As Approved on March 8, 2011

EDWARDS AQUIFER AUTHORITY

CONCEPT MEMORANDUM

NON-DEGRADATION WATER QUALITY REGULATIONS

Background and Reasons for the Concept Memorandum:

The Edwards Aquifer Authority ("EAA" or "Authority") takes seriously its charge to protect the water quality of the Edwards Aquifer ("Aquifer"), and has thoughtfully sought solutions to prevent its degradation. To that end, in 2006, the Authority's Board of Directors ("Board") adopted a Water Quality Vision Statement that established a goal of non-degradation for the Authority's water quality regulations. It should be noted that non-degradation represents a higher standard of protection than does ant-degradation. A key portion of the adopted statement also provided: "The EAA is committed to seek solutions that respect the efforts of communities that have already acted to improve water quality protection, but also provide the most practical and effective results. The EAA will seek solutions that observe property rights, but offer flexible, innovative alternatives to rigid interpretations, through mitigation, planning and design options, effective best management practices, and other sustainable solutions."

In an effort to further the development of its water quality regulations, the Board directed Authority staff, at its May 11, 2010, meeting, to:

> Develop a preliminary framework and staff-proposed schedule for a comprehensive plan to protect water quality in the Edwards Aquifer, pursuant to Goal D, Action Step 3 of the Authority's Strategic Plan for 2010. The preliminary framework is to be completed with input from the Board's Aquifer Management and Planning Committee for consideration by the Board during its work session in August and is to incorporate the efficacy of the regulatory programs of other agencies including TCEQ, existing Authority initiatives, and proposed initiatives including impervious cover rules.

Such a framework document was developed and presented to the Board in August 2010 for consideration. Then, at the October 12, 2010, Board meeting, Authority staff and legal counsel were further directed to develop a regulatory concept memorandum, combining two stormwater regulation options identified within the framework document and to provide further detail on the remaining regulatory aspects contained therein.

This concept memorandum follows that direction by outlining specific regulatory concepts intended to serve as the basis for drafting proposed rules to address the Authority's water quality concerns and overall goal of non-degradation of the Aquifer. In addition, the proposed concepts include recommended actions that would improve the Authority's existing water quality regulatory program by clarifying and adjusting the existing regulations in response to issues brought to light through their administration and implementation.

Water Quality Risks:

Contaminants from both point sources and non-point sources present risks to water quality in the Aquifer. These contaminants originate on or near the ground surface and can enter groundwater if they are not altered or attenuated by natural or engineered processes. Water quality risks from point source contaminants are generally addressed through existing regulations. For example, regulations by the Authority, the State of Texas, and other agencies pertaining to storage tanks, well construction and closure, hazardous materials storage, and spill response provide a reasonable regulatory framework to address most point source hazards. Water quality risks from non-point source contaminants, however, remain a concern, and the Board has determined that additional levels of regulatory protection are necessary to prevent non-point contaminants from adversely affecting the Aquifer.

Statutory Authority:

Section 1.08(a) of the EAA Act states, "The [EAA] has all of the powers, rights, and privileges necessary to manage, conserve, preserve, and protect the [A]quifer and to increase the recharge of, and prevent the waste or pollution of water in the [A]quifer."

Section 1.08(c) of the EAA Act states, "The [EAA] and local governments with pollution control powers provided under Subchapters D and E, Chapter 26, Water Code, in order to prevent pollution and enforce water quality standards in the counties included within the [EAA]'s boundaries and within a buffer zone that includes all of the area less than five miles outside of those counties, shall apply pollution control regulations equally and uniformly throughout the area within the counties and the buffer zone."

Unanticipated Obstacles:

While this concept memorandum outlines anticipated actions that are intended to accomplish the Authority's goals related to protection of water quality in the Aquifer, as the rule making process progresses, it may become necessary to make adjustments to the concepts described below. The Board will be kept informed of any such adjustments that may be necessary.

PROPOSED CONCEPTS FOR REGULATIONS ON PERMANENT STORMWATER BEST MANAGEMENT PRACTICES FOR NEW DEVELOPMENT

This portion of the proposed concepts applies to all commercial, industrial, and residential projects containing more than 20-percent impervious cover. All regulated projects would be required to obtain a "Letter of Approval" from the EAA before construction on the project could begin. In order to obtain a Letter of Approval, an applicant would be required to perform the following actions and submit related information to the EAA:

- Identify typical pollutants associated with runoff from the type of project that is being proposed (a previously performed study, approved by the EAA, that analyzes pollutants and project type could be used at the owner's discretion). Any legacy pollutants resulting from past uses must also be identified for re-development projects.

- Identify any impacts to the hydrologic regime resulting from the proposed project (e.g. increased runoff velocity and volume and increased flow frequency, duration, and peaks).

- Identify specific permanent stormwater best management practices ("BMPs") to be implemented to achieve, to the maximum extent practicable, pre-development conditions.

- Provide a detailed description of how each BMP would be implemented along with any supporting engineering calculations used to determine how the proposed BMP or series of BMPs would address associated pollutants and hydrologic impacts.

Letters of Approval would be issued by the General Manager; however, if the General Manager determines that a submittal cannot support issuance of a Letter of Approval, the matter would be brought before the Board for final action.

If all necessary information is submitted, a Request for a Letter of Approval would be processed by the Authority in 60 days. If additional information is required, the timeframe for approval would follow the review timeframe established in the EAA's current rules regarding processing of applications and could take up to 105 days.

Vested Rights Determinations:

In accordance with H.B. 2130, 78th Legislature, if the proposed rules are approved as final rules, they would not apply to a project, as defined by Chapter 245, Texas Local Government Code, which is demonstrated to be in progress on the effective date of the rules. A project is considered to be in progress if a permit or other form of authorization establishing vested rights for the project pursuant to the applicable definitions contained in Chapter 245, Texas Local Government Code, was in effect in the area of the EAA's jurisdiction as of the effective date of the rules.

- In order to show that a project is in progress, the owner would be required to provide sufficient evidence that the project meets the requirements to be considered a project in progress. Sufficient evidence can be in the form of previously issued permits for the project or a previous vested rights determination for the same project by a governmental entity and evidence that the project has not become dormant as defined by the Texas Local Government Code, Section 245.005.

- Once such evidence is provided, the owner would receive a "Letter of Recognition" from the EAA.

- All projects wishing to obtain a Letter of Recognition would be required to submit sufficient evidence within a reasonable period of time of the effective date of the rules.

Letters of Recognition would be issued by the General Manager; however, if the General Manager determines that a submittal cannot support issuance of a Letter of Recognition, the matter would be brought before the Board for final action.

If all necessary information is submitted, a Request for a Letter of Recognition would be processed by the Authority in 30 days. If additional information is required, the timeframe for approval would follow the review timeframe established in the EAA's current rules regarding processing of applications and could take up to 75 days.

PROPOSED CONCEPTS FOR REGULATION OF BMPs

All BMPs, whether they are new or existing, would be required to be registered with the EAA. In addition, subsequent submittals establishing proof that appropriate maintenance has been performed would be required.

Registration:

Registration information would be required to contain:

- Identification of each BMP that requires maintenance;

- A description of the BMP-specific maintenance activities, processes, and the disposition of any wastes;

- Identification of the approximate age of each BMP, or if new, the anticipated date of activation;

- Schedules or required frequency of BMP maintenance; and

- Identification of responsible parties.

In addition to the information listed above, each registration would be required to include a written agreement identifying a funding source for proper maintenance and certifying that funding responsibilities have been addressed and would be transferred to any future owners.

Proof of Maintenance:

Based on the schedules provided in each BMP's registration, evidence would be required to be submitted to the EAA certifying that timely maintenance has been performed and that the BMP is working as designed. Certification would need to be supplied by appropriate maintenance personnel.

PROPOSED CONCEPT FOR BMP AND WATER QUALITY MONITORING

At the outset, the monitoring program for BMP effectiveness and water quality conditions would be performed by the EAA as a data collection project. Sampling and monitoring would be performed at representative areas throughout the jurisdictional area. Results would be analyzed and used as a basis for possible future actions and/or regulatory requirements. Water quality information would be openly shared with other regulatory entities with the goal of gaining a better understanding of water quality impacts resulting from stormwater discharges and the performance of specific types of BMPs.

PROPOSED CONCEPTS FOR REGULATION OF EXISTING AND NEW ORGANIZED SEWAGE COLLECTION SYSTEMS

This portion of the proposed water quality regulations is aimed at strengthening regulatory protection for existing organized sewage collection systems that exist over sections of the recharge and contributing zones that lie within the regulatory jurisdiction of the Authority.

In concept, the proposed regulations would require that the integrity of wastewater pipes be inspected and that such pipes be cleaned on a more frequent basis than current TCEQ requirements, as warranted.

In addition, the proposed regulations would require that lift stations on the recharge and contributing zone be required to have back-up electrical generators. If fuel related storage instruments are not consistent with the requirements in Chapter 713, Subchapter G of the Authority's rules, the generators would be required to be powered by natural gas. Monthly testing of the back-up generators would be required in order to identify replacement or maintenance needs. This proposed concept would be a substantial requirement as it is believed that SAWS has approximately 45 lift stations on the recharge zone alone. Staff has yet to determine how many lift stations New Braunfels Utilities and the City of San Marcos have, if any.

PROPOSED CONCEPT FOR REGULATION OF USE OF RECLAIMED WATER

The Proposed Water Quality Rules would address the use of reclaimed water over the Recharge zone. Storage of reclaimed water on the Edwards Aquifer Recharge Zone is partially regulated

by Texas Commission on Environmental Quality (TCEQ); however, TCEQ regulations do not prohibit the use of reclaimed water on the recharge zone. Current TCEQ treatment standards for reclaimed water only include standards for biochemical oxygen demand, turbidity, and certain indicator bacteria species. While diffuse usage of reclaimed water on or near the recharge zone may be plausible, large spills of non-potable water from storage vessels or distribution system piping onto a karst terrain such as the recharge zone presents an unreasonable and unnecessary risk to aquifer water quality.

This proposed concept would be to prohibit new releases and storage of reclaimed water over the Recharge Zone unless the reuse water is treated to drinking water standards before entering the collection and distribution system that would supply the reuse water for release over the Recharge Zone.

PROPOSED CONCEPTS FOR AMENDMENTS TO EXISTING ABOVEGROUND AND UNDERGRAOUND STORAGE TANK REGULATIONS

The catalyst for this particular portion of the proposed water quality regulations was the recent moratorium on certain major modifications to aboveground and underground storage tanks. Accordingly, the "major modifications" section of Subchapter G is proposed to be amended to clarify that a "major modification" is a tank replacement with either a tank of identical size or smaller or a tank replacement with multiple tanks whose combined volume is equal to or less than that of the tank being replaced. In other words, the proposed change would prohibit "major modifications" that increase storage volume in any way. In addition, it is proposed that any owner or operator of an AST or UST who performs a major modification would be required to incorporate a method for tertiary containment for both the tank and any associated piping at the same time, unless the modification deals solely with the piping portion of an AST system. This proposed change is necessary because current rules are unclear as to what portions of an AST or UST system requires tertiary containment.

Procedures for formally processing "major modifications" are also proposed to be incorporated into the Proposed Rules. This would include a more formal application process with an administrative and technical review that would result in a formal approval or denial – in lieu of the current approval letter that is issued by the general manager. The procedure is proposed to follow the application process currently included in the EAA's rules.

The applicability of Subchapter G would also be amended to clarify that the regulations do not apply to containers of 55 gallons or less. This is a change from the current exception that states, "This subchapter does not apply to *sealed* containers *less than 56 gallons in size that are stored for resale*." The proposed change is in response to confusion within the regulated community and to address issues that have come to light through administration of the current rules.

Additional proposed changes include:

- An allowance of movement and storage of empty or out of service tanks on the Recharge Zone would be added; however such tanks would need to be clearly identified and proof that the tank is either "out of service" or "empty" would be require to be submitted.

Storage of such tanks on the Recharge Zone would not increase the amount of recognized tank capacity for any regulated entity;

- The removal of the requirements to submit proof of financial assurance and location of records because the Authority has determined that such information is not essential to the administration of the rules;

- The removal of language regarding the liability of taxing units, lenders, and corporate fiduciaries because the Authority has determined that such information is not essential to the administration of the rules;

- The addition of notification requirements for any spill, release or discharge from an AST or UST;

- The consolidation of rule provisions pertaining to spills, leaks, releases, discharges, and abatement of ruptures;

- The removal of any language that is unnecessary or duplicative when the rules are compared to the definitions pertaining to the rules; and

- The addition of more stringent regulations for mobile fuel vehicles.

- Addressing any unnecessary language or typographical errors that exist in the current rules.

It is also recommended by staff that consideration be given to an administrative system that would allow for exchanges of existing, recognized tank capacity between regulated entities. A provision for partial retirement of capacity could be incorporated into the system.

PROPOSED CONCEPTS FOR AMENDMENTS TO EXISTING HAZARDOUS SUBSTANCES REGISTRATION, STORAGE, AND PLANNING REGULATIONS

Proposed amendments to this section of the Authority's rules would:

- Clarify the requirements for proper secondary containment of regulated substances;

- Amend the title of the section by replacing the word "hazardous" with "regulated" in order to better identify the subject of the regulations;

- Clarify specific definitions and requirements regarding Spill Protection and Response Plans;

- Include practical exclusions for what is to be considered a regulated substance; and

- Address any unnecessary language or typographical errors that exist in the current rules.

PROPOSED CONCEPT FOR A PROHIBITION ON THE APPLICATION OF COAL TAR SEALANT

The application of coal tar pavement products would be prohibited over the Recharge Zone and certain portions of the Contributing Zone within the Authority's water quality jurisdictional limits. An exception to the prohibition may be considered if no viable alternative to a coal tar pavement product is available for the intended use.

PROPOSED CONCEPT FOR CONSISTENCY OF APPLICABILITY

A global amendment would be made to the EAA's water quality regulations in order to ensure that related rule sets have a consistent scope of applicability.

PROPOSED CONCEPTS FOR UPDATES OF RECHARGE ZONE MAPS TO CHAPTER 713 OF THE AUTHORITY'S RULES

Eight topographic maps that were inadvertently left off the original list of recharge zone maps would be added to the current rules. These maps include:

- Crown Mountain;
- Dripping Springs;
- Jack Mountain;
- Leakey;
- Rio Frio;
- Rough Hollow;
- Signal Hill; and
- Vanderpool.

Existing maps contained in Chapter 713 and the "last revision date" included in the current rules would receive minor, necessary updates.

JOINT AGREEMENTS, MEMORANDA OF UNDERSTANDING, AND COOPERATIVE EFFORTS

While not specifically included in the proposed rules, all efforts would be taken to execute cooperative agreements with entities sharing regulatory jurisdiction with the EAA.