR states: A comment from the Manning area noted child's play and seining for minnows and chubs occurring; however, a frequency was not noted for either activity. The persons contact information was provided on the survey form if a follow up was needed.	No
7	Southern	6	Silver Creek	Mills	A2	B(WW-1)	Mouth (S21, T71N, R41W, Mills Co.) to Hwy. 41 crossing (Mills Co.)	The average depth was between 6 and 7 inches with a maximum depth of 25 inches. One survey form was returned from a Mills Co. Conservation employee who answers yes to canoeing, kayaking, or tubing, but did not specify which activity. The commenter explains: yes – numerous times during the summer over the course of the last 7 "seven" years – at least twice a summer you notice it – start north of Hwy 34 and go south of Malvern to L-68.	No
8	Southern	7	Silver Creek	Mills / Pottawattamie	A2	B(WW-2)	Hwy. 41 (Mills Co.) to the road crossing of Pioneer Street (N. line, S28, T74N, R41W, Pottawattamie Co.)	The average depth was between 6 and 9 inches with a maximum depth of 17 inches. One survey form was returned from a Mills Co. Conservation employee who answers yes to canoeing, kayaking, or tubing, but did not specify which activity. The commenter explains: yes – numerous times during the summer over the course of the last 7 "seven" years – at least twice a summer you notice it – start north of Hwy 34 and go south of Malvern to L-68.	No
9	Southern	37	Nodaway River	Page	A2	B(WW-1)	Iowa-Missouri state line (Page Co.) to confluence with Highway 71 (SE ¼ , S32, T69N, R36W, Page Co.)	The average depth was between 3 and 6 inches with a maximum depth of 11 inches. A public comment, sent via email, identified a list of streams where the person personally has had considerable water contact, or where they are aware of significant use by others.	No
10	Southern	39	Nodaway River	Page	A2	B(WW-1)	Washington Street (NE 1/4 S32, T69N, R36W, Page Co.) to confluence of Middle Nodaway R. and W. Nodaway R. (S33, T71N, R36W, Montgomery Co.)	The average depth was between 4 and 7 inches with a maximum depth of 16 inches. A public comment, sent via email, identified a list of streams where the person personally has had considerable water contact, or where they are aware of significant use by others.	No
11	Southern	47	Middle Nodaway River	Adair	A2	B(WW-2)	Confluence with W. Fk. Middle Nodaway R. (Adair Co.) to confluence with an unnamed tributary (S1, T75N, R32W, Adair Co.)	The average depth was 11 inches with a maximum of 24 inches. A public comment survey was not addressed in the Public Comment Analysis. The survey was assessed as a Nodaway River public comment. The commenter stated that swimming, children's play, canoeing, fishing all occur in or on Nodaway River. Markings on the top of the survey questioned if it should be "Middle?." The commenter included a location where recreation had occurred and left their address. The location of the commenter's address and the location of the recreational use was in or near Greenfield, Iowa.	No
12	Southern	105	Chariton River	Lucas	A2	B(WW-2)	Upper extent of Rathbun Lake conservation pool to Highway 14 (Lucas Co.)	A public comment via on-line survey indicated primary contact recreation (swimming) occurred daily throughout the warmer months but did not describe where. The same survey stated that they have participated in or observed children playing in this river or stream and described that water skiing, swimming, wading, all types of water contact sports, occurred in Lake Rathbun and wading and swimming occurred in the Chariton River. Under the question: "Where do you access or enter the stream?" the commenter mentioned the Lake Rathbun upper reaches.	No
13	Southern	111	Cooper Creek	Appanoose	A2	B(WW-2)	Mouth (SE ¼, S21, T69N, R17W, Appanoose Co.) to the confluence with an Unnamed Creek (SE ¼, S9, T68N, R19W, Appanoose Co.).	The average depth was between 6 and 16 inches with a maximum depth of 30 inches. A public comment, sent via email, indicated that their family had used the creek previously for tubing. IDNR states: "One email was received with comments about Cooper Creek. The email stated that "tubing" had occurred in Cooper Creek in the past. No specific location or frequency of recreational activity was mentioned."	No

	Basin	Index Number	Water Body	County(s)	Recommended Recreational use	Aquatic life Use	2008 Surface Water Classification Legal Description	Explanation	Recreational Use Approved
14	Des Moines	19	Soap Creek	Wapello / Davis	A2	B(WW-1)	Mouth (S35, T71N, R12W, Wapello Co.) to confluence with Little Soap Cr. (S1, T70N, R13W, Davis Co.)	The average depth was between 3 and 7 inches with a maximum depth of 14 inches. A public comment, sent via email, identified a list of streams where the person personally has had considerable water contact, or where they are aware of significant use by others.	No
15	Des Moines	36	Coal Creek	Mahaska / Monroe	A2	B(WW-3)	Mouth (S1, T74N, R17W, Mahaska Co.) to 115th Trail (NW1/4, S11, T73N, R18W, Monroe Co.)	The average depth was between 0.25 and 14 inches with a maximum depth of 18 inches. Public comment provided by a County Conservation Board member suggested a recreational use. IDNR states: The survey from the Mahaska County Conservation Board employee stated that cabins were found near the mouth of Coal Creek. These cabins are found along the Des Moines River and the activities described are most likely to be taking place in the Des Moines River or in the waters of the Des Moines River that back up into the Coal Creek's channel. No information was provided to indicate that IDNR followed up with the County Conservation Board employee to confirm this statement.	No
16	Des Moines	63	Middle River	Adair / Guthrie	A2	B(WW-2)	Confluence with 350th Street crossing (N. Line, S1, T77N, R32W, Adair Co.) to the bridge on 340th Street (S. Line, S26, T78N, R32W, Guthrie Co.)	The average depth was 16 inches with a maximum depth of 26 inches. A public comment, sent via email, identified a list of streams where the person personally has had considerable water contact, or where they are aware of significant use by others.	No
17	Des Moines	121	Long Branch	Guthrie	A2	B(WW-2)	Mouth (SW1/4, S12, T78N, R30W, Guthrie Co.) to Diamondhead Lake Dam (NW ¼ S13, T78N, R30W, Guthrie Co.)	The average depth was 3 inches with a maximum depth of 5 inches. One survey stated swimming occurred above Diamondhead Lake, and one stated swimming and children's play occurred above Diamondhead Lake, but no specific locations were given.	No
18	Des Moines	123	Long Branch	Guthrie	A2	B(WW-2)	Bridge crossing at 325th Street (SW ¼ S24, T78N, R30W, Guthrie Co.) to confluence with Unnamed Creek (NW1/4, SW1/4, S27, T78N, R30W, Guthrie Co.)	EPA followed up on a public comment to confirm the recreational use on Long Branch Creek. The commenter stated, yes, he and his children do play in the creek especially when collecting minnows for bait. The same commenter had supplied a survey form stating that swimming and playing does occur in the creek near the entrance of Diamondhead lake.	No
19	Des Moines	145	Hardin Creek	Greene / Calhour	A2	B(WW-2)	From 170th Street bridge crossing (S3/10, T84N, R31W Greene Co.) to the confluence with Unnamed Creek (SE ¼, SE ¼, S11, T86N, R31W, Calhoun Co.)	The average depth was 16 inches with a maximum depth of 30 inches. Two surveys were specific for this segment of the creek. One survey indicated that swimming, children playing, canoeing/kayaking, tubing, and fishing/seining/trapping minnows occur near the town of Churdan. The survey did not specify the frequency of these activities. The other survey indicated that the following activities take place near Churdan: swimming, canoeing/kayaking/john boating, and fishing/seining/trapping minnows. It also stated that children's (sic) play in the creek and canoeing/kayaking/john boating depended on the amount of water in the creek."	No
20	Des Moines	152	Unnamed Creek	Calhoun	A2	B(WW-2)	Mouth (S23, T86N, R32W, Calhoun Co.) to the 5th Street (N. line, S14, T86N, R32W, Calhoun Co.)	The average depth was between 4 and 6 inches with a maximum depth of 20 inches. Public comment provided by the County Conservation Board indicated recreational uses but the frequency was unknown. Also, within field sheet (410-1), where an interview was conducted, it was hard to decipher the meaning of the interviewee statement.	No
21	Des Moines	163	Drainage Ditch 9,13	Calhoun	A2	B(WW-2)	Mouth (confluence with D. D. No. 65 in S29, T88N, R32W, Calhoun Co.) to the North Line of Calhoun Co. (North Line S6, T89N, R32W, Calhoun Co.)	The average depth was between 1.5 and 18 inches with a maximum depth of 30 inches. IDNR states: One interview was conducted in which a local knew of some kids who play or seine in the creek at site 771-1 during the summer months. A frequency was not given for the activity. No public comment analysis was provided but evidence of use can be seen via photos provided which shows a small rock dam.	No
22	Des Moines	202	Drainage Ditch 2	Wright	A2	B(WW-2)	Mouth of Drainage Ditch 2 (SE ¼, SE ¼, S16, T91N, R25W, Wright Co.) to the road crossing of Madison Avenue (E. line, S12, T91N, R25W, Wright Co.)	The average depth was between 3 and 11 inches with a maximum depth of 23 inches. IDNR states: Two surveys were returned for Drainage Ditch 2 from Wright County Conservation Board employees. Neither survey listed a specific location. Both surveys stated that there was no known swimming or canoeing occurring in Drainage Ditch 2. One survey stated that kids play in the creek during the summer months near the mouth of the creek, while the other survey stated that there was no known kids play occurring. The location and frequency was not given for the activity.	No

* "Public comments" consist of, but are not limited to: interviews with landowners or persons available during the assessments, survey responses from County Conservation Board members, postcards, and on-line survey results.

Table 5 - Use Recommendation Was Not Supported by the Data

	BASIN	Index Number	Water Body	County	Recommended Recreational Use	Aquatic Life Use	2008 Surface Water Classification Legal Description	Explanation	Recreational Use Approved
1	Western	53	Mill Creek	O'Brien	A2	B(WW-2)	From (N. line of S3, T94N, R41W, O'Brien Co.) to the confluence with Dry Run Creek (S29, T95N, R41W, O'Brien Co.)	No depth measurements were taken within the stream segment. Therefore, there is no data available to support the removal of a Primary Contact Recreational Use for this water body segment.	No
2	Western	107	Unnamed Creek	Sioux	A2	B(WW-2)	Mouth (SE ¼, S15, T97N, R45W, Sioux Co.) to the confluence of Unnamed Creek (NE ¼, S22, T97N, R45W, Sioux Co.)	No depth measurements were taken within the stream segment. Only photos were taken at the site which assumed depths not attainable for Primary Contact Recreation. Therefore, there is no data available to support the removal of a Primary Contact Recreational Use for this water body segment.	No
3	Southern	79	Unnamed Creek	Decatur	A2	B(WW-2)	Mouth (N1/2, S14, T67N, R27W, Decatur County) to the county road bridge (N. line, S14, T67N, R27W, Decatur Co.)	No depth measurements for a recreation use were taken within the stream segment. Therefore, there is no data available to support the removal of a Primary Contact Recreational Use for this water body segment.	No
4	Des Moines	78	Badger Creek	Warren	A2	B(WW-2)	Bridge crossing at 25th Street (S1/2, T77N, R25W, S29) to the confluence with Unnamed Creek (NE1/4, S30, T77N, R25W, Warren Co.)	No depth measurements were taken within the stream segment. Therefore, there is no data available to support the removal of a Primary Contact Recreational Use for this water body segment.	No