

10 June 2017

Mr. Duncan Martin
Planner
Planning & Development Services
Parkland County
53109A – S. H. 779
Parkland County, Alberta T7Z 1R1

Dear Mr. Martin,

We, the undersigned, are opposed to the recently submitted West Point Estates Development Outline Plan based on environmental, social and economic concerns in the Jackfish Lake Watershed that we discuss in more detail below. In addition, we are opposed to the Land Use Bylaw Amendment for NE-9-52-2-W5M and support retaining this property as Agricultural Restricted District, which is more consistent with the character of the surrounding area, and under its current rangeland and forest cover, provides substantial reduction in nutrient loading to Jackfish Lake. Finally, the undersigned are also opposed to any municipal funding for the county road modifications that would be necessary to facilitate a development of this scale.

Overall, the primary local concern with the West Point Estates Outline Plan relates to the scale of the development relative to the scale of Jackfish Lake and its small watershed. Concerns about the existing scale of development in the Jackfish Lake watershed date back to at least the 1990s, so it should not be surprising that the local community is concerned with this extensive development over two decades later. Jackfish Lake is a relatively small (239 hectare [ha]), shallow lake with a correspondingly small watershed (1665 ha). The proposed West Point Estate Development consists of 57 residential lots encompassing approximately 100 ha (proposed net developable area of 91 ha) or an area equivalent to 42% of the total lake area. Furthermore, approximately 30 of the proposed lots are lakefront properties and all 57 lots are well within the immediate watershed of the lake. The 2009 Municipal Census for the area indicates that there are at least 378 properties with 391 permanent residents in the Jackfish Lake watershed. The proposed West Point Estates development would result in another 57 properties and associated residences, which would increase the number of homes in the watershed by 15%, and based on the Outline Plan estimate would be expected to accommodate an additional 160 residents, increasing the population in the immediate watershed by 41%. This unprecedented population increase in a currently rural landscape should be of considerable concern to the County given that it will not promote environmental sustainability in the Jackfish Lake watershed nor will it retain the community character as promised in the Municipal Development Plan (MDP) of 2007. It will also lead to clear conflicts with surrounding agricultural land uses and will promote further loss and degradation of the small amount of natural area left in this portion of the lake basin. Finally, this more suburban or urban style development should also be a concern in rural Parkland County given poor servicing opportunities for a development of this scale (e.g., fire protection and ambulance services).

Unlike the Outline Plan suggests, the undersigned believe that this development is completely inconsistent with the direction provided by the Jackfish Lake Area Structure Plan (ASP), which was originally produced in 1997 and updated in 2002. In accordance with this document, community

members have structured their concerns with the proposed development based on land, water and social-based factors. Furthermore, significant corroborating support for the community concerns stems from the Jackfish Lake State of the Watershed (SOW) Report that was just completed in 2016. It is important to recognize that the stated purpose of the SOW Report was “to consolidate environmental information on Jackfish Lake and its watershed in an effort to support future planning and management decisions” by the Jackfish Lake Management Association, Parkland County and Alberta Environment and Parks.

Water-based Concerns with the Proposed Development

Water quality concerns should be considered a primary constraint for development proposals in the Jackfish Lake Watershed. The flushing rate in this relatively closed and naturally eutrophic lake basin is in excess of 100 years. The SOW Report indicates that the annual flushing rate is estimated at only 1.3 % of the lake volume making it highly susceptible to pollution effects from increased nutrient or other contaminant input from surrounding developments. Essentially this characteristic of the lake means that what goes into the lake stays there for a very long time. Additional residential development immediately adjacent to the lake, particularly developments on the scale of West Point Estates, will further degrade the lake’s water quality in a number of ways including increased use of fertilizers and pesticides on adjacent lands, increased storm water production and runoff from the increase in impervious surfaces (e.g., roads and homes), loss of natural wetland functions immediately adjacent to the lake, increased domestic animal waste production, increased boating traffic repeatedly suspending sediment-based nutrients and other contaminants, and numerous other sources. It is important to recognize that the proposed development area is predominantly perennial vegetation including a mosaic of naturalized grassland and forest stands, which has been instrumental in reducing nutrient input into the lake in recent years. It is interesting to note that most of the developer’s reports, including the Outline Plan, list the current land cover of the proposed development area as cultivation which is incorrect, and then go on to state that by converting the area from this agricultural land use to residential development that phosphorus loading to the lake will be reduced. Conversely, loss of the current perennial vegetation cover to impervious surfaces will only increase the surface flow of nutrients, sediment and other contaminants into Jackfish Lake.

It is also important to recognize that the long term mean depth of Jackfish Lake is only 3.3 metres (m) (SOW Report 2016). By fall 2015, the mean depth of the lake was estimated at only 2.8 m, the lowest recorded for the past half century (SOW Report 2016). This extremely low water level likely led to the fish kill during the winter of 2016 (SOW Report 2016). An even more important recognition for planners is that the water level in the lake has declined by 1.69 m between 1983 and 2015 (SOW Report 2016) indicating that the lake is in a long term drawdown phase, which will make lake water quality even more challenging to maintain as the existing nutrient levels in the basin are further concentrated by less water volume. Given this fact alone, approving a large scale residential development like West Point Estates would be a very reckless decision. Furthermore, increasing regional water use and land cover changes are also altering surface flow and infiltration to groundwater, which may be affecting lake water levels. Because Jackfish is located in a groundwater recharge zone, it may be actively losing water to diminishing underlying aquifers (SOW Report 2016). To add further support to this concern, test well data indicate that groundwater is in long term decline throughout Parkland County, declining by 0.8 to 2.5 m in all test wells from 1990 to 2010. It is also very disconcerting to note that the developer simply suggests that the 57 new homeowners in this development “should” seek their water supply through

remote sources/cisterns, but they cannot prevent these homeowners from drilling their own water wells, which could ultimately reduce lake water levels even further given Jackfish Lake's unusual groundwater recharge function. Therefore, as local groundwater reserves are diminished, inflow of surface water from the lake to the aquifer will likely increase.

As could be readily predicted by declining lake water levels and increasing nutrient concentrations, Alberta Health Services issued its first blue green algae advisory for Jackfish Lake in summer of 2015. If water levels continue their long-term decline and/or nutrient input is increased from surrounding developments, it should be expected that the occurrence of such events will become more frequent. Simply put, because of its naturally eutrophic status, control of external phosphorus input will be essential to help reduce the frequency and extent of future algal blooms in Jackfish Lake. The ASP states that "if the nutrient input into the lake is any greater than it was in the late 1990s, that increased phosphorus levels would eventually degrade the lake's water quality". Parkland County planners should be very familiar with this risk given recent events at Lac Isle and other waterbodies in the county, where poorly managed nutrient inputs have led to annual algal blooms and collapses in previously outstanding sport fisheries.

Similarly, the SOW Report states that "ongoing recreational, development and agricultural pressures on Jackfish Lake must be managed in a way to reduce watershed phosphorus loads". It goes on to say "that current total phosphorus levels of approximately 35 µg/L should be rigorously protected". It would be impossible to imagine how this key objective could be achieved if West Point Estates is approved given the diverse and difficult-to-control mechanisms for increased nutrient input associated with a residential development of this scale. It will definitely not be achieved simply through application of a narrow 30 to 60 m Environmental Reserve buffer between home construction and the lakeshore, which does not address many of the negative effects associated with this development.

Finally, based on the developer's own Biophysical Report, the fish habitat associated with the shoreline area of the development area is described as "quite extensive with a large lakeshore perimeter that contributes to the spawning and rearing of Northern Pike and Yellow Perch, which are the dominant fish species in the lake". Later in this same report, the adjacent lakeshore fish habitat is described as "...significant supporting various species of fish". Given this acknowledgment and the potential impacts of this development to these fish spawning and rearing habitats, it was not apparent if this project had been properly reviewed by the Department of Fisheries and Oceans in relation to the developer's ability to comply with the federal *Fisheries Act*. It was also not apparent if this project has applied for, or received an approval under the *Alberta Water Act*, for either the inevitable impacts that approximately 30 lakefront lots will bring to these valuable shoreline and aquatic habitats or the potential loss of up to 12 wetlands within the development area. Approval of the West Point Estates Outline Plan in the absence of a clear understanding of the project's impact on recognized fish spawning and rearing habitat adjacent to the development area could be considered as complicit under the federal *Fisheries Act*.

Land-based Concerns with the Proposed Development

The 2014 Parkland County Environmental Conservation Master Plan, Phase I ESA indicates that much of the land proposed to be developed for West Point Estates is recognized as an Environmentally Significant Area (ESA) of regional significance. These lands and other ESA surrounding Jackfish Lake were considered of regional significance due to high groundwater sensitivity, high surface water quality and aspects of the lake basin and depth that make it highly susceptible to water quality degradation. Furthermore, approving an extensive residential development on this site is inconsistent with the 2007 Parkland County MDP, which indicates that the County supports protecting ESAs. Specifically, the policy section of the MDP states “land deemed to be ecologically significant will be protected with particular emphasis on the protection of lakes, streams, and rivers within the county”. These municipal plans provide strong and defensible rationale to reject both the Outline Plan and rezoning applications.

Interestingly, the current Jackfish Lake ASP acknowledges that its greatest deficiency is its lack of site specific analysis on land-based limiting factors for development. This key information need should be addressed before any further residential development is considered in the Jackfish Lake Watershed. The ASP goes on to state that “further research will be required to determine the specific capability of individual sites to accommodate multi-parcel country residential subdivision”. We suggest that this important information gap should be filled by Parkland County rather than by a developer’s consultants to ensure an unbiased and unabridged assessment.

From a fish and wildlife perspective, the ASP indicates that it is critical to protect the remaining shoreline areas at Jackfish Lake that remain in a natural state. This simply cannot be achieved by means of a relatively narrow shoreline buffer that is unlikely to maintain important wildlife corridors. West Point Estates will result in significant degradation to one of the last remaining native shoreline areas along the eastern side of the lake. Overall, loss of both shoreline and upland wildlife habitat from this development will be significant considering that almost all 97 ha is currently in some form of native or naturalized cover. Removal of the native and naturalized habitat on this property will also lead to the loss of a significant wildlife corridor between Jackfish and Hasse Lakes.

Terrestrial land use and impacts have a clear connection to water quality in the lake. In particular, phosphorus input from cleared land will be high. As clearly stated in the ASP, any large scale disruption of natural vegetation surrounding the lake will increase nutrient input into the lake. This is the primary reason that we believe that the Agricultural Restricted District should remain in place for the northern portion of the proposed development area. We suggest that the County should work with the current or future landowners to encourage that the land is retained as hayland or natural grassland and forest cover to maintain the significant nutrient reducing capacity of these land cover types.

Finally, under the currently proposed development scenario, nutrient input into the lake will be even further exacerbated by loss and degradation of most wetlands within the development area (12 wetlands have been assessed for potential impact in the Biophysical Assessment). The natural water quality improvement functions of wetlands will be significantly degraded or lost as they are converted in to stormwater management infrastructure or residential development. The proposed Stormwater Management Plan suggests that the water quality improvement functions of many wetlands will be converted to a water storage function (i.e., stormwater pond), which will lead to further reduction in lake water quality given less nutrient absorption in these man-made water bodies. The only statement that even acknowledges the water quality concerns associated with loss of natural wetlands indicates

that “...consideration will also be given to developing constructed treatment wetlands within or downstream of stormwater infrastructure to assist in sediment filtration and nutrient removal”, but this is far from a commitment to actually construct these water quality treatment ponds.

Social-based Concerns with the Proposed Development

The primary social concerns with the West Point Estates Development include that it is a large scale urban/suburban style development that is inconsistent with the prevailing rural and cottage community character of the surrounding area, that it will increase local noise production, and reduce community safety. Community safety concerns include both road-related and boating safety issues.

The ASP defines the boating carrying capacity of a lake as “the level or type of use beyond which impacts to the visitor experience exceeds acceptable levels”. By 1996, virtually all measures of boating carrying capacity indicated that Jackfish Lake had reached or grossly exceeded its carrying capacity at that time. In fact, most estimates suggest that its carrying capacity has been exceeded by 2 to 17 times (ASP 2002), which clearly represents an unacceptable level of lake use. The additional boating traffic this development will bring will further exacerbate exceedances in the carrying capacity of the lake and will substantially increase the risk of boating accidents and boating-related conflicts.

While Jackfish Lake covers a total of 239 ha, the estimated surface area for boating is only 124 ha (SOW Report 2016). A previous Jackfish Lake property owner survey conducted in 1996 suggests mean boat ownership per household in the area is 1.9 boats. In addition, a volunteer boat count in 2014 found 144 power boats, 48 fishing boats, 52 pontoon boats, 86 personal watercraft and 171 non-motorized boats on adjacent lakefront properties. Virtually none of these estimates account for day use boating at Jackfish Lake by non-residents, but assuming the 1.9 boats per household average estimate for local residents, the proposed West Point Estates development could add an additional 108 boats to the lake contributing to unprecedented and dangerous exceedances of the lake’s carrying capacity. Ignoring these data, could lead to concerns of municipal liability for future boating-related accidents on this relatively small lake.

The ASP indicates that escalation in boating use of the lake should be considered a key limiting factor for future development. The ASP instructs the County that no development of marina facilities that would encourage additional boating traffic should be approved. We believe that this directive should also apply to this large scale residential development that by current estimates could result in an additional 108 boats on the lake. Again, this estimate does not even consider the additional boating traffic resulting from the guests of those additional residences.

Furthermore, the SOW Report indicates that motor boats can influence lake water quality by disturbing lakebed sediments, thereby increasing turbidity and nutrient suspension, which leads to increased algal production and direct damage to submersed aquatic plants. These disturbance effects can extend to 10 feet below the surface for engines greater than 100 HP (SOW Report 2016). Boat traffic can increase turbidity by up to 50% and suspension of sediment can contribute to suppression of fish populations by smothering eggs and disrupting spawning areas (SOW Report 2016). The lake basin area adjacent to the proposed development shoreline is actually a shallow neck between deeper basin areas, which will further exacerbate boat disturbance of sediment and suspend even more nutrients. It will also degrade the recognized fish spawning and rearing habitat in this area. The SOW Report indicates that “innovative approaches to managing boat traffic will be required, particularly at the low mean depth

currently observed at the lake". However, it is difficult to imagine how this would be achieved by approving a large scale residential development adjacent to one of the shallower regions of the lake.

From a noise perspective, the increasing traffic noise on Highway 770 is already a significant issue for local residents. For many residents, this has been one of the most significant reductions in the quality of living in the area in recent years. At the open house events in 2016, Urban Systems indicated that at full build, the currently high local traffic levels will be increased by up to 35%, which will further exacerbate traffic noise-related concerns and will likely represent a significant safety risk to the residents in the area. In particular, those residents living along TWP 522 and parts of RR 22 may be put at significant risk from increased traffic on these small, winding roads that were never built to handle the scale of traffic that will be generated by this development, but this was virtually ignored in the Traffic Impact Assessment. It is anticipated that increased traffic will markedly escalate the risk of automobile collisions and endanger children at play. However, current residents do not support allocation of municipal funding to make the road modifications necessary to support the West Point Estates development. Because of currently low levels of traffic and numerous positive natural features, TWP 522 and parts of RR 22 receive considerable recreational use such as walking, jogging, horseback riding, bird watching and snowmobiling. Road widening and straightening would result in loss of protective forest cover, negative hydrological impacts to Crown-owned wetlands, and by increasing traffic would result in loss of recreational value and increased risk of injury to children playing in the area. Furthermore, the ASP states that "where possible, additional traffic should not be routed on to existing developed local roads". Based on this direction and the desire of local residents, it is unacceptable to the community to use TWP 522 as the sole entrance and exit to this proposed development.

Residents are also very concerned about the effects this development could have on their groundwater wells. The SOW Report indicates that there are over 150 wells immediately surrounding Jackfish Lake and even more in the watershed. Most concerning is recent test well data that suggest that groundwater is in long term decline throughout the County, including the closest test well to Jackfish Lake. A recent study by Alberta Environment and Parks indicates that groundwater levels at the nearby Hubbles Lake test well have dropped by 1 m in the last 16 years. Of greater concern, is the poor understanding of groundwater connectivity to surface waters in the Jackfish Lake area. This economically and ecologically important topic should be much better understood before considering an extensive development that could bring increasing demand on groundwater supplies in the area. It is currently recognized that because Jackfish Lake occurs in a groundwater recharge zone, the groundwater contamination risk is considered moderate to high based on water quality in the lake. In addition, low availability and poor groundwater quality east and south of Jackfish Lake are acknowledged by the ASP as having high potential for limiting development in this area.

Finally, from an economic perspective, local residents are particularly concerned that property and home values will be significantly diminished if the County approves the West Point Estates development that will essentially lead to the loss of our rural and cottage lifestyles and the likely collapse in lake water quality. For many members of the Jackfish Lake community, our home and property are our primary assets and approval of this development could significantly affect our economic security and the current municipal taxes generated by diminishing home and property values.

Summary and Recommendations

We, the undersigned, believe that the proposed West Point Estates Outline Plan is not consistent with the current Jackfish Lake ASP, the Jackfish Lake SOW recommendations, the 2007 Parkland County MDP, and the recommendations from the 2014 Parkland County Environmental Conservation Master Plan. We also believe that certain aspects of the development could ultimately contravene federal and provincial legislation for the protection of fisheries and the aquatic environment.

Most significantly, the Jackfish Lake ASP plan recommends “rehabilitation of areas of degraded shoreline to maintain or improve water quality”, this development would simply bring further loss and degradation of natural shoreline areas and the corresponding reductions in lake water quality. Even more significantly, when evaluated against the specific ASP goals, the proposed West Point Estates Development fails on at least 5 of the 7 plan goals. Specifically, the proposed development will not:

- Preserve and enhance the natural environment, and control any activities which contribute to environmental degradation of the watershed and lake;
- Maintain and improve the quality and safety of the recreation experience for all lake users;
- Promote the safe and responsible recreational use of the lake’s natural resources;
- Help develop an efficient land use strategy which minimizes social, environmental and infrastructure costs; and
- Consider the cumulative effects of lake development and use upon the environmental and social fabric of the Jackfish Lake area.

In addition, the 2016 Jackfish Lake SOW Report makes the following recommendations to the Jackfish Lake Community, Parkland County and Alberta Environment and Parks:

- Support only sustainable residential and development practices in the watershed;
- Improve the management of boat traffic;
- Begin the rehabilitation of damaged riparian zones; and
- Consider other restoration needs.

The proposed West Point Estates Development is contrary to virtually every one of the SOW recommendations. Furthermore, recent comprehensive evaluation of Jackfish Lake to support lake planning efforts evaluated 15 key lake metrics and found that 6 of these factors were of high concern (i.e., watershed land cover, watershed area to lake surface area, proportion of shoreline development, shoreline complexity, trophic status, and flushing rate), five were of moderate concern (i.e., summerkill risk, winterkill risk, internal phosphorus loading, littoral zone as % of lake area and riparian zone health), and only one factor was considered of low concern (water allocation volume as % of inflow). Based on this assessment, Jackfish Lake was considered “highly sensitive to additional human encroachment”. Consequently, the SOW Report recommends that “strict measures are required to minimize the potential for future degradation of the lake resulting from shoreline disruption, or watershed land use changes”. It is quite clear that the large scale West Point Estates development will have far more than a minimal environmental and recreational effect on the lake and its current residents.

As current members of the Jackfish Lake community, we believe that no additional major developments should be approved until the updated Jackfish Lake land use plan committed to in the 2016 Parkland County Lakes Land Use Plan is completed. As we understand, Jackfish Lake is one of five lakes that the

County has designated as high priority for an updated land use plan. In the meantime, we respectfully request that the County please consider only those development proposals that fully support the current Jackfish Lake ASP goals. Ultimately, the ASP recommends that only “limited development scenarios that address both environmental and recreational concerns” should be considered. This science-based direction and the material provided above suggests that the County should not support the West Point Estates Outline Plan nor any rezoning, or road modifications necessary to facilitate this development. This approach is completely consistent with the *Municipal Government Act* which provides municipalities with the authority to ensure that land use practices are compatible with protection of the aquatic environment. Thank you for considering our concerns and suggested approach for decisions related to this large scale residential development proposal.

Best regards,

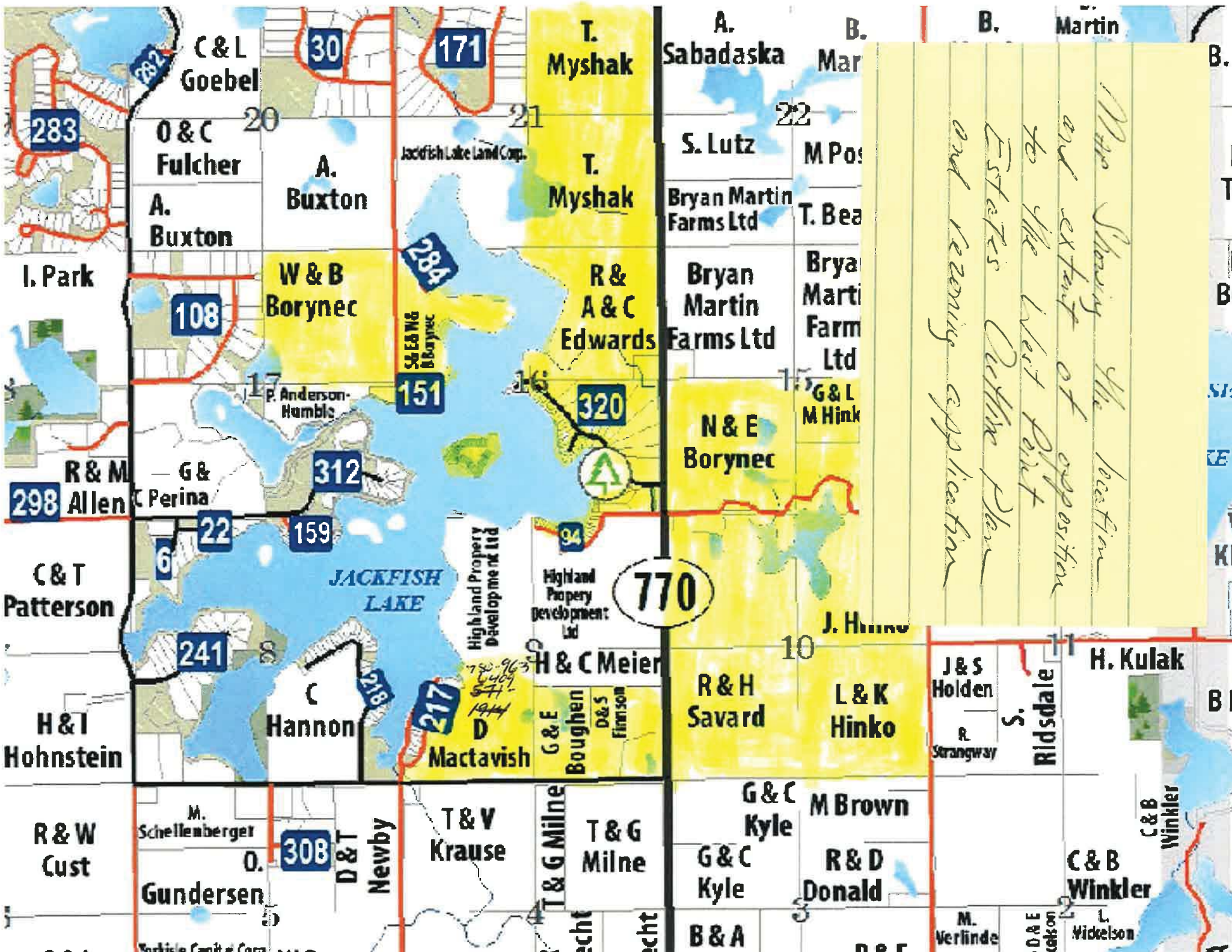
Concerned Members of the Jackfish Lake Area Community

(See the attached petition for all signatures to this letter)

In accordance with FOIP Regulations, the signatures attached to the original letter have been removed.
Administration has verified that the original document was signed by 192 individuals.

Please direct responses to this petition to:

Dr. Jonathan E. Thompson



*Map showing the location
and extent of opposition
to the West Port
Estates Decline Plan
and rezoning application*

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