

**Project Criteria &
Recommendations
for
Successful
Bragg Creek Water
and
Wastewater
Solutions**

**Final Report to the M.D. of Rocky View
Bragg Creek Citizen's Advisory Committee
on Water & Wastewater**

June 25, 2002

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1. EXECUTIVE SUMMARY

1.1 Bragg Creek Citizen's Advisory Committee

The Council of the Municipal District of Rocky View (MDRV) formed a Citizen's Advisory Committee (CAC) in October 2001 to provide recommendations to Council on the implementation of solutions to deal with the water and wastewater issues in the Bragg Creek area. The CAC was initiated by the Bragg Creek community's direct request to the MDRV to be involved in the solution of Bragg Creek water and wastewater issues.

The CAC prepared this report to provide Council with the Community's criteria that should be satisfied as the water and wastewater solutions are implemented.

1.2 Mandate of the CAC

The CAC's mandate was to:

1. Identify the criteria that are important to the Bragg Creek community in any water and wastewater services solution
2. Provide the community with an opportunity to participate in setting these criteria
3. Act as a liaison between the community and outside stakeholders such as Alberta Environment (AE) and the Calgary Health Region (CHR) and the MDRV.
4. Ensure that the community's criteria are given priority when solutions are implemented
5. Communicate progress to the community and other stakeholders

The CAC collected significant feedback from the Bragg Creek area, comprising the Hamlet and surrounding rural areas (Township 23, Range 5 of the MDRV). This process included 2 open houses and a town hall meeting as well as in responses to about 800 questionnaires directly mailed to property owners and distributed to places of business. Approximately 75 people attended the two open houses, 35 people were at the town hall meeting, 158 questionnaires were completed and over 100 people submitted written comments ranging up to several pages. The majority of respondents were supportive of the mandate and direction of the CAC, with the final report reflecting a consensus of opinion.

In developing the criteria and preparing the final report, the CAC met with and incorporated the input of AE, the CHR and MDRV staff.

1.3 Summary of Public Input

A general summary of public comment is as follows:

1. It should be noted that the MDRV, AE, and the CHR mandated a significant number of the criteria that had to be included in this report. A majority of the community would be supportive of a communal water and waste water system only if it complied with the project criteria that were contributed by the community through

the CAC process. There is a high level of agreement regarding the importance of those criteria to the community.

2. If a solution was implemented, most respondents thought it should be contained within the Hamlet, where health and environmental issues need to be resolved, with the possibility of including some selected adjacent areas.
3. The majority of respondents, especially those living outside the Hamlet, do not believe there is a current need for new or expanded communal services outside the area described above. In general, they do not believe there is economic, technical or environmental justification for such services. They also expressed minimal support for a regional, watershed-based system.
4. The majority of respondents cited cost as a primary concern. Many people believe their share of the costs of a communal system would create significant financial hardship for them.
5. Other key issues included:
 - a) Impact on the community resulting from development subsequent to servicing
 - b) Concerns regarding preservation of Bragg Creek's "visual" environment (ie. protection of trees, retention of the current rustic character, minimal surface disturbances).
 - c) Objection to any requirement to de-commission existing wells (many people wanted the ability to use well water for non-potable service), with some indicating that compensation should be offered for these systems.
 - d) Requests from cabin owners who only occasionally occupy their property to be excused from mandatory connection.
 - e) A number of people believed that an Area Structure Plan should be completed before any servicing was considered.

1.4 Recommendations to Council

The following recommendations represent the CAC's view of community consensus on the issue of water & wastewater servicing:

1. Any servicing at this time should be contained to the area in which health and environmental concerns have been identified and quantified, ie. the Hamlet of Bragg Creek. Selected adjacent areas (Banded Peak School, Upper Elkana Estates, and Camp Cadicasu) should be included, based on specific justification. The areas known as Elbow Rise Road, Bragg Creek Provincial Park and intervening lands, should also be investigated for inclusion (Reference Maps 1 & 2). Solutions implemented should be expandable and compatible with a comprehensive area plan for water and wastewater.

The CAC is not aware of any health and/or environmental issues in the balance of the Bragg Creek area, outside of the areas noted above, that provide a need for new or expanded communal services at this time.

2. Any water and wastewater solution implemented should satisfy the list of project criteria that was developed by the Citizen's Advisory Committee through an extensive community consultation process. When water and wastewater solutions are proposed, it is recommended that the criteria contributed by the community be assigned appropriate priority to help ensure acceptance by Bragg Creek residents and businesses.

3. It is recommended that all further development in the Greater Bragg Creek area be governed by a Greater Bragg Creek Area Structure Plan (ASP) which should be undertaken as soon as possible and submitted to area residents before adoption by Council. It is further recommended that the Area Structure Plan include a comprehensive plan for water and wastewater which must ensure that:
 - (a) the costs and development issues regarding alternative water and wastewater solutions are presented,
 - (b) a clear servicing cost recovery mechanism is established,
 - (c) any new development must pay its way with no additional financial burden on existing residents or businesses, and
 - (d) the total population that can be sustained by water supplied from the Elbow River is determined and used to govern development.
4. Any water and wastewater services should be owned by the MDRV, with the MD retaining a competent utility company to oversee and manage the infrastructure. The utility system provider should be selected by a competitive process on the basis of expertise, commitment to an incremental approach to servicing, and commitment to public consultation and consensus building within the local community.
5. The total, all-inclusive average metered cost (e.g. capital, operating and maintenance, infrastructure replacement as required, and profit) per household in the service area should not exceed \$100/month. Future escalation of this rate should be restricted to an Alberta CPI or comparable indicator.
6. Rates for users in the service area other than residential dwellings, such as commercial or institutional operators/owners, or undeveloped lots or normally unoccupied cabins, require special consideration to ensure the rates are fair and justifiable.
7. There should be mandatory connection of all users within designated service areas and existing septic fields should be disabled at that time. Property owners should be allowed to use existing water wells for non-potable uses (e.g. irrigation, car washing, etc.), however, the system design should ensure the two water sources cannot be commingled.
8. Given the fact that water/wastewater services are a controversial topic in Bragg Creek, it is important that the community continue to be informed and consulted at each major step in the process. This consultation should allow the community to influence and change outcomes based on identified community priorities.
9. If piped infrastructure is installed, other services which could benefit from utilizing the same trench (ie. communication wiring) should be investigated.
10. Strong preference should be given to wastewater solutions which are based on

communal decentralized wastewater management principles and allow for incremental expansion as needs dictate.

11. The needs identified in this report should be pursued in consultation with the MDRV, AE and the CHR.

2. PROJECT CRITERIA FOR WATER AND WASTEWATER SOLUTIONS

The following comprehensive list of criteria was developed by the CAC after extensive consultation with interested community citizens. These criteria also include the requirements of various public agencies, including the MDRV, AE, and the CHR.

2.1 Financial
1. The installed facilities shall be owned and operated by the MD of Rocky View in an open and responsible manner.
2. The total, all-inclusive, cost per average household, based on metered usage should not exceed \$100/month. This rate should include costs for capital, operating and maintenance, infrastructure replacement as required, and profit. Future escalation of this rate should be restricted to the Alberta Consumer Price Index or comparable indicator. No hidden costs will be allowed. Commercial or institutional operators/owners should be charged commercial/residential rate differentials which are comparable to similar situations elsewhere.
3. The combined total will be verified using a business plan that deals with all costs associated with the operations of the systems, including such items as: loan payments, infrastructure costs, connections, operations and maintenance, insurance, MD costs, capital replacement costs and other associated costs. Prior to any formal project commencement, all residents and businesses will be informed of all projected capital and operating costs and the financial impact on individual ratepayers.
4. Any financial obligation, taken on by Bragg Creek Area customers, is limited to infrastructure required for the service area defined in the technical section.
5. The customers in the service area will pay for their proportionate capacity of the system(s).
6. The Municipality shall obtain all financing for the service area.
7. Connection to the system will be mandatory for all occupied properties. In order to accommodate undeveloped lots or normally unoccupied cabins, payment of the operations and maintenance portion of the cost structure should only commence upon connection to the system. Payment of the capital portion of the costs should be mandatory for all properties within the service area. These costs should be proportionate to property frontage or other comparable measure.
8. The Municipality will pay compensation for existing infrastructure if it becomes part of the new system, provided it is economic in a life cycle basis.

<p>9. The Municipality will not pay offsetting compensation for existing private water and sewer infrastructure, or for its decommissioning, if it is not used in the new system.</p>
<p>10. In order to ensure system performance and public safety, the system provider and operator shall provide financial guarantees comparable to those required for similar public projects. These guarantees are currently \$2,000,000 per incident and \$50,000,000 total.</p>
<p>11. Final system(s) selections shall be based on life cycle cost with appropriate economic parameters.</p>
<p>12. Water metering will be mandatory.</p>
<p>13. Preference shall be given to a system provider who can also operate the installed facilities, unless an economic advantage can be achieved by splitting the two services.</p>
<p>14. Preference will be given to proposals that alleviate the impact on initial customers that would be exposed to financial hardship.</p>
<p>15. Use of local contractors and suppliers is encouraged where economically feasible.</p>
<p>16. Proposals are requested on both of the following:</p> <ul style="list-style-type: none"> a. Fixed monthly rates to be fixed for the first 5 years; and, b. Floating monthly rates.
<p>17. Consideration will be given to proposals that allow individual users to elect (a) or (b) above.</p>

2.2 Technical

18. The proposed water and wastewater solutions shall conform to applicable government requirements with respect to design, construction, operations and maintenance and oversight. Wastewater shall be treated to tertiary standards, including nutrient removal, and consideration shall be given to providing protection from Giardia and Cryptosporidium.
19. Enough treated water will be produced to supply a single source of water for all water demand (potable and non-potable) including: current residential, public and commercial uses; reasonable projected future growth needs of the Bragg Creek Hamlet Area Redevelopment Plan and amendments; fire protection and other service area needs based on economic concerns of their existing residential and commercial users.
20. The wastewater system will provide suitable treatment and disposal for all wastewater needs including: current residential, public and commercial uses; reasonable projected future growth needs of the Bragg Creek Hamlet Area Redevelopment Plan and amendments; and commercial acceptance of wastewater for other service area needs, based on economic concerns of their existing residential and commercial users.
21. Piped services shall be insulated, shallow burial to minimize surface disruption.
22. The installed facilities shall be limited to the priorities defined herein but shall be reasonably expandable to allow for the development options outlined in the future area structure plan (ASP). The installed facilities should be upgradeable to meet future standards affordably.
23. Timely commencement and completion of the project(s) is required with due consideration given to community activities, commercial and residential concerns regarding disruptions of access, noise and other inconveniences.
24. The technology employed shall be economically supportable for a minimum of 20 years and an ultimate service life of 40 years with a comprehensive maintenance regime.
25. Consider using existing infrastructure based on a life-cycle cost/benefit analysis.
26. Preference will be given to communal decentralized water and wastewater management designs where they are technically and economically feasible.
27. Preference will be given to connecting services directly to the systems or buildings that are in existence as of January 1, 2002; in an agreeable location to the property owner (residences/commercial/institutional in existence) and utilize the existing private infrastructure as much as possible. Other undeveloped properties will only be provided services to the property line.

28. A preference shall be given to proposed solutions that minimize disruption to:

- a. emergency services
- b. resident's activities
- c. commercial activity
- d. community activities

29. Preference will be given to solutions that minimize land usage.

30. Preference will be given to technology employed that has a 2-year proven track record under comparable operating conditions. If newer technologies are proposed, a contingency plan must be provided in case the technology does not meet performance standards.

31. Preference shall be given to technology which minimizes:

- a. Infrastructure
- b. Disruption to the community and the environment
- c. Water consumption
- d. Effluent volumes
- e. Energy requirements
- f. Noise
- g. Health-related risks due to chemical inputs and processes
- h. Odours and Light pollution

32. Preference will be shown to a proposal that addresses the following:

- a. Quality Assurance
- b. Environmental Assurance
- c. Health and Safety
- d. Communications Plans

2.3 Community Impacts/Social/ Communications

33. Future development in the service area, as well as the design of specific components of the water and wastewater system will conform to the current Bragg Creek Hamlet Redevelopment Plan (The Hamlet Plan) and its subsequent amendments or to any superseding Area Structure Plans.
34. Minimize impact on roads and traffic safety during both construction and operations.
35. The community acting through the Community Advisory Committee will participate in the following:
- a. Selection of bidders from the Expressions of Interest
 - b. Preparation of the Request For Proposals
 - c. Evaluation of proposals
 - d. Recommendation of the successful system provider
36. The system operation shall allow for liaison with a community-based group to ensure local issues are addressed.
37. Location of surface facilities should minimize impact on the Community and recreationally used lands through the use of a public consultation process.

2.4 Environmental

38. Proposals shall minimize impacts on the following:

- a. Trees and vegetation,
- b. Waterways and riparian habitat,
- c. Wildlife habitat.

39. The proposal will quantify any impacts on the above.

40. All damaged areas shall be restored to original conditions or better.

41. Trees that are removed shall be replaced with a similar species that have a minimum trunk diameter of 6 inches except where such replacement is impractical for the operational requirements of the system(s).

42. The system operator shall undertake an on-going customer water conservation program.

43. Piped services should be installed in existing roadways or laneways whenever practical.

44. Environmental friendly (green) technology will be favoured provided it is economically feasible on a life-cycle basis.

2.5 Miscellaneous

45. Terms of the management contract will be based on the following principles:

- a. The utility manager will be required to develop a detailed master plan for water and wastewater improvements together with a schedule and a budget. That plan would be subject to community and government regulatory approval.
- b. Life cycle costs will be used in evaluating alternatives.
- c. Competitive tenders will be used to award any contracts for design and engineering with the utility manager being paid a management fee.
- d. The contract will provide for performance measures with contract bonuses and penalties related to providing service at minimum cost to the existing residents and achieving measurable improvement in drinking water and groundwater quality.
- e. No decision for implementation of individual projects would be made without public consultation, community and regulatory approvals.
- f. The utility manager will be required to provide advice and input to the ASP preparation process regarding water and wastewater.
- g. The utility manager will operate and maintain the water and wastewater system with professional management practices and certified operations personnel.

46. The MD will retain a professional utility management company through a competitive proposal call based on the Request For Proposals, which defines the company's capacity to use an incremental approach to water and wastewater management, its experience and qualifications and its track record of building community consensus around solutions

47. Standards in this Request for Proposals are minimums. Bidders are encouraged to propose alternatives that utilize enhanced services (i.e. water quality, wastewater treatment levels, etc) on an itemized separately priced basis.

48. The MD will ensure its staff and Councillors have the capabilities and necessary management processes to oversee the new water and wastewater systems they own and protect their customers.

49. Bulk water sales could be provided to others, in conjunction with a revenue sharing agreement that facilitates a reduction in existing user's rates.

3. GOVERNMENT CONSULTATION

3.1 General

AE, the CHR and the MDRV believe a solution to water and wastewater issues in the Bragg Creek Area are necessary at this time. These issues include:

1. Public health concerns in the Hamlet and immediate area due to groundwater contamination of the drinking water.
2. Elbow River contamination caused by septic systems in the Hamlet.
3. Provision for extension of water and wastewater services to the remainder of the Bragg Creek area and the Elbow River watershed as necessary over time.

These government stakeholders have agreed that the current status quo is no longer acceptable. Furthermore, they have established minimum requirements that they want incorporated into any implemented solutions.

The requirements do not mean that any particular solution has been mandated. In fact, these agencies have continuously repeated their commitment to achieving a solution that reflects the wishes of the community.

3.2 Alberta Environment Requirements

AE requires a communal or community wide solution which:

1. Is regulated by AE and the CHR. Their preference is for the MDRV to be accountable for the solution.
2. Doesn't include solutions by private individuals on private property since, as a practical matter, it is difficult to monitor and ensure the on-going operation, maintenance and upgrades required by these systems are occurring.
3. Provides the entire residential or commercial property with one supply of treated water in order to have a broad base to share costs. The system design could look at different requirements for different water uses.
4. Treats wastewater to tertiary quality standards, including nutrient removal. AE's stated preference is that wastewater in the Bragg Creek area, Redwood Meadows, and other developments along the Elbow River be pipelined into Calgary, with treatment to occur in the City of Calgary's facilities. However AE is prepared to consider licensing local wastewater solutions for the short term.
5. Is compatible with and provides a reasonable contribution to the resolution of regional water and wastewater problems.

3.3 Calgary Health Region Requirements

The requirements of the CHR are as follows:

1. Management of wastewater.
2. All drinking water wells must produce drinking water free of fecal coliforms and which meets the Canadian Drinking Water Quality Guidelines.
3. The Bragg Creek solution should be compatible with and provide a reasonable contribution to the resolution of regional water and wastewater problems. This statement essentially means that the CHR will not accept individual lot solutions for wastewater and drinking water and a communal system is necessary.
4. Until the Bragg Creek water/wastewater solutions are implemented, the current boil water advisories will remain in place and be communicated regularly to the Bragg Creek community.

3.4 The Municipal District of Rocky View Requirements

The MDRV requires the following:

1. All residences (existing and undeveloped lots) and all businesses in the designated service area will be required to hook-up to the water and wastewater services, with undeveloped lots being connected at the time of development.
2. The cost of connecting existing residential and business locations (including costs to connect and meter the location, including piping from the property line into the existing septic tank or building/structure wall as the case may be) to the services will be included in the project costs.
3. Owners of existing water and wastewater facilities will not be compensated for their systems except where they are included in the new services.
4. The MDRV will own any installed systems and will be ultimately be accountable for all aspects of operating and maintaining such facilities to ensure the safe functioning of any services.
5. A private utility management company will be selected, through a competitive bidding process, to design, build and operate the water and wastewater system.

4. COMMUNITY CONSULTATION

4.1 Consultation Process

The public consultation process involved a number of methods designed to develop a detailed view of the water/wastewater issues seen by residents and businesses in the community. A key consultation objective was to obtain confirmation, feedback, and suggested revisions to the criteria list developed by the CAC. As part of this process, the CAC sought to obtain community approval and acceptance of the mandate of the CAC.

In particular, the CAC sought to obtain community input and consensus on a number of key concerns that had been conveyed to the MDRV in prior forums. These included: the proposed service area; the potential costs and affordability of such services to users ; the ongoing ownership, operation and maintenance of such facilities; the construction of such facilities in a manner that cause minimal disruption; and the assurance of safe and reliable operation of these facilities.

Details of the timing of this process are provided in section 11. In summary, the process included:

1. Familiarization with the problem and setting the mandate and terms of reference of the CAC with the MDRV
2. Initial discussion with AE and CHR
3. Meetings held with members of the CAC to develop the proposed criteria
4. Individual discussions between the 10 members of the CAC and the public.
5. Newsletters mailed to all property owners in the township (800 in total).
6. Two Open Houses attended by approximately 75 people.
7. A Town Hall meeting where members of the public were invited to address the CAC and community on their views respecting water and wastewater (35 in attendance).
8. A mailing of a detailed questionnaire throughout the township
9. Collection of approximately 100 written comments from the public, ranging up to several pages.
10. Analysis of 158 detailed questionnaires, completed by residents and businesses.
11. Meeting with AE, CHR and the MDRV to review the draft findings of the results of the CAC

12. Preparation of a final report that was reviewed with AE, CHR and the MDRV prior to the presentation to the MDRV Council

4.2 Summary of Community Input

The statistical results of the questionnaire responses as well as summaries of written comments from the community are enclosed in Appendix A. The CAC did not attempt to define the problem or alternative solutions during the consultation process. There is no community-wide consensus on the definition of the problem or the range of possible viable alternatives. A general summary of public comment follows:

1. It should be noted that the MDRV, AE, and the CHR mandated a significant number of the criteria that had to be included in this report. A majority of the community would be supportive of a communal water and waste water system only if it complied with the project criteria that were contributed by the community through the CAC process. There is a high level of agreement regarding the importance of those criteria to the community.
2. If a solution was implemented, most respondents thought it should be contained within the Hamlet, where health and environmental issues need to be resolved, with the possibility of including some selected adjacent areas.
3. The majority of respondents, especially those living outside the Hamlet, do not believe there is a current need for new or expanded communal services outside the area described above. In general, they do not believe there is economic, technical or environmental justification for such services. They also expressed minimal support for a regional, watershed-based system.
4. In the Hamlet, where water well contamination has been reported, most respondents either feel there is no large-scale problem, or do not want piped services. Many believe the best solutions should focus on the relatively small number of contaminant sources and should be implemented on a smaller, household scale rather than through large expenditures on an unwanted communal system. Several Hamlet residents felt the removal of contaminants in the aquifer would restore the water quality over time.
5. A minority of residents and a number of businesses in the Hamlet did advocate communal systems. Residents typically cited poor quantities or quality of well water, while businesses were generally concerned with the high costs of trucked water and waste services.
6. The majority of respondents living outside the Hamlet do not believe there is a current need for new or expanded communal services.
7. Cost is a significant concern. Bragg Creek, especially the Hamlet, has a number of residents on limited or fixed incomes. Many people believe their share of the costs of a communal system will create significant financial hardship for them. Numerous respondents complained about having to “pay to fix Calgary’s drinking water problem”.

Other primary issues included:

8. Impact on the community resulting from development subsequent to servicing.
9. Concerns regarding preservation of Bragg Creek's "visual" environment (ie. protection of trees, retention of the current rustic character, minimal surface disturbances).
10. Objection to any requirement to de-commission existing wells and septic systems that had been installed at resident expense and in compliance with government regulations. Many people wanted the ability to use well water for non-potable service and others wanted compensation for existing systems.
11. Requests from cabin owners who only occasionally occupy their property to be excused from mandatory connection.
12. A number of people believe the process is somewhat backward. They feel that an Area Structure Plan should be completed before any servicing. In other words, they feel the destiny of the community should be determined by a community-generated plan rather than driven by the need to pay for an extensive utility.
13. Another concern focused on the capacity of the Elbow River watershed to provide fresh water. Some people felt that determination of this capability should precede any utility development.
14. There was minimal support for a regional pipeline-based system. If a solution was implemented, most respondents thought it should be contained within the Hamlet, with the possibility of including some selected adjacent areas, such as Banded Peak School.

5. Recommendations to Council

The following recommendations represent the CAC's view of community consensus on the issue of water & wastewater servicing:

1. Any servicing at this time should be contained to the area in which health and environmental concerns have been identified and quantified, ie. the Hamlet of Bragg Creek. Selected adjacent areas (Banded Peak School, Upper Elkana Estates, and Camp Cadicasu) should be included, based on specific justification. The areas of Elbow Rise Road, Bragg Creek Provincial Park and intervening lands should also be investigated for inclusion (Reference Maps 1 & 2). Solutions implemented should be expandable and compatible with a comprehensive area plan for water and wastewater.

The CAC is not aware of any health and/or environmental issues in the balance of the Bragg Creek area outside of the areas noted above that provide a need for new or expanded communal services at this time.

2. Any water and wastewater solution implemented should satisfy the list of project criteria that was developed by the Citizen's Advisory Committee through an extensive community consultation process. When water and wastewater solutions are proposed, it is recommended that the criteria contributed by the community be assigned appropriate priority to help ensure acceptance by Bragg Creek residents and businesses.
3. It is recommended that all further development in the Greater Bragg Creek area be governed by a Greater Bragg Creek Area Structure Plan (ASP) which should be undertaken as soon as possible and submitted to area residents before adoption by Council. It is further recommended that the Area Structure Plan include a comprehensive plan for water and wastewater which must ensure that:
 - a) the costs and development issues regarding alternative water and wastewater solutions are presented,
 - b) a clear servicing cost recovery mechanism is established,
 - c) any new development must pay its way with no additional financial burden on existing residents or businesses, and
 - d) the total population that can be sustained by water supplied from the Elbow River is determined and used to govern development.
4. Any water and wastewater services should be owned by the MDRV, with the MD retaining a competent utility company to oversee and manage the infrastructure. The utility system provider should be selected by a competitive process on the basis of expertise, commitment to an incremental approach to servicing, and commitment to public consultation and consensus building within the local community.
5. The total, all-inclusive average metered cost (e.g. capital, operating and maintenance, infrastructure replacement as required, and profit) per household in the

service area should not exceed \$100/month. Future escalation of this rate should be restricted to an Alberta CPI or comparable indicator.

6. Rates for users in the service area other than residential dwellings, such as commercial or institutional operators/owners, or undeveloped lots or normally unoccupied cabins, require special consideration to ensure the rates are fair and justifiable.
7. There should be mandatory connection of all users within designated service areas and existing septic fields should be disabled at that time. Property owners should be allowed to use existing water wells for non-potable uses (e.g. irrigation, car washing, etc.), however, the system design should ensure the two water sources cannot be commingled.
8. Given the fact that water/wastewater services are a controversial topic in Bragg Creek, it is important that the community continue to be informed and consulted at each major step in the process. This consultation should allow the community to influence and change outcomes based on identified community priorities.
9. If piped infrastructure is installed, other services which could benefit from utilizing the same trench (ie. communication wiring) should be investigated.
10. Strong preference should be given to wastewater solutions which are based on communal decentralized wastewater management principles and allow for incremental expansion as needs dictate.
11. The needs identified in this report should be pursued in consultation with the MDRV, AE and the CHR.

6. THE CHARACTER AND VISION OF THE BRAGG CREEK AREA

6.1 Community's Character and Vision

Most members of the Bragg Creek community believe the provision of water and wastewater services should be responsive to and facilitate the lifestyle choices of its citizens. These choices are documented in the current Hamlet of Bragg Creek Area Redevelopment Plan (MDRV By-law C-4935-98, adopted September 29, 1998). Following are some key excerpts from this document describing the community's character and vision.

6.2 The Hamlet of Bragg Creek

Nestled in the foothills of the Rocky Mountains, Bragg Creek has a sense of place unique in Alberta. The Hamlet was named after an original settler, Albert Bragg, who established the first cattle ranch in the area in 1894. The history of human habitation predates this event - what is now White Avenue was once part of a well-traveled native trading route.

The Hamlet of Bragg Creek is a special settlement area. From its origins, residents have resided in Bragg Creek due its spectacular setting and outdoor oriented lifestyle. The Hamlet was once primarily occupied by seasonal recreationalists. Over the past decades, road improvements between Bragg Creek and Calgary have increased the attractiveness of Bragg Creek for year round living. The majority of the Hamlet's employed residents commute to work in Calgary. Bragg Creek is also a favorite shopping location for those interested in arts and crafts and unique products. Recreational users of Kananaskis Country and the Bragg Creek Provincial Park frequently stop in Bragg Creek as part of their day's excursion.

The preservation of the Hamlet's rural and woodsy character in harmony with the environment is a strong priority for the Hamlet and the surrounding community.

Vision statement

The Steering Committee for the Bragg Creek Area Redevelopment Plan drafted, in consultation with the public, a visioning statement which is intended to reflect those values shared by most residents of Bragg Creek. Visioning is a declaration of the preferred future for the Hamlet.

"In 20 years, Bragg Creek will be a community that has maintained its trees and rural feel through roadway standards and development controls. Commercial activity has been focused in a central commercial core that specializes in one of a kind businesses and services to residents. Architectural controls have maintained the rustic building styles using natural materials and the buildings have not extended above the tree cover. Housing will be predominantly single family with opportunities for some public oriented multi-family developments for seniors. All homes and businesses will have safe drinking water and sewage effluent will not contaminate the environment."

Mission statement

While a vision statement creates an impression of the preferred future, a mission statement is one overarching goal that all land use decisions should be measured against and all development should strive towards.

“It is the mission of Bragg Creek to sustain a high quality of life by maintaining the unique, safe, peaceful and vibrant community that is in balance with its natural surroundings.”

6.3 The Greater Bragg Creek Area Community’s Vision

In the balance of the Bragg Creek Area (Township 23 Range 5 W5M), the majority of these residents have similar views to those expressed by the Hamlet residents in the Hamlet Redevelopment Plan on the quality of life issues that the Bragg Creek Area presents. Most of these residents routinely utilize the services and businesses of the Hamlet, and contribute to the overall sense of community that the Bragg Creek Area enjoys.

In the township, land use varies somewhat from the Hamlet of Bragg Creek. The area can be generally characterized as ranging from: heavily treed and rugged undeveloped raw land; sporadic, low-density residential developments; a number of large agricultural/ranching land tracts that also include Crown grazing leases; and environmental reserves. Low impact housing developments that integrate with the natural settings are located in the township in the West Bragg Creek Area, Wintergreen Subdivision and in the general proximity of the Hamlet.

There are major day-use facilities that include the Rocky View School District’s Banded Peak School and the Resort of the Canadian Rockies Wintergreen Ski and Golf resort (serves up to 2,000 customers/staff on peak days).

To date, the balance of the township has not been the focus of a public consultation process on development such as the one conducted in the Hamlet. The MDRV has committed to develop an Area Structure Plan for the Greater Bragg Creek Area. This will give residents the opportunity to decide on and document the kind of community they wish to create.

7. WATER AND WASTEWATER CHALLENGES IN THE BRAGG CREEK AREA

The Bragg Creek area, comprising the Hamlet and surrounding rural areas (Township 23, Range 5 of the MDRV), is experiencing water and wastewater challenges.

7.1 The Hamlet of Bragg Creek, Upper Elkana Estates and Camp Cadicasu

This area, shown on Map 2, has two problems, caused by the contamination of ground water by septic systems. These are:

1. Health concerns – use of contaminated ground water is dangerous to public health
2. Environmental - both the contamination of the groundwater (local alluvial aquifer) and the eventual pollution of the Elbow River are unacceptable.

A study by the University of Calgary shows that septic field effluents contaminate a number of Hamlet wells in the floodplain, though many are not. The level of contamination can change rapidly as a result of seasonal and shorter-term environmental effects. In addition, the recent dry spell has resulted in significantly decreased or no water flows from some wells in the Hamlet and the surrounding rural areas. The CHR currently has 2 boil water advisories in effect for the Hamlet of Bragg Creek.

In addition to the area that was considered in the University of Calgary study, the CAC was of the opinion two other areas in near proximity of the Hamlet should be included into a “Hamlet based solution. The CAC felt that Upper Elkana Estates, which is located outside the north boundary of the Hamlet and is pipeline connected to a water system (the Elkana water co-op – see following section) warranted inclusion into the “Hamlet solution”. Similarly, Camp Cadicasu, a seasonal recreation and meeting facility, should also be included into a servicing plan that dealt with the Hamlet.

7.2 The Balance of the Bragg Creek Area

Outside of the Hamlet area, the majority of residents typically utilize water wells or trucked-in water and use septic fields for the handling of wastewater.

The Wintergreen subdivision is served by a water co-op with the Wintergreen Ski and Golf Resort operating a sewage treatment plant for the Resort and a 14 lot development located adjacent to the resort.

The Banded Peak School, which is about 1 mile south of the Hamlet, currently transports by trucks potable water and wastewater. The Rocky View School District has recently made application to AE to drill up to 16 water wells on the school site in an effort to reduce the costs associated with trucking in water.

The CAC is not aware of any health and/or environmental issues in the balance of the Bragg Creek area.

7.3 Water Co-ops in the Bragg Creek Area

Two water co-ops serve residents in the Bragg Creek Area.

The Elkana Water Co-op is a user-owned, not-for-profit system that serves Lower and Upper Elkana Estates. The system, which was originally installed over 20 years ago, sources water from the Elbow River and chlorinates and delivers it to approximately 68 households. The system has undergone a number of upgrades; the most recent being the installation of a new raw water line and reservoir baffling in the fall of 2000. The Co-op has been instructed by AE to upgrade its treatment process to meet current standards and pending this upgrade, there is a boil water advisory issued by the CHR.

The Wintergreen water co-op sources the Elbow River for water for the Wintergreen Subdivision and Resort. The co-op is a user owned, not-for-profit system. Raw water is filtered and treated for potable water uses. Additionally, the co-op provides raw water to the Resort for snowmaking in the winter ski season. This system has been upgraded on an ongoing basis. The co-op's license with AE requires it to construct additional storage prior to November 2002.

8. STAGED IMPLEMENTATION OF WATER AND WASTEWATER SOLUTIONS

8.1 The Hamlet, Upper Elkana Subdivision and Camp Cadicasu

Contamination of ground water, by septic fields, has created the need for implementation of water and wastewater solutions for the Hamlet of Bragg Creek, the Upper Elkana subdivision and the Camp Cadicasu property (Map 2).

The public health and environmental issues in his area need to be addressed on an expedited basis. Due consideration should also be given to ensuring their resolution is reasonably expandable and compatible with a long term Water and Wastewater Master Plan to be developed for the Greater Bragg Creek area.

8.2 The Balance of the Bragg Creek Area

The area community (shown on Map 1) is about to begin the process of developing a Greater Bragg Creek Area Structure Plan. As part of this document, a Water and Wastewater Master Plan should be developed to support the recommendations of the ASP.

8.3 The Elbow River Watershed

The Provincial Government and its municipal partners can more appropriately address issues regarding the watershed. Their concerns and priorities have the potential to lead to solutions that may not be considered viable for the Hamlet or the rest of the Bragg Creek area on a stand-alone basis. These solutions would likely address the water and wastewater issues from a more regional perspective.

9. FUTURE COMMUNITY INVOLVEMENT IN THE IMPLEMENTATION OF WATER AND WASTEWATER SERVICES

The community has expressed a desire for continuing representation in the next steps of the process. The following table is a proposal for achieving this objective.

Step	Details	Timeline	Responsibility
Present Report to Council	Report entitled "Project Criteria and Recommendations for Successful Bragg Creek Water and Wastewater Solutions"	June 25, 2002 at 1:00 pm	Citizens Advisory Committee
Present RFEI to Council	Request for Expressions of Interest Document ready for issue	June 25, 2002 following Committee presentation	MD Staff with CAC Representative(s) present
Meeting with Proponents	Meeting open to all industry proponents to discuss their interest in the procurement process.	July 5, 2002 at 10:30 am	MD Staff with CAC Representative(s) present
Prepare detailed Evaluation Procedures for Expressions of Interest	A more detailed evaluation mechanism conforming to the RFEI evaluation criteria	Prior to July 26, 2002	MD Staff with review by CAC Representative(s)
Submissions of Expressions of Interest.	Receipt of Expressions of Interest	July 26, 2002	MD Staff
Evaluation of Expressions of Interest	Detailed evaluation leading to selection of three short listed teams, who are the only ones invited to submit detailed proposals.	End of July / Early August 2002	Evaluation Committee supported by consultant and MD staff and includes CAC Representative
Announcement of Three Short Listed Proponents	Presentation to CAC of reasons for short listing and then a public announcement.	Early August	MD Staff and Press Release
Preparation of Detailed Request for Proposals Documents including draft contracts	Detailed RFP. Large document which will be shared with CAC for comments.	June and July 2002	MD staff and consultant with CAC Review

Step	Details	Timeline	Responsibility
Public Meeting(s) on RFEI Results and proposed RFP Content	Recommended shortlist and the content of the RFP presented to a public meeting.	June and July	CAC Facilitated Meetings
Council Approval of RFP	Presentation of final RFP to Municipal District Council for approval and issue in early August NB No Council meetings until Sept 10 after this one	July 30th 2002 Meeting	MD Staff
RFP Proponent Meeting	Meeting with short listed proponents to discuss RFP in detail	Mid August 2002	MD Staff with CAC Representative(s) present
Submission of Proposals	Receipt of Proposals	End of September 2002	MD staff
Evaluation of Proposals	Detailed evaluation of Proposals leading to the selection of a single preferred proponent	October 2002	Evaluation Committee supported by consultant and MD staff and includes CAC Representative
Public Meeting to discuss recommended Proposal	Presentation of details of recommended winning proposal	End of October 2002	CAC Facilitated Meetings
Council Approval	Council approval of winning proposal	Early November 2002	MD Staff with CAC Report
Newsletters and website	Ongoing communications regarding the status of the project until completion	Ongoing	

10. THE CITIZEN'S ADVISORY COMMITTEE

10.1 Formation

The Council of the MDRV formed a Citizen's Advisory Committee (CAC) in October, 2001 to provide recommendations to Council on the implementation of solutions to deal with the water and wastewater issues in the Bragg Creek area. The CAC was initiated by the Bragg Creek community's direct request to the MDRV to be involved in the solution of Bragg Creek water and wastewater issues.

The CAC prepared this report to provide Council with the Community's consensus on the criteria that should be satisfied as a resolution of the water and wastewater issues is implemented.

10.2 The CAC Mandate

The purpose of the CAC is to ensure that the community is fully consulted in developing the criteria that any water and wastewater solutions would be expected to satisfy.

The CAC is made up of 10 volunteer citizens and 2 MDRV representatives. The citizens include; 5 Hamlet residents, 2 residents from the surrounding area, and 1 representative from each of the Bragg Creek Chamber of Commerce, the Wintergreen Water Co-op and the Elkana Water Co-op. The MDRV representatives are; Frank Misura, Supervisor of Development Services with the MD and Jonathan Huggett, an outside facilitator with significant experience in these issues.

The mandate of the CAC is to:

1. Identify the criteria that are important to the Bragg Creek area community in any water and wastewater services solution; things such as low user costs, protection of our environment, minimum disruption, etc.
2. Provide each community member with an opportunity to participate in setting these criteria.
3. Act as a liaison between the community and outside stakeholders (i.e. MDRV, the CHR, AE).
4. Ensure that the community's objectives are given priority when solutions are implemented.
5. Communicate progress to the community and other stakeholders.

The mandate of the CAC does not include:

1. Commenting on the water and wastewater problem.
2. Developing or deciding on specific technical solutions.
3. Controlling when, or even if, solutions might be put in place.
4. Restricting, promoting or controlling the future development of the Bragg Creek area. The MDRV will be starting the process of creating a new Area Structure Plan that will govern development. All members of the community will have an opportunity to participate in that process. The work of the CAC is simply intended to be compatible with whatever development direction is set by the Area Structure Plan.

The citizen members of the CAC wish to gratefully acknowledge the assistance of Messieurs Misura and Huggett in assisting with the preparation of this report.

11. STEPS IN PROVIDING WATER AND WASTEWATER SERVICES

The following table describes the past, present and future steps in providing water and wastewater services to the Bragg Creek area.

Description of Activity	Involved	Timing
1. Need for a solution to the Bragg Creek area water and wastewater problem brought to a head by: <ul style="list-style-type: none"> a. Walkerton and North Battleford tragedies, b. MDRV accountability and liability to water and wastewater users, c. University of Calgary study “Water Quality Impacts by Septic Tanks in Bragg Creek”, d. The Herron Property development proposal and lawsuit, e. The Hamlet Plan’s development constraints, f. Local and National press coverage, g. Watershed preservation studies, h. Environmental monitoring data, i. Recommendations by AE and the CHR regulators to the MDRV to solve the water and wastewater problems in the Bragg Creek area 	All	Various times in late 90’s to mid 2000
2. The MDRV Council committed to find and implement a solution	MD Council	Fall 2000
3. MD Steering Committee produced and communicated the UMA report – “Bragg Creek Engineering Feasibility Study” to the community - community wanted more input	Steering Committee, Community	May 2001
4. Community Meetings (4+), organized by the Chamber of Commerce. Focus was on the community’s need to: <ul style="list-style-type: none"> a. Understand the problem. b. Meet representatives from the MDRV, U of C, AE, and the CHR, and have them explain their perspective on the problem. c. Express its opinions to the representatives and to one another. Community petitioned MDRV to be included in any future steps.	Chamber of Commerce (Doug Sephton), Community Petitioners	Summer Fall 2001
5. Bragg Creek area Citizen’s Advisory Committee (CAC) approved by MDRV Council at the Community’s request.	MD Council, Volunteers, Community	Oct 23 2001
Bragg Creek area Structure Plan (ASP) development, approved by the MDRV Council. ASP was requested by the BCA Community	MD Council, Community	Oct 23 2001 for 2002

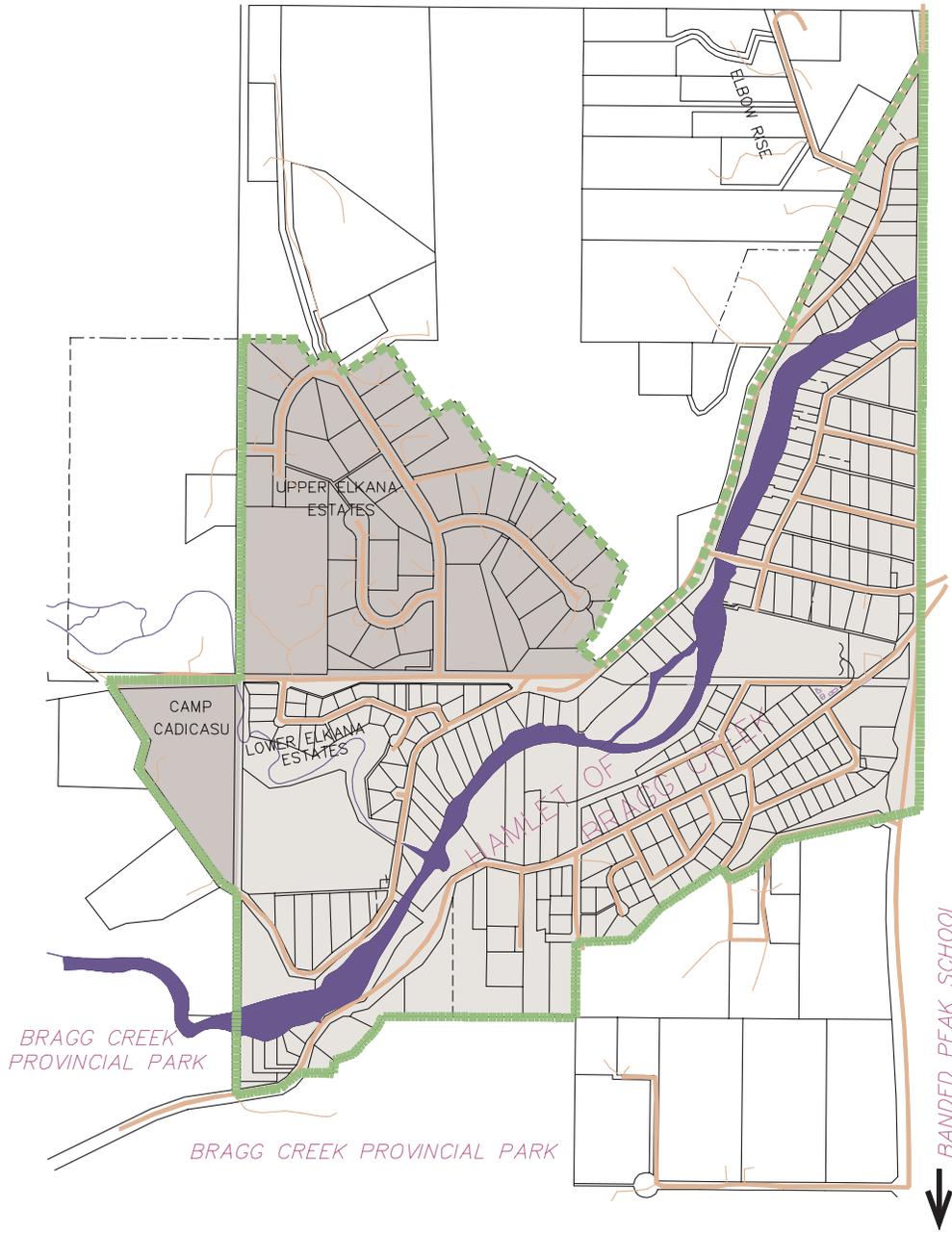
6 CAC drafted initial: a. Geographic priorities of providing services to different parts of BCA b. "Community's Criteria for Water and Wastewater Solutions"	CAC	Nov/Jan 2002
7. Community consultation on the drafts conducted by the CAC. Consultation activities included: a. Newsletters b. A starter list of Community Criteria for Water & Wastewater Solutions c. Proactive advertising of the consultation meetings d. Open Houses to develop Community criteria e. Town Hall Meeting to express views and opinions f. Questionnaire to quantify community opinion and input comments Reporting summary of feedback to community	CAC, Community	Feb/Mar 2002
8. CAC Report developed and presented to MD Council.	CAC, MD Council	June 2002
9. MD prepares a Request for Expression of Interest (RFEI) and uses it to select 3 Companies to invite to bid on designing, building and operating water and wastewater solutions.	MD Staff, Consultants, CAC input	TBA
10. MD arranges financing from Provincial and Federal governments and financial institutions.	MD	TBA
11. MD prepares a Request for Proposals which the 3 bidding companies follow to prepare and submit their proposals.	MD, CAC, Bidders	TBA
12. MD and CAC evaluate the proposals and selects a utility management company. CAC involved to ensure the community's needs are met.	MD, CAC, Bidders	TBA
13. Facilities designed, and built with ongoing consultation with the community	MD, Utility Manager , Community	TBA
14. Operations/services commence with ongoing consultation with the community to identify and resolve issues and concerns	MD, Utility Manager, Community	TBA
15. MDRV provides appropriate management oversight and direction to their Utilities Manager.	MD Council, Utility Mgr	TBA
16. Area Structure Plan is approved by the MD Council after the community and other interested parties input on future development of the BCA	MD, Community Others	TBA

Due to the number of unknowns at the community consultation stage, such as funding and overall timing, there were no guarantees provided regarding the implementation of

any solutions. Whatever the outcome, the CAC's goal was to provide an open and transparent forum for community input.



The Hamlet of Bragg Creek Service Area



Map 2

APPENDIX A

QUESTIONNAIRE STATISTICS

AND

WRITTEN COMMENTS SUMMARY

When reviewing the questionnaire statistics, please refer to the sample questionnaire enclosed at the end of Appendix A.